106TH CONGRESS
2d Session

SENATE

REPT. 106–229
Volume 2

DEVELOPMENTS IN AGING: 1997 AND 1998 VOLUME 2

A REPORT

OF THE

SPECIAL COMMITTEE ON AGING UNITED STATES SENATE

PURSUANT TO

S. RES. 54, SEC. 19(c), FEBRUARY 13, 1997

Resolution Authorizing a Study of the Problems of the Aged and Aging

FEBRUARY 7, 2000.—Ordered to be printed

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56–466 WASHINGTON : 2000

DEVELOPMENTS IN AGING: 1997 AND 1998—VOLUME 2

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LETTER OF TRANSMITTAL

U.S. SENATE,
SPECIAL COMMITTEE ON AGING
Washington, DC, 2000.

Hon. ALBERT A. GORE, Jr.,
President, U.S. Senate,
Washington, DC.

DEAR MR. PRESIDENT: Under authority of Senate Resolution 54 agreed to February 13, 1997, I am submitting to you the annual report of the U.S. Senate Special Committee on Aging, Developments in Aging: 1997 and 1998, volume 2.

Senate Resolution 4, the Committee Systems Reorganization Amendments of 1977, authorizes the Special Committee on Aging "to conduct a continuing study of any and all matters pertaining to problems and opportunities of older people, including but not limited to, problems and opportunities of maintaining health, of assuring adequate income, of finding employment, of engaging in productive and rewarding activity, of securing proper housing and, when necessary, of obtaining care and assistance." Senate Resolution 4 also requires that the results of these studies and recommendations be reported to the Senate annually.

This report describes actions taken during 1997 and 1998 by the Congress, the administration, and the U.S. Senate Special Committee on Aging, which are significant to our Nation's older citizens. It also summarizes and analyzes the Federal policies and programs that are of the most continuing importance for older persons and their families.

On behalf of the members of the committee and its staff, I am pleased to transmit this report to you.

Sincerely,

CHARLES E. GRASSLEY, *Chairman.*

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DEVELOPMENTS IN AGING: 1997 AND 1998

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Mr. GRASSLEY, from the Special Committee on Aging, submitted the following

REPORT

REPORT FROM FEDERAL DEPARTMENTS AND AGENCIES

ITEM 1—DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE (ARS)

Title and purpose statement of each program or activity which affects older Americans

The Jean Mayer USDA Human Nutrition Research Center on Aging (HNRCA) at Tufts University was established by Congress through the Food and Agricultural Act of 1977 as one of five mission-oriented research centers designed to study the effect of human nutrition on health. HNRCA's creation was a major response of the federal government to the growing awareness of the need for improved nutrition recommendations for the American public throughout the life cycle. The overall mission of the HNRCA is to explore the relationship between nutrition and good health and to determine the nutritional and dietary requirements of the maturing and elderly population. The interaction between nutrition and the onset and progression of aging and associated degenerative conditions is of special concern. HNRCA scientists conduct cell and molecular biology, animal model, and human metabolic and field studies to further their understanding of the processes of nutrient utilization and metabolism to determine ways by which diet in combination with genetic and environmental factors may promote health and vigor over the lifespan.

Antioxidants Research Laboratory. The mission of the Antioxidants Research Laboratory is (1) to understand the role of antioxidant nutrients and other environmental factors on free radical reactions and lipid peroxidation events during the aging process and (2) to elucidate the impact of these phenomenon age-related changes in nutrient requirements and chronic degenerative conditions. The lab pursues its mission by exploring the effects of specific nutrients, especially vitamins E and C, carotenoids, glutathione and polyunsaturated fatty acids as well as factors such as exercise and xenobiotics on free radical-mediated oxidative damage. Animal models, cell cultures, and human volunteers are employed in this research program.

Body Composition Laboratory. The Body Composition Laboratory's mission is to evaluate the effect of nutrition on the dynamic interactions between the body's protein, water, fat, and bone and to study the relationship of these changes to the process of aging. The laboratory includes four principal facilities: Whole Body Counter; Partial Body and Small Animal Counter; Neutron Activation Facility; and Neutron Generator Facility for the in vivo measurement of fat.

Calcium and Bone Metabolism Laboratory. The mission of the Calcium and Bone Metabolism Laboratory is to examine ways in which diet and nutritional status in combination with exercise and hormones, particularly estrogen and parathyroid hormone, influence age-related loss of bone density. To determine the extent to which increased calcium and vitamin D intake can mitigate bone loss and prevent the development of osteoporosis and spontaneous fractures in the elderly. This mission is pursued through clinical studies in which the effects of modifying the diet and/or activity level on calcium absorption and bone density are measured in healthy, elderly volunteers. In addition, the process of intestinal adaptation to altered calcium intake is being examined and compared in black and white women.

Energy Metabolism Laboratory. The mission of the Energy Metabolism Laboratory is to examine how body weight is normally regulated and why many people tend to gain weight as they grow older. The importance of genetic and environmental factors in determining body composition and energy regulation, and quantifying optimal dietary energy requirements are under investigation. Research involves studies at the level of whole-body physiology such as examining the importance of energy expenditure and energy intake in determining body fat gain during adult life. In addition, hormonal and cellular investigations are underway to identify the underlying metabolic cause of differences in body composition and energy regulation between people.

Gastrointestinal Nutrition Laboratory. The Gastrointestinal Nutrition Laboratory's mission is to determine how aging and associated factors such as medication use affect the intestinal absorption and metabolism of micronutrients, including carotenoids. Experimental animal and cell culture models, and human volunteers are employed in studies to investigate whether changes in the Recommended Dietary Allowances (RDA) for niacin, vitamin A, vitamin B2, vitamin B6, vitamin B12 are warranted for the elderly. The chemopreventive effects of carotenoids against cancer are ex-

plored. In addition, research is conducted in elderly subjects with atrophic gastritis or hypochlorhydria, a significant sub-population of elderly at risk for impaired nutrient absorption and gastric cancer. Perfused intestinal segments and mesenteric lymph cannulae are also used in animal models characterizing the kinetics, energy requirements and age-associated changes in micronutrient uptake and clearance.

Genetics Laboratory. The mission of the Genetics Laboratory is to examine the molecular mechanisms by which diet and development regulate metabolic pathways at the genetic level. The major focus is the absorption, storage and utilization of nutrient energy. This process constitutes a complex homeostatic system in mammals, balancing energy intake and expenditure while maintaining energy stores. Consequently, the nutrient regulation of gene expression is highly complex, involving numerous positive and negative stimuli. In vitro and in vivo molecular techniques are used to determine how individual nutrients activate and suppress transcription. Little is known about the genetic control of the process of lipogenesis which underlies the accumulation of body fat and synthesis of circulating fats. Molecular techniques are used to study the dietary and hormonal control of lipogenesis in the liver. The focus is to determine the DNA sequence elements that regulate lipogenic gene transcription in response to diet and hormones; to identify the critical transacting factors that interact with these elements and how they transduce dietary and hormonal signals; and to determine how altered transcription of lipogenic genes in diabetes and obesity affect lipogenesis and the response to nutritional stimuli.

Laboratory or Nutrition and Vision Research. The Laboratory for Nutrition and Vision Research's mission is to determine the primary causes of eye lens cataract and degeneration of the macula and to apply that knowledge to extend the useful life of these organs. Current approaches involve defining adequate levels of nutrients during various life stages which will result in delayed accumulation of damaged proteins in lens and retina, as well as delayed lens opacification and age-related maculopathy. The laboratory pursues this mission principally using clinical/epidemiologic studies and laboratory tests, human and other mammalian lens tissue, animal models, whole lenses and lens epithelial cells in culture. Since the lens is primarily composed of protein, a significant effort is made to understand interrelationships between aging, regulation of lens protein metabolism, protease function and expression, and nutrition.

Lipid Metabolism Laboratory. The Lipid Metabolism Laboratory's mission is to define the interrelationships between lipoprotein metabolism, nutrition and the aging process and to develop recommendations for older adults regarding dietary fat and cholesterol in an effort to minimize cardiovascular risk factors and atherosclerosis. Research focuses on defining the biochemical parameters which identify individuals at risk for premature coronary artery disease and optimal diets which minimize plasma lipoprotein abnormalities in the elderly; the short- and long-term regulation of plasma lipoproteins by diet; the nutritional regulation of lipoprotein synthesis and apolipoprotein gene expression in vitro

and in vivo; the nutritional requirements for essential fatty acids with aging; and prevention of diet induced atherosclerosis. Methodologies established in the laboratory include lipoprotein isolation by ultracentrifugation, automated standardized enzymatic lipid analysis, gradient gel electrophoretic analysis of plasma lipoproteins, apolipoprotein isoelectric focusing, apolipoprotein quantitation by enzyme linked immunoassays, stable isotope kinetic studies, fatty acid analysis by gas liquid chromatography, cell culture studies, DNA isolation and genomic blotting analysis, specific mRNA quantitation, DNA amplification and gene cloning and sequencing.

Mineral Bioavailability Laboratory. The Mineral Bioavailability Laboratory's mission is to examine the biochemical and physiologic basis for changes in absorption and utilization of minerals with aging and to determine the effects of aging on mineral requirements in the elderly. Research focuses specifically on calcium, magnesium and zinc metabolism, and the effects of nutrient and hormonal changes on the expression of genes which modulate mineral metabolism.

Nutrition, Exercise Physiology and Sarcopenia Laboratory. The mission of the Nutrition, Exercise Physiology and Sarcopenia Laboratory is to explore the interaction between nutrition, exercise and aging and to understand how physical activity affects nutrient requirements and functional capacity in the elderly. The extent to which aging alters the adaptive responses to increased physical activity is largely unknown, particularly its effects on protein metabolism. The laboratory is focusing its activities on the metabolism and requirements of several macronutrients and how they change with age and activity. The laboratory makes use of stable isotope probes and the euglycemic glucose clamp technique to establish how energy expenditure, body composition and the turnover of whole body nitrogen and glucose vary in the population with increasing age, particularly with regard to changes in amount of physical activity. Through the use of these techniques, it can be established how these changes affect substrate requirements.

Nutritional Immunology Laboratory. The Nutritional Immunology Laboratory investigates the role of dietary components and their interactions with other environmental factors in age-associated changes of the immune and inflammatory responses. Research looks to reverse and/or delay the onset of these immunologic and age-related changes by appropriate dietary modifications and to determine the molecular mechanisms by which antioxidant and prooxidant nutrients modulate immune cell functions. Methods are being developed to use the immune response as a biologically meaningful index in determining specific dietary requirements.

Nutritional Epidemiology Program. The mission of the Nutritional Epidemiology Program is to identify the determinants of nutrition status in the elderly, to relate nutrition status to health and well-being, to define groups at special risk of nutritional problems, and to evaluate nutrition programs which service the elderly. Research addresses age-associated changes in energy and nutrient intake; constitutional, psychosocial and environmental determinants of food choices; nutritional determinants of neurobehavioral function, and of age-related changes, such as lens opacification.

Vitamin K Research Program. The mission of this program is to determine dietary needs for vitamin K, and the contribution that various forms of vitamin K make to general health and well-being during the aging process. Vitamin K is responsible for introducing unique calcium-binding sites (gamma-carboxyglutamic acid residues) into vitamin K-dependent proteins. Prior to 1976, the only known proteins (prothrombin, Factors VII, IX, & X) thought to be vitamin K-dependent were involved in blood coagulation. Today other vitamin K-dependent proteins (Proteins C & S) involved as anticoagulants are known. Protein S, osteocalcin and matrix gla protein are vitamin K-dependent proteins involved in bone biology. As new vitamin K-dependent proteins continue to be discovered, it is apparent that vitamin K has roles outside of its well-established role in regulation of blood clotting. The goals of the program are to develop new methods for the biochemical, functional, and dietary assessment of vitamin K nutritional status, and to determine the nutritional sources, bioavailability and requirements of vitamin K in humans at different stages of the aging process. Epidemiologic studies are being undertaken to examine the relationship between vitamin K status and chronic diseases, such as cardiovascular disease and osteoporosis.

Vitamin Metabolism Laboratory. The mission of the Vitamin Metabolism Laboratory is multifaceted. The Lab studies the bioavailability of water soluble vitamins in the aging population and determines the effect of aging on vitamin requirements; examines the basis for the absorption, utilization, and excretion of water soluble vitamins from food in the maturing and elderly population; assesses vitamin status and its relationships to drug intake and chronic diseases; studies the impact of subclinical vitamin deficiencies on the integrity and function of body physiology; studies the pathogenesis and pathophysiology of homocysteinemia; determines the relationship of vitamin status to chronic diseases; and, determines the relationship between folate status and dysplasia.

BRIEF DESCRIPTION OF ACCOMPLISHMENTS

Elevated levels of blood vitamin C is associated with protection against eye disease. Scientists have determined the minimal vitamin C intake needed to provide maximum protection for eye tissue. Results indicate that in humans, elevated vitamin C intake is associated with markedly reduced risk for cataracts of the eye.

Age associated changes in behavior may result from increased sensitivity to oxidative stress. Evidence indicates that abilities to mitigate the effects of oxidative stress and repair tissue damage due to oxidative stress show a decline as people grow older. Data indicate that one of the major sites of action of oxidative stress are the membrane of neurological cells. It is suggested that attempts to increase protection through diets rich in total antioxidant capacity from fruits and vegetables might prevent or reverse the deleterious oxidative-stress effects of neurological functions.

Older people might reduce their risk of gaining weight by eating smaller, more frequent meals. These findings are from a study that was the first to measure fat oxidation after eating. It was aimed at revealing underlying causes behind an age-related increase in

body fat, which typically doubles between the ages of 20 and 50 to 60 years.

Scientists conducted the first population-based study of vitamin D with 759 free-living volunteers. Findings suggest that inadequate vitamin D is an important public health problem in older Americans. Vitamin D is essential for healthy bones and teeth and helps prevent osteoporosis. Studies show that Vitamin D status is better for elderly men and women in the general population than for elderly hospital patients, confirming the importance of eating foods rich in vitamin D and exposing skin to sunlight.

Findings have identified an instigator behind the age-related decline in T cell function, which coordinates the body's response to an infectious agent or a would-be tumor. What's more, they were able to reduce the effects of this instigator in cultured cells. The finding brings science a little closer to defining how people can maintain a healthy immune system well into old age.

Researchers have identified a negative role of high dietary calcium intakes on zinc homeostasis in the elderly. Specifically, a high calcium intake reduced zinc retention, a finding of substantial relevance to consumers who self-prescribe calcium supplements and may thereby put them at risk of zinc deficiency.

Human Nutrition Research Center on Aging—Research Projects Related to Nutrition and the Elderly

	Funding level fiscal year dollars
Functional Capacity and Nutrient Needs of Aging—1/11/95–1/10/00. Objective: To examine the effects of increased physical activity, body composition and diet on the following: (1) peripheral insulin sensitivity and glucose metabolism; (2) functional capacity and nutrition status of the frail elderly; (3) whole body and skeletal muscle protein metabolism; and (4) total energy expenditure and its relationship to physical activity level and body composition	940,560
Function and Metabolism of Vitamin K and Vitamin K Dependent Proteins During Aging—1/11/95–1/10/00. Objective: Molecular, biochemical and functional assays of vitamin K nutritional status and dietary tools for the assessment of vitamin K intakes will be developed and validated. In vivo studies with rats will determine dietary sources of vitamin K and requirements related to the synthesis of matrix gla protein (MGP). The effects of aging and gender on the expression of MGP will be studied in relationship to dietary sources of vitamin K (phylloquinone and menadione) and vitamin K antagonists	904,769
Absorption & Metabolism of Phytochemicals: Enhancement of Antioxidant Defense Mechanisms in Aging—10/01/96–09/30/99. Objective: Determine (1) extent of absorption and metabolism of flavonoids in fruits and vegetables high in antioxidant activity, (2) usefulness of Oxygen Radical Absorbing Capacity (ORAC) assay as an indicator of antioxidant capacity of fruits and vegetables and status in animal models exposed to increased oxidative stress, and (3) possible health related outcomes	370,184
Dietary Antioxidants, Aging, and Oxidative Stress Status—11/01/94–10/31/99. Objective: To determine the effect of enhancing antioxidant status, on oxidative status, immune responsiveness, and other physiologic functions, interactions between vitamin E, other dietary antioxidants and/or polysaturated fatty acids, the effect of dietary antioxidants on the generation of eicosanoid and cytokine products and oxidated lipid, protein and nucleic acid targets, the value of measures of antioxidants and oxidative stress status as biomarkers of aging and health	670,700

Human Nutrition Research Center on Aging—Research Projects Related to Nutrition and the Elderly—Continued

	Funding level fiscal year dollars
Gastrointestinal Function and Metabolism in Aging—11/01/94–10/31/99. Objective: To delineate the pathways of intestinal carotene metabolism, and to determine if any metabolic intermediate can transactivate nuclear receptors; to determine if beta-carotene or cryptoxanthin can prevent gastric cancer in the feffet/model; to determine relative bioavailabilities of different carotenoid compounds in the human. To determine niacin requirements in elderly humans. To study the effect of antioxidants in gut immunity in young and elderly adults	1,684,467
Nutrition, Aging and Immune Response—11/01/94–10/31/99. Objective: Investigate the role of nutrients and their interactions with other environmental factors in age-associated changes of the immune response, to reverse and/or delay the onset of these immunological changes by dietary modification and to use the immune response as an index in determining the specific dietary requirements for older	1,033,933
The Role of Aging in Energy and Substrate Regulation and Body Composition—1/11/95–1/10/00. Objective: To examine the extent and causes of changes in energy metabolism, energy regulation and body composition with agin, and to investigate optimal values for dietary energy intake and expenditure in the aging population. In particular to determine the (1) roles of genetic inheritance and environment factors in determining fat content, (2) extent to which changes in body fat and protein with aging are inevitable, and (3) molecular regulation of proteins involved in fat metabolism in adipocytes	1,879,726
Regulation of Gene Expression in Nutrient Metabolism—01/11/95–01/10/00. Objective: The major areas being explored are aimed at defining the molecular mechanisms which contribute to metabolic dysfunction in diabetes and obesity. Specifically, the role of oxidants in nutrient and hormonal signal transduction and gene expression will be examined. Secondly, how aging influences nutrient and hormonal signaling and gene expression will be explored	432,679
Mineral Bioavailability in the Elderly—01/11/95–01/10/00. Objective: To define the dietary factors that influence the Bioavailability, requirements, and status of minerals especially, Ca, Mg, Fe and Zn in humans. To define the relationship between restriction fragment length polymorphisms in the vitamin D receptor gene and calcium metabolism in humans. To define the mechanism of age-associated intestinal calcium malabsorption	610,334
Bioavailability of Nutrition in the Elderly—01/11/95–01/10/00. Objective: To study the bioavailability of water soluble vitamins in the aging population and determine the effect of aging on vitamin requirements. To examine the basis for the absorption utilization and excretion of water soluble vitamins from food in the maturing and elderly population. To assess vitamin status and its relationships to drug intake and chronic diseases. To study the impact of subclinical vitamin deficiencies on the integrity and function of body physiology	901,017
Dietary Assessment of Rural Older Persons—02/01/96–12/31/00. Objective: (1) Test dietary assessment methodologies (24-hr phone recalls and written food records) in a rural population of older persons. (2) Seek confirmation of dietary findings using doubly-labeled water and indirect calorimetric procedures. (3) Correlate dietary findings with biomarkers of nutritional status (i.e., measures of visceral protein, folate, B 12, pyridoxine, homocysteine and iron). (4) Investigate nutrition knowledge and practices (use of dietary supplements and reduced calorie foods) of rural older persons	186,857
Maintaining Bone Health in the Elderly—11/01/94–10/31/99. Objective: Define the intake of calcium and vitamin D above which skeletal mineral is maximally spared. This requires an understanding of how hereditary, demographic, endocrine, and physical factors (i.e., race, sex, age, years since menopause, weight, and activity level) affect the absorption and utilization of these nutrients. Race differences in bone metabolism will be sought in an effort to understand why blacks have less osteoporosis	1,100,401

Human Nutrition Research Center on Aging—Research Projects Related to Nutrition and the Elderly—Continued

	Funding level fiscal year dollars
Dietary Effects on Neurological Function—10/01/96–09/30/99. Objective: Identify selected food components that affect neurological function and determine their mechanism of action	633,579
Lipoproteins, Nutrition and Aging—01/11/95–01/10/00. Objective: To develop optimal diets in terms of fat and cholesterol content which are effective in reducing LDL cholesterol, as well as favorably affecting other heart disease risk factors, to study nutritional regulation of plasma lipoproteins in animals, and to study the interrelationships between aging, nutrition, genetics, and to examine ways to prevent diet-induced atherosclerosis, lipoproteins, and heart disease risk in populations	1,285,299
Effect of Nutrition and Aging on Eye Lens—01/11/95–01/10/00. Objective: One-half of the eye lens cataract operations and savings of over $1 billion would be realized if formation could be delayed by only 10 years. Enhancement of dietary antioxidants, such as vitamin C, and other nutrients, such as carotenoids or tocopherol, will be used to delay damage to lens proteins and proteases and to maintain visual function in elderly populations. This should delay, cataract-like lesions in eye lens preparations, cataracts in vivo, and age-related maculopathy	958,286
Epidemiology Applied to Problems of Aging and Nutrition—01/11/95–01/10/00. Objective: To define diet and nutrition needs of older Americans. To advance methods in nutritional epidemiology. To develop indices which reflect nutrient intake and which predict health or disease outcomes in aging populations	1,250,359

COOPERATIVE STATE RESEARCH, EDUCATION, & EXTENSION SERVICE, (CSREES)

PROGRAMS AND ACCOMPLISHMENTS

Title and purpose statement of each program or activity which affects older Americans

The Cooperative State Research, Education, and Extension Service (CSREES) in its mission advances research, extension, and higher education in the agricultural, environmental, and human sciences to benefit people, communities, and the Nation. As a major research and education arm of USDA, CSREES through its Land-Grant institution network has conducted educational and research programs that have benefited older persons, their adult children, and caregivers. The vision is for older persons to maintain and continue a quality lifestyle while aging; have a greater opportunity to be financially secure; experience positive human relations; and to have the knowledge necessary to access health care options.

CSREES and its state partner institutions collaborate with a variety of national, state, and local organizations and agencies such as the American Association of Retired Persons (AARP) including the AARP Grandparent Information Center, the National Association for Family and Community Education, the Hospice Foundation of America, the Administration on Aging, the Area Agencies on Aging, American Society on Aging, American Gerontological Society, the Brookdale Foundation Group, Grandparents United for Children's Rights, Family Support Education Program, Generations United, Health Care Financing Administration, and Federal/State/local departments of human/family services and health. This collaboration provides more well-coordinated programs for consumers

and extends the resources of each collaborator to better serve the clientele.

As a component of the CSREES National Initiative on Children, Youth, and Families at Risk, human and electronic networks are addressing targeted issues identified by professionals and stakeholders throughout the system. One of those networks, the National Network for Family Resiliency (NNFR), provides leadership for acquisition, development, and analysis of resources that foster family resiliency. Family resiliency is defined as the family's ability to cultivate strengths to positively meet the challenges of life. The NNFR brings together educators, researchers, agency personnel, families, advocates for families, and practitioners who share an interest in strengthening families that face multiple risks to their resiliency. Collaborators from CSREES and more than 40 Land-Grant institutions share leadership for maximizing expertise, bringing research to bear on significant family issues, and guiding research based on evaluation of programs and practices. The network provides access to resources through multiple avenues including electronic media, training and education, and community development. Within the network, a special interest group has formed to address intergenerational issues. The work group is composed of more than 35 multi-state and multi-institutional members. Currently their focus is on "grandparents raising grandchildren" and "relationships between generations."

An Internet web site was developed that highlights resources for grandparents/relatives as primary caregivers and promotion of positive intergenerational relationships for educators and the general public. A variety of topics are included in the web information. For example, information on elder abuse, family support, and families with special needs are included. An extensive collection of curriculum, research abstracts, and educational resources/materials can be found on the web site. The Internet address is <http://www.nnfr.org/igen/>.

The Intergenerational Special Interest Work Group has planned a national video conference entitled, "Grandparents Raising Grandchildren: Implications for Professionals and Agencies. The video conference will be held January 12, 1999. The University of Wisconsin-Extension Cooperative Extension Service and Purdue University Cooperative Extension Service are the lead institutions for this project.

The video conference will provide training for professionals from a broad spectrum of family-serving organizations and agencies. Participants will explore the issues facing grandparents raising their grandchildren, examine the latest research, and learn about resources for clientele. The ultimate goal is more educational programs for the nearly 4 million grandparents serving as primary caregivers for their grandchildren. This is a rapidly emerging social and educational concern and most professionals need more training to better serve this growing clientele group.

A number of land-grant institutions have active programs designed to help relatives be more capable caregivers. For example, the University of Kentucky Extension Service teaches parenting techniques, use and access of community agencies, computer literacy, and mutual support techniques for caregiving grandparents.

Grandparents participate in monthly support group meetings and receive a newsletter. In New Hampshire, the Cooperative Extension Service offers a series of classes through a community resource center to grandparents parenting their grandchildren. Cornell Cooperative Extension, North Carolina State University Cooperative Extension Service, and Purdue University Cooperative Extension provide similar programs to grandparents facing parenting again.

A national program funded by the Brookdale Foundation Group of New York City provides supportive services for programs focusing on grandparents and other relatives who have assumed the responsibility of surrogate parenting. The initiative calls attention to state and local needs by supporting the establishment of statewide networks of local organizations and statewide task forces, relative support groups, and community-based services to grandparents and other relatives raising grandchildren. The University of Wisconsin-Extension and Cornell University Extension Service received seed grants from the Foundation during 1998 to allow Cooperative Extension System personnel to expand their programming to address this growing societal issue.

CSREES and the Cooperative Extension System launched another national initiative, Healthy People * * * Healthy Communities in June 1998. The goals of the initiative are to (1) Educate and empower individuals and families to adopt healthy behaviors and lifestyles, (2) Educate consumers to make informed health and health care decisions, and (3) Build community capacity to improve health. Target audiences include older citizens.

Partnerships are being formed with the Centers for Disease Control and private corporations to address life cycle immunization education. Older citizens need to be able to make informed decisions about vaccinations.

With enormous change taking place in the health care arena, the land-grant university system will be able to help consumers make informed decisions regarding health care choices. The initiative will marshal the extension, teaching, and research system and its stakeholders to address these and other health care issues of interest to older Americans.

Through the Cooperative Extension System at Land-Grant institutions, administrators and specialists in such fields as aging/gerontology, housing, financial management, nutrition, health, human development, family life, community development, and the agricultural sciences; plus the county extension educators serving 3,150 counties have designed, implemented, and evaluated numerous programs in the field of aging/gerontology. Below are highlights of these programs.

Brief description of accomplishments

GEORGIA

The University of Georgia Cooperative Extension Service produces a quarterly newsletter entitled, "Senior Sense Putting Knowledge to Work for Older Georgians." The newsletter is distributed to 2,700 persons and is also available on the College of Family and Consumer Sciences web page, where it is accessed and read

worldwide. Topics covered in the newsletters include health issues, financial management, and care giving tips.

IDAHO

In Idaho, the rapid growth in the numbers of elderly citizens has produced the need for more people trained with an understanding of aging development and a wide variety of approaches to serving the elderly. An Idaho extension/research specialist joined forces with a teaching/research colleague to develop an interdisciplinary minor in aging in the School of Family and Consumer Sciences at the University of Idaho. A team of professionals from academic programs in psychology, sociology, architecture, family and consumer sciences, communications, and a representative from the library developed a proposal and submitted it to the Idaho Board of Education. The program has been approved. A minor in Aging will be an important career compliment to majors as the student develops expertise in a subject matter support area like aging.

The University of Idaho Cooperative Extension Service (CES) and vocational education staff identified a need for additional trained home health aides by the year 2005. They discovered that 890 people were employed as aides in 1994 but by the year 2005, 1244 would be needed to meet the demand. The CES and the Idaho Department of Vocational Education collaborated to plan a secondary and post-secondary program for Geriatric Home Care Aides. They compiled a curriculum to be used to train home care aides, piloted the program, established sites for student clinical experience and internships, and established a system for graduate placement. Upon completion of the program including the internship, the student will be eligible to take the examination for Certified Nurse Assistant certification. In Idaho, these positions command approximately $8.00 per hour and prepare people for a wide variety of career paths.

In October 1998, the University of Idaho Cooperative Extension Service hosted their annual conference focused on issues of aging and health. The conference provided professional update and continuing education units for 175 agency personnel who provide health care and services for the elderly.

MICHIGAN

Michigan State University Cooperative Extension Service is in a partnership with Blue Cross and Blue Shield of Michigan, Kirtland Community College, Michigan Rural Aging Institute, Office of Services to the Aging, Michigan Department of Community Health, and the Michigan Family Independence Agency to provide caregiver training that will prepare caregivers to improve the care provided to older persons. Annually 4,000 caregivers of older adults are trained on such topics as financial and legal issues of older adults, dementia, understanding difficult behaviors, working with the frail elderly, and financial abuse of the elderly. The training is provided statewide using distance learning technology. Caregivers obtain certification for completion of the training.

MINNESOTA

A program for transferring non-titled property among family members after a death was created by the University of Minnesota Extension Service. "Who Gets Grandma's Yellow Pie Plate?" is an estate planning process through which individuals can plan to share with their family members their possessions and record the meanings associated with the property while they are living. This program has been widely replicated throughout the country.

In preparation for the "Minnesota Celebration of Community" effort during the year 2000, school children listen to oral histories of elders; create songs, recitations, and art based on the personal stories of their elders. The program culminates in a community-wide celebration honoring older citizens.

MISSOURI

The Center on Aging Without Walls is a unique way to bring information on age-related issues to the University Outreach and Extension network, to the older adults of the State of Missouri, and the many caregivers who provide care for older citizens. The Center is a web site made possible through a partnership between the Center on Aging Studies at the University of Missouri—Kansas City and the University of Missouri Outreach and Extension. Care giving issues have been addressed in this initial phase of the web site. Topics covered include burdens and rewards, care giver resources, ethics, health concerns, family relationships, and mental health. The web address is <http:Hcei.haag.umkc.edu/casww>.

"Building Bridges" is a collaborative program which provides opportunities for children and seniors to interact. The program targets the frail and home-bound elderly. Through the three components of the program—education, friendship, and caring—children learn from and develop positive images of the elderly and help older adults achieve a sense of fulfillment. In consideration of the needs of the elderly and the children, a variety of appropriate activities occur such as visits to nursing homes, tutorial assistance for children, interviewing, story telling, reading, and dancing.

NEW YORK

A Cornell University program that has young people and senior citizens interacting in ongoing activities has become a national model. A detailed handbook for group leaders who want to replicate the program is available nationally. Geared for children ages 9 to 13, but easily adaptable for other ages, Project EASE—Exploring Aging through Shared Experiences—is ideal for groups of scouts, 4-H groups, religious youth groups, after-school programs and other youth organizations. It can also be utilized in the classroom. The project is based on current research on the effectiveness of intergenerational programs to develop activities and projects that youth and senior citizens can share for mutually satisfying, meaningful and goal oriented interaction. Three years in development, Project EASE has been field tested and evaluated by more than 70 4-H clubs in New York, involving about 600 participants. The youth and seniors may plan a joint community service project in which children and elders work together on an activity that the

community will value; shared group activity projects that both groups enjoy but are not community service; and one-on-one programs, in which each youth is paired with a senior in activities such as arts and crafts, sharing oral histories, grooming pets, playing board games, etc. This project is supported in part with grants from the Charles Stewart Mott Foundation, the Public Welfare Foundation, and the College of Human Ecology at Cornell.

In another innovative program, Cornell University researchers, Coperative Extension Service faculty, and State/local volunteers, and community agencies are addressing housing options for senior citizens. Twenty counties in New York have provided multi-faceted educational programs about community-based housing options for the elderly for both professionals and the public. Professionals, housing and human service agency staff, municipal officials, and residents have new capacity to respond the population. As a result of this project, they are knowledgeable about low-cost community-based housing options such as shared housing, accessory apartments, and elder cottages. As a result of Cornell's research and extension outreach, state legislation was passed to provide capital funding for the creation of these new types of housing units. Municipal land-use and zoning regulations have been changed to permit the development of this housing in approximately 25 communities. Technical assistance is provided to attorneys and community planners about zoning and land-use regulations. There are now 12 shared living residences in communities throughout the State. A not-for-profit organization has received $375,000 from the State to develop and operate an elder cottage lease program for low-income elderly.

NORTH CAROLINA

The North Carolina Aging with Gusto program has been adopted in more than half of the housing needs of an increasing older North Carolina's 100 counties. This program is believed to be unique nationally because it focuses on the positive aspects of aging in how to achieve optimum financial, physical, and mental well-being in later years. Older adults learn how to prepare for and cope with problems related to finances, legal issues, health, care giving, housing and self-care. Recent figures suggest that the program has reached more than 35,000 people directly.

North Carolina Cooperative Extension Service (CES) and the North Carolina Division of Aging have collaborated to pilot a new approach by distributing nutrition education materials with the Meals on Wheels food deliveries. This is one way to reach homebound elderly that are especially difficult to reach and who are at greater risk of malnutrition and chronic disease. Sixteen different learn-at-home lessons have resulted in positive changes in the stages of change for fruit and vegetable consumption as evidenced in the pre- and post-test from 177 participants in five counties.

To address another important issue for seniors, North Carolina CES and the North Carolina State Attorney General's Office worked together to educate older adults about consumer scams. In one county, 785 seniors were reached with 80 percent reporting they would be more cautious about telephone and mail solicitations and 77 percent stated that the program motivated them to change

some of their consumer practices such as: avoid sharing credit card information on the telephone, making financial donations to known charities and organizations, and checking on offers that are "too good to be true."

OREGON

Oregon State University Cooperative Extension Service (CES) has a grant to study Behavioral Changes in Dementia Patients: Relationships to Caregiver Well-Being. Currently data is being collected on caregivers to Alzheimer's patients. The goal of the research is to expand the understanding of later life care giving to dementia patients and its consequences on caregivers' mental and physical health. Extension curricula will be developed as a result of this research.

Dissemination of research-based information is the hallmark of the Cooperative Extension System. A network of professional educators provide such information in community-based settings. For example, Oregon State University is in a four university consortium to provide geriatric education with a special emphasis on reaching rural areas. A grant from the Geriatric Education Center Training Grant, Department of Health and Human Services, Public Health Services makes this program possible. A special focus is on reaching rural health care professionals to update and expand their knowledge of geriatric health issues. Oregon CES has disseminated 13 health guidelines for consumers relevant to older populations to 2,700 English and over 625 Spanish consumers. In addition, Extension sponsored four teleconferences on a variety of women's health issues in later life with satellite downlinks in 27 sites throughout the State.

PENNSYLVANIA

Pennsylvania State University Cooperative Extension Service (CES) has a preventive health program for people over age 75 and their family caregivers. The program provides independent living through lifestyle changes, nutrition, and regular exercise. Developed in rural Pennsylvania in Tioga, Bradford, Sullivan, and Susquehanna counties, this program reaches an extremely high-risk population. Ninety percent of the participants had annual household incomes below $20,000, and 84 percent had only a high school or less education. High percentages had nutrition risk, low levels of physical activity, and losses in daily living activities. This program will be expanded statewide.

Pennsylvania CES has also provided a program entitled "Medicare Managed Care: What Does It Mean For You?" More than 190 senior citizens and health care professionals in Centre County, Pennsylvania, participated. The six sessions were organized by Penn State's College of Agricultural Sciences and the Pennsylvania Office of Rural Health, in collaboration with Centre County CES, American Association of Retired Persons, Centre County Office of Aging Apprise Program, and the Brookline Village.

In Allegheny County the Extension Service assisted residents of Carnegie Towers public housing in Pittsburgh to organize and take leadership for a fledgling community. Originally built for low income elderly citizens, a predominantly young population now occu-

pies the project. Most of the households are headed by single, low-income females. Intergenerational conflicts existed between elderly residents and children, partly because the housing area did not include recreational facilities for youth. After Extension leader training workshops were completed, residents organized and elected a tenant council of eight adults and one youth. Since organizing, the council has sponsored a Community Day Celebration, supported by various fund raising activities. They have established a computer room with computer training classes, an outdoor play area, Extension educational programs related to 4-H youth development and nutrition, and a program highlighting guest speakers who provide useful and practical information.

"Generation Celebration" is designed to help students develop communication skills and to foster positive attitudes about older persons. This awareness program uses a variety of activities including family history, shared recreation, and visits to long-term care settings. In some communities, high school youth have adapted the program to include networking with the Area Agency on Aging to provide regular telephone reassurance to a vulnerable older person and in some instances developing communication skills that improve the functioning of dementia patients and family members in institutional care facilities.

SOUTH CAROLINA

Clemson University Cooperative Extension Service (CES) specialist Katherine Carson has developed a program entitled, Learning, Innovation, Networking, and Celebration (LINC) nutrition program. LINC focuses on the elderly and preschool children, as well as pregnant and parenting adolescents. Changes in attitude, skills, knowledge, and behavior are documented. LINC has reached 2,407 elderly South Carolinians. LINC is a collaborative effort between the Clemson University CES, the South Carolina Department of Social Services, and the State Department of Health and Environmental Control Center for Health Promotion. South Carolina Governor David Beasley has recognized Carson for developing a nutrition program that reaches senior citizens by presenting her with the Governor's Health Promotion for Older South Carolinians Award. This program will be expanded with the assistance of a $759,000 grant from USDA Food and Consumer Services. One phase of the expansion will include a Nutrition Education and Resource Center on the Internet for people who want information rapidly.

TEXAS

Project Y.E.S. promotes positive intergenerational relationships between youth and seniors by training 4–H and FHA–HERO youth to provide assisted-living services that enhance independent lifestyles for the elderly in rural communities. Youth provide housekeeping, personal services, lawn care, and home/auto repair for the elderly. In return, the elder recipients of the services share their time and talent with the youth. Youth learn more about the aging process, communicating among generations, and potential career options. The program sponsor, the Texas Agricultural Extension Service has developed a curriculum manual, a youth-service pro-

vider workbook, videos and recognition materials to support this program.

WISCONSIN

University of Wisconsin-Extension has formed a statewide network to facilitate, link, inform, and advocate for intergenerational understanding and interdependence by making the best use of the skills of persons of all ages.

ECONOMIC RESEARCH SERVICE (ERS)

The ERS analyzes data collected from the USDA's Continuing Surveys of Food Intakes by Individuals (CSFII) to understand food choices made by American elderly age 60 and above. The American elderly population represents 18 percent of the population and accounts for about 30 percent of all health care expenditures. Improved diets could prevent a significant proportion of the incidences of heart disease, stroke, cancer, diabetes, and osteoporosis-related hip fractures in this population. Therefore, a better understanding of food choice and nutrient intake by the elderly can improve their health and well-being and hence reduce both present and societal medical outlays.

Brief description of accomplishments:

The following publications on the elderly have been prepared by our staff in 1998:

Weimer, J. "*Factors Affecting Nutrient Intake of the Elderly.*" ERS AER No. 769, Oct. 1998.

Lin, B.H. and E. Frazao. "A Nutritional Quality of Foods At and Away from Home." *Food Review*, Vol. 20: 33–40. May–Aug. 1997.

Barefield, E. "*Osteoporosis-Related Hip Fractures Cost $13 Billion to $18 Billion Yearly." Food Review*, Vol. 19: 31–36. January–April 1996.

FOOD AND NUTRITION SERVICE (FNS)

Title and purpose statement of each program or activity which affects older Americans

The Food Stamp Program provides monthly benefits to help low-income families and individuals purchase a more nutritious diet. In fiscal year 1997, $20 billion in food stamps were provided to a monthly average of 23 million persons.

Households with elderly members accounted for approximately 18 percent of the total food stamp caseload. However, since these households were smaller on average and had relatively higher net income, they received only 7 percent of all benefits issued.

Brief description of accomplishments

FNS continues to work closely with the Social Security Administration (SSA) in order to meet the legislative objectives of simplified application processing for Supplemental Security Income (SSI) households.

In response to recommendations for joint processing improvements, FNS and SSA have stepped up efforts to ensure that SSI applicants are counseled on their potential eligibility to receive food

stamps. Additionally, a joint Supplemental Security Income/Food Stamp processing demonstration—the South Carolina Combined Application Project (SCCAP)—was begun in the fall of 1995. Approximately 22,000 SSI households in South Carolina receive food stamp benefits through this project. An independent evaluation of SCCAP is underway and is scheduled to be completed in 1999.

Title and purpose statement of each program or activity which affects older Americans

The Commodity Supplemental Food Program provides supplemental foods, in the form of commodities, and nutrition education to infants and children up to age 6, pregnant, postpartum or breastfeeding women, and the elderly (at least 60 years of age) who have low incomes and reside in approved project areas.

Service to the elderly began in 1982 with pilot projects. In 1985, legislation allowed the participation of older Americans outside the pilot sites if available resources exceed those needed to serve women, infants, and children. In fiscal year 1997, approximately $45 million was spent on the elderly component.

Brief description of accomplishments

About 61 percent of total program spending provides supplemental food to approximately 243,000 elderly participants a month. Older Americans are served by 20 of the 20 eligible State agencies.

Title and purpose statement of each program or activity which affects older Americans

The Food Distribution Program on Indian Reservations (FDPIR) provides commodity packages to eligible households, including households with elderly persons, living on or near Indian reservations. Under this program, commodity assistance is provided in lieu of food stamps.

Approximately $26 million of total costs went to households with at least one elderly person. (This figure was estimated using a 1990 study that found that approximately 39 percent of FDPIR households had at least one elderly individual.)

Brief description of accomplishments

This program serves approximately 48,000 households with elderly participants per month.

Title and purpose statement of each program or activity which affects older Americans

The Child and Adult Care Food Program (CACFP) provides Federal funds to initiate and maintain nonprofit food service for children, the elderly, or impaired adults in nonresidential institutions which provide child or adult care as well as children in emergency shelters. The program enables child and adult care institutions to integrate a nutritious food service with organized care services.

The adult day care component permits adult day care centers to receive reimbursement of meals and supplements served to functionally impaired adults and to persons 60 years or older. An adult day care center is any public or private nonprofit organization or any proprietary Title XIX or Title XX center licensed or approved

by Federal, State, or local authorities to provide nonresidential adult day care services to functionally impaired adults and persons 60 years or older. In fiscal year 1997, $29 million was spent on the adult day care component.

Brief discussion of accomplishments

The adult day care component of CACFP served approximately 26 million meals and supplements to over 50,000 participants a day in fiscal year 1997.

In 1993, the National Study of the Adult Component of CACFP was completed. Some of the major findings of the study include: overall, about 31 percent of all adult day care centers participate in CACFP; about 43 percent of centers eligible for the program participate. CACFP adult day care clients have low incomes; 84 percent have incomes of less than 130 percent of poverty. Many participants consume more than one reimbursable meal daily; CACFP meals contribute just under 50 percent of a typical participant's total daily intake of most nutrients.

Title and purpose statement of each program or activity which affects older Americans

The Emergency Food Assistance Program (TEFAP) provides nutrition assistance in the form of commodities to emergency feeding organizations for distribution to low-income households for household consumption or for use in soup kitchens.

Approximately $17 million in commodities were distributed to households including an elderly person. (This figure is estimated using a 1986 survey indicating that about 38 percent of TEFAP households have members 60 years of age or older.)

Brief description of accomplishments

About 38 percent of the households receiving commodities under this program had at least one elderly individual.

Title and purpose statement of each program or activity which affects older Americans

The Nutrition Program for the Elderly provides cash and commodities to States for distribution to local organizations that prepare meals served to elderly persons in congregate settings or delivered to their homes. The program addresses dietary inadequacy and social isolation among older individuals. USDA currently supplements the Department of Health and Human Services' Administration on Aging with approximately $145 million worth of cash and commodities.

Brief description of accomplishments

In fiscal year 1997, over 247 million meals were reimbursed at a cost of almost $150 million. On a average day, approximately 932,000 meals were provided.

FOOD SAFETY AND INSPECTION SERVICE (FSIS)

Title and purpose statement of each program or activity which affects older Americans

FSIS provides older Americans with information about safe food handling through consumer education campaigns. Older Americans are an important audience for the agency's consumer education program because they face increased risks from foodborne illness. They are more likely to become ill from pathogens in food and, once ill, the health consequences can be more serious. The elderly, with more than 35 million people in their ranks, are the largest group facing increased risks from foodborne disease.

Brief description of accomplishments

FSIS has developed several publications designed to address the special needs and interests of older Americans. "Seniors Need Wisdom on Food Safety" is a feature issued from the USDA Meat and Poultry Hotline and distributed to callers to the Hotline. The publication explains why older Americans face special risks from foodborne illness and how to handle food safely. Another publication, a large-print chart, provides information seniors frequently request about how long food can safely be stored in the refrigerator.

Finally, the FSIS food safety education staff is developing a video called "Healthy Choices, Healthy Lives: Food Safety for Seniors." When completed, this video will be distributed to 800 local area offices on aging and be used at senior centers throughout the country. The video project has been developed with cooperation and input from the Administration on Aging, the American Association of Retired Persons and the National Institutes on Aging.

MARKETING AND REGULATORY PROGRAMS

The Agricultural Marketing Service purchases commodities for several federal feeding programs, with the school lunch program being by far the largest. However, a very small amount of our purchases goes to the Nutrition Program for the Elderly, which is administered by the Department of Health and Human Services. The Nutrition Program for the Elderly provides cash or commodity support to social centers for the elderly.

ITEM 2—DEPARTMENT OF COMMERCE

UPDATES TO THE DEVELOPMENTS IN AGING REPORT FOR 1997 AND 1998

This report provides short descriptions and listings of products that contain demographic and socioeconomic information on the elderly population, 65 years of age and older, here and abroad. All of the items included in this report were released by the Census Bureau during calendar years 1997 and 1998.

The items listed are available to the public in a variety of formats including print, electronic data bases, microcomputer diskettes, and CD–ROM. Many of these products can be found on the Internet at the Census Bureau's Web site at: <http://www.census.gov>.

1. Population, Housing, and International Reports.—Three of the Census Bureau's major report series (Current Population Reports, Current Housing Reports, and International Population Reports) are important sources of demographic information on a wide variety of population-related topics. This includes information on the United States' elderly population, ranging from their numbers in the total population to socioeconomic characteristics, such as income, health insurance coverage, need for assistance with activities of daily living, and housing situation. Additionally, data on the elderly around the world also are found in this series of reports.

Much of the data used in Current Population Reports are derived from the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP). The Current Housing Report series presents housing data primarily from the American Housing Survey, a biennial national survey of approximately 55,000 housing units. The International Population Report series includes demographic and socioeconomic data reported by various national statistical offices, such as the National Institute on Aging, agencies of the United Nations, and the Organization for Economic Cooperation and Development.

Additionally, the Census Bureau's population projection program and Special Studies Report series also contain information about the future estimated size of the elderly population and information pertaining to statistical methods, concepts, and specialized data.

2. Decennial Products.—A large number of printed reports, computer tape files, CD–ROMs, and summary tape files are produced after each decennial census. Included in these is information and data on the numbers and characteristics of persons 65 years of age and over.

3. Data Base on Aging/National Institute on Aging Products.—The data base provides a summary of analytical studies and other ongoing international aging projects. Reports are based on compila-

tions of data obtained from individual country statistical offices, various international organizations, and estimates and projections prepared at the Census Bureau. This work is funded by the National Institute on Aging.

4. Federal Interagency Forum on Aging-Related Statistics Summary.—The Forum, for which the Census Bureau is one of the lead agencies, encourages cooperation, analysis, and dissemination of data pertaining to the older population. A summary of the activities of the Forum lists a number of aging-related statistics.

5. Other Products.—In addition to the major products listed separately, we include a list of other data products that contain demographic and socioeconomic information on the elderly population.

1. POPULATION, HOUSING, AND INTERNATIONAL REPORTS

POPULATION

	Report Number
Series P–20 (Population Characteristics):	
Regularly recurring reports in this series contain data from the Current Population Survey. Topics include geographical mobility, fertility, school enrollment, educational attainment, marital status and living arrangements, households and families, the Black and Asian and Pacific Islander populations, persons of Hispanic origin, voter registration and participation, and various other topics for the general population, as well as the elderly population 65 years and older.	
Educational Attainment in the United States: March 1997	505
Marital Status and Living Arrangements: March 1997	506
The Foreign-Born Population: 1997	507
The Black Population in the United States: March 1997	508
Household and Family Characteristics: March 1997	509
Geographical Mobility: March 1996 to March 1997	510
The Hispanic Population in the United States: March 1997	511
The Asian and Pacific Islander Population in the United States: March 1997	512
Series P–23 (Special Studies):	
Information pertaining to methods, concepts, or specialized data is furnished in these publications. Reports in this series contain data on mobility rates, home ownership rates, and the Hispanic population for both the general and older populations.	
How We're Changing: Demographic State of the Nation: 1997	193
Population Profile of the United States: 1997	194
Series PPL (Population Paper Listings):	
This series of reports contains estimates of population and projections of the population by age, sex, race, and origin. Other topics appear as well some of which address issues related to aging.	
Who is Minding Our Preschoolers: Fall 1994	81
U.S. Population Estimates by Age, Sex, Race, and Hispanic origin: 1990 to 1997	91
The Foreign-Born Population: 1997	92
Educational Attainment in the United States: March 1998	99
Marital Status and Living Arrangements: March 1998	100
Household and Family Characteristics: March 1998	101
The Hispanic Population in the United States: 1998	105
The Black Population in the United States: March 1997	106
The Asian and Pacific Islander Population: March 1997	108
Estimates of the Population of States by Age and Sex: 1990 and 1997	109
Estimates of the Population of Counties by Broad Age Group: July 1, 1990 to July 1, 1997	112

HOUSING

INTERNATIONAL

Series WP (World Profiles):
This series provides comprehensive demographic information for all countries and regions of the world. The information is maintained in a data base and is regularly updated. In addition, each edition of the series focuses on a specific topic of interest related to the world's population.
World Population Profile: 1998. Forthcoming January 1999
Series WID (Women of the World):
This series contains information on the world's women, including elderly women. Demographic, educational, employment, and political participation data are included.
Women's Education in India 1998 98–1

2. DECENNIAL PRODUCTS

No new products were released in this area in 1997 or 1998. A report on the population aged 100 and over in 1990, entitled Centenarians in the United States, is forthcoming.

3. DATA BASE ON AGING/NATIONAL INSTITUTE ON AGING PRODUCTS

The following reports, articles, wall charts, and book chapters are based on information contained in the International Data Base on Aging and other related holdings of the International Programs Center, Population Division, Bureau of the Census. This work is carried out with the support of the National Institute on Aging and is intended to highlight the present and future worldwide dimensions of aging and portray the diversity among nations.

"Gender Stereotypes: Data Needs for Aging Research." Victoria Velkoff and Kevin Kinsella. *Aging International,* forthcoming, 1999.

Aging in the Americas into the XXI Century. [Wall chart] U.S. Bureau of the Census, Pan American Health Organization and U.S. National Institute on Aging, 1998.

Pension Management and Reform in Asia: An Overview. Loraine A. West and Kevin Kinsella. Executive Insight No. 11. National Bureau of Asian Research. May 1998.

"Aging Populations Signal a Demographic Sea Change." Kevin Kinsella and Victoria Velkoff. *Common Health*. Spring 1998.

Aging in the United States—Past, Present, and Future. [Wall chart] U.S. Bureau of the Census, 1997.

"The Demography of An Aging World." Kevin Kinsella. In *The Cultural Context of Aging*, Jay Sokolovsky, ed. Greenwood Press. 1997.

4. THE FEDERAL INTERAGENCY FORUM ON AGING-RELATED STATISTICS SUMMARY

The Census Bureau is one of the convening agencies in the Federal Interagency Forum on Aging-Related Statistics. The Forum, begun in the mid-1980s, was the first-of-its-kind effort to coordinate data and efforts of different government agencies. The Forum currently is being managed by staff of the National Center for Health Statistics, with the support of the National Institute on Aging.

The Forum encourages cooperation among federal agencies in the development, collection, analysis, and dissemination of data pertaining to the older population. Through coordinated approaches,

the Forum extends the use of limited resources among agencies through joint problem-solving, identification of data gaps, and improvement of statistical information bases on the older population that are used to set project priorities of individual agencies.

The Forum goals include widening access to information on the older population, promoting communication between data producers and public policymakers, coordinating the development and use of statistical data bases among relevant federal agencies, identifying information gaps/data inconsistencies, and evaluating data quality. The work of the Forum facilitates the exchange of information about needs at the time new data are being developed or changes are being made in existing data systems. It also promotes communication between data producers and policymakers.

As part of the Forum's work to improve access to data on the older population, the Census Bureau published in 1997 a report entitled *Data Base News in Aging*, which includes developments in data bases of interest to researchers and others in the field of aging. Much of the information comes from government-sponsored surveys and products. All federal agencies are invited to contribute to the report, which is produced in hard copy and is available on the Census Bureau's Internet site. A new edition is planned for release in 1999.

5. OTHER PRODUCTS

American Housing Survey

Computer data tapes and CD–ROM are available for the 1997 survey efforts. The survey is designed to provide information on the housing situation in the United States. Information is available by age.

CPS and SIPP Surveys

Data for both surveys are available in electronic media.

Statistical Abstract of the United States: 1997 and 1998

As the National Data Book, these annually released products contain an enormous collection of statistics on social and economic conditions in the United States. Selected international data also are included. The abstract appears in both print and CD–ROM versions.

International Data Base

The International Data Base (IDB) is a computerized data bank containing statistical tables of demographic and socioeconomic data for all countries of the world. Most demographic information comes from country-specific estimates and projections made by the Census Bureau's International Programs Center. Country-specific data on social and economic characteristics are obtained from censuses and surveys or from administrative records. Country files are regularly updated as new information becomes available. Selected information from the IDB is highlighted in the Census Bureau's various international reports and publications mentioned previously.

ITEM 3—DEPARTMENT OF DEFENSE

The Department of Defense has several ongoing initiatives in support of older Americans. They are detailed below.

ELDERCARE SUPPORT

The Department's Family Centers reports that there is an increasing demand for information about eldercare. The Centers providing information workshops on eldercare issues describe them as well-attended and very useful. In addition to workshops and seminars on eldercare, the Centers access the national 1–800 eldercare locator to assist family members with eldercare support services in other parts of the country. The Centers also have a number of useful pamphlets and handouts on eldercare that they provide to military family members seeking assistance for a particular eldercare issue.

The Family Centers often work with the local Retired Affairs Offices across the country in sponsoring Retired Affairs Seminars that draw thousands of military retirees and their families. For these seminars, the staff brings in experts to discuss eldercare topics such as long-term care insurance, respite care, medical information, Social Security benefits, and eldercare legal issues. These seminars are an important vehicle to update the military retiree community on current eldercare issues.

The Department of Defense recognizes that eldercare is a growing issue for military personnel and their family members and will continue to be responsive to the needs of the active duty and retired community in this regard.

HEALTH CARE

The Department of Defense has implemented TRICARE, a regionally managed care program for members of the uniformed services and their families and survivors, and retired members and their families.

TRICARE gives beneficiaries three choices for their health care delivery: TRICARE PRIME, TRICARE Extra, and TRICARE Standard. All active duty members will be enrolled in TRICARE Prime. Those CHAMPUS eligible beneficiaries whom elect not to enroll in TRICARE Prime and Medicare-eligible DoD beneficiaries will remain eligible for care in military medical facilities on a space-available basis.

TRICARE Prime is a voluntary enrollment option that offers patients the advantage of managed health care, such as primary care management, and assistance in making specialty appointment. The PRIME option offers the coverage of CHAMPUS plus additional preventive and primary care services. Retirees who are eligible for

CHAMPUS, i.e., those retirees under age 65, may enroll in PRIME and are charged an enrollment fee. Enrollees in TRICARE Prime obtain most of their care within the integrated military and civilian network of TRICARE providers.

TRICARE Extra allows CHAMPUS-eligible beneficiaries to receive an out-of-pocket discount when using preferred network providers. CHAMPUS beneficiaries who do not enroll in TRICARE Extra may participate in Extra on a case-by-case basis just by using network providers.

TRICARE Standard: This option is the same as the standard CHAMPUS program.

Under current law, military retirees and their families up to age 65 are eligible for CHAMPUS. Military retirees and their dependents over the age of 65 are not covered by CHAMPUS, but are eligible for care in military treatment facilities on a "space available" basis. Military beneficiaries over the age of 65 have traditionally relied on a combination of "space available" care at military treatment facilities, Medicare coverage; and other benefits gained through non-military employment. With the post-Cold War drawdown in the military and the growing number of retired beneficiaries, space available care has been shrinking. The Department of Defense is seeking ways to enhance its services to its over-65 beneficiaries. Specifically, the Department is conducting demonstration programs to test alternatives to expand health care coverage to Medicare-eligible beneficiaries. These demonstrations include a program offering "TRICARE Senior Prime" at six demonstration sites. Under this program, the Department enrolls military Medicare-eligible beneficiaries and receives capitated payments from the Medicare TRUST Fund. The program operates similar to a Medicare at-risk health maintenance organization, through which enrollees in TRICARE Senior Prime agree to receive all their health care from designated primary care managers at the military treatment facilities. The TRICARE Senior Prime enrollees receive all their Medicare-covered services through the MTF and civilian provider network, and also receive benefits such as prescription drugs. This demonstration runs for three years, and the Department of Defense will report to the Congress on the results of the test program. The purpose of the program is to leverage Medicare dollars flowing into the military treatment facilities to expand access to Medicare-eligible retirees.

The Department is also conducting a demonstration program offering Medicare-eligible retirees enrollment in the Federal Employees Health Benefit Program, a program offering TRICARE benefits as a "wraparound" benefit to supplement Medicare coverage, and a pilot program to expand the national mail order pharmacy benefit to military retirees over the age of 65.

ITEM 4—DEPARTMENT OF EDUCATION

ENFORCEMENT OF THE AGE DISCRIMINATION ACT OF 1975

CALENDAR YEARS 1997–1998

I. STATUS OF THE DEPARTMENT OF EDUCATION'S IMPLEMENTING REGULATION

The Department of Education's final regulation implementing the Age Discrimination Act of 1975 was published on July 27, 1993. The effective date of implementation was August 26, 1993.

The Department's regulation prohibiting age discrimination applies to all elementary and secondary schools, colleges and universities, public libraries, and vocational rehabilitation services. It covers age discrimination at these institutions except age discrimination in employment.

The regulation describes the standards for determining age discrimination; the responsibilities of recipients; and procedures for enforcing the statute and regulation.

II. AGE DISCRIMINATION ACT IMPLEMENTATION

The Department of Education's (ED) Office for Civil Rights (OCR) is responsible for enforcement of the Age Discrimination Act of 1975 (the Age Act), as it relates to discrimination on the basis of age in federally funded education programs or activities. The Age Act applies to discrimination at all age levels. The Age Act contains certain exceptions that permit, under limited circumstances, continued use of age distinctions or factors other than age that may have a disproportionate effect on the basis of age.

The Age Act excludes from its coverage most employment practices, except in federally funded public service employment programs under the Workforce Investment Act of 1998 (formerly the Job Training Partnership Act). The Equal Employment Opportunity Commission (EEOC) has jurisdiction under the Age Discrimination in Employment Act of 1967 to investigate complaints of employment discrimination on the basis of age. OCR generally refers employment complaints alleging age discrimination to the appropriate EEOC regional office. However, the EEOC does not have jurisdiction over cases alleging age discrimination against persons under 40 years of age. Rather than referring such a case to the EEOC, OCR closes the complaint and informs the complainant that neither OCR nor the EEOC has jurisdiction.

The Department of Health and Human Services (HHS) published a general government-wide regulation on age discrimination. Each agency that provides Federal financial assistance must publish a

final agency-specific regulation. On July 27, 1993, ED published in the *Federal Register* its final regulation implementing the Age Act.

Under ED's final regulation, OCR forwards complaints alleging age discrimination to the Federal Mediation and Conciliation Service (FMCS) for attempted resolution through mediation. FMCS has 60 days after a complaint is filed with OCR in which to mediate the age-only complaints or the age portion of multiple-based complaints. ED's regulation provides that mediation ends if: (1) 60 days elapse from the time the complaint is received; (2) prior to the end of the 60-day period, an agreement is reached; or (3) prior to the end of the 60-day period, the mediator determines that agreement cannot be reached.

If FMCS is successful in mediating an age-only complaint or the age portion of a multiple-based complaint within 60 days, OCR closes the case or the age portion of the complaint. If mediation is unsuccessful, the mediator returns the unresolved complaint to ED for further case processing.

OCR helps its working relationship with FMCS by designating enforcement office contact persons who coordinate directly with FMCS. OCR also accepts verbal or facsimile referrals from FMCS after unsuccessful attempts at mediation, and may grant FMCS extensions of up to 10 days beyond the 60 day mediation period on a case-by-case basis when mediated agreements appear to be forthcoming.

The other statutes which OCR enforces are Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, and national origin; Title IX of the Education Amendments of 1972, which prohibits discrimination on the basis of sex; and Section 504 of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability.

III. COMPLAINTS

(a) Receipts

OCR received 391 age complaints in Calendar Years 1997–1998. Of these, 124 were age-only complaints and 267 were multiple bases complaints. As shown on Table 1, 270 of the 391 receipts were processed in OCR and 121 were referred to other Federal agencies for processing. The most frequently cited issues in complaint receipts involving students were "harassment," "retaliation," "student rights," "selection for enrollment," "discipline," "academic evaluation/grading," and "admission to education program." The most frequently cited issues in complaint receipts involving employees were "demotion/dismissal/disciplinary action" and "retaliation."

TABLE 1.—CALENDAR YEARS 1997–1998 AGE-BASED COMPLAINT RECEIPTS

Processed by OCR	270
Referred to FMCS	59
Referred to EEOC	54
Referred to Other Federal Agencies	8
Total Receipts	391

(b) Resolutions

During Calendar Years 1997–1998, OCR resolved 402 age-based complaints, including 127 age-only complaints and 275 multiple-based age complaints. The resolution of the complaints are shown in Table 2.

TABLE 2.—CALENDAR YEARS 1997–1998 AGE-BASED COMPLAINT RESOLUTIONS

Inappropriate for OCR Action	285
OCR Facilitated Change	33
No Changed Required	84
Total Resolutions	402

Inappropriate for OCR Action

Of the 402 complaint resolutions, 285 were resolved because they were "Inappropriate for OCR Action." These would include a resolution achieved by (1) referral of a complaint to another federal agency; (2) lack of jurisdiction over recipient or allegation contained in a complaint; (3) complaint was not filed in a timely manner; (4) complaint did not contain sufficient information necessary to proceed; (5) complaint contained similar allegations repeatedly determined by OCR to be factually or legally insubstantial or were addressed in a recently closed OCR complaint or compliance review; (6) subject of a complaint was foreclosed by previous decisions by federal courts, Secretary of Education, Civil Rights Reviewing Authority, or OCR; (7) there was pending litigation raising the same allegations contained in a complaint; (8) allegations were being investigated by another federal or state agency or through a recipient's internal grievance procedures; (9) OCR treated the complaint as a compliance review; (10) allegation(s) was moot and there were no class implications; (11) complaint could not be investigated because of death of the complainant or injured party or their refusal to cooperate; and (12) complaint was investigated by another agency and the resolution met OCR standards.

OCR Facilitated Change

There were 33 complaints resolved because "OCR Facilitated Change." These would include a resolution achieved by (1) a recipient resolving the allegations contained in the complaint; (2) OCR facilitating resolution between the recipient and complainant through Resolution between the Parties; (3) OCR negotiating a corrective agreement resolving a complainant's allegations; and (4) settlement achieved after OCR issued a letter of findings.

No Change Required

In 84 complaints, there was "No Change Required." These would include a resolution achieved by (1) complainant withdrawing his or her complaint without benefit to the complainant; (2) OCR determining insufficient factual basis in support of complainant's allegations; (3) OCR determining insufficient evidence to support a finding of a violation; and (4) OCR issuing a no violation letter of findings.

POSTSECONDARY EDUCATION

The Office of Postsecondary Education administers programs designed to encourage participation in higher education by providing support services and financial assistance to students.

In fiscal year 1998, $46 billion was made available to an estimated 8.2 million students through the student financial assistance programs authorized by Title IV of the Higher Education Act of 1965, as amended. There are no age restrictions for participation in the Title IV programs. An estimated 6.1 percent, or nearly 500,000 recipients, were over age 40.

The Federal TRIO programs fund postsecondary education outreach and student support services that encourage individuals from disadvantaged backgrounds to enter and complete postsecondary education. Because age is not an eligibility criterion under most of these programs, data on the age of participants are not available.

In addition to these programs, the Fund for the Improvement of Postsecondary Education supports innovative projects, including some designed to meet the needs of older Americans. In fiscal year 1998, FIPSE funded a program at the University of Findlay in Findlay, OH to develop an intergenerational, cross-disciplinary, two-year degree program to train students to work in multigenerational care settings.

Because jobs in today's workplace require an increasingly higher level of knowledge and skills, it is essential that all Americans have the opportunity for further education. The Administration was successful in obtaining an authorization for the Learning Anytime Anywhere Partnership program in the Higher Education Amendments of 1998 that has great promise for assisting working Americans gain the knowledge and skills they need to remain competitive through lifelong learning.

The Learning Anytime Anywhere Partnerships (LAAP) program authorizes a new grant competition to promote student access to high quality technology-mediated learning opportunities that are not limited by the constraints of time and place. For fiscal year 1999, the Congress has appropriated $10 million to fund partnerships among colleges, industry, community organizations, and others, whose projects will have a national or regional impact and will encourage innovative solutions to the biggest challenges facing technology-mediated learning. The LAAP program will expand access to all learners who seek undergraduate education, career-oriented lifelong learning, or who can benefit from the removal of time and place constraints.

ADULT EDUCATION

As America prepares for the 21st Century and a tremendous increase in the aging population, greater emphases have been placed on addressing issues that involve literacy skills for adults, 60 years old and older. A report from the 1990 Census data shows that, of the 41,399,000 adults 60 years of age and over in the United States, 8,900,000 have had 8 years of schooling or less.

The U.S. Department of Education is authorized under the Adult Education Act (AEA), Public Law 100–297, as amended by the National Literacy Act of 1991 (P.L. 102–73), to provide funds to the

States and outlying areas for educational programs and related support services benefiting all segments of the eligible adult population. The Division of Adult Education and Literacy (DAEL), in the Office of Vocational and Adult Education (OVAE), administers the Adult Education Act. The State-administered Basic Grant Program is the central program established by the AEA and is the major source of Federal support for basic skills programs. Basic Grants to States are allocated by a formula based on the number of adults, over age 16, who have not completed high school in each State. States distribute funds to local providers through a competitive process based upon State-established funding criteria. Eligible providers of basic skills and literacy programs include: local educational agencies, community based organizations, correctional education agencies, postsecondary educational institutions, public or private nonprofit agencies, institutions or organizations which are part of a consortium that includes a public or private agency, organization or institution. This program will:

- Enable adults to acquire the basic educational skills necessary for literate functioning;
- Provide sufficient basic education to enable these adults to benefit from job training and retraining and to obtain productive employment; and
- Enable adults to continue their education to at least high school completion.

In addition, amendments to the AEA State-administered Basic Grant Program include, in part:

- A requirement for States to develop a system of indicators of program quality to be used to judge the quality of State and local programs;
- A requirement in allocating Federal funds to local programs, that each State consider: past program effectiveness (especially with respect to recruitment, retention and learning gains of program participants), the degree of coordination with other community literacy and social services, and the commitment to serving those most in needs of literacy services;
- A requirement that each State Educational agency receiving financial assistance under this program provide assurance that local educational agencies, public or private nonprofit agencies, community-based organization, correctional education agencies, postsecondary education institutions, institutions which serve educationally disadvantaged adults and any other institution that has the ability to provide literacy services to adults and families will be provided direct and equitable access to all Federal funds provided under this program; and
- A requirement that States evaluate 20 percent of grant recipients each year.

In program year 1996–1997, over 4 million adult learners were served through the AEA program nationwide. Of these learners, approximately 209,486 were 60 years of age or older. Many of the emerging workforce participants, including a large number of older adults and nonnative speakers of English, lack the basic literacy skills necessary to meet the increased demands of rapid change and new technology. Therefore, employers are revisiting their

workforce strategies in training and retraining to meet the demanding needs of older workers.

The adult education program addresses the needs of older adults by emphasizing functional competency and grade level progression, from the lowest literacy level, to providing English as a second language instruction, through attaining the General Education Developmental Certificate. States operate special projects to expand programs and services for older adults through individualized instruction, use of print and audio-visual media, home-based instruction, and curricula relating basic educational skills to coping with daily problems in maintaining health, managing money, using community resources, understanding government, and participating in civic activities.

Equally significant is the expanding delivery system, increased public awareness, as well as clearinghouses and satellite centers designed to overcome barriers to participation. Where needed, supportive services such as transportation are provided as are outreach activities adapting programs to the life situations and experiences of older persons. Individual learning preferences are recognized and assisted through the provision of information, guidance and study materials. To reach more people in the targeted age range, adult education programs often operate in conjunction with senior citizen centers, nutrition programs, nursing homes, and retirement and day care centers.

Cooperation and collaboration among organizations, institutions and community groups are strongly encouraged at the national, State and local levels to meet the demanding needs of older adults.

Note: After 30 years, the Adult Education Act has been repealed and the Federal investment in adult education and literacy has been authorized as part of the new comprehensive Workforce Investment Act of 1998, (Title II—Adult Education and Family Literacy Act). The Act incorporates a number of current federal statutes governing job training, adult education and literacy, and vocational rehabilitative services. This new Act emphasizes State and local flexibility, shared accountability, customer choice, and stronger coordination among service providers. This Act will take effect July 1, 1999. Data will be available in the Winter of 2000.

NATIONAL INSTITUTE ON DISABILITY AND REHABILITATION RESEARCH PROJECTS THAT RELATE TO AGING—1998

(Prepared by S. Sweeney)

The National Institute on Disability and Rehabilitation Research (NIDRR) authorized by Title II of the Rehabilitation Act, has specific responsibilities for promoting and coordinating research that relates directly to the rehabilitation of disabled persons.

Grants and contracts are made to public and private agencies and organizations, including institutions of higher education, Indian Tribes and tribal organizations, for the purpose of planning and conducting research, demonstrations, and related activities which focus directly on the development of methods, procedures and devices which assist in the provision of rehabilitation services.

The Institute is also responsible for facilitating the dissemination of information concerning developments in rehabilitation proce-

dures, methods, and devices to rehabilitation professionals and to disabled persons to assist them in leading more independent lives.

The Institute accomplishes its mission through the following programs:

—Rehabilitation Research and Training Centers
—Rehabilitation Engineering and Research Centers
—Research and Demonstration Projects
—Field-Initiated Projects
—Utilization Projects
—Career Development Projects which include:
— Fellowships
— Research Training
—ADA Technical Assistance Programs
—State Technology Assistance
—Small Business Innovative Research

REHABILITATION RESEARCH AND TRAINING CENTERS

The primary goals of these centers are: (1) To conduct research targeted toward the production of new knowledge which will improve rehabilitation methodology and service delivery systems, alleviate or stabilize disabling conditions, and promote maximum social and economic independence; (2) To institute related teaching and training programs to disseminate and promote the utilization of research findings, thereby reducing the usual long intervening delay between the discovery of new knowledge and its wide application in practice.

The three major activities, research, training, and service expected to be mutually supportive. Specifically, this synergy calls for research ideas to derive from service delivery problems, for research findings to be disseminated via training, and for new professionals to be attracted to research and service via training.

1. Rehabilitation Research and Training Center on Aging with a Disability, Rancho Los Amigos Medical Center, Downey, CA

(Principal Investigator: Bryan J. Kemp, PhD)

Abstract: This project helps people who are aging with a disability by conducting a series of studies, using a sample of 1,000 people, with a variety of disabilities represented. Studies include: (1) the natural course of aging with a disability, which investigates physical, function, and psychosocial aging with a disability over time; (2) a cross-ethnic-group study focusing on assisting family caregivers of people aging with a disability, and comparing stress, support, coping preferences, and appraisals of caregiving for people aging with a disability and evaluating the effectiveness of a structured group intervention; (3) improving community integration and adjustment, focusing on depression and how it affects community integration and demonstrates effective treatment; (4) secondary complications such as diabetes and thyroid disorders, determining if providing feedback to patients' primary physicians regarding these illnesses results in appropriate treatment, and if functional impairment is related to these illnesses; (5) bone mass, focusing on whether a regimen of exercise and vitamins improves bone density; and (6) the effectiveness of assistive technology (A1) and environ-

mental interventions (EI) in maintaining functional independence, evaluating differences between those receiving intensive AT and EI services and those receiving standard care. Training, dissemination, and technical assistance activities focus on students and professionals in the health care fields, researchers, community service providers, and people with disabilities and their families.

2. Rehabilitation Research and Training Center on Aging With Mental Retardation, The University of Illinois at Chicago University of Illinois UAP, 1640 West Roosevelt Road Chicago, IL

(Principal Investigator: Tamar Heller, PhD; David Braddock, PhD)

Abstract: This project promotes the independence, productivity, community inclusion, full citizenship, and self-determination of older adults with mental retardation through a coordinated program of research, training, technical assistance, and dissemination activities. The research program is aimed at increasing knowledge about the changing needs of older adults with mental retardation and their families as they age and the effectiveness of innovative approaches, public policies, and program interventions that provide needed supports and that promote the successful aging of these adults and their families. It examines how age-related changes in physical and psychological health affect the ability to function in the community, including home, work, and leisure settings. The research program also identifies best practices and current public policies that seek to support these adults and their families. The primary goal is to translate the knowledge gained into practice through boardbased training, technical assistance, and dissemination to people with mental retardation, their families, service providers, administrators and policy makers, advocacy groups, and the general community. Dissemination vehicles include the Center's Clearinghouse, Web page, and newsletters.

3. Rehabilitation Research and Training Center on Enhancing Quality of Life of Stroke Survivors, Rehabilitation Institute Research Corporation, 345 East Superior, Chicago, IL

(Principal Investigator: Elliot J. Roth, MD)

Abstract: This project tests the effectiveness of several stroke rehabilitation strategies and tactics, trains stroke survivors and professionals, and disseminates knowledge relevant to stroke care. In order to extend the knowledge base of stroke rehabilitation, produce changes in clinical practice, and enhance the quality of life of stroke survivors and their families, the Center: (1) identifies, develops, and evaluates rehabilitation techniques in order to address coexisting and secondary conditions and improve outcomes for all stroke patients; (2) develops and evaluates standard aerobic exercise protocols; (3) identifies and evaluates methods to identify and treat depression and other psychological problems associated with stroke; (4) determines the effectiveness of stroke prevention education provided in a medical rehabilitation setting; (5) evaluates the impact of changes in diagnosis and medical treatment of stroke on rehabilitation needs; (6) evaluates long-range outcomes for stroke rehabilitation across different treatment settings; (7) evalu-

ates the impact of stroke practice guidelines on delivery and outcomes of rehabilitation services; (8) provides training on new approaches, innovations, and the specialized principles and practices of rehabilitation care of individuals with stoke; (9) provides applied research experience and training in research principles and methods; (10) disseminates information of new developments in the area of stroke care and research to people with stroke and their families, rehabilitation professionals, and service providers; and (11) conducts a state-of-the-science conference. The Center has a large database of information regarding stroke rehabilitation patients and continues ongoing systems and activities to collect and analyze data concerning stroke impairment, disability, and social functioning.

4. Rehabilitation Research and Training Center Aging with Spinal Cord Injury and Aging, Rancho Los Amigos Medical Center, Downey, CA

(Principal Investigator: Bryan J. Kemp, PhD; Robert Waters, MD)

Abstract: The Rehabilitation Research and Training Center (RRTC) on Aging with Spinal Cord Injury (SCI) is devoted to understanding the unique problems people with spinal cord injury experience as they age. Topics of research include: the course of aging with SCI, cardiovascular and pulmonary aspects of aging with SCI, bone loss across ethnic groups, activities of daily living, employment, depression, and formal and informal care systems for people aging with SCI. The RRTC has several goals for education, training, dissemination, and utilization: to train current and future health, allied health, and rehabilitation professionals about aging with SCI; to train and develop rehabilitation research professionals in the area of aging with SCI; to improve adoption and use of RRTC-developed knowledge and treatment regimens by health and rehabilitation professionals; to disseminate information about aging with SCI to people with SCI and their families; and to train graduate students and medical students in advanced knowledge and techniques from studies about aging with SCI. Training and dissemination occurs through advanced and continuing education courses, local and national conferences, workshops, and the Internet.

5. Disability Statistics Rehabilitation Research and Training Center, University of California, San Francisco, Institute for Health and Aging, Box 0646, Laurel Heights, San Francisco, CA

(Principal Investigator: Mitchell P. LaPlante, PhD)

Abstract: The Center conducts research in the demography and epidemiology fields of disability and disability policy, including costs, employment statistics, health and long-term care statistics, statistical indicators, and congregate living statistics. Statistical information is disseminated through published statistical reports and abstracts, journals, professional presentations, and a publications mailing list. Training activities and resources (such as a predoctoral program) disseminate scientific methods, procedures, and results to both new and established researchers, policymakers,

and other consumers, and assist them in interpreting statistical information. A National Disability Statistics and Policy Forum is conducted periodically to foster dialogue between people with disabilities and representative organizations, researchers, and policymakers.

6. Rehabilitation Research and Training Center in Secondary Complications in Spinal Cord Injury, University of Alabama/Birmingham, Department of Physical Medicine and Rehabilitation, Birmingham, AL

(Principal Investigator: Amie B. Jackson, MD)

The primary goal of this RRTC is to conduct high-quality basic and applied research that improves existing methods of care for people with spinal cord injury (SCI). Current RRTC research areas include urology, pressure ulcer healing, spasticity, psychosocial adjustment, obstetric/gynecologic complications, costs of rehospitalization, and pulmonary complications. The Center's training component disseminates RRTC research results to rehabilitation professionals and consumers with SCI in useable formats such as videotapes, audiotapes, written materials, journal articles, and short-term training programs.

7. Rehabilitation Research and Training Center in Neuromuscular Diseases, University of California/Davis, MED: Physical Medicine and Rehabilitation TB 191, Davis, CA

(Principal Investigator: Craig McDonald, MD)

Abstract: This project enhances the quality of life for people with neuromuscular diseases through multidisciplinary research and a comprehensive program of training and information services. The Center serves consumers, physicians, and health care workers. Program areas include: Interventions to preserve functional capacity including management of weakness and respiratory insufficiency due to muscle wasting, exercise interventions, treatment of exercise related fatigue, pain interventions, lower limb orthotic interventions, and dietary interventions; interventions to enhance community integration, including incorporating goal-based approaches to community integration, facilitation of healthy adaptation through development of stress management and coping skills, and resource training for acquisition of disability-related information through the Internet; genetic testing, information, and research; and training and information services. The centerpiece of the information services program is the National Clearinghouse Information on Neuromuscular Diseases, which provides access to findings on basic and applied research.

8. Research and Training Center on Personal Assistance Services (PAS), World Institute on Disability, Oakland, CA

(Principal Investigator: Deborah Kaplan, JD)

Abstract: This project furthers the understanding that Personal Assistance Service (PAS) systems design can better promote the economic self-sufficiency, independent living, and full integration of

people of all ages and disabilities into society. The project explores the models, policies, access to, and outcomes of, personal assistance services, through: (1) gathering perspectives of consumers, program administrators, policy makers, and personal assistants using a State of the States survey and database development; (2) a policy study on the impact of devolution; (3) a cost-effectiveness study; (4) a study of workplace PAS; and (5) a study on the supply of qualified PAS.

9. Managed Health Care for Individuals with Disabilities, Medlantic Research Institute, National Rehabilitation Hospital Research Center, 102 Irving Street Northwest, Washington, DC

(Principal Investigator: Gerben DeJong)

Abstract: This project provides national leadership on the major health service and health policy issues facing consumers with disabilities in managed health care arrangements. It: (1) conducts research; (2) prepares special policy analyses; (3) hosts forums for discussion; (4) presents expert testimony to Congress and governmental agencies; (5) publishes in the health policy, consumer, and trade literature; (6) trains graduate students with disabilities in health service research; and (7) disseminates findings to diverse consumer, provider, payer, academic, and policy-making audiences. On the state and national levels the project seeks to make managed care and the larger health care system more responsive to the needs of people with disabilities by acting as a catalyst for the development of new ideas. Program partners are the National Rehabilitation Hospital Research Center (NRH–RC) in Washington DC and the Independent Living Research Utilization (IL RU) center in Houston Texas.

10. Rehabilitation Research and Training Center on Blindness and Low Vision, Mississippi State University,

(Principal Investigator: J. Elton Moore, EdD)

Abstract: The Center is conducting a series of research, training, and dissemination projects using a multidisciplinary strategy. The project works to investigate and document employment status, identify barriers to employment and techniques and reasonable accommodations to overcome these barriers, identify training needs in the Business Enterprise Program, and develop and deliver training programs. Training and dissemination activities include an information and referral center, national conferences, in-service training and technical assistance, advanced training for practitioners, advanced training in research, and publication and distribution of a variety of materials in accessible media.

11. Missouri Arthritis Rehabilitation Research and Training Center, University of Missouri/Columbia, Multipurpose Arthritis Center, DC 330.00, Columbia, MO

(Principal Investigator: Jerry C. Parker, PhD)

Abstract: MARRTC helps to prevent and manage disability in people with arthritis and related musculoskeletal disease by pro-

viding leadership at the national level, through three strategies: (1) MARRTC conducts state-of-the-art rehabilitation and health services research that addresses the needs of people with arthritis and related musculoskeletal diseases in the following areas: exercise and fitness, interventions for psychological well-being and pain, job accommodations and employment, and health and wellness, using participatory action research (PAR) strategies to emphasize the inclusion of consumers in all phases of the research process; (2) MARRTC provides training for physicians and other health care professionals in the rehabilitative aspects of rheumatologic practice, including university-based programs, national presentations, research capacity-building, and publications aimed at improving clinical skills; (3) MARRTC disseminates rehabilitation research and technology transfer for the empowerment of people with arthritis to help them to minimize disability, maintain employment, and improve functional status.

12. Rehabilitation Research and Training Center on Rural Rehabilitation Services, University of Montana, Missoula, MT

(Principal Investigator: Tom Seekins, PhD)

Abstract: This RRTC has the following objectives for improving rural rehabilitation services: (1) identify the employment and vocational rehabilitation service needs of people with disabilities in rural areas; (2) develop interventions to improve employment outcomes; (3) demonstrate rural entrepreneurial models; (4) identify issues in rural independent living and develop interventions to improve transportation, health care, housing, and accessibility; (5) coordinate with rural independent living centers to identify or design and test alternative models of delivery of rural rehabilitation services; (6) provide training in rural rehabilitation research and practice; (7) conduct an annual interactive conference on disability issues in rural America; and (8) disseminate research findings to rehabilitation service-delivery personnel.

13. Rehabilitation Research and Training Center on Drugs and Disability, Wright State University School of Medicine, Substance Abuse Resources and Disability Issues, Dayton, OH

(Principal Investigator: Dennis C. Moore, EdD)

Abstract: This project conducts epidemiological and evaluative studies of substance abuse and substance abuse services for consumers of state vocational rehabilitation (VR) programs. Activities address substance abuse as it co-exists with other disabilities; all components of the RRTC are designed to interrelate and synergistically build on each other. The research components include longitudinal and multisite studies to address more advanced research questions, and quantitative/qualitative methods or secondary analysis to investigate vocational rehabilitation issues for people with HIV and the relationship of social benefits on VR outcomes. The training components use a variety of materials, venues, and trainers in order to address needs within pre- and inservice populations. Training and dissemination components also include extensive use of distance learning media, especially use of the

Internet to provide professionals and consumers with timely and relevant information. Stakeholder concerns and interests are addressed by several mechanisms, including a formal subcontract with the National Association on Alcohol, Drugs, and Disability. Multiple collaborations are delineated with federal agencies, including the Substance Abuse and Mental Health Services Administration, as well as professional and consumer organizations, national clearinghouses, other RRTCs, and institutions of higher education.

14. Multiple Sclerosis Research and Training Center, University of Washington, Department of Rehabilitation Medicine, Box 356490, Seattle, WA

(Principal Investigator: George H. Kraft, MD, MS)

Abstract: This Center promotes health and wellness of people with Multiple Sclerosis (MS) and improves their functioning and employment status. Fundamental to the project is a health survey administered to people with MS throughout the Northwest region. Information from the survey is fed into six project components: (1) promoting wellness among people with MS through brief counseling methods; (2) improving the functioning of people with MS through three studies: improving psychological distress using pharmacological intervention, evaluating the combined effect of cooling and exercise on performance, and improving function through cognitive rehabilitation interventions; (3) exploring the employment status of people with MS; (4) designing practical interventions and workplace modifications; (5) studying the interaction between aging and MS; and (6) exploring the effects of gender, culture, stsocio-economic status, ethnicity, place of residence, and insurance coverage on people with MS, in regard to symptomology and response to treatments. Researchers develop and apply interventions and conduct follow-up surveys to evaluate the effectiveness of the intervention strategies. This Center collaborates with the RRTC on Substance Abuse, the Consortium of MS Centers, the National MS Society, and the MS Association of America.

REHABILITATION ENGINEERING AND RESEARCH CENTERS

This program provides support for the Rehabilitation Engineering Research Centers to conduct programs of advanced research of an engineering or technical nature in order to develop and test new engineering solutions to problems of disability. Each center is affiliated with a rehabilitation setting, which provides an environment for cooperative research and the transfer of rehabilitation technologies into rehabilitation practice. The centers' additional responsibilities include developing systems for the exchange of technical and engineering information and improving the distribution of technological devices and equipment to individuals with disabilities.

1. Rehabilitation Engineering Center: Assistive Technology and Environmental Interventions for Older Persons with Disabilities, New York University at Buffalo, Buffalo, NY

(Principal Investigator: William C. Mann, PhD)

Activities of the RERC focus on research, assistive device development, education, and information relating to assistive technology for older people in the home and beyond the home. The projects of the RERC fall into four major areas: (1) research: ten projects address assessments in the home and community, issues for minority elders, highly problematic device categories, clinical trials of effectiveness, and managed care work issues; (2) device development: six projects, including devices addressing automobiles, obesity, mobility, balance, stairs, and public seating; (3) education: four projects addressing professional students, graduate students, and rehabilitation and aging service professionals; and (4) information: ten project areas, including a "Helpful Products" series of videos and booklets, training manuals, resources for hotel and motel guests, product information, national conferences, newsletter inserts, a World Wide Web site, monograph series, resource sourcebook, and a resource phone line.

2. Smith-Kettlewell Rehabilitation Engineering Research Center, Smith-Kettlewell Eye Research Institute, 2232 Webster Street, San Francisco, CA

(Principal Investigator: John A. Brabyn, PhD)

Abstract: This RERC develops and evaluates new technology and methods for infant vision screening, orientation and navigation, described video, access to products, displays and electronic information, deaf-blind communication, and other problems faced by people who are blind, have visual impairments, or have multisensory loss.

3. Rehabilitation Robotics to Enhance the Functioning of individuals with Disabilities, Applied Science and Engineering Laboratories, University of Delaware, Wilmington, DE

(Principal Investigator: Richard A. Foulds, PhD)

Abstract: This project focuses on interfaces, design and application, and motor control of rehabilitation robotics, as well as related information and dissemination. Within its research focus, the RERC conducts many interdisciplinary research and information projects. Research and information activities are constituent-oriented and include implementation of a Consumer Innovation Laboratory. This lab includes consumers in the engineering design and fabrication of robotic devices to aid people with disabilities.

4. Rehabilitation Engineering Research Center on Telerehabilitation, Catholic University of America, Department of Biomedical Engineering, Angborn Hall, Cardinal Station, Washington, DC 20064

(Principal Investigator: Jack Winters, PhD)

Abstract: This project experiments with various models of telerehabilitation for strategic populations, engages in development activities that exploit promising technologies, and focuses on all aspects of the human-technology interface in a broad range of activities that benefit people with disabilities. Structured to include national resources with a strong focus on outreach and dissemination activities and a broad-based set of research activities, the Center focuses on: (1) Tele-homecare: telesupport for stroke caregivers; (2) Telecoaching: enhancing job options; (3) Telemonitoring: passive sensing of functional performance and health parameters at home using unobtrusive instrumentation; (4) Teleassessment: remote evaluation of skin health and decubiti for people with SCI at rural hospitals and clinics using innovative technologies; (5) Telerehab Consumer Toolkit: outreach and development activities and products; (6) Home Telerehab: interactive systems for remote delivery of therapy, assessment, teaching and demonstration at home; (7) Telecounseling and Teleevaluation: remote psychological counseling and neuropsychological evaluation at rural clinics and homes; (8) Behavioral Virtual Reality: investigation and training of social and attending behaviors using virtual environment technology; (9) Teleplay: therapeutic play, including embedded teleassessment for children with disabilities; (10) Integrating Telerehabilitation in Today's Health Care Marketplace. The Center also establishes National Resources activities: (1) Homecare and Telerehabilitation Technology Center; (2) Homecare and Telerehab Education/Training Center; (3) Virtual Library and Dissemination Center; (4) Standards, Codes and Electronic Patient Records (EPR); (5) Telerehab Policy Information Center. The Center comprises three institutions: The Catholic University of America (CUA), the National Rehabilitation Hospital (NRH); and the Sister Kenny Institute (SKI).

5. Rehabilitation Engineering Research Center on Universal Telecommunications Access, Gallaudet University, Washington, DC

(Principal Investigator: Judith Harkins, PhD (Gallaudet/UTA); Gregg C. Vanderheiden, PhD (Trace/UTA); Betsy Bayha (WID/UTA))

Abstract: This RERC conducts research and engineering activities with the overall goal of improving the accessibility of emerging telecommunications systems and products. The Center moves forward the available telecommunications knowledge base for access issues confronting people with all types of disabilities. The program areas of the RERC are: (1) systems engineering analyses; (2) telecommunications access research, focusing on needs assessment and development of design solutions; (3) universal design specification and review, aimed at developers of products and services; (4) telecommunications standards that include accessible features; (5) telecommunications applications for increased independence; and (6)

knowledge utilization and dissemination. The RERC combines expertise from Gallaudet University, the Trace Research and Development Center at the University of Wisconsin, and the World Institute on Disability (WID) with the expertise of the telecommunications industry through the active involvement of two noted telecommunications consultants, Richard P. Brandt and Robert Mercer.

6. Rehabilitation Engineering Research Center on Prosthetics and Orthotics,Northwestern University, Rehabilitation Engineering Research Program and Prosthetics Research Laboratory, Chicago, IL

(Principal Investigator: Dudley S. Childress, PhD)

Abstract: Activities of the Center include material science studies and applications in limb prosthesis and orthoses, biomechanical characterizations and functional design of prostheses and orthoses, state-of-the-art studies that delineate the status of the field and help organize and plan for the advancement of prosthetics and orthotic.s, and an information and education resource service.

7. Rehabilitation Engineering Research Center on Hearing Enhancement and Assistive Devices,The Lexington Center for the Deaf Research Division, 30th Avenue and 75th Street, Jackson Heights, NY

(Principal Investigator: Harry Levitt, PhD; Matt Bakke, PhD)

Abstract: This RERC harnesses emerging technology to accommodate the needs of people with hearing loss, and disseminates related information in a form that is understandable to consumers, service providers, employers, and community leaders. These goals are accomplished by: (1) developing and evaluating improved, cost-effective technological aids for each of the target populations identified; (2) developing and evaluating instrumentation for detecting hearing loss at an early age; (3) providing improved access to modern telecommunications; (4) developing and evaluating specialized technology for community, home, and work environments; and (5) pursuing an active program of dissemination and training to ensure effective utilization of these technological aids.

8. Rehabilitation Engineering Research Center on Communication Enhancement in the New Millennium, Duke University, Department of Surgery, Division of Speech Pathology and Audiology, Durham, NC

(Principal Investigator: Frank DeRuyter, PhD)

Abstract: This project uses innovative communications technologies to benefit researchers, engineers, rehabilitation service providers, developers, and users of AAC technologies. The project: (1) investigates attitudinal barriers toward technology use by elderly people with communication disorders, their listeners, and service providers; (2) studies the organizational strategies of adult AAC users to determine if preferences are predictive of performance using AAC; (3) studies how to improve AAC technologies for young children with significant communication disorders by evaluating

learning demands and functional performance (also involves development of design specifications); (4) evaluates and enhances communication rate efficiency and effectiveness through the development of procedures and software technology that simulates and measures the performance of AAC technologies; (5) identifies barriers to employment, describes strategies to overcome them, documents design specifications for AAC technologies, and describes action plans to achieve successful employment outcomes; (6) increases employment opportunities for graduates of an employment and AAC program; and (7) develops a coordinated program that monitors and seeks out technology developments in both commercial form and prerelease development stages that affect the engineering and clinical AAC field.

9. Rehabilitation Engineering Research Center on Accessible and Universal Design in Housing, North Carolina State University School of Design, Raleigh, NC

(Principal Investigator: Lawrence H. Trachtman)

The RERC's mission is to: (1) conduct research in documenting problems in housing for people with disabilities; (2) identify or generate and test solutions to documented problems; (3) demonstrate the general utility of solutions to documented problems; and (4) conduct training to address skill acquisition, knowledge diffusion, and general awareness of issues related to housing for people with disabilities. The Center also provides information and referral services to address identified needs through development and dissemination of publications and other information materials and referral to other organizations and agencies who can assist with specific information requests. The Center's audience includes designers, contractors, developers, financial providers, consumer advocates, and users of residential environments.

10. Vermont Rehabilitation Engineering Research Center for Low Back Pain, University of Vermont, Vermont Back Research Center, Burlington, VT

(Principal Investigator: Martin H. Krag, MD)

The Vermont RERC improves the employability of people with back disorders and back disability by developing and testing assistive technology. Engineering projects include studies of lifting, posture, seating, vibration, and materials handling in connection with back pain and disability. Applied research projects include the testing of rehabilitation engineering products, evaluation of exercise programs, and the development of a statewide model program to hasten return to work of people with back injuries. The Center's Information Services Division provides toll-free assistance in locating research and rehabilitation programs, as well as bibliographic searching and fact finding. The Center also maintains an Electronic Discussion Group: BACKS–L (Send subscription request to listproc@list.uvm.edu; body of message should read: subscribe backs-1 your name).

11. Rehabilitation Engineering Research Center on Information Technology Access, University of Wisconsin/Madison, Trace Research and Development Center, 5901 Research Park Boulevard, Madison WI

(Principal Investigator: Gregg C. Vanderheiden, PhD)

Abstract: This RERC improves access by individuals with all types, degrees, and combinations of disabilities to a wide range of technologies, including computers, ATMs, kiosks, point-of-sale devices and smartcards, home and pocket information appliances, Internet technologies (XML, XSL, CSS, SMIL, etc.), intranets, and 3–D and immersive environments. As one component in a larger system of consumers, researchers, industry, and policy and public agencies, the Trace Center's program is designed to work within the existing structure, supporting other components and coordinating its efforts to address the functioning of the whole. The program identifies strategies that can be used by industry to broaden the user base for their standard products, so individuals with as broad a range of abilities as possible are able to use standard products directly. Further, the Center targets specific compatibility and interconnection standards work to ensure that people who cannot use products directly are able to operate them using assistive technologies. The Center focuses on the use of targeted projects and collaboration, both national and international, to carry out the research, development, information dissemination, training, and standard-setting activities required. The approach is intended to be flexible, forward-looking, and broad in scope, yet focused on key access issues as defined by its consumer constituency and its research programs.

FIELD INITIATED RESEARCH PROGRAM

This program is designed to encourage eligible applicants to originate valuable ideas for research and demonstrations, development, or knowledge dissemination activities in areas which represent their own interests, yet are directly related to the rehabilitation of people with disabilities.

1. Aging and Adjustment after Spinal Cord Injury: A 20-Year Longitudinal Study, Shepherd Center for Spinal Injuries, Inc., 2020 Peachtree Road, NW, Atlanta, GA

(Principal Investigator: J. Stuart Krause, PhD)

This fourth study phase will be the most extensive follow-up yet performed and will use an expanded version of the same questionnaire that was used in each of the three previous followups (1973, 1984, 1988). Three types of research designs will be used for data analysis including: (1) traditional longitudinal analysis of 1973 to 1992 data from the original participant sample; (2) cross-sequential analysis of the repeated measures data from 1984 to 1992 for samples one and two; and (3) timesequential analysis of time-lagged data comparing the 1984 data for sample two with that of the new third sample.

2. Remote Signage Development to Address Current and Emerging Access Problems for Blind Individuals, Smith-Kettlewell Eye Research Institute, 2232 Webster Street, San Francisco, CA

(Principal Investigator: John A. Brabyn, PhD; William F. Crandall, PhD)

Abstract: This project is developing new, practical enhancements of remote signage technology to solve a range of specific current and emerging accessibility problems faced by people who are blind and who have other print-reading disabilities. For users who are blind, access to any place or facility begins with the problem of knowing it exists; then the problem of finding it must be addressed. Specific solutions are being developed for safe usage of light-controlled pedestrian crossings, identification and onboard announcements of stops for buses, identifying route number and destination of oncoming buses, locating and accessing automated teller machines and other vending information terminals, and access to signage by people with cognitive impairments. These innovative solutions are being developed from the infrared Talking Signs(R) system of remotely readable signs for people who are blind, which was developed by Smith-Kettlewell. This system is gaining acceptance as an aid to orientation and navigation for those who cannot read the print signage that fully sighted people take for granted in navigating and accessing the world.

3. Spatial Hearing with Laboratory-Based Hearing Aids, Smith-Kettlewell Eye Research Institute, 2232 Webster Street, San Francisco, CA 94115

(Principal Investigator: Helen J. Simon, PhD)

Abstract: Since conventional binaural hearing aids do not satisfactorily solve the problem of speech perception in noise, a long-term goal of the Smith-Kettlewell Eye Research Institute is to develop a better binaural hearing aid (HA). This project's hypothesis suggests that a binaural perceptual balance of Interaural Intensity Difference (IID) and Interaural Time Delay (ITD) across frequencies is required to restore optimum localization and speech intelligibility by eliminating or lessening exaggerated dominance consequent to asymmetric hearing loss. Aberrations of either or both IID and ITD at different frequencies would impair directional localization and, therefore, speech intelligibility in noise. Hearing Aids

4. Marketing Health Promotion, Wellness, and Risk Information to Spinal Cord Injury Survivors in the Community, Craig Hospital, 3425 South Clarkson Street, Englewood, CO

(Principal Investigator: Gale Whiteneck, PhD)

Abstract: Building on experience gained from the RRTC in Aging with Spinal Cord Injury (SCI) at Craig Hospital, this project offers health promotion, wellness, and risk information to SCI survivors. Recent reports from survivors caregivers, and researchers are demonstrating that SCI is not the unchanging disability it was once thought to be; over time many survivors face medical complications, psychosocial concerns, and diminishing quality of life. Al-

though many of these adverse outcomes could be averted or lessened with active health maintenance and wellness strategies, SCI survivors in the community face a dearth of the information they need to make such positive lifestyle choices. This project creates: (1) a Wellness and Risk Assessment Profile that provides individualized SCI-specific health risk appraisals via the Internet; (2) regular health information columns in three widely-read consumer journals; (3) custom brochures targeting the prevention and health promotion needs of SCI survivors in the community; (4) a handbook offering information about making wise health and lifestyle choices for recently injured SCI survivors; (5) a handbook targeting caregivers of SCI survivors; and (6) a curriculum for people who teach and provide support to caregivers.

5. Toward a Risk Adjustment Methodology for People with Disabilities, Medlantic Research Institute, National Rehabilitation Hospital Research Center, Washington, DC

(Principal Investigator: Gerben DeJong, PhD)

The principle goal of this knowledge dissemination project is to provide its primary audiences, health care policy-makers and payers, with key information to advance the development of a risk adjustment system for working- and retirement-age people with disabilities. Risk adjustment reduces the incentive for risk selection and promotes access to needed health services. To achieve this goal, the project assembles a panel of leading experts on risk adjustment and disability to guide the development of a consensus report that: (1) details the state of science in risk adjustment, (2) evaluates the appropriateness of health care outcome indicators for people with physical and mental disabilities, and (3) provides a set of recommendations for modifying and implementing risk adjustment methodologies that enhance access to health services for people with disabilities enrolled in public and private sector health plans.

6. Relation of Rehabilitation Intervention to Functional Outcome in Acute and Subacute Settings, Rehabilitation Institute Research Corporation, Rehabilitation Services Evaluation Unit, 345 East Superior Street, Chicago, IL

(Principal Investigator: Allen Heinemann, PhD)

Abstract: Seven rehabilitation facilities that provide acute medical rehabilitation are assessing rehabilitation outcomes and predictors of outcomes, using a method for assessing rehabilitation therapy goals, activities, and barriers to goal attainment. This project is extending that study. It uses the same methodology used by five sites that provide subacute rehabilitation. Being assessed are: (1) patient attributes at admission, such as impairment severity, comorbid conditions and complications, functional deficits, and demographic characteristics; (2) therapeutic interventions (type, quantity, duration, modality, and intensity) provided in acute and subacute settings; and (3) outcomes achieved (functional status, discharge destination, and patient satisfaction). The lead project, the NIDRR-funded RRTC on Functional Assessment and Evalua-

tion of Rehabilitation Outcomes, was awarded to the State University of New York.

7. Enhancement of Upper Limb Functional Recovery in Stroke, Using a Computer-Assisted Training Paradigm, Rehabilitation Institute Research Corporation, Sensory Motor Performance Laboratory, #1406, 345 East Superior Street, Chicago, IL

Principal Investigator: Julius Dewald

Abstract: This study investigates use of a novel computer-assisted isometric training regime to overcome abnormal movement synergies following hemiparetic stroke. These deficits in coordination are expressed in the form of abnormal muscle synergies and result in limited and stereotypic movement patterns that are functionally disabling and often debilitating, but that are not understood. Current neurotherapeutic approaches to the amelioration of these abnormal synergies have produced, at best, limited functional recovery. The effect of two training regimes on functional movement are being investigated in 40 hemiparetic stroke subjects. The first training regime uses a general, classical strengthening protocol to increase torque production in specific directions. The second, novel regime strengthens subjects using torque combinations that require the subject to deviate progressively from their abnormal torque synergies. Assessment of the effectiveness of these two regimes is based on quantitative comparisons of voluntary upper limb movements performed pre- and post-training.

8. Knowledge Dissemination for Vision Screeners, University of Kansas Institute for Life Span Studies, Parsons, KS

(Principal Investigator: Charles R. Spellman, EdD)

This project is disseminating a CD–ROM to providers of vision screening and evaluation services, in order to increase the quantity and quality of vision services available nationally to infants, toddlers, preschoolers, and older people with disabilities. These populations are sometimes considered difficult to test, and as a consequence, often do not receive traditional vision screening services. The project addresses the training needs of a variety of personnel by providing an interactive CD–ROM program, modeled after the "knowledge on demand" technology used in industry, that can be readily delivered in a variety of settings. The program is providing a model for using CD–ROM to disseminate "knowledge on demand."

9. Development and Commercial Transfer of a Tactile Image Printer (TIP), International Braille Research Center, 4424 Brookhaven Avenue, Louisville, KY

(Principal Investigator: T.V. Cranmer, PhD)

Abstract: The project designs a product that allows students, educators, and other professionals who are blind to access a variety of graphic material such as computer screens, maps, schematics, geometry tables, organizational charts, flow charts, and line drawings. Researchers develop a device that produces sharper, better-

defined tactile images and includes lines and filled-in areas of varying dimensions and textures. Colors can also be produced as needed or as appropriate. Developers include the inventor, engineers, educators, publishers, and grassroots advocacy organizations, with support from three Rehabilitation Research Engineering Centers, those on Information Access (Trace), Blindness and Visual Impairment (Smith-Kettlewell), and Technology Transfer (SUNY/Buffalo). The device should help people who are blind or who have visual impairments to become active participants in the new global economy. Phases of the project include firmware development, experimentation and testing, creation and testing of graphic material, and product and information dissemination.

10. Measuring Functional Communication: Multicultural and International Applications, American Speech-Language-Hearinq Association, 10801 Rockville Pike, Rockville, MD

(Principal Investigator: Diane Paul-Brown)

Abstract: The long-term objective of this project is to improve the quality of life for adults with communication disabilities by expanding and validating an assessment tool for multicultural and international populations. Assessments can then be made regarding communication functions and needs, and rehabilitation can be individualized to optimize the person's ability to communicate in their natural environments. Reliable communication skills are a requisite for individuals to achieve their social, educational, and vocational potentials, and for patients to understand and participate in their care and recovery. Activities of this project include: (1) development of a supplemental measure of quality of communicative life; (2) validation of the extended American Speech-Language-Hearing Association Functional Assessment of Communication Skills for Adults with multicultural groups including African Americans, Asian Americans, Caucasian, Hispanic, and Native Americans; (3) validation with various populations with communication disorders such as those caused by brain injury, stroke, Alzheimer's disease and related dementias, and acquired neurological disorders; and (4) validation in other English-speaking countries.

11. Closed Captioning and Audio Description: Development and Testing for Access to Digital Television, WGBH Educational Foundation, 125 Western Avenue, Boston, MA

(Principal Investigator: Larry Goldberg)

Abstract: This project addresses the urgent, time-sensitive need to improve the effectiveness of Advanced Television (ATV) to deliver high-quality captioning and description services to people who are deaf, hard of hearing, who are blind, or who have visual impairments. Advanced Television (ATV) incorporates the technologies known as High-Definition Television (HDTV) and Standard Definition Television (SDTV), and is a complete redesign of North America's television service, featuring a digital signal, a sharper picture, an aspect ratio resembling that of a wide-screen movie, multiple CD-quality audio channels, and ancillary data services. This project uses knowledge and understanding gained

from research and development previously undertaken by the WGBH Educational Foundation (among others) to design and develop prototype ATV captioning and description processes. Project objectives are: (1) to develop and disseminate a standard data file that tests ATV systems for quality and accuracy in handling ATV captions and descriptions as they are encoded, transmitted, and decoded in accordance with accepted standards and official minimum requirements; (2) to develop and disseminate an advanced-features data file that tests ATV systems for quality and accuracy in handling ATV captions and descriptions as they are encoded, transmitted, and decoded in accordance with accepted standards and with a full range of advanced features; (3) to evaluate the effectiveness of ATV receivers in decoding ATV captions and descriptions and to measure implementation of advanced features.

12. *Secondary Conditions, Assistance, and Health-Related Access Among Independently Living Adults with Major Disabling Conditions, Massachusetts Health Research Institute, Boston, MA*

(Principal Investigator: Nancy Wilber)

Participants in this study are affiliated with six Massachusetts independent living centers (ILCs). The cross-disability sample includes people with a range of significant physical, mental, sensory, and developmental disabilities who require assistance with activities of daily living. Primary outcomes of interest are: (1) the frequency and severity of secondary conditions, including skin problems, seizures, chronic pain, spasms, falls, fatigue, respiratory tract infections, and urinary tract infections; and (2) reactions to medication, depression, anxiety, and injuries related to medical equipment. Mediating variables include: adequacy of personal assistance, assistive technology, access to health promotion and health care services, environmental barriers, transportation, employment, education, socioeconomic status, smoking, use of substances, and compliance with prescribed health care routines. The research study includes two annual cross-sectional surveys, each of 300 randomly-selected ILC consumers, to determine prevalence, distribution, frequency, and severity of secondary conditions. Focus groups of ILC consumers and others help interpret the data.

13. *The Impact of Managed Care on Rehabilitation Services and Outcomes for Persons With Spinal Cord Injury, Rehabilitation Institute of Michigan, Research Department, 261 Mack Boulevard, Room 520, Detroit, MI*

(Principal Investigator: Marcel Dijkers, PhD)

Abstract: This project examines the impact of managed care on rehabilitation services and outcomes for people with SCI. The study analyzes demographic, medical, functional, community integration, life satisfaction, and service delivery data collected from Model Systems projects to determine how managed care is altering the acute and rehabilitative management of SCI and how it affects short- and long-term outcomes, such as functional status and community integration. Objectives include: (1) describing the pathways of newly injured people with SCI through the health care system, from injury

to stable community residence: acute care, rehabilitation care (including inpatient-acute, subacute, day hospital and outpatient), home care, and readmissions for complications; (2) assessing the impact of managed care on these pathways: determining whether managed care patients differ from those with more traditional health insurance in terms of services received (providers, services, durations); and (3) assessing the effect of various pathways on the outcomes for this patient population at one and two years after injury in functional, medical, psychological, and health services utilization. The project team disseminates findings to consumers, managed care and other payer organizations, policy makers, and SCI professionals using a variety of mechanisms. Findings are expected to contribute to the redesign of the SCI Model Systems National Database to make it correspond optimally to the organization of health and rehabilitative services in the 21st century.

14. Effect of Motor Learning Procedures on Brain Reorganization in Subjects With Stroke, University of Minnesota, Program in Physical Therapy, Box 388 Mayo, Minneapolis, MN

(Principal Investigator: James Carey)

Abstract: This project determines whether elements of motor learning can promote brain reorganization and recovery of function in individuals with stroke. Two interventions have been shown to be effective in helping people recover from stroke, "forced use" of the weak side and electrical stimulation. Investigators have hypothesized that these treatments may unmask dormant motor centers or improve synaptic effectiveness, but no evidence has been forthcoming. The project involves two experiments: (1) subjects with stroke receive 20 training sessions at a finger movement tracking task in which they are forced to process the perceptual motor information mentally and learn to respond accurately, and (2) different subjects with stroke receive 20 days of electrical stimulation to the weak forearm muscles. For both experiments, changes in finger function are measured with tracking and manual dexterity tests. Neuroplastic changes in the brain are measured with functional magnetic resonance imaging. This project may show for the first time that physical rehabilitation procedures may stimulate beneficial reorganization of the brain following stroke and invite further experiments to optimize treatments.

15. The Universal Bathroom, Research Foundation of State University of New York, State University of New York (SUNY)/Buffalo, Amherst, NY

(Principal Investigator: Abir Mullick, Project Director)

While the greatest potential benefactors of a universal bathroom are non-institutionalized people with disabilities who are living independently, the new bathroom's design will be created to be safe, accessible and usable by all people regardless of their age, sex, and disabling conditions. Its assumed modular, interchangeable components will include three primary units, for bathing/showering, toileting, and grooming. Since the bathroom of the user's choice can be custom built from a large range of component

units, this will be a marketable, culturally responsive one with accepted layouts and levels of privacy. Additionally, the "lifespan perspective" of the bathroom's design will allow able-bodied care-providers such as parents of young children and those assisting older individuals to make layout changes and product alterations based on their current needs. Thus the bathroom's assistive qualities will reduce temporary dependence on others and increase safety by preventing accidents that lead to disability. It will empower independent users, dependent users, and care-providers equally—the young, the old, married couples, people with children, and families with "live-in" grandparents.

16. *Promoting the Practice of Universal Design, North Carolina State University School of Design, Center for Universal Design, 219 Oberlin Road, Raleigh, NC*

(Principal Investigator: Molly Story)

Abstract: This project promotes the practice of univeral design by developing and implementing a self-supporting product design evaluation and marketing program that responds to consumer and industry needs. Universal design is the design of products and environments that are usable, to the greatest extent possible, by everyone regardless of their age or ability. The critical next step toward increasing the practice of universal design is adoption and application of its principles both by consumers and by industry. The three objectives of this project are to improve consumers' ability to recognize universal design, to improve designers' ability to meet the needs of a diverse consumer base, and to recognize and support industry efforts to market universal design successfully. Ways these objectives are achieved through this project include: (1) developing a set of performance measures that reflect the Principles of Universal Design, (2) confirming the reliability of these measures and pilot testing the evaluation program, (3) developing a plan of self-support for the universal design evaluation program, and (4) disseminating the results to appropriate audiences. The project develops a sound universal design program based on information gathered directly from future users—consumers, designers, and marketers—as well as the universal design research community.

17. *Women's Personal Assistance Services (PAS) Abuse Research Project, Oregon Health Sciences University/Portland, Child Development and Rehabilitation Center, P.O. Box 574, Portland, OR*

(Principal Investigator: Laurie Powers, PhD)

Abstract: This project increases the identification, assessment, and response to abuse by formal and informal personal assistance service (PAS) providers of women with physical and physical and cognitive disabilities living independently in the community. The aims of the project: (1) develop culturally sensitive screening approaches to identify PAS abuse, (2) develop a culturally appropriate PAS abuse assessment protocol, and (3) develop culturally appropriate response strategies to prevent and manage PAS abuse. Culturally diverse participants assist in the development of these three

aims. The study includes three phases, beginning with a focus group study of culturally diverse women with physical and cognitive disabilities. Phase II involves the use of findings from Phase I to develop and disseminate a survey of 260 culturally diverse females with disabilities drawn from four national organizations. Phase III involves the development and field testing of the effectiveness of the screening, assessment, and support protocols, the final product being a comprehensive package of PAS abuse prevention materials. The project plans to disseminate these materials on a national basis.

18. A Pilot Study for the Clinical Evaluation of Pressure-Relieving Seat Cushions for Elderly Stroke Patients, University of Pittsburgh, Pittsburgh, PA

(Principal Investigator: David Brienza)

This project designs and tests the feasibility of a randomized clinical trial to determine the efficacy of pressure-relieving seat cushions for immobile, elderly stroke patients. Older people with disabilities who are immobile and, thus, spend their time either in bed or seated, are at risk for developing pressure ulcers. Commercial seat cushions intended to reduce the risk of sitting-induced pressure ulcers are available. The elderly population, however, is not customarily evaluated for seating and positioning needs or provided with the benefits of this technology. Reimbursement is not available, due in part to the fact that the effectiveness of this intervention has not been sufficiently demonstrated for this high-risk population, and these services and technology are not available. If these cushions are a successful intervention for increased comfort, improved quality of life, and pressure ulcer incidence rate reduction, the project plans to disseminate the findings and provide justification for third party funding. If successful, project plans to increase the availability of seating and positioning services and products to this deserving population.

DISABILITY AND REHABILITATION RESEARCH PROJECTS (FORMERLY RESEARCH AND DEMONSTRATION PROJECTS)

These projects address rehabilitation priorities identified by NIDRR and published in the Federal Register. These priorities address a variety of problems encountered by people with disabilities. Projects are funded for up to 36 months.

1. Exercise and Recreation for Individuals with a Disability: Assessment and Intervention, Rehabilitation Institute of Chicago, Center for Health and Fitness, Chicago, IL

(Principal Investigator: Jeffery Jones)

This project demonstrates that participation in exercise and physical activities improves function, facilitates community reintegration, and enhances the quality of life of people with disabilities. The project: (1) investigates the long-term effects of an exercise fitness program on the physiology, metabolic performance, and quality of life of people with spinal cord injury, stroke, and cerebral palsy; (2) examines the role of self-efficacy in maintaining partici-

pation in an exercise fitness program; (3) describes the types and frequency of recreation and fitness activities among people who have had a stroke, people with spinal cord injury, and people with cerebral palsy; (4) examines the relationships between participation in recreation and exercise programs and the health status, life satisfaction, and depression in the above populations; and (5) delineates barriers and deterrents to participation in recreation and exercise programs that exist for a variety of disability groups.

2. The Center on Emergent Disability, University of Illinois/Chicago, Institute on Disability and Human Development, 1640 West Roosevelt Road, Chicago, IL

(Principal Investigator: Glenn T. Fujiura, PhD)

Abstract: This Center focuses on characterizing the impact of major health, social, and economic trends on the manifestation of disability in America, through a broadly conceived nationwide research effort across multiple disciplines and constituencies. Core activities include secondary analyses of major data sets, evaluation of public health surveillance systems, local needs assessment, policy analysis, and dissemination. This project is headquartered at the University of Illinois at Chicago with collaborating research groups at the University of Southern California Children's Hospital, Rancho Los Amigos Medical Center, Georgetown University Medical Center, Baylor College of Medicine, University of Minnesota, Northern Arizona University, and Vanderbilt University.

3. Reducing Risk Factors for Abuse Among Low-Income Minority Women with Disabilities, Baylor College of Medicine, Department of Physical Medicine and Rehabilitation, 3440 Richmond Avenue, Suite B, Houston, TX

(Principal Investigator: Margaret A. Nosek, PhD)

Abstract: This project pursues strategies to reach women with disabilities at all stages of resolving abusive situations. To accomplish this purpose, the project has the following objectives: (1) identify risk factors for emotional, physical, and sexual abuse faced by women with disabilities; (2) assess the ability of rehabilitation and independent living counselors to identify women in abusive situations and refer them to appropriate community resources; (3) develop and test models for programs that reduce the risk of abuse for women with disabilities, particularly among women with disabilities from low-income, minority backgrounds where the incidence of abuse is highest; and (4) establish an agenda for future research on women with disabilities using a national advisory panel. The project works not only with programs that help battered women, but also with those in contact with women with disabilities in various community contexts.

4. Understanding and Increasing the Adoption of Universal Design in Product Design, University of Wisconsin/Madison, Trace Research and Development Center, Madison, WI

(Principal Investigator: Gregg C. Vanderheiden, PhD)

This project: (1) identifies the factors that cause industry to practice, or not to practice, universal design of products; and (2) identifies ways that people outside companies can encourage and facilitate the practice of universal design of products on a more widespread basis. The project brings together experts who have been active in universal design from across the technology spectrum to work with industry in addressing these questions. Areas of expertise include housing and architecture, computers and electronic products, media and materials, telecommunications, and educational software.

UTILIZATION PROJECTS

This program supports activities that will ensure that rehabilitation knowledge generated from projects and centers funded by the Institute and other sources is fully utilized to improve the lives of individuals with disabilities.

1. Improving Access to Disability Data, InfoUse, Berkeley, CA

(Principal Investigator: Susan Stoddard, PhD, AICP)

InfoUse's Center on Access to Disability Data is the central source for disability statistics data and related technical reports in accessible, easy-to-understand, user-friendly formats. The Center provides this information to businesses, the media, urban planners and policymakers, and the disability community. The first major product, the Chartbook on Disability in the United States, 1996, provided updated statistical information on a range of disability topics. Material for the Chartbook series and related fact sheets are available to the public in a variety of published and electronic formats, including print and electronic media. The Center's Web site serves as a source for electronic documents, includes guidelines for accessible Web publishing, and provides links to major national data sources including data sites developed by other NIDRR grantees and by major national disability data suppliers.

2. National Rehabilitation Information Center (NARIC), KRA Corporation, Silver Spring, MD

(Principal Investigator: Mark X. Odum)

The National Rehabilitation Information Center (NARIC) maintains a research library of more than 51,000 documents and responds to a wide range of information requests, providing facts and referral, database searches, and document delivery. Through telephone information referral and the Internet, NARIC disseminates information gathered from NIDRR-funded projects, other federal programs, and from journals, periodicals, newsletters, films, and videotapes, NARIC maintains REHABDATA, a bibliographic database on rehabilitation and disability issues, both in-house and on

the Internet. Users are served by telephone, mail, electronic communications, or in person.

3. ABLEDATA Database Program, Macro International, Inc., Silver spring, MD

(Principal Investigator: Lynn Halverson)

The project maintains and expands the ABLEDATA database, develops information and referral services that are responsive to the special technology product needs of consumers and professionals, and provides the data to major dissemination points to ensure wide distribution and availability of the information to all who need it. The ABLEDATA database contains information on more than 23,000 assistive devices, both commercially produced and custom made. Requests for information are answered via telephone, mail, electronic communications, or in person.

4. National Center for the Dissemination Of Disability Research (NCDDR), Southwest Educational Development Laboratory, Austin, TX

(Principal Investigator: John D. Westbrook, PhD)

This project provides information and technical assistance to NIDRR grantees in identifying and improving dissemination strategies designed to meet the needs of their target audience. The project also analyzes and reports on dissemination trends relevant to disability research. Task force and material development activities address multicultural factors that influence dissemination and utilization. This project conducts ongoing International networking through a variety of approaches, including an interactive world Wide Web site highlighting events and other information about specific NIDRR grantees, the production of quarterly issues of The Research Exchange, and in-person and online technical assistance support.

RESEARCH TRAINING GRANTS

The purpose of this program is to expand capability in the field of rehabilitation research by supporting projects that provide advanced training in rehabilitation research. These projects provide research training and experience at an advanced level to individuals with doctoral or similar advanced degrees who have clinical or other relevant experience, including experience in management or basic science research, in fields pertinent to rehabilitation, in order to qualify those individuals to conduct independent research on problems related to disability and rehabilitation.

1. Advanced Rehabilitation Research Training Project in Rehabilitation Services Research, Northwestern University, Rehabilitation Institute Research Corporation, Rehabilitation Services Evaluation Unit, Chicago, IL

(Principal Investigator: Allen W. Heinemann, PhD)

Abstract: This project develops a five-year fellowship program in rehabilitation service research at Northwestern University's De-

partment of Physical Medicine and Rehabilitation. It uses available expertise and collaborators to train postdoctoral fellows in rehabilitation health services research. Over two years the program includes course work, a practicum, original research, and grant writing. Fellows new to health services research have six core courses, as well as the four-to-five additional courses for all fellows. The first year concentrates on beginning Masters in Public Health (MPH) courses. The second year includes intermediary MPH course work plus electives. Each fellow is expected to develop an individual research project by the end of the first training year and a publishable article by the end of the second year in addition to submitting at least one grant application related to the research activity.

SMALL BUSINESS INNOVATIVE RESEARCH

New ideas and products useful to people with disabilities and the rehabilitation field are encouraged with small business innovative research grants. This three-phase program takes an idea from development to market readiness.

1. Webwise: A Specialized Web Browser Providing Independent Access to the Internet to Individuals with Mental Retardation, Ablelink Technologies, 2501 North Chelton Rd, Colorado Springs

(Principal Investigator: Daniel K. Davies)

Abstract: This project investigates the issues surrounding World Wide Web access for people with mental retardation and other cognitive disabilities, and builds a prototype browser called WebWise that improves their Web access. Researchers test the prototype to assess its effectiveness compared to existing Web browsers, and data is collected regarding educational and recreational benefits of the WebWise browser.

2. Automated PC-based Speech-to-Sign-Language Interpreter, Seamless Solutions, Inc., 3504 Lake Lynda Drive, Suite 390, Orlando, FL

(Principal Investigator: Edward M. Sims, PhD)

Abstract: This project demonstrates the feasibility of real-time, PC-based, speech-to-sign-language interpretation, by integrating commercially available speech recognition and language modeling software with Seamless Solutions, Inc.'s PC-based Signing Avatars(tm) 3D character animations of sign language communication. For example, a teacher could speak into a headmounted microphone, and the sentences would be translated into 3D sign language communication on the student's desktop PC; such a system could also facilitate sign language learning for hearing people.

(3. Visual Light Audio Information Transfer System (VLAITS), Talking Lights Company, 28 Constitution Road, Boston, MA

(Principal Investigator: George Hovorka)

Abstract: This project develops an inexpensive communication system that uses currently installed visible lighting, such as fluo-

rescent or mercury vapor lighting, as a carrier medium for data. The system modulates light output from the lighting fixture and transmits the data fast enough that no visual flicker is perceptible. The data is received by a personal audio receiver (PAR) and is converted into audio information for the PAR wearer, who may be hard of hearing, have a visual impairment, or may not have a disability. The system is developed, evaluated, and tested with people with visual impairments and people who are hard of hearing to maximize user friendliness and value.

4. Development of a Tactile Graphical User Interface Touch Graphics, 140 Jackson Street, Brooklyn, NY

(Principal Investigator: Steven Landau)

Abstract: This project develops a standardized tactile graphical user interface (TGUI) that allows fuller access to interactive educational tools and forms of entertainment to millions of children, adults, and senior citizens who are blind or who have visual impairments. Goals include: (1) a fully realized tactile "screen" layout that incorporates tools, icons, data entry functions, working space, and calibration and identification features; (2) a sample application based on the TGUI; (3) a full regime of user tests carried out by the American Foundation for the Blind; (4) instructional materials for using the TGUI and the sample application; (5) a final report documenting the findings of the project and the feasibility for future development. The resulting device and accessories are marketed to schools, libraries, and individuals.

5. Trails Web Site with Universal Access Information, Beneficial Designs, Inc., 5858 Empire Grade, Santa Cruz, CA

(Principal Investigator: Peter W. Axelson; Denise A. Chesney)

Abstract: This project develops the Trails Web site to provide universal access information for trails throughout the United States, making the site useful to all hikers, regardless of their ability. The Universal Trails Assessment Process enables trail managers to assess specific trails objectively with regard to grade, cross slope, width, surface characteristics, and obstacles. The collected trail data is processed to create Trail Access Information in a format similar to a Nutrition Facts food label. The Trails Web site contains Trail Access Information on numerous hiking trails and allows users to search for trails that meet their specific access needs.

6. Broadcast Radio for Individuals who are Deaf: Gaining Equity (BRIDGE), TeleSonic Division of Associated Enterprises, Inc., 31 Old Solomons Island Road, Annapolis, MD 21041

(Principal Investigator: Leonard A. Blackshear)

Abstract: Phase I of this project proved it is feasible to transmit multimedia signals over commercial radio and to receive them with special decoder devices. Phase II develops working models of radio transmitter and receiver devices that allow simultaneous radio broadcasting of both audio and visual information. Users of TTYs,

for example, could receive "closed captioned" broadcasts of radio programs. Research and development tasks include: (1) conducting ongoing technical research, (2) examining future directions in radio broadcasting, (3) finalizing synchronization schemes, (4) updating system specifications, (5) developing models, (6) conducting tests with radio stations, (7) identifying modes of sustaining further development, and (8) reporting results. Anticipated future results include development of a commercial broadcast system.

STATE TECHNOLOGY ASSISTANCE PROGRAMS

This program, funded under The Technology-Related Assistance for Individuals with Disabilities Act of 1988, as amended, supports consumer-driven, statewide, technology-related assistance for individuals of all ages with disabilities.

States and territories are eligible to apply for one 3-year development grant, a first-extension grant for years 4 and 5, and a second-extension grant for years 6–10. The purpose of these grants is to establish a program of statewide, comprehensive, technology-related assistance for individuals with disabilities of all ages.

INDEPENDENT LIVING SERVICES FOR OLDER INDIVIDUALS WHO ARE BLIND, CHAPTER 2 OF TITLE VII

Section 752 of the Rehabilitation Act of 1973, as amended, authorizes discretionary grants to State vocational rehabilitation (VR) agencies for projects that provide independent living services for persons who have severe visual impairments and who are aged 55 and older. Each designated State unit that is authorized to provide rehabilitation services to blind individuals may either directly provide independent living services or it may make subgrants to other public agencies or private non-profit organizations to provide these services.

The services most commonly provided are: (1) training for activities of daily living, (2) the provision of adaptive aids and appliances, (3) low vision services, (4) orientation and mobility services, (5) training in communication skills, (6) family and peer counseling, and (7) community integration, which includes outreach and information and referral.

During FY 1966, the most recent year for which we have analyzed data, 26,846 older individuals with significant visual impairment or blindness received services. of these consumers, 64.4 percent were at age 76 or older and 45 percent were age 81 or older. The individuals served by this program represent approximately one-half of the individuals with significant visual impairments or blindness who receive rehabilitation and independent living services through public and private rehabilitation programs as estimated by the Mississippi State University and the New York Lighthouse for the Blind.

ITEM 5—DEPARTMENT OF ENERGY

INTRODUCTION

The Department of Energy is a leading science and technology agency whose research supports our Nation's energy security, national security, environmental quality, and contributes to a better quality of life for all Americans. The Department's missions include the largest environmental cleanup in history, as well as research and development that support the Nation's defense, energy, and economic security. DOE employs approximately 10,000 federal workers and 100,000 contract employees. The Department owns and manages more than 50 major installations located in 35 States.

At the center of the Department's work is science, performed at DOE's 27 laboratories and other scientific user facilities and in the Nation's universities. The Department supports breakthrough research in energy sciences and technology, high energy physics, global climate change, genome mapping and the bio-sciences, superconducting materials, accelerator technologies, environmental sciences, and super-computing. DOE also supports science and mathematics education in our schools from the K–12 level through post-doctoral work.

In support of the Nation's energy security, the Department promotes development of secure, clean, and sustainable energy resources, works to increase the diversity of energy sources and fuel choices, and maintains the Strategic Petroleum Reserve.

In fulfilling its national security mission, the Department assures the safety and reliability of the U.S. nuclear weapons stockpile without underground testing, in compliance with the Comprehensive Test Ban Treaty, and supports U.S. nonproliferation, arms control, and nuclear safety objectives in the states of the former Soviet Union and world-wide.

In meeting its environmental quality mission, the Department is responsible for cleaning up the environmental legacy left at the sites where, for some 50 years, the Nation's nuclear weapons were designed and manufactured.

ENERGY EFFICIENCY PROGRAMS

Weatherization Assistance Program—The program's mission is to make energy more affordable and improve health and safety in homes occupied by low-income families, particularly those with elderly residents, children, or persons with disabilities. Elderly residents make up approximately 40 percent of the low-income households served by this program. As of September 30, 1998 about 4.7 million homes had been weatherized with Federal, State, and util-

ity funds; of these, an estimated 1.9 million were occupied by elderly persons.

Low-income households spend an average 15 percent of income for residential energy—more than four times the proportion spent by higher income households. The weatherization program allows low-income citizens to benefit from energy efficiency technologies that are otherwise inaccessible to them. Alleviating the high energy cost burden faced by low-income Americans helps them increase their financial independence and their flexibility to spend household income on other needs.

The program has become increasingly effective due to improvements in air-leakage control, insulation, water heater systems, windows and doors, and space heating systems. A low-income household now saves approximately $193 per year, about one-third of its space heating costs. Program benefits are further described in Progress Report of the National Weatherization Assistance Program that features 90 photo illustrations of specific benefits. The report is available through the National Technical Information Service, 703/487–4650, 5285 Port Royal Rd., Springfield, VA 22161.

The program is implemented by states through community-based organizations. The Department of Energy and its State and community partners weatherize approximately 70,000 single- and multi-family dwellings each year. The program awarded $120.8 million in Fiscal Year 1997 and $124.8 million in Fiscal Year 1998 for grants to the 50 States, the District of Columbia and six Native American tribal organizations. In addition to DOE appropriations, State and local programs receive funding from the Department of Health and Human Services Low Income Home Energy Assistance Program, from utilities, and from States.

State Energy Program—The program provides grants to State energy offices to encourage the use of energy efficiency and renewable energy technologies and practices in states and communities through technical and financial assistance. In FY 1997 $29 million was appropriated and $30.25 million was appropriated in FY 1998. States have broad discretion in designing their projects. Typical project activities include: public education to promote energy efficiency; transportation efficiency and accelerated use of alternative transportation fuels for vehicles; financial incentives for energy conservation/renewable projects including loans, rebates and grants; energy audits of buildings and industrial processes; development and adoption of integrated energy plans; promotion of energy efficient residences; and deployment of newly developed energy efficiency and renewable energy technologies.

There have been some projects that specifically target the elderly such as Louisiana's low-income/handicapped/elderly/Native American outreach program that provided energy-related assistance through a joint venture with utilities. The elderly also benefit from programs that provide energy audits, hands-on energy conservation workshops, and low-interest loans for homeowners that can result in significant energy savings. Energy efficiency improvements in local and state buildings and services also benefit the elderly by freeing up state and local government tax revenues for non-energy expenses. Energy efficient schools can be less of a burden on property taxes.

An emerging issue is the restructuring of the electric utility industry. The State Energy Program has supported workshops with States and local communities to ensure that homeowners and disadvantaged groups are not overlooked or denied the economic benefits of lower-cost sources of energy after deregulation. Utility deregulation workshops for public officials have emphasized techniques and negotiating strategies, e.g. franchising, to ensure that vulnerable populations such as the elderly are not excluded from energy pricing competition.

INFORMATION COLLECTION AND DISTRIBUTION

The Energy Information Administration collects and publishes comprehensive data on energy consumption through the Residential Energy Consumption Survey (RECS). The RECS is conducted in households quadrennially and collects data from individual households throughout the country, including those headed by elderly individuals. Along with household and housing unit characteristics data, the RECS also collects the actual billing data from the households' fuel suppliers for a 12-month period.

The results of the RECS are analyzed and published by the Energy Information Administration. The most recent household survey data are from the 1997 RECS and are published on the Internet at http:www.eia.doe.gov/emeu/consumption. The consumption and expenditures data from the 1997 RECS will be published on the same Internet site in the spring of 1999. At that time, the RECS data files will also be made available to the public. These files will include demographic characteristics of the elderly such as age, marital status and household income, as well as estimates of consumption and expenditures for electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas used in elderly households.

In the 1997 RECS, 28.6 million, or 28 percent of all U.S. households, were headed by a person 60 years of age or older. Of these elderly households, 44 percent were one-member households (12.4 million people living alone) and 43 percent contained two people. In 19 percent of the two-member elderly households both members were under the age of 65; in 21 percent of these households, only one member was younger than 65; and in 60 percent, both members were over the age of 65. Comparisons of elderly versus non-elderly households reveal that:

- The 1997 household income of elderly households was generally lower than that of non-elderly households. Nearly a quarter, 23 percent, of elderly households had incomes of less than $10,000, compared to 9 percent of the non-elderly households. Only 12 percent of the elderly households had incomes of $50,000 or more, compared to 33 percent of the non-elderly households. Of the 14.7 million U.S. households whose income was below the poverty line, 37 percent were headed by a person 60 years of age or older.
- Despite having lower household incomes, the elderly households were more likely to own their housing unit, 80 percent, than were non-elderly households, 63 percent. The elderly were also more likely to live in a single-family house, 76 percent, than were non-elderly households, 71 percent.

- Elderly households are less likely to have a personal computer or a modem connecting that computer to the Internet or e-mail networks than are households headed by persons less than 60 years of age. Among elderly households, 14 percent have a personal computer compared to 43 percent of the non-elderly households. Only 7 percent of elderly households have a modem connection compared to 26 percent of the non-elderly households.
- Elderly households are only marginally less likely to have a microwave oven, 79 percent, than are non-elderly households, 85 percent.

Analysis of the 1993 RECS data shows that consumption patterns differed between the elderly and non-elderly for some uses of energy. The elderly used more energy to heat their homes but used less energy for air conditioning, water heating, and appliances. Expenditures followed the same pattern. Specifically,

- The average expenditures per household member in elderly households in 1993 was $68. This amount was higher than the comparable amount for all other households, due to the fact that households headed by persons 60 years or more of age tend to be smaller than those headed by persons under 60 years of age.
- About 61 percent of total energy consumption and about 38 percent of total energy expenditures in elderly households were for space heating. On the other hand, appliances accounted for 16 percent of consumption and 31 percent of total expenditures in elderly households. Energy costs for appliances are much higher relative to consumption than are energy costs for space heating because virtually all appliances are powered by electricity, the most expensive energy source, whereas space heating is largely provided by other, less expensive, energy sources.

Research Related to Aging

In 1997 and 1998, the Office of Environment, Safety and Health (EH) sponsored research to further an understanding of the human health effects of radiation. As part of this research program, the Department of Energy (DOE) sponsored epidemiologic studies concerned with understanding health changes over time. Lifetime studies of humans constitute a significant part of EH's research, and because the risks of various health effects vary with age, these studies take age into consideration. EH supports research to characterize late-appearing effects induced by chronic exposure to low levels of physical agents and some basic research concerning certain diseases that occur more frequently with increasing age.

Because health effects resulting from chronic low-level exposure to energy-related toxic agents may develop over a lifetime, they must be distinguished from normal aging processes. To distinguish between induced and spontaneous changes, information is collected from both exposed and nonexposed groups on changes that occur throughout the life span. These data help characterize normal aging processes and distinguish them from the toxicity of energy-related agents. Summarized below are specific research projects that the Department sponsored in 1997–1998.

Long Term Studies of Human Populations—Through EH, DOE supports epidemiologic studies of health effects in humans who may have been exposed to chemicals and radiation associated with energy production or national defense activities. Information on life span in human populations is obtained as part of these studies. Because long-term studies of human populations are difficult and expensive, they are initiated on a highly selective basis.

The Radiation Effects Research Foundation, sponsored jointly by the United States and Japan, continues to work on a lifetime followup of survivors of atomic bombings that were carried out in Hiroshima and Nagasaki in 1945. Over 100,000 persons are under observation in this study. An important feature of this study is the acquisition of valuable quantitative data on dose-response relationships. Studies specifically concerned with age-related changes are also conducted. No evidence of radiation-induced premature aging has been observed.

Multiple epidemiologic studies involving about 400,000 contractor employees at DOE facilities are being managed by the Department of Health and Human Services through a Memorandum of Understanding between the two agencies. These studies include assessments of health effects at older ages due to ionizing radiation and other industrial toxicants. Several of the studies will look closely at workers who were first exposed at age 45 or older, assessing the impact of these late exposures in relation to the burden of chronic diseases that are common among older people. The average age of workers included in these studies is greater than 50 years.

The United States Uranium/Transuranium Registry, currently operated by Washington State University, collects occupational data including work, medical, and radiation exposure histories and information on mortality among workers exposed internally to plutonium or other transuranic elements. Most of the workers participating ating in this voluntary program are retirees.

In response to the Defense Authorization Act of 1993, EH has established a program involving a number of ongoing projects across the DOE weapons complex to identify former workers whose health may have been placed at risk as a result of occupational exposures that occurred from the 1940's through the 1960's. These projects provide medical screening and monitoring for former workers to identify those at high risk for occupationally related diseases and to identify workers with diseases that may be reduced in severity by timely interventions.

In addition to its epidemiologic research and health monitoring programs, EH has established the Comprehensive Epidemiologic Data Resource, a growing archive of data sets from the many epidemiologic studies sponsored by DOE. This public archive provides the research community with data that continue to be used to gain additional insights into the relationships between occupational exposures and a variety of health outcomes including diseases of aging, such as cancer.

OTHER DOE-FUNDED RESEARCH RELATED TO AGING

Since the inception of the Atomic Energy Commission, the Department and its predecessor agencies have carried out a broad range of research and technology development activities which

have impacted health care and medical research. The Medical Sciences Division within the Office of Biological and Environmental Research carries out a Congressional mandate to develop beneficial applications of nuclear and other energy related technologies including research in aging affecting older Americans. The aging research involves study of a brain chemical, dopamine (DA), and its function in humans as they age. A significant decline in the function of the brain DA system with age has long been a recognized fact, but the functional significance of this loss is not known. Medical imaging studies, using radiotracers; and positron emission tomography, are designed to investigate the consequences of the age-related losses in brain DA activity in cerebral function and to investigate mechanisms involved with the loss of DA function with normal aging. The results of these studies have already shown that in healthy volunteers with no evidence of neurological dysfunction there is a decline in parameters of DA function, which are associated with decline in performance of motor and cognitive functions. The results of these studies also indicate that changes in life style, such as exercise, may be beneficial in promoting the health of the dopamine system in the elderly.

Additional research has resulted in the creation of a new scientific discipline known as biodemography, a melding of biology and demography. This research is searching for biological information, at all levels of biological organization, that predicts and explains patterns of age-related mortality observed in populations. In the long term, biodemography provides a conceptual framework that helps policy makers assess the impact that specific biomedical interventions such as heart bypass surgery, renal dialysis, chemotherapy, or gene therapy will have on population aging and, as a result, on the fiscal solvency of government entitlement programs for aging citizens.

The programmatic costs for aging research are estimated at approximately $400K annually.

ITEM 6—DEPARTMENT OF HEATH AND HUMAN SERVICES

THE ADMINISTRATION ON AGING AND THE OLDER AMERICANS ACT

INTRODUCTION

Today, one in every six Americans, or 44 million people, is 60 years of age or older. While most older Americans are active members of their families and communities, others are at risk of losing their independence. These include four million Americans aged 85 and older and persons living alone without a caregiver. The Administration on Aging (AoA) in the Department of Health and Human Services is dedicated exclusively to planning and delivering services to our nation's diverse population of older Americans and their caregivers. AoA provides critical information, assistance, and home and community-based support services and programs that protect the rights of vulnerable, at-risk older persons.

Working in close partnership with its sister agencies in the Department and throughout the Executive Branch, AoA provides leadership, technical assistance and support to the national network on aging. This network includes AoA's central and regional offices, 57 state units on aging (SUA's), 655 area agencies on aging (AAA's), 223 Indian Tribal Organizations (ITO's); and thousands of service providers, senior centers, caregivers and volunteers. Appendix I includes an organizational chart of the National Network on Aging.

CONSUMER INFORMATION AND PROTECTION

Educating older persons and their families about issues of concern is a critical component of AoA's consumer information and protection role. AoA funds programs that link people to available services, protects the rights of vulnerable and at-risk older persons, educates them and their communities about the dangers of elder abuse and consumer fraud, and offers opportunities for older persons to enhance their health. Two important examples include the Eldercare Locator and Insurance, Benefits and Pension Counseling Programs.

AoA's elder rights protection programs also include the Long-Term Care Ombudsman Program, that investigates and resolves complaints that are made by or on behalf of residents of nursing, board and care and similar adult care homes. Through the AoA, thousands of paid and volunteer long-term care ombudsmen, insurance counselors and other professionals have been trained to recognize and report fraud and abuse in nursing homes and other settings. The AoA also recruits and trains retired professionals, such as doctors, nurses, attorneys, accountants, and others to serve as

health care "fraud busters." These recruits work with other older persons in their communities to review their health care benefits statements and to identify and report potential waste, fraud and abuse.

SUPPORTIVE SERVICES AND HOME AND COMMUNITY-BASED CARE

AoA provides funds for home and community-based care services, research and demonstrations These services include:

- Access Services—information and assistance; outreach; transportation; and case management.
- In-home Services—home-delivered meals; chores; home repair, modifications and rehabilitation; homemaker/home health aides; and personal care.
- Community Services—congregate meals; senior center activities; nursing home ombudsman services; elder abuse prevention; legal services; employment and pension counseling; health promotion and fitness programs.
- Caregiver Services—respite; adult day care; counseling and education; and support for caregivers of persons with Alzheimer's disease by improving coordination between the health care and social service systems.
- Long-Term Care Resource Centers—researching best practices and innovative models of providing home and community-based care.

NATIVE AMERICAN PROGRAMS

AoA awards funds to 223 ITO's, representing more than 300 tribes in the United States, to assist older American Indians, Alaskan Natives and Native Hawaiians. Native Americans in general—and older Native Americans in particular—are among the most disadvantaged groups in the country. AoA's support provides home and community-based services in keeping with the cultural heritage and specific needs of each person receiving assistance.

CAPACITY BUILDING THROUGH DISCRETIONARY GRANTS

The discretionary grant programs authorized by Title IV of the Older Americans Act constitute the major research, demonstration, training, and information dissemination effort of the AoA. Title IV program outcomes include:

- an expanded understanding of older persons' wants, needs and desires;
- the development of innovative model programs; and
- the provision of technical assistance and information to the aging network and to others who work with older persons.

The Title IV program supports a number of projects, including the continuation of the Eldercare Locator; Family Friends; Senior Legal Hotlines, a national legal assistance support, and related elder rights projects such as the National Resource Centers on Long Term Care Ombudsman Programs and Elder Abuse. New Title IV project areas, as earmarked by the Congress, include the prevention of health care fraud, waste, and abuse; pension information and counseling; minority aging; and research on caregiving for

Alzheimer's Disease patients. A compendium of projects supported by Tile IV in FY 1997 and FY 1998 can be found in Appendix II.

PREPARING FOR THE FUTURE

Through consumer advocacy and education targeted at present and future generations of older Americans, AoA raises public awareness about the importance of preparing now for living a long life. AoA is providing leadership in addressing longevity issues by focusing attention on attitudes and lifestyles, interventions which contribute to good health, quality of life, and financial security in the future.

This report is organized and divided into two sections summarizing AoA's major activities in FY 1997–1998. Section I discusses the activities focused on "Improving Services for Seniors and Their Families." Section II discusses the activities related to "Enhancing the Cap of the Network."

SECTION I: IMPROVING SERVICES FOR SENIORS AND THEIR FAMILIES

PRESERVING AND STRENGTHENING THE OLDER AMERICANS ACT

The AoA, in consultation with key partners in the aging network, continued work for the reauthorization of the Older Americans Act (the ACT). A summary of the activities in the Congress related to reauthorization of the Act follows:

Reauthorization in the 105th Congress

Senator Barbara Mikulski (D–MD) introduced the Administration's proposed bill, S. 390, on March 4, 1997. It contained one change from the Administration bill from the 104th Congress in that it did not transfer the USDA cash in lieu of commodities program to AoA. This was consistent with the Administration's position for the 105th Congress.

Representative Matthew G. Martinez (D–CA) introduced H.R. 1671 with co-sponsors Reps. Green (D–TX), J. Kennedy (D–MA), Filner (D–CA) and Reps. Farr, (D–CA), Rep Frank (D–MA), Rep. Nancy Pelosi (D–CA), Sanchez (D–CA), Lofgren (D–CA), Kucinich (D–OH), Smith, Adam (D–WA), and Stabenow (D–Mich). Mr. Martinez's statement which accompanied the bill indicated that the bill contained the majority of the principles in the Administration's bill from the 104th Congress. Inconsistent with the Administration's initial position, Mr. Martinez's bill did not transfer the Title V, Senior Community Service Employment Program, to AoA.

On June 19, 1998, Rep. Frank Riggs (R–CA), Chair of the House Subcommittee on Early Childhood, Youth and Families, introduced H.R. 4099, a bill to reauthorize the Older Americans Act.

On July 13, 1998, Senator John McCain (R–AZ), along with 25 bipartisan cosponsors, introduced S. 2295, a bill to reauthorize the Older Americans Act until the year 2001. S. 2295 made no changes to current law, last authorized in 1992.

On July 29, 1998, Rep. Peter A. DeFazio (D–OR) and Rep. Frank A. LoBiondo (D–NJ) introduced H.R. 4344 a bill which mirrored the McCain bill to reauthorize the Older Americans Act, S. 2295. H.R. 4344 was introduced with 151 bipartisan cosponsors.

The House Subcommittee on Early Childhood, Youth and Families (Frank Riggs, (R–CA), Chair; Matthew G. Martinez, (D–CA), (Ranking Democrat), held two hearings (7/9/97 and 7/16/97) on the reauthorization of the Older Americans Act. At the first hearing held on July 9, 1997. William F. Benson, Acting Principal Deputy Assistant Secretary for Aging, provided testimony for the Administration. Others who testified at the hearing included Judith Brachman, President of the National Association of State Units on Aging and Cindy Farson, Past President of the National Association of Area Agencies on Aging.

Background and Status at Close of 105th Congress

The most recent reauthorization of the OAA expired on September 30, 1995 during the 104th Congress. The 104th and 105th Congresses adjourned without taking final action on reauthorization of the Older Americans Act. During the 105th Congress, the Senate and House Majority Committee members indicated that they would use their previous proposals (from the 104th Congress) as the starting point for their legislative proposals.

The 105th Congress adjourned on October 21, 1998 following final passage on the FY 1999 Omnibus Consolidated Appropriations bill which contained funding for the Older Americans Act and the Administration on Aging for FY 1999. Congress did not reauthorize the Older Americans Act because of unresolved differences between the Majority and the Minority together with the Administration. These differences included efforts to alter parts of the Act that target services to low income minority elders, that allow for older persons to receive nutrition services without being required to pay, and that provide employment to low income older persons through Title V of the Act, administered by the Department of Labor. Near the end of the 105th Congress, much discussion occurred around two bills (S. 2295, McCain, R–AZ) and (H.R. 4344, DeFazio, D–OR) which would have extended the current authorization, but no final action occurred.

The Administration plans to introduce a bill to reauthorize the Older Americans Act early in the 106th Congress.

PROTECTING ELDERS' RIGHTS

For close to three decades, state ombudsman programs have investigated complaints and protected the rights of nursing home and board and care facilities residents as well as brought to the attention of the public, policymakers and regulatory agencies a host of conditions that required change to improve the health, safety, rights and welfare of these residents. In FY 1996, ombudsman program funding from all sources totaled $41,519,334, almost one million above the previous fiscal year. In addition to attempting to improve the quality of care, paid and volunteer ombudsman provide support for the Administration's initiative to combat fraud, abuse and waste in the Medicare and Medicaid Programs.

According to the Annual Long Term Care Ombudsman Report to Congress for Fiscal Year 1996, over seventy-two percent of all complaints by nursing home or board and care residents were resolved or partially resolved by the national cadre of state and local paid and volunteer ombudsmen working throughout the nation. This re-

port provides the first-ever compilation of data for all state ombudsman programs on the types of problems reported by those who seek assistance from the ombudsman program. The data collected through this report helps to point this nation in the right direction to better care for the growing numbers of older persons expected in this country in the next several decades.

Ombudsman opened 126,606 new cases and closed 116,242 cases, involving 179,111 complaints. Most complaints were filed by residents of facilities or friends or relatives of residents. Eighty-one percent of the cases closed involved nursing home residents. The five most frequent nursing home complaints were:

- accidents, improper handling;
- unheeded requests for assistance;
- personal hygiene neglect;
- lack of respect for residents; and
- lack of adequate care plan, resident assessment.

Seventeen percent of the cases closed involved board and care homes, including assisted living, adult day care, and similar levels of care facilities. The five most frequent complaints in these settings involved:

- menu—quality, quantity, variation, and choice;
- physical abuse;
- administration and organization of medications;
- lack of respect for residents, poor staff attitudes; and
- equipment/building disrepair, hazard, lighting, safety issues.

A copy of the Executive Summary of the Annual Long Term Care Ombudsman Report can be found in Appendix III. Copies of the report are also available through the National Aging Information Center and the AoA website.

PREVENTING CRIME AND VIOLENCE

According to the National Elder Abuse Incidence Study released by the Assistant Secretaries for Aging and Children and Families on October 5, 1998, at least one-half million older persons in domestic settings were abused and or/neglected, or experienced self neglect during 1996. Additionally, the study estimated that for every reported incident of elder abuse, neglect or self neglect, approximately five go unreported. In cases where a perpetrator of abuse and neglect is known, the perpetrator is found to be a family member in 90 percent of the cases, and two-thirds of these perpetrators are adult children or spouses. The report covered all major categories of abuse and neglect in domestic settings.

Domestic elder abuse refers to maltreatment of an older person residing in his/her own home or the home of a caregiver. The four common kinds of elder abuse are:

- physical abuse, the infliction of physical pain or injury, e.g., slapping, bruising, sexually molesting, restraining;
- psychological abuse, the infliction of mental anguish, e.g., humiliating, intimidating, threatening;
- financial abuse, the improper or illegal use of the resources of an older person, without his/her consent, for someone else's benefit; and

- neglect, failure to fulfill a caretaking obligation to provide goods or services, e.g., abandonment, denial of food or health-related services.

Self-neglect refers to the conduct of an older person living alone which threatens his/her own health or safety. A copy of the report is included in Appendix IV, and is available from the National Aging Information Center and the AoA website.

On September 30, 1998, a new three-year cooperative agreement was awarded to the National Association of State Units on Aging (NASUA) to establish a new National Center on Elder Abuse (NCEA). The NASUA operates the NCEA in partnership with the National Committee for the Prevention on Elder Abuse (NCPEA), National Association of Adult Protective Services Administrators (NAAPSA), American Bar Association's Commission on Legal Problems of the Elderly, University of Delaware's Department of Consumer Studies, and the Goldman Institute on Aging. The new NCEA will facilitate training and technical assistance among state and local service providers working to prevent elder abuse.

CRACKING DOWN ON FRAUD

Since 1995, the Administration on Aging (AoA) has been a partner in a government-led effort to fight fraud, waste, and abuse in the Medicare and Medicaid programs. The AoA, and its national aging network, focused its initial anti-fraud and abuse efforts on training state and local ombudsmen, insurance counselors, and other professionals to recognize and report suspected cases of fraud abuse in nursing facilities, home health care agencies, and providers of durable medical equipment. The effort was later expanded to train staff and volunteers of state and area agencies on aging, senior centers, and other aging service personnel.

Beginning in 1997, the AoA has administered two programs designed to combat and prevent health care waste fraud and abuse. The first program, funded under the Health Insurance Portability and Accountability Act, expanded the training of aging network personnel to 15 states. In early 1998, three states were added, for a total of 18 states which focus on training aging service professionals, and providing outreach, counseling, and assistance through community-based provider agencies.

The second program, funded through the enactment of P. L.104–209, the Omnibus Consolidated Appropriations Act of 1997, recruits and trains retired professionals, such as doctors, nurses, teachers, lawyers, accountants, and others to work with Medicare and Medicaid beneficiaries to review their health care benefits statements and to identify and report potential waste, fraud and abuse. In May, 1997, the AoA awarded funds to 12 state and community-based agencies and organizations for this purpose.

During fiscal year 1998, both projects produced the following outcomes:

- held more than 1,600 training sessions;
- trained over 8,000 professionals and retired volunteers who are now working in their communities on anti-fraud, waste, and abuse activities; convened more than 3,000 community education forums which directly informed more than

300,000 beneficiaries in their communities about Medicare waste, fraud, and abuse;

- developed and disseminated more than 250 types of products, educational materials and training guides—distributing tens of thousands of materials to beneficiaries;
- reached an estimated 44 million people through public service announcements, community education events, and other activities;
- referred more than 700 calls to the Office of the Inspector General's (OIG) hotline; and
- contributed to the OIG's recovery of millions of dollars in errors, overpayments, civil penalties and monetary awards.

Based on information gathered from AoA's partners and stakeholders, a number of new ORT-related technical assistance resources were developed in 1998, including:

- a report of "best practice" recommendations developed by the grantees;
- a limited access internet communication link which permits the AoA and its grantees and project officers to ask questions, raise issues, and exchange information with one another simultaneously;
- an AoA anti-fraud web page for posting and downloading manuals, brochures, fact sheets, and other materials;
- a bi-monthly newsletter, which includes updates, volunteer spotlights, and other information;
- the convening of a national technical assistance and resource-exchange conference where grantees exchanged best practice strategies; and
- the drafting of two national brochures designed to recruit volunteers—one targeted to retired professionals and the other targeted to aging network personnel.

INCREASING VISIBILITY OF NUTRITION AS A KEY COMPONENT OF HEALTH

State Nutritionist's Meeting

On November 14–15, 1997, the Administration on Aging (AoA) held the second state nutritionists/administrators meeting, "Preparing the Elderly Nutrition Program for the 21st Century," in Dallas, Texas. Fifty-five state unit on aging representatives from 45 states attended.

The program included presentations by the AoA, the Food and Drug Administration, and Food and Nutrition Services of the United States Department of Agriculture, state units on aging from across the country, and personnel from the National Policy and Resource Center on Nutrition and Aging. Individual speakers and panels addressed the following topics: managing uncertainty and change in Older Americans Act Nutrition Programs; strategic planning for nutrition services at federal, state and local levels; implementing the National Aging Program Information System (NAPIS); using data to reduce risk; maintaining food safety; and nutrition challenges including dietary reference intakes, the relationship between nutrition and chronic disease, and the delivery of nutrition services in home-care and managed care.

Program outcomes included:

- increased understanding of the relationship between nutrition and chronic disease;
- increased understanding of the components necessary to implement the Elderly Nutrition Program (ENP) and willingness to test innovative approaches;
- increased understanding of the challenges facing the ENP and the solutions states are using to meet these challenges; and
- improved partnerships between and among AoA and state units on aging.

An evaluation of the comments from the meeting indicated that states viewed the meeting as a success because it:

- showed national leadership of the AoA regarding the ENP;
- ensured quality networking and information sharing among state staff who often work in isolation from other nutrition professionals or do not communicate often with nutrition professionals;
- integrated the nutrition program into the larger view of home and community based care by encouraging the participation of both nutrition staff and social service and other state staff;
- ensured a learning environment for AoA and state staff in response to identified needs;
- provided visibility for state solutions to issues faced in many states; and
- utilized state staff as partners in developing the nutrition program nationally.

Morning Meals on Wheels

The AoA and the General Mills Foodservice (GMFS) entered into a public-private partnership to expand meal service for home bound older adults by adding a breakfast meal. The Morning Meals on Wheels Breakfast Program (MMOW) partnership also included the National Policy and Resource Center on Nutrition and Aging at Florida International University (Center).

As a result of this public-private partnership, the AoA and GMFS, with the assistance of the Center, conducted a six-month feasibility study of expanding meal service from a single meal at noon, to both breakfast and lunch meals for high risk participants in home-delivered meal programs. Based on a competitive request for applications, 20 nutrition service providers were selected. These nutrition service providers were representative of the network to ensure replicability for AoA and GMFS. The programs were geographically dispersed; urban and rural; large and small; served ethnically diverse populations; utilized different methods for meal production; consisted of independent non-profit nutrition service providers as well as nutrition services directly provided by area agencies on aging; targeted different groups of high risk individuals; and represented both Title III and Title VI programs.

Successful applicants received:

- $500 program setup grant from GMFS;
- on-going product discounts; continuing education funding;

- written manual and newsletters;
- technical assistance via conference calls, individual telephone calls and in person visits;
- publicity materials; and
- volunteer materials.

Nutrition service providers began implementation in September, 1997. Selected nutrition service providers agreed to participate in an evaluation of the program by the Center which would document both strengths and weakness of program implementation and recommendations for replication.

Outcomes included:

- service expansion to high risk homebound older adults at minimal costs;
- successful test of an innovative service model;
- development of individual outcome measures for nutrition services, such as decreased nutritional risk, improved nutrient intake, improved perceived health, improved functionality, and increased caregiver support;
- development of program outcome measures for nutrition services such as improved targeting of high risk participants, improved customer satisfaction, minimized costs for two meal a day service and improved service delivery; and
- independent evaluation of the Morning Meals on Wheels Breakfast Program by the Center.

Based on an evaluation of the program, the AoA and GMFS will consider the national expansion of the program to the aging network of state and area agencies on aging, tribes and nutrition service providers.

PROVIDING CAREGIVER SUPPORT

AoA continues to support a nationwide, toll free information and assistance directory called the Eldercare Locator, which can locate the appropriate AAA to help an individual needing assistance. Older persons and caregivers can contact the Eldercare Locator by calling 1–800–677–1116, Monday through Friday, 9:00 a.m. to 8:00 p.m., Eastern Standard Time. When contacting the Locator, callers should know the address, zip code and county of residence of the person needing assistance.

During FY 1997 and FY 1998 over 144,000 inquiries. Some of the most frequently requested information included questions about:

- general information and assistance;
- legal services;
- transportation;
- state general information;
- insurance;
- Alzheimer hotline;
- nursing homes; and
- prescriptions.

OLDER AMERICANS MONTH

The "kick-off" event for Older Americans Month (OAM) was the AoA Caregivers Fair on May 1, 1998. The purpose of this event was to provide federal employees with information on a variety of services and resources available to assist older persons and their care-

givers. Approximately 40 local and national organizations exhibited materials and provided consultation and printed information to assist caregivers in their efforts to care for a older family member, neighbor or friend. The information provided included "how-to" information for long-distance caregiving, and assistance in juggling the many demands of jobs and caregiving responsibilities.

On May 1, 1997, the AoA launched OAM with a caregivers resource fair for federal employees working in the southwest area of the District of Columbia. The theme for the 1997 OAM was "Caregiving: Compassion in Action." State and Area Agencies nationwide used the theme in the many events and activities they sponsored in celebration of OAM. The caregiver fair was designed to assist federal employees access a range of care and services in the community to help older loved ones maintain their independence and remain in their own homes and communities. Forty-five exhibitors provided consultation and information about in-home assistance, home-delivered meals, home health care, transportation, legal assistance, respite/day care, long-distance caregiving and long term care ombudsmen.

SECTION II: ENHANCING THE CAPACITY OF THE NETWORK

IMPROVING SERVICE DELIVERY TO AMERICAN INDIANS, ALASKAN NATIVES, AND NATIVE HAWAIIANS

In 1998, grants totaling $18,457,000 were awarded to 223 Indian Tribal Organizations(ITOs) and one Native Hawaiian organization for providing nutrition and supportive services to Native American elders. In 1996, over 70,000 elders received nearly two million congregate meals, 46,000 elders received 2.2 million home delivered meals, and nearly 110,000 elders received supportive services, including outreach, transportation, in-home services, and family support.

The University of Colorado at Denver and the University of North Dakota at Grand Forks were awarded cooperative agreements by the AoA totaling $700,000 to continue as National Resource Centers for Older Indians, Alaskan Natives and Native Hawaiians. The Centers continue to focus on health, community-based long-term care and related issues. The Resource Centers are the focal points for the development and sharing of technical information and expertise to ITOs, Title VI grantees, Native American communities, educational institutions, and professionals and paraprofessionals in the field. In 1998, the Resource Centers produced two culturally appropriate training modules, entitled "Diabetes Mellitus in American Indian/Alaska Native Elders: Cultural Aspects of Care" and "Cancer among Elder Native Americans." Additionally, they arranged to have mammography screening available for elderly women attending the National Indian Council on Aging national conference.

ENHANCING INFORMATION AND ASSISTANCE ACTIVITIES

Over the past year the AoA has worked on several fronts to support the enhancement of the Older Americans Act information and assistance programs at the state and local levels. The Balanced Budget Action of 1997 established the Medicare+Choice Program,

which authorizes new Medicare health plan options for beneficiaries. The AoA has been working in partnership with the Health Care Financing Administration (HCFA) to support Medicare+Choice and initiated three steps to enhance information and assistance activities.

First, AoA provided funds to State Units on Aging (SUAs) to strengthen the capacity of information and referral providers at the State, Area Agency and local levels to respond to inquiries regarding Medicare+Choice. Second, AoA awarded grants to six states to gather more detailed information on the type and number of M+C inquiries made to information and referral providers and to develop revised protocols for handling such inquiries which will be widely disseminated to other SUAs. Third, AoA worked in collaboration with the National Information and Referral Support Center and HCFA to develop the Medicare+Choice Training Manual for Older Americans Act Information Referral & Assistance Programs. The manual was provided to SUAs and Area Agencies on Aging to assist them in developing Medicare+Choice training and outreach activities.

BREAST CANCER AWARENESS AND EDUCATION GRANTS

On October 30, 1997, AoA awarded three grants totaling approximately $300,000 designed to focus on outreach to older underserved women, including Native Americans, to increase their awareness of breast cancer, and encourage them to get mammograms. The three grants to national aging organizations were made available through the Federal Coordinating Committee on Breast Cancer and the DHHS Office of Women's Health, and were awarded during October, proclaimed by President Clinton as National Breast Cancer Awareness Month. These grants were part of the Administration's overall efforts to respond to the significant threat posed by breast cancer. In 1995, First Lady Hillary Rodham Clinton launched a campaign, highlighted at the White House Conference on Aging, urging older women to obtain mammograms, and to promote the use of Medicare coverage for mammography. In 1997, President Clinton proposed, and Congress adopted, the expansion of Medicare coverage which will help pay for annual mammograms for all Medicare beneficiaries age 40 and over.

Breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer deaths among American women. There is no proven way to prevent breast cancer, so early detection through mammography and clinical breast exams is essential. For women aged 50–69, having regular mammograms can reduce the chance of death from breast cancer by one third or more. The AoA projects were designed to emphasize the national aging network's capacity to reach out to older women, in particular those who are most at risk, and urge them to become more actively aware of the need to get a mammogram and become more involved in their own self-care.

The grantees were:

- The Long Term Care Resource Center of the National Association of State Units on Aging, Washington, D.C. This project was designed to work with state and territorial agencies on aging which administer home and community based

care systems to introduce breast cancer outreach and education into several key aging services programs, including information and assistance, congregate and home-delivered meals, adult day care; case management and homemaker/chore services. The project also coordinated with the multi-city pilot outreach projects on mammography being conducted by the Health Care Financing Administration.

- The Native Elder Health Resource Center at the University of Colorado Health Sciences Center, Denver, Colorado. This project included the implementation of a coordinated education and dissemination plan to address the root causes of the differential in breast cancer morbidity and mortality that affects older American Indian and Alaskan Native women. The Center augmented its widely used Internet-based telecommunications effort to more specifically and effectively disseminate relevant educational materials to key providers, planners, administrators and policy makers in urban, rural and reservation Native communities.
- The National Resource Center on Native American Aging at the University of North Dakota, Grand Forks, North Dakota. This project also implemented a coordinated education plan and pursued a nationwide program of "train the trainer" instruction. It disseminated culturally appropriate materials in collaboration with the National Indian Council on Aging, the National Title VI Directors organization, the Recruitment and Retention of American Indians into Nursing Programs (RAIN), the Indian Health Service, and various other direct service programs serving urban and reservation locations. An additional component of this effort was four demonstration projects carried out by RAIN to determine the most effective methods of developing awareness.

ADULT IMMUNIZATION INFORMATION

The AoA worked with the aging network to draw attention to the importance of adult immunization with particular attention to vaccination against influenza and pneumonia before the start of the fall season. Every year, in the United States, between 50,000 to 70,000 adults die of influenza, pneumococcal infections and hepatitis B. It is estimated that the cost to society for these and other vaccine-preventable diseases of adults exceeds 10 billion dollars per year. As a part of the Department of Health and Human Services' effort to improve health care provider and public awareness of the value of immunization in promoting health and preventing disease, the AoA encouraged aging network involvement and support of adult immunization efforts. The Centers for Disease Control (CDC), the National Institutes of Health (NIH), the Food and Drug Administration (FDA), the Health Care Financing Administration (HCFA) and the AoA, along with other agencies, have joined together, over the years, in an effort, to reduce vaccine-preventable illnesses.

Congress declared October 12–18, 1997, as National Adult Immunization Awareness Week. This special observance highlighted the importance of timely adult immunizations. The AoA effort emphasized that adults, particularly those individuals over age 65, should receive the flu vaccine annually before early November. Individuals

age 65 and over, or others with chronic respiratory disease or a weakened immune system, should also receive a once-in-a-lifetime immunization against pneumonia. Adult immunization does not receive as much public attention as childhood vaccination, partly because there are no statutory requirements and partly because many adults do not understand the importance of these preventive measures. Adults also need immunization for the prevention of hepatitis A and B, measles, mumps, rubella, tetanus, diphtheria, and chickenpox.

MANAGED CARE PRINCIPLES

The AoA conveyed a set of principles to assist and help guide state and area agencies on aging, tribal organizations and service providers in interactions and activities related to managed health care. These principles reinforced the essential role which state and area agencies on aging and other aging organizations play with regard to consumer education, protection, and representing the interest of the elderly.

Following the successful AoA Managed Care Conference in February, 1996, many members of the aging network requested additional assistance and guidance. The issuance of a set of principles seemed to be the best approach for assisting the aging network. This approach included receiving input about draft documents from other federal agencies, various state and area agencies on aging, national aging organizations, universities and groups representing consumer concerns.

The question of the appropriate roles of state and area agencies on aging in managed care has been widely discussed. In an effort to respond to the issues and questions which have been raised, AoA has worked to reinforce the public mission of state and area agencies funded under the Older Americans Act in the rapidly changing era of health and long-term care reform. Our goal was to provide guidance for responding to new issues facing the elderly as they encounter changes in health and LTC delivery systems. This information was designed to assist the aging network in its decision making as its representatives worked with managed care organizations and policy makers in addressing managed care issues. The guidance alerted the aging network to some of the potential benefits and possible pitfalls of managed health care plans.

The principles were developed because of the activity related to managed care at the time. As of March 1, 1997, approximately 5 million Medicare beneficiaries were enrolled in managed care plans, accounting for approximately 14 percent of the total Medicare population. Of the total 369 prepaid contracts, 285 were risk contracts, 37 were cost contracts, 19 were demonstrations and 48 were health care prepaid plans. There was a 1.6 percent increase in managed care enrollment during February, 1997. Enrollment in Medicaid managed care plans is also increasing. As of June 30, 1996, approximately 40.1 percent of the Medicaid population was enrolled in managed care. This figure was an increase from 29.37 percent enrolled in 1996.

DOCUMENTING VALUE OF AGING NETWORK IN HUMAN TERMS

The value of the aging network is readily apparent at the local level because of the tangible nature of the assistance provided to older individuals. At the national level, the network's activities are reflected through the state program performance report under the National Aging Program Information System (NAPIS). State Agencies on Aging provided a profile of who was served with their submission of state program performance data for Fiscal Year 1996. This information represented the second step toward more client-centered reporting by the aging network. The new reporting requirements introduced by the AoA for Titles III and VII in 1995, required both national and state data on persons served, services provided, services expenditures, providers used, state and area agency staffing, and the use of senior centers. Program performance summaries and profiles of individual state programs can be found in Appendix V.

CELEBRATING THE INTERNATIONAL YEAR OF OLDER PERSONS

The United Nations General Assembly designated 1999 as the International Year of Older Persons (IYOP) to highlight the challenges and opportunities of a rapidly aging global population. President Clinton officially launched IYOP in the United States on October 1, 1998, with its theme, "Toward a Society for all Ages". Over 30 federal government departments and agencies, coordinated by the AoA, have worked together to plan government-wide activities through December 1999 to review common issues that will affect aging populations of this country in the next century and to share best practices among other nations of the world. Many events in process at the federal, state and local level are to highlight the importance of an international demographic shift in aging populations and the U.S. has assumed a leadership role in developing a blueprint for the societal changes resulting from greater longevity.

APPENDICES

APPENDIX I: The National Aging Service Network

APPENDIX II: Compendium of Active Grants Under Title IV of the Older Americans Act

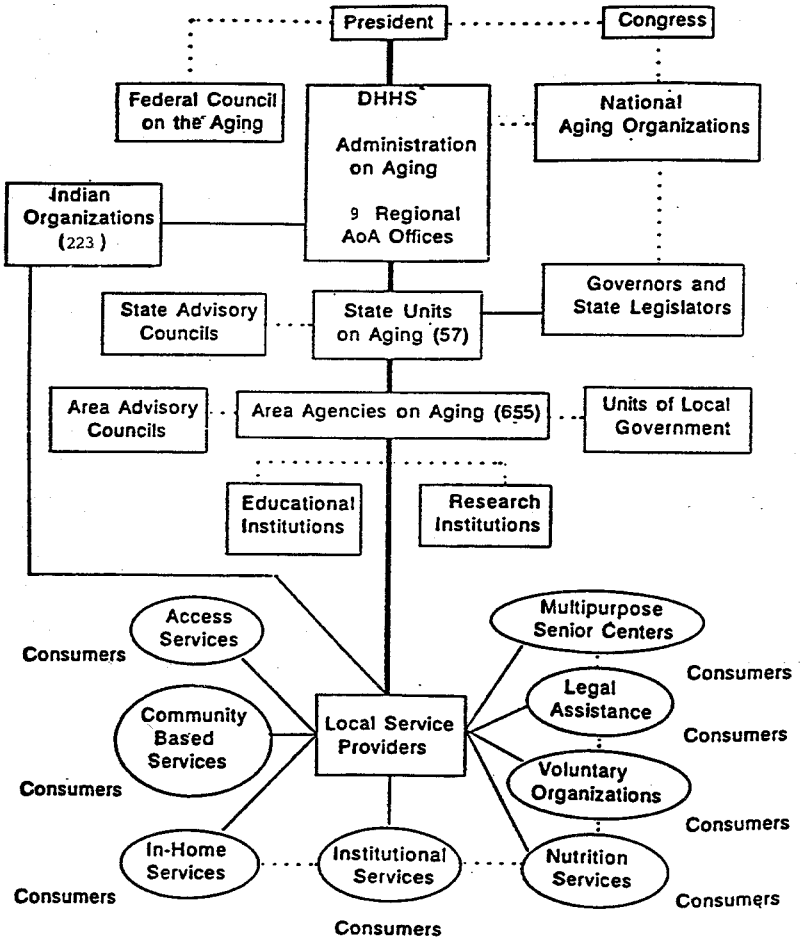
APPENDIX III: Long-Term Care Ombudsman Annual Report, Fiscal Year 1996, Executive Summary

APPENDIX IV: National Elder Abuse Incidence Study

APPENDIX V: Program Performance Summaries, 1996 State Program Report for Titles III and VII of the Older Americans Act

APPENDIX I

THE NATIONAL AGING SERVICE NETWORK



U.S. Department of Health and Human Services
Administration on Aging

Compendium of Active Grants

Under Title IV of the Older Americans Act

January 1999

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Alzheimer's Disease

90-AR-2160 **THE CENTER FOR ALZHEIMER'S DISEASE RESEARCH: FINDING NEW WAYS TO SUPPORT PATIENTS AND CAREGIVERS**

THE FUND FOR AGING SERVICES
2 LAFAYETTE STREET
NEW YORK, NY 10007

Ms. Dianne Woitkowski (212) 442-3086
September 30, 1998 to February 29, 2000

FY 1998
$1,999,928

This project establishes a Center for Alzheimer's Disease Research: Finding New Ways to Support Patients and Caregivers. The Center has four objectives: (1) examine Alzheimer's Disease provider approaches and delivery mechanisms and their impact on caregiving; (2) demonstrate the effectiveness of a caregivers assistance model that includes a family training program, day/night-time respite, and home modification; (30 train professional caregivers to conduct physical exercise with the AD patient and assess the results; and (4) conduct research into the development of more effective medication therapies for the agitation seen in the vast majority of AD patients.

Community-based Care Systems Development/Improving Linkages

90-AM-0896 **National Information Sharing and Mentoring Program on Home and Community-Based Services**

University of Minnesota, School of Public Health
D-351 Mayo (Box 197)
420 Delaware Street SE
Minneapolis, MN 55455

Dr. Robert Kane Ph.D. (612) 624-1185
February 15, 1995 to January 31, 1999

FY 1995	FY 1996	FY 1997
$367,001		$150,000

This project facilitates the development of strong infrastructures for innovative and effective home and community-based long term care programs at State and local levels. The Mentoring project is being carried out by the University of Minnesota in collaboration with Richard Ladd Associates. Certain States with demonstrated expertise in the operation of home and community based long term care systems will participate in the project as mentors. As many as fifteen other States, which demonstrate both an interest in and a significant potential for gaining greater capacity to develop and improve their systems, will participate as partners in the mentoring effort.

Eldercare Locator

90-AM-2159 **A NATIONAL TOLL-FREE AGING INFORMATION AND REFERRAL SERVICE AND A NATIONAL INFORMATION AND REFERRAL SUPPORT CENTER**

NATIONAL ASSOCIATION OF AREA AGENCIES ON AGING
1112 16TH STREET, N.W., Suite 100
WASHINGTON, DC 20036

Ms. Janice Jackson (202) 296-8130
September 30, 1998 to September 29, 2002

FY 1998	FY 1999
$790,000	$65,000

The National Eldercare Locator, a collaboration of the National Association of Are Agencies on Aging, the National Association of State Units on Aging, and Biospherics, Inc., is a national telephone access system designed to provide information about home and community-based services in any community in the country. With access to that information, anyone concerned about the well-being of distant older family members can more effectively assist their parents, grandparents, and siblings in getting the care that might make the difference between their remaining at home or being placed in an institutional setting. An adjunct National I&R Support Center provides training, technical assistance, and consultation to the information and referral/assistance staff, based primarily in Area Agencies on Aging, who direct persons using the Locator to available and appropriate services.

Legal Services

90-AM-2026 **Create a Statewide Senior Legal Hotline to Serve the Seniors of Kansas**

Kansas Legal Services, Inc.
Executive Office
712 S. Kansas Ave, Ste. 200
Topeka, KS 66603

Mr. Wayne White (913) 233-2068
September 30, 1995 to September 30, 1999

FY 1995	FY 1996	FY 1997
$103,354	$103,354	$103,354

This project will establish a Senior Legal Hotline for the State of Kansas aimed at helping the elderly and their familiesgain access to a wide variety of legal services. Outreach will be implemented through the media, Area Agencies on Aging, senior centers, etc. Approximately 150 private attorneys will be recruited to provide pro bono and low fee representation to Kansas seniors. A training program, including manuals and tapes, will be utilized to train Hotline staff and referral attorneys.

Legal Services

90-AM-2074 **STATEWIDE ELDERLY LEGAL SERVICES HOTLINE**

SOUTH MISSISSIPPI LEGAL SERVICES CORPORATION
P.O. BOX 1386
BILOXI, MS 39533

Stanley Taylor Jr. (601) 374-4160
June 1, 1996 to May 31, 1999

FY 1995	FY 1996	FY 1997	FY 1998
$120,101		$119,400	$115,000

The South Mississippi Legal Services Corporation, in collaboration with the Tougaloo College Gerontology Program, will establish a Statewide Legal Hotline for Elder Mississippians. The project will increase access to legal services for older Americans, particularly, rural residents and minorities. An agreement has been made with the Jackson County Community Agency to assist its large clientele of Asian Americans, particurarly those concentrated in the southern portion of the state . Similarly, an agreement has been secured with the Band of Choctaw Indians Community to provide services to those located on the reservation. The Gerontology Program at Tougaloo will assist with the design of appropriate training materials for the Legal Hotline implementation to targeted participants in the project. It is estimated that the Hotline will handle over 10,000 clients per year. In addition to key legal services personnel, a panel of over 100 private attorneys will be recruited to respond to the needs of the Hotline users. Satisfaction and quality control will be ensured through ongoing training and staff development, needs assessments, informal feedback and routine surveys. The Hotline will benefit the elderly community by providing access to much needed legal services to a segment of the population in need of it most, but cannot always obtain it due to access restrictions. Additionally, the program will serve as a linking resource to individuals, agencies and organizations needing information on the legal needs of the aging. Thus, through proper dissemination, this project will lead to a network of exchange linkages and support services.

Legal Services

90-AM-2077 **NATIONAL LEGAL ASSISTANCE AND ELDER RIGHTS PROJECT**

A.A.R.P. FOUNDATION
LEGAL ASSISTANCE GROUP
P.O. BOX 51040
WASHINGTON, DC 20091

Mr. Wayne Moore (202) 434-2149
September 30, 1996 to March 31, 1999

FY 1996	FY 1997
$135,000	$150,000

This project responds to the need for a broad range of legal assistance resources in support of the Older Americans Act, especially Title VII. Through elder rights advocacy, it is developing and implementing elder rights plans in 5 states. Under the heading of legal assistance programs, it is disseminating proven methods of delivering services less expensively through better use of volunteers. The project is providing substantive advice, case consultation, and support with precedent-setting litigation in support of LTC Ombudsman programs. In addition, networks of trainers and advocates in 9 states are being trained in elderlaw.

Legal Services

90-AM-2116 **LSCI LEGAL HOTLINE FOR OLDER IOWANS**

LEGAL SERVICES CORPORATION OF IOWA
CENTRAL ADMINISTRATION OFFICE
1111 9TH STREET, SUITE 230
DES MOINES, IA 50314 2527

Mr. Dennis Groeneboom (515) 243-2151
September 1, 1997 to August 31, 2000

FY 1997	FY 1998
$99,360	$99,360

Iowa is a large, rural state with a sizable and increasing population over 60. One vital service seniors lack is a legal hotline. This project will fill that gap and improve the delivery of legal services to older Iowans. A hotline will strengthen the enforcement of rights mandated by Title VII of the Older Americans Act. Specific outcomes of the project include: 1) an estimated 2,200 to 2,500 seniors will receive legal assistance during the first year of the hotline operation, and 5,700 to 6,000 callers per year will be served thereafter; 2) a new outlet for service to seniors will be opened to 1,700 volunteer lawyers enrolled in LSCI's pro bono program, the Volunteer Lawyers Project, and; 3) an extensive plan for outreach and publicity will be implemented based on LSCI's extensive experience with similar projects.

Legal Services

90-AM-2117 **SENIOR LEGAL HOTLINE**

NORTHWEST JUSTICE PROJECT
401 SECOND AVENUE SOUTH, SUITE 407
SEATTLE, WA 98104

Ms. Joan Kleinberg (206) 464-1519
September 1, 1997 to August 31, 2000

FY 1997	FY 1998
$96,616	$96,616

Northwest Justice will implement a statewide seniors' hotline through augmentation of its existing Legal Services Corporation-funded hotline, the Coordinated Legal Education, Advice and Referral system, "CLEAR". (CLEAR was established in 1996. It currently provides centralized telephone advice, brief service and referral to low-oncome persons in 25 of Washington's 39 counties. While CLEAR has proven beneficial where it is operating, it is currently serving less than one-third of the state's senior population.) This project will: 1) Expand the benefits of CLEAR to all seniors in all Washington counties, and operate statewide within the year of 1998. 2) Eliminate means testing of CLEAR services for seniors. 3) Target outreach efforts to seniors with high social and economic need. 4) Demonstate the feasibility of integrating a senior hotline with a Legal Services Corporation-funded hotline.

Legal Services

90-AM-2118 **GEORGIA SENIORS HOTLINE**

ATLANTA LEGAL AID SOCIETY, INC.
151 SPRING STREET, N.W.
ATLANTA, GA 30303

Mr. Steve Gottlieb (404) 614-3990
September 1, 1997 to August 31, 2000

FY 1997	FY 1998
$96,000	$100,000

The Atlanta Legal Aid Society, in collaboration with the State Division of Aging Georgia Legal Program, will establish a statewide Seniors Hotline to respond to the legal needs of persons 60 years and older. The expected outcomes of the hotline are: 1) to provide seniors greater access to legal information or referrals; 2) to increase free and low cost legal services for seniors, and; 3) to maximize the ability of Legal Services Corporation grantees and other legal services providers in Georgia to offer ongoing representation to seniors on complex cases. The Hotline will use a managing attorney and the equivalent of two full time staff attorneys, as well as interns and self-help materials. It will also utilize and expand existing private attorney resources, by cooperation of the State Pro Bono Project.

Legal Services

90-AM-2128 **TECHNICAL ASSISTANCE PROJECT FOR LEGAL HOTLINE**

AMERICAN ASSOCIATION OF RETIRED PERSONS FOUNDATION
DIVISION/LEGAL ADVOCACY GROUP
P.O. BOX 51040-RSG
WASHINGTON, DC 20091

Ms. Monica Kolasa (412) 216-5201
November 15, 1997 to November 14, 2000

FY 1998	FY 1999
$100,000	$100,000

This project's purpose is to provide technical assistance and other services to the network of legal hotlines. The objectives are needed to maintain the integrity of a service delivery model with the potential to expand legal services to older adults whose needs cannot be met through traditional models. The AARP Foundation proposes a combination of proven and promising strategies. The Foundation will achieve these objectives: (1) Provide technical assistance and support to new and established programs by on-site visits, on-call technical support, conference calls, listserv, and materials; (2) increase awareness through expansion of the hotline clearinghouse, listserv, and conference presentations; and (3) coordinate the development of quality standards governing hotlines. Products: Conference on Innovations & Ethical Considerations in Hotlines, Technology and Pro Se Delivery; expanded collection of self-help publications; updated hotline guide; updated best practices collection; The Senior Hotline Quarterly; monthly issues of The Legal Hotline Staff Bulletin; listserv; and quality standards.

Legal Services

90-AM-2145 **LEGAL HELPLINE FOR OLDER KENTUCKIANS**

ACCESS TO JUSTICE FOUNDATION, INC
209 EAST HIGH STREET
LEXINGTON, KY 40507

Ms. Jamie Oslie Hamon (606) 255-9913
September 1, 1998 to August 31, 2001

FY 1998
$100,000

The Access to Justice Foundation (AJF) plans to establish a new statewide senior legal hotline, the Legal HelpLine for older Kentuckians. The Legal HelpLine will combine resources of two existing statewide public interest non-profits to increase access to legal assistance for older Kentuckians, particularly the at-risk elderly and socially and economically needy and rural poor. This project will blend the resources of an existing statewide senior information and referral hotline and its weekly radio program on issues of concern to the elderly with the resources of a statewide legal services center and its links to all legal services programs, their accompanying pro bono and reduced fee panels, Title III benefits coordinators, and local bar associations. The weekly radio program is an innovative method of reaching a large segment of the target audience and of generating audiocassettes and radio program transcripts that will be useful to senior Kentuckians and social services providers.

Legal Services

90-AM-2146 **TENNEESSEE ELDER LAW HOTLINE**

SOUTHEAST TENNESSEE LEGAL SERVICES, INC.
414 MCCALLIE AVENUE
CHATTANOOGA, TN 37402

Mr. Micheal C. Roebuck (800) 572-7457
September 1, 1998 to August 31, 2001

FY 1998
$109,974

The Southeast Tennessee Legal Services (STLS), in cooperation with a statewide coalition of providers of services to the elderly, will establish a statewide legal hotline for older Tennesseans. The Tennessee Elder Law Hotline will provide: free legal advice and brief services, including self-help pamphlets, document reviews, calls and letters to third parties on behalf of callers, when appropriate, to free legal services programs, pro bono programs, local bar referral services, a reduced-fee panel, private practitioners, governmental entities and social service agencies. It will also experiment with the preparation of some minimal pleading and/or legal documents in limited cases where there is a likelihood that this will resolve the problem, and will continue the service if this appears feasible. These services will be provided to all older Tennesseans, regardless of income or assets. Prorities for the hotline will be set by the statewide advisory board, which will be composed of the current members of the statewide coalition responsible for working with STLS to submit this proposal. The coalition is composed of: representatives from the Tennessee Commission on Aging, all of the Tennessee Area Agencies on Aging, the Tennessee Bar Association (TBA), two federally funded legal services programs, and the Tennessee Association of Legal Services (TALS). The hotline will identify the segment of the elderly popultion most underserved, and will especially target ethnic and/or racial minority older persons, those elderly in greatest economic and social need, and older persons in rural areas for outreach and hotline services. In addition, it will also provide for other elder rights professionals, such as the Long-Term Ombudsman, Public Guardians for the Elderly, Adult Protective services, and so on.

Legal Services

90-AM-2147 **STATEWIDE LEGAL HOTLINE**

LEGAL SERVICE FOR THE ELDERLY, INC
P.O. BOX 2723
72 WINTHROP STREET
AUGUSTA, ME 04338 2723

Ms. Amy Kurtz (207) 621-0225
September 1, 1998 to August 31, 2001

FY 1998
$100,000

In a project that will expand their existing senior hotline, Legal Services for the Elderly (LSE) plan the following to improve access to legal services for older Mainers: (1) Provide clients with easier access to legal and social services providers by creating a seamless web of service connections using new communications technology; (2) Promote client self-advocacy with information technologies (such as the Internet), client education in the community, and specialized self-advocacy clinics; (3) Improve services to vulnerable clients by training Hotline attorneys on cognitive and mental health impairments affecting the elderly and by piloting an innovative program of volunteer financial exploitation investigators; (4) Empower clients to make informed health insurance choices by building awareness of Hotline's expert insurance counseling services and working with client advocacy groups. Products include: (1) LSE website with client self-advocacy tools; (2) Study of client educational materials and delivery efficacy; (3) Hotline attorney training module/video on mental health impairments; (4) Findings on financial expitation program; (5) Findings on seamless access network. (A few innovative ideas that could really enhance services are: [1] Hiring a full time client resources coordinator to expand services through such things as website development and outreach. {The coordinator, a non-attorney, will not be recruiting, that task appropriately being left to the managing attorney.} [2] Establishing a single point of entry with a phone forwarding system. [3] Plan to develop a special team of investigators to adddress financial exploitation and [4] Special staff training on mental health issues.)

Legal Services

90-AM-2148 **SENIOR CITIZENS LAW PROJECT HOTLINE**

NEW HAMPSHIRE LEGAL ASSISTANCE
1361 ELM STREET, SUITE 307
MANCHESTER, NH 03101

Mr. John E. Tobin Jr. (603) 644-5393
September 1, 1998 to August 31, 2001

FY 1998
$101,130

New Hampshire Legal Assistance (NHLA) will establish a statewide toll-free hotline with live intake, staffed by retired, volunteer intake worker, two full time attorneys (one as managing attorney) and volunteer retired attorneys. Priority areas of the hotline, for advice and brief service, will include housing, income maintenance, health care and public benefits. Cases requiring full representation, will be referred to appropriate agencies, including NHL staff attorneys and the New Hampshire Bar Association's Pro Bono, Reduced Fee and Full Fee Programs. NLHA will collaborate with the NH Bar Association to develop special reduced and fixed-fee panels for seniors. The objectives include: (1) Improving the delivery of legal services to NH's most socially and economically needy seniors, (2) Increasing awareness and access to civil legal services for NH seniors, especially in rural areas, (3) Increasing affordable extended representation to NH seniors through collaboration with the NH Bar Association, and (4) Increasing identification and response to systemic legal issues of NH seniors.

National Center on Elder Abuse

90-AM-0660 **NATIONAL CENTER ON ELDER ABUSE**

American Public Welfare Association
Research and Demonstration Dept.
810 First Street, N.E.
Suite 500
Washington, DC 20002

Toshio Tatara (202) 682-0100
September 30, 1993 to March 31, 1999

FY 1993	FY 1994	FY 1995	FY 1996	FY 1997
$349,992	$670,713	$679,975	$350,000	$199,996

The American Public Welfare Association operates the Center jointly with the National Association of State Units on Aging, the National Committee for the Prevention of Elder Abuse, and the University of Delaware to serve the information, skills development, and knowledge building needs of professionals working within and outside the nation's elder abuse/neglect network. The Center operates the Clearinghouse on Abuse and Neglect of the Elderly (CANE); publishes a newsletter, NCEA EXCHANGE; provides technical assistance; disseminates information about best practices in the field; distributes training materials and research syntheses; and conducts training and research studies. Other major products and outcomes include a computer bulletin board; teleconferences; reports, monographs and short articles; manuals; and statistics.

National Long Term Care Ombudsman Resource Center

90-AM-2139 **NATIONAL LONG TERM CARE OMBUDSMAN RESOURCE CENTER**

NATIONAL CITIZENS' COALITION FOR NURSING HOME REFORM
1424 16th STREET N.W., SUITE 202
WASHINGTON, DC 20036

Ms. Sarah Burger (202) 332-2275
April 1, 1998 to March 31, 2003

FY 1998
$290,000

The National Long-Term Care Ombudsman Resource Center provides support, technical assistance, and training to State LTC Ombudsman Programs and their state-wide network of regional (local) programs. The Center assists the states in promoting public awareness of the work done by ombudsman programs, disseminates information and best practice materials, and alerts state and local ombudsman programs to breaking developments affecting the nursing home care of older Americans.

National Minority Aging Organization's

90-AM-2078 **COMMUNITY BASED CAPACITY BUILDING FOR ASIAN/PACIFIC ISLANDER ELDERS**

NATIONAL ASIAN PACIFIC CENTER ON AGING
POLICY/RESEARCH
MELBOURNE TOWER, SUITE 914
1511 THIRD AVENUE
SEATTLE, WA 98101 1626

Dr. Donna Yee Ph.D. (206) 624-1221
February 15, 1997 to February 15, 2000

FY 1997	FY 1998
$130,000	$260,000

This project is designed to catalyze and coordinate community-based capacity building efforts by Asian/Pacific Islander (API) elders and representative groups to better enable them to work with, and improve the responsiveness of, aging network service providers and health/long term care providers. Year two community organizing conferences are targeted for Boston, Chicago, New York City, and the San Francisco Bay area; the gains made in year one of the project to mobilize API elders and aging network service providers in Los Angeles County, Philadelphia, and Seattle/King County are being followed up and reinforced.

National Minority Aging Organization's

90-AM-2079 **INDIAN HEALTH DATA BUREAU**

NATIONAL INDIAN COUNCIL ON AGING, INC.
DHHS/DIVISION ON AGING
10501 MONTGOMERY BLVD. N.E., SUITE 210
ALBUQUERQUE, NM 87111

Mr. David Baldridge (505) 292-2001
February 15, 1997 to February 14, 2000

FY 1997	FY 1998
$130,000	$130,000

This project has established and is now further developing an Indian Health Data Bureau within NICOA for the purpose of providing Indian tribes with much-needed data on, and analysis of, tribal and Indian elder health status and concerns. Without access to and informed use of such data, given the growing managed health care environment, tribes ara at a disadvantage in competing with private/state providers for health care dollars to serve their elders and other members. Under the project, begun in early 1997, NICOA has negotiated agreements with the Indian Health Service to access health data on Indian elders, and just recently with HCFA/AoA to access Medicaid/Medicare data files. Data transfer and analysis will undergo a trial run with North Dakota tribes, followed by a broadened Indian Health Data Bureau capability to assist other Indian tribes over the course of the project. Extensive dissemination and education efforts have been undertaken and will continue through 1999.

National Resource Centers for Long Term Care

90-AM-0701 **NATIONAL RESOURCE CENTER ON LONG TERM CARE**

National Association of State Units on Aging
1225 I Street, N.W.
Suite 725
Washington, DC 20005

Diane Justice (202) 898-2578
September 30, 1993 to September 29, 1999

FY 1993	FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
$499,943	$739,587	$500,000		$149,932	$39,927

The National Resource Center on Long Term Care will concentrate on two specialty areas: (1) development and improvement of community based long term care (CBLTC) infrastructures and their components - assessment, case management, services and quality assurance, and (2) enhancement of those infrastructure components to better meet the needs of all LTC consumers, with particular emphasis on persons with Alzheimer's disease and persons of all ages with physical disabilities. The Center has three main objectives. Objective 1 enhances the capacity of SUAs and AAAs to design, develop, and manage their CBLTC infrastructures. Objective 2 assists SUAs and AAAs to prepare for a new national CBLTC program. Objective 3 collects and analyzes information on state and local CBLTC initiatives.

National Resource Centers for Older Indians, Alaskan Natives, and Native Hawaiians

90-AM-0756 **UNIVERSITY OF NORTH DAKOTA RESOURCE CENTER ON NATIVE AMERICAN AGING**

University of North Dakota
Off. of Native American Programs
P.O. Box 7134
Grand Forks, ND 58202 7134

Alan Allery (701) 777-4291
February 1, 1994 to January 31, 1999

FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
$249,879	$300,000		$270,000	$350,000

This Center will concentrate on enhancing knowledge about older Native Americans in order to increase and improve the development and provision of services to older Native Americans. The Center will concentrate on the development and technical information and expertise to Indian Tribal Organizations, Title VI grantees, Native American communities, educational institutions; professionals and paraprofessionals in the field; short term applied research; education; and dissemination of information.

National Resource Centers for Older Indians, Alaskan Natives, and Native Hawaiians

90-AM-0757 **NATIVE ELDER HEALTH CARE RESOURCE CENTER**

University of Colorado at Denver
4455 East 12 Avenue
Room 308
Denver, CO 80220

Dr. Spero Manson Ph.D. (303) 372-3232
February 1, 1994 to January 31, 1999

FY 1994	FY 1995	FY 1996	FY 1997	FY 1998
$249,984	$300,000		$270,000	$349,994

The Center focuses on culturally competent health care. There are four themes: ascertaining health status and conditions, improving practice standards, increasing access to care, and mobilizing community resources. Diverse organizational assets will be integrated to create a multi-component program led by experienced, prominent Native faculty. Telecommunications and print media are employed to increase awareness of and access to program activities. The computerized electronic telecommunicaions system (Denver Free-Net) provides nationwide access to NEHCRC generated data, discussion groups, TA resources and exemplar programs related to the health care of Native Elders. Approximately seven (7) research projects encourage replication and extension into related areas of study. Intensive continuing education workshops and home-based, self-study certificate programs are being developed and offered to nursing, social work, physical therapy, exercise physiology, pharmacy, nutrition, dental, psychology, and medical personnel.

Nutrition

90-AM-0889 **NATIONAL POLICY AND RESOURCE CENTER ON NUTRITION AND AGING**

Florida International Univesity
Department Dietetics/Nutrition
11200 S.W. 8th Street
Miami, FL 33199

Dr. Nancy Wellman Ph.D. (305) 348-1517
February 1, 1995 to January 31, 1999

FY 1995
$358,835

The National Resource and Policy Center on Nutrition and Aging is focused on the prevention of malnutrition and food insecurity and the promotion of good nutritional practices among older Americans, purposes which are at the center of the Administration on Aging's Nutrition/Malnutrition Initiative. The Center 's principal activities will include: (1) information dissemination including the development of a media campaign; (2) training and Technical assistance for agencies in the aging network and other organizations working in the field of nutrition and aging, and (3) the development of effective strategies to prevent malnutrition and promote good nutrition through knowledge building and policy analysis.

Pension Information and Counseling

90-AM-2031 **The New York Pension Hotline**

Legal Services for the Elderly
130 West 42nd Street, 17th Floor
New Yourk, NY 10036

Edgar Pauk Ph.D. (212) 391-0120
September 30, 1995 to December 31, 1999

FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
$75,000		$21,000	$75,000	$75,000

The project is designed to both enlighten and empower pension (and other retirement benefits) claimants by providing them with hot-line access to information they need both to discover and enforce their rights. The project will also assist public interest attorneys and private attorneys who are willing to represent pension claimants either on a pro bono or contingent fee basis. Pension counseling information provided includes: (1) information needed to apply for benefits and exhaust plan remedies by appealing a denial of benefits within a claimant's plan; (2) information needed to assess whether a plan complies with ERISA's minimum standards; (3) referrals to private attorneys and bar associations for representation and litigation; and (4) outreach to alert persons with pension and other retirement claims to the Project.

Pension Information and Counseling

90-AM-2032 **Pension Rights Counseling Advocacy Project**

California Advocates for Nursing Home Reform
1610 Bush Street
San Franciso, CA 94109

Patricia McGinnis (415) 474-5171
September 30, 1995 to December 31, 1999

FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
$74,968		$21,000	$75,000	$75,000

The Pension Rights Counseling Advocacy Program (PRCAP) has five objectives: (1) expand the existing project statewide; (2) create a statewide pension referral panel of private attorneys, financial planners and government and social service agencies; (3) revise existing consumer materials, create new materials and disseminate materials in English, Spanish, and Chinese; (4) conduct training sessions for pension panel members, legal services attorneys, and social services programs in California each year; and (5) disseminate program information, products and materials through a designated marketing program targeting employers, unions and the the aging network with special emphasis on women and minority elders.

Pension Information and Counseling

90-AM-2033 **Pension Information and Counseling Center**

Older Women's League
666 11th Street NW
Washington, DC 20001

Ms. Deborah Briceland-Betts (202) 783-6686
September 30, 1995 to February 28, 2000

FY 1995	FY 1996	FY 1997	FY 1998
$75,000			$74,906

The Older Women's League will provide innovative, low-cost, user-friendly methods of making pension and retirement support information to low-income seniors, especially minorities and women. Through an information and counseling service, a partnership with the organizations serving the African American community, speakers bureau, extended outreach into the community of minority and older women, volunteer training, financial workshiops and consumer materials, the project will strengthen financial independence, and increase access to retirement income.

Pension Information and Counseling

90-AM-2036 **Pension Information Effort (PIE)**

City of Chicago
Area Agency on Aging Chicago Dep
510 Peshtigo Court 3A
Chicago, IL 60611

Marcia Naas (31) 744-2676
September 30, 1995 to December 31, 1999

FY 1995	FY 1996	FY 1997	FY 1998
$74,605			$74,988

The Chicago Department on Aging will establishe a pension information and couseling program entitled the Pension Information Effort (PIE). The objective of the program is to assist seniors in undrstanding and obtaining their pension benefits and to strengthen seniors' financial independnece by increassing their access to retirement income. PIE will use outreach and dissemination of information through workshops, presentations,literature distribution, letters to public and private organizations, individual counseling, and referrals.

Pension Information and Counseling

90-AM-2049 **Technical Assistance Project Pension Information and Counseling Program**

Pension Rights Center
Pension Assistance Project
918 16th Strret, NW, Suite 704
Washington, DC 20006

Trip Reid (202) 296-3776
September 30, 1995 to December 31, 1999

FY 1995	FY 1996	FY 1997	FY 1998	FY 1999
$155,000	$50,000	$37,000	$150,000	$150,000

The Pension Rights Center technical assistance project provides technical assistance, backup support and training to six pension demonstration projects plus others who request guidance in the area of pension counseling. Products of the project, which will be disseminated nationally, will include an updated Intake and Training Manual, a Compendium of project approaches and resources, an on-line electronic pension assistance service, Pension Counseling Bulletins and News Briefs, a National Conference on Confronting the Pension assistance Problem, and a White Paper recommending policy and legislative initiatives to solve the pension assistance problem.

Pension Information and Counseling

90-AM-2051 **Pension Counseling Through Law School Clinical Program**

The University of Alabama
School of Law
Box 870104
Tuscaloosa, AL 35487 0104

Norman Stein (205) 348-1136
September 30, 1995 to February 28, 2000

FY 1995	FY 1996	FY 1997	FY 1998
$74,247			$75,020

The University of Alabama will undertake a demonstration project in which law students provide pension counseling, assistance, and outreach to older Americans in both uban and rural communities in Alabama. The program's goals are to (1) use outreach programs to educate seniors about pensions and the availablity of the program's counseling services; (2) determine the efficacy of using law students to counsel seniors on pensions and other retirement benefits; (3) analyze and compare the results with different senior populations (mid-size urban area, small urban area, rural area); (4) assess whther law schools are able to train non-legal volunteers to provide pension counseling and assistance; and (5) disseminate results during and after the program.

Pension Information and Counseling

90-AM-2131 **PENSION COUNSELING AND INFORMATION PROJECT**

PIMA COUNCIL ON AGING
5055 E. BROADWAY, SUITE C-104
TUCSON, AZ 85711

Ms. Marian Lupu (520) 790-7262
January 1, 1998 to February 28, 2001

FY 1998
$75,000

This project is designed to assist persons with low and moderate income to optomize and/or protect their pension resources. With the collaboration of the Arizona Aging and Adult Administration, it has conducted a series of training programs on pension rights for area agency on aging community service case managers and for attorneys and paralegals of the Arizona Legal Hotline for the Elderly. It is now training volunteers in problem-solving techniques to gain pension benefits for qualified persons. It has brought pension infrormation and counseling to several Indian tribes of Arizona, including the Navahos, Zunis, and Apaches. And it continues to strengthen a working relationship with the regional office of the U.S. Department of Labor and other federal agencies aimed at increasing pension assistance resources to low income and minority older persons.

Pension Information and Counseling

90-AM-2155 **NEW ENGLAND PENSION ASSISTANCE PROJECT**

UNIVERSITY OF MASSACHUSETTS - BOSTON
GERONTOLOGY INSTITUTE
100 MORRISSEY BLVD.
BOSTON, MA 02125 3393

Ms. Ellen Bruce (617) 287-7300
September 30, 1998 to September 29, 2001

FY 1998
$75,000

This project aims at expanding a Massachusetts Pension Assistance Project to all six states in New England through the collaboration of the Gerontology Institute at the University of Massachusetts Boston, the Massachusetts Executive Office of Elder Affairs, and community partners in the other five New England States. The project objectives are to 1) increase awareness of pension eligibility, benefits, and rights, as well as different types of pensions and retirement income; 2) maximize individuals' retirement income; 3) identify recurring pension problems; and 4) expand pension counseling in New England to respond to those problems.

Pension Information and Counseling

90-AM-2156 **ONE-TO-ONE PENSION COUNSELING PROJECT**

COMMONWEALTH OF VIRGINIA
DEPARTMENT FOR THE AGING
1600 FOREST AVENUE, SUITE 102
RICHMOND, VA 23229

Mr. Bill Peterson (804) 662-9325
September 30, 1998 to September 29, 2001

FY 1998
$75,000

This project will pilot a model one-to-one pension counseling program in two rural regions of Virginia. It builds on a volunteer base developed by the Virginia Insurance Counseling and Assistance Program (VICAP), and on the programs and services of the Crater District Area Agency on Aging and the Mountain Empire Older Citizens Area Agency on Aging, to reach retirees (especially African-Americans) who have worked in rural regions of the state dominated by the tobacco and coal industries. The project will test the efficacy of having volunteer pensioners making individual contacts with 500-1,000 retirees to overcome the racial, cultural, and other trust barriers found in many rural communities.

Pension Information and Counseling

90-AM-2157 **PENSION RIGHTS PROJECT CIRCLE OF LIFE**

MINNESOTA SENIOR FEDERATION
METROPOLITAN REGION
1885 UNIVERSITY AVENUE, NORTH #190
ST. PAUL, MN 55104

Mr. James Zenter (612) 645-0261
September 30, 1998 to September 29, 2001

FY 1998
$53,000

The Minnesota Senior Federation is focused on meeting the needs of retirees, especially in regard to pension rights and benefits. This project will recruit and train one hundred community and tribal volunteers to provide pension information and counseling, educate thousands of Minnesotans annually about pension benefits and services to access those benefits, and develop a pension awareness and referral initiative to assist Native Americans in attaining those pension benefits to which they are entitled.

Pension Information and Counseling

90-AM-2158 **MICHIGAN PENSION RIGHTS HOTLINE**

ELDER LAW OF MICHIGAN, INC.
115 W. ALLEGAN STREET, SUITE 720
LANSING, MI 48933

Ms. Kate White (517) 372-5959
September 30, 1998 to September 29, 2001

FY 1998
$60,468

The Michigan Pension Rights Hotline (MPRH) will test the effectiveness of several project components: 1) a pension hotline accessible by retirees all across Michigan; 2) a pension investigation unit; 3) an up-to -date referral system to connect retirees with pension attorneys, legal assistance programs, and federal, state, and local resources for securing pension benefits; 4) an outreach campaign to bring the MPRH to the attention of low-income, women, minority, and rural retirees; and 5) an intensive fund-raising campaign to make the MPRH self-sufficient by the end of the project.

Volunteer Senior Aide Program (Family Friends)

90-AM-2028 **Family Friends of Chattanooga**

Senior Neighbors of Chattanooga Inc.
10th & New Streets
Chattanooga, TN 37402

Ms. Winifred McDuffie (615) 755-6105
September 30, 1995 to September 29, 1999

FY 1995	FY 1996	FY 1997
$36,000	$33,999	$34,000

This project will replicate the volunteer senior aide program model and match 20 senior volunteers with 20 families caring for disabled, developmentally delayed, or chronically ill children. This project will work closely with RSVP of the Chattanooga area to recruit senior volunteers. It will also work in cooperation with a network of community agencies whose mission relates to disabled and/or chronically ill children. The program goals are to replicate a Familiy Friends project and to disseminate the Family Friends concept and program model to several additional communities in the southeastern United States.

Volunteer Senior Aide Program (Family Friends)

90-AM-2030 **Foothills' Family Friends Project**

Kentucky River Foothills Development Council, Inc.
The Volunteer Resource Center
1623 Foxhaven Drive
P.O. Box 743
Richmond, KY 40476 0743

Ms. Cindy Laing (606) 624-2046
September 30, 1995 to March 31, 1999

FY 1995	FY 1996	FY 1997
$36,000	$34,000	$34,000

A Volunteer Senior Aide (Family Friends) program will be replicated in Madison, Clark, Estill and Powell counties of Eastern Kentucky. The region is rural and Appalachian with all of its attendant traditions and problems. Twenty low-income senior vol.unteers will be matched with families whose children, ranging in age from infants to pre-teenagers, have chronic illnesses or disabilities. These matches will provide the seniors with meaningful volunteer experiences, while the children receive care, nurturing and emotional support. The families, in turn, will receive encouragement, respite and an advocate to work with them for the children. The presence of the senior "Familiy Friend" will enable the entire familiy to live a more healthful, balanced life.

Volunteer Senior Aide Program (Family Friends)

90-AM-2119 **FAMILY FRIENDS IN HOMELESS SHELTERS**

LOUISVILLE & JEFFERSON CO.
COMMUNITY ACTION AGENCY
1018 S. 7TH STREET
PO BOX 2197
LOUISVILLE, KY 40201 2197

Ms. Judy Wilson (502) 585-1631
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$60,933	$60,933

This project will: (1) utilize the talents of older citizens to provide physical care and emotional support to help create a more stable and nurturing environment for the children of 30 families who reside in homeless shelters; (2) provide a meaningful volunteer experience that offers more structure and purpose to the lives of 30 senior volunteers, increasing their productivity, self-worth, and quality of life, and; (3) assist the families to overcome obstacles associated with homelessness and achieve self-sufficiency.

Volunteer Senior Aide Program (Family Friends)

90-AM-2120 **VOLUNTEER SENIOR AIDES GRAINING AND TECHNICAL ASSISTANCE PROJECT**

THE NATIONAL COUNCIL ON THE AGING, INC.
RESEARCH AND DEVELOPMENT DIVISIO
409 THIRD STREET, SW
WASHINGTON, DC 20024

Ms. Miriam Charnow (202) 479-6675
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$70,000	$124,602

The National Council on the Aging (NCoA) will provide training and technical assistance to all current AoA funded Family Friends/Volunteer Senior Aides model projects. The training, technical assistance, information , and related support includes advice on start-up; recruiting and matching volunteers and families; training volunteers; handling family crises; fundraising; public relations; marketing; and project maintenance, from inception to sustained operation.

Volunteer Senior Aide Program (Family Friends)

90-AM-2121 **HARLEM HOSPITAL CENTER FAMILY FRIENDS VOLUNTEERS SENIOR AIDES**

HARLEM HOSPITAL CENTER
DEPARTMENT OF PEDIATRICS
506 LENOX AVENUE
NEW YORK, NY 10037

Dr. Danielle Laraque M.D. (212) 939-2440
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$70,000	$70,000

This project will use an intergenerational approach to benefit children with special health needs, their families, and older volunteers in the central Harlem community of New York City. Approximately 25-30 Family Friends will be selected and matched with families who have children with disabilities/chronic illnesses. The older volunteers will be trained to provide emotional support, mentorship, and guidance, including health promotion and coping strategies, addressing the complex needs of high-risk children and families in this medically underserved community.

Volunteer Senior Aide Program (Family Friends)

90-AM-2122 **THE FAMILY FRIENDS/VOLUNTEER SENIOR AIDES PROGRAM**

METROPOLITAN FAMILY SERVICES
SENIOR SERVICES
14 EAST JACKSON BOULEVARD
CHICAGO, IL 60604

Ms. Dee Spiech (312) 986-4163
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$62,055	$62,055

Metropolitan Family Services, in partnership with Hope Childrens' Hospital of Chicago, will utilize the talents and experience of older adults to benefit children with special health needs, their families and communities in the southwestern metropolitan Chicago area. This project plans to: (1) establish a caring relationship between 40 older volunteers and 40 children with special needs, and their families; (2) enhance the self-esteem and the contribution of older adults, and; (3) strengthen family ties by improving the coping mechanisms and problem-solving skills of the parents.

Volunteer Senior Aide Program (Family Friends)

90-AM-2123 **OREGON FAMILY FRIENDS SENIOR VOLUNTEER AIDES PROGRAM**

EASTER SEAL SOCIETY OF OREGON
PROGRAM SERVICES
5757 SW MACADAM AVENUE
PORTLAND, OR 97201

Mr. Robert Baker (503) 228-5108
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$63,320	$63,320

Oregon Family Friends will provide in-home supportive services for children with disabilities/chronic illnesses and for their caregiving families to prevent burnout, reduce risks to family stability, ease the burdens of raising a child with special needs, and wherever possible avert institutionalization of the child. Children with developmental disabilities, chronic medical conditions and impairments, and at-risk children of poverty-level, single-parent families are targeted by the project. Sixty older volunteers will be recruited, screened, and selected to provide services to a minimum of 40 children and their families in urban Multnomah County and rural Lane and Deschutes Counties.

Volunteer Senior Aide Program (Family Friends)

90-AM-2124 **FAMILY FRIENDS/VOLUNTEER SENIOR AIDES PROJECT FOR BUCKS COUNTY**

BUCKS COUNTY INTERMEDIATE UNIT
705 SHADY RETREAT ROAD
DOYLESTOWN, PA 18901

Mr. Ted Feldstein (215) 348-2940
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$70,000	$70,000

This project will provide a therapeutic support system for children with disabilities, and for preschool and school-age children, in Bucks County, Pennsylvania. About 25 Family Friends will be trained to provide both in-home and in-school support for an equal number of children and their families during year one. During years two and three, children with emotional or speech/language disorders will be added. The older volunteers will gain skills, develop new relationships, and increase self-esteem by playing the principal roles in this project.

Volunteer Senior Aide Program (Family Friends)

90-AM-2125 **FAMILY FRIENDS INTERGENERATIONAL PROGRAM**

GULF COAST JEWISH FAMILY & MENTAL HEALTH SERVICES
D/B/A GULF COAST COMMUNITY CARE
14041 ICOT BOULEVARD
CLEARWATER, FL 34620

Ms. Debi McGinty (813) 538-7460
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$60,000	$60,000

Gulf Coast Community Care will recruit, train, and match 60 elder volunteer mentors/Family Friends with 60 children with childhood diabetes. The children typically will be from single-parent, low-income families and will be at very high risk for serious medical complications. Poor control of diabetes can lead to blindness, kidney failure, heart disease, amputations, and other dire consequences. With proper support and guidance from the Family Friends, however, diabetic children can avoid or postpone these problems.

Volunteer Senior Aide Program (Family Friends)

90-AM-2126 **SENIOR VOLUNTEER PROGRAM FOR FAMILIES WITH CHRONICALLY ILL CHILDREN**

VISITING NURSE ASSOCIATION OF DELAWARE
BUSINESS DEVELOPMENT MARKETING D
ONE READ'S WAY
NEW CASTLE, DE 19720

Ms. Margarita Rodriguez-Duffy (302) 326-4003
September 30, 1997 to September 29, 2000

FY 1997	FY 1998
$61,209	$61,209

This project will enhance support systems for families of children with serious chronic illnesses/disabilities and promote self-worth, independence, and dignity among the older volunteers. Family Friends volunteers will provide supportive services to pediatric patients and their caregiving families, based on referrals from VNA nurses, the DuPont Hospital for Children, and the Medical Center of Delaware's Neonatal Intensive Care Unit. The project is designed to improve the family's ability to care for the child and their access to service systems, increase meaningful activities for the child, and create a model that can be replicated statewide.

Volunteer Senior Aide Program (Family Friends)

90-AM-2127 **A FAMILY FRIENDS/VOLUNTEER SENIOR AID AND A LATINO MODEL**

NATIONAL HISPANIC COUNCIL ON AGING
2713 ONTARIO ROAD NW
WASHINGTON, DC 20009

Dr. Marta Sotomayor Ph.D. (202) 265-1288
December 1, 1997 to November 30, 2000

FY 1998	FY 1999
$70,000	$74,888

This project focuses on the needs of Latino children with serious chronic illnesses and disabilities. Elderly Latino volunteers, incorporated the strengths and resources of the immigrant Latino community in the Washington DC area, will act as a Family Friend to visit a family with children beset by chronic diseases and disabilities once a week for approximately four hours per visit.

Volunteer Senior Aide Program (Family Friends)

90-AM-2129 **FAMILY FRIENDS OF GUERNSEY COUNTY**

AREA AGENCY ON AGING REGION 9, INC.
60788 SOUTHGATE ROAD
BYESVILLE, OH 43723

Ms. Shirley Blackledge (614) 439-4478
December 1, 1997 to November 30, 2000

FY 1998	FY 1999
$55,400	$55,400

The Family Friends of Guernsey County project brings together the Area Agency on Aging, Region 9 and the Guernsey County Mental Retardation and Developmental Disabilities Board in a joint effort that utilizes older volunteers to provide support to rural at-risk children and their families. The Area Agency on Aging is responsible for the recruitment and screening of older volunteers, the MRDD board for locating families that are most likely to benefit from the support of older volunteers. Both agencies will share in carrying out the traing and other components of the project.

Index of Grantee Organizations

Index of Grantee Organizations

Long-Term Care Ombudsman Annual Report Fiscal Year 1996

Executive Summary

Administration on Aging
Department of Health & Human Services

THE SECRETARY OF HEALTH AND HUMAN SERVICES
WASHINGTON, D.C. 20201

JAN 6 1999

The Honorable Charles E. Grassley
Chairman
Special Committee on Aging
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

In accordance with Section 207(b) of the Older Americans Act, as amended, I transmit herewith the Department of Health and Human Services, Administration on Aging Annual Long-Term Care Ombudsman Report for Fiscal Year 1996.

The report includes data on cases and complaints made to ombudsmen; information on program structure and operations; a list of the major long-term care issues identified by the states; and "best practices" of a number of state and local ombudsman programs.

Sincerely,

Donna E. Shalala

Enclosure

FY 1996 Long-Term Care Ombudsman Report

Executive Summary

The Long-Term Care Ombudsman Program was established under the Older Americans Act to advocate on behalf of older residents of long-term care facilities. Ombudsman programs in every state and hundreds of local or regional areas carry out a variety of activities to assist residents and their loved ones to obtain a good quality of life and care in nursing homes, assisted living, and other types of long-term care facilities.

This report provides the first compilation of data from all state ombudsman programs on the types of problems reported by those who turn to the program for assistance and on other activities carried out by ombudsmen. Thus, the national totals for FY 1996 constitute the baseline for this information. (Comparable data on program operations were provided by all states for FY 1995.)

Ombudsmen opened 126,606 new cases and closed 116,242 cases, involving 179,111 complaints, in FY 1996. Most complaints were filed by residents of facilities or by friends or relatives of residents. Seventy-four percent of complaints were verified, and 72.1 percent of all complaints were resolved or partially resolved to the satisfaction of the resident or complainant.

Eighty-one percent of the cases closed involved nursing homes. The five most frequent nursing home complaints concerned:

accidents, improper handling
requests for assistance unheeded
personal hygiene neglected
lack of respect for residents, poor staff attitudes
lack of adequate care plan, resident assessment

Seventeen percent of the cases closed involved board and care homes, including assisted living, adult care, and similar levels of care facilities. The five most frequent complaints involving these types of homes concerned:

menu — quality, quantity, variation, choice
physical abuse
medications — administration, organization

lack of respect for residents, poor staff attitudes
equipment/building — disrepair, hazard, poor lighting, and fire safety

FY 1996 program funding from all sources totaled $41,519,334, approximately one million dollars above the FY 1995 funding level. There were 570 local programs, five more than in FY 1995, and 847 full-time equivalent staff serving the program in FY 1996[1]. The number of ombudsman volunteers increased dramatically during this two-year period—from 6,421 certified and a total of 11,580 for FY 1995 to 6,622 certified and a total of 12,657 for FY 1996.

Although the state ombudsman reports show that the number of nursing facilities decreased from 18,911 in FY 1995 to 18,066 in FY 1996, the number of beds in nursing facilities increased during the two-year period, demonstrating that fewer nursing facilities are growing larger in size. The number of licensed board and care-type facilities and beds, including assisted living, adult care, residential care and similar homes, increased dramatically from 35,304 facilities with 662,199 beds in FY 1995 to 39,369 facilities with 673,903 beds in FY 1995.

The ratio of paid ombudsman full-time equivalents (FTE) to total number of long-term care facility beds was 1 to 2,973 in FY 1996. This was approximately one-third greater than the ratio of one FTE to 2,000 beds which the Institute of Medicine, in its comprehensive assessment of the Long-Term Care Ombudsman Program, said was required for ombudsman programs to fulfill the responsibilities assigned to them in the Older Americans Act.

Ombudsmen nationwide provided 46,015 hours of training in 9,199 training sessions to 27,568 ombudsman trainees; gave 7,321 training sessions and 62,962 individual consultations to facility managers and staff; provided information and consultation to 188,067 individuals; participated in 9,776 facility surveys, 11,942 resident council meetings, 4,685 family council meetings, and 8,985 community education sessions; provided 3,406 press interviews and issued 3,252 press releases. They reported visiting 70.7 percent of all nursing facilities and 28.1 percent of all board and care and similar types of homes on a regular basis, not in response to a complaint.

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[1]There were 913 full-time equivalent staff in FY 1995. The drop in FY 1996 was largely due to a substantial drop in the number of staff reported by one program — South Carolina.

Long-Term Care Ombudsman Report, p. ii

Ombudsman work on laws, regulations and government policies and actions is referred to as issues advocacy. It is significant that almost half (eight) of the seventeen states reporting that state ombudman staff spend thirty percent or more of their time on issues advocacy are among the twelve states whose programs are located outside the state agency on aging (CO, DC, FL, MI, VT, WA, WI and WY)[2].

Issues identified by the states are listed below in the order of the frequency with which they were mentioned in the state reports.

1. **Regulation and enforcement issues,** especially as related to poor performing facilities: 16 states (AK, CA, DC, MI, MA, NC, NV, OH, PA, KS, RI, TX, UT, VT, WI, WA)

2. **Limited long-term care options,** especially for Medicaid-eligible and moderate-income individuals: 11 states (DC, IN, MI, MN, NC, NH, TN, VT, WV, WA, MA)

3. **Chronic shortage of qualified, trained, equitably compensated staff to assist residents** - 10 states (CO, DC, FL, IN, LA, MA, MT, NC, OH, TX)

4. **Ombudsman Program Issues:** 10 states (AK, CA, KS, MD, MS, NH, NJ, PR, WA)

5. **Board and care homes/assisted living** (also related to topic # 1, regulation and enforcement issues): 9 states (KS, LA, ME, NM, OR, PA, WI, WV, WA)

6. **Involuntary transfers, discharge and readmission issues,** especially related to residents with dementia and mental health problems: 9 states (AZ, IN, KS, KY, MA, MO, NH, OR, WA)

7. **Resident abuse; adult protective services:** 6 states (AK, MD, MN, NH, OR, SC)

8. **Abuse Registries:** 3 states (AK, NJ, UT)

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[2]This is only one of several types of analysis which can be carried out with data in the "other ombudsman activities in addition to complaints" section of the report.

9. **Bioethical (advance directives and right to refuse medical treatment) issues**:
   2 states (IN, NJ)

10. **Medicare, Medicaid anti-fraud and abuse**: 2 states (IL, NY)

11. **Managed care**: 2 states (FL, MA)

12. **Guardianship and legal issues**: 2 states: (MO, RI)

13. **Family councils**: 1 state (SC)

14. **Physician accountability**: 1 state. (WA)

15. **Behavior of Residents and Families**: 1 state (MO)

Ombudsman "best practice" in advocacy, public education and problem solving provided in the report reflect the wide range of projects and activities which ombudsmen undertake to improve the long-term care system for residents.

Long-Term Care Ombudsman Report
Fiscal Year 1996

Introduction

The Long-Term Care Ombudsman Program was established under the Older Americans Act (OAA) to advocate on behalf of older residents of long-term care facilities. Ombudsman programs in every state and 570 local or regional areas carry out a variety of activities to assist residents and their loved ones to obtain a good quality of life and care in nursing homes, assisted living, and other types of long-term care facilities.

This report provides the first compilation of data from all state ombudsman programs on the types of problems reported by those who turn to the program for assistance and on other activities carried out by ombudsmen. Thus, the national totals for FY 1996 constitute the baseline for this information.

Beginning in FY 1995, all states provided comparable data on their local programs, staff, volunteers, numbers of facilities and beds, and sources of funding, making the FY 1996 the second year for which this information is available.

This report also includes a list of major issues identified by the states and descriptions of best practices reported by state ombudsman programs for the period covered by the report.

Cases and Complaints

Ombudsmen opened 126,606 new cases and closed 116,242 cases, involving 179,111 complaints, in FY 1996. All data in this report is for cases closed. Most complaints were filed by residents of facilities or friends or relatives of residents. Seventy-four percent of complaints were verified, and 72.1 percent of all complaints were resolved or partially resolved to the satisfaction of the resident or complainant.

Eighty-one percent of the cases closed involved nursing homes. The five most frequent nursing home complaints concerned:

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Seventeen percent of the cases closed involved board and care homes, including assisted living, adult care, and similar levels of care facilities. The five most frequent complaints involving these types of homes concerned:

- menu—quality, quantity, variation, choice
- physical abuse
- medications—administration, organization
- lack of respect for residents, poor staff attitudes
- equipment/building — disrepair, hazard, poor lighting, and fire safety

National statistics on complainants (cases) and complaints (problems), including a list of the 20 most frequent types of complaints, are provided in Tables 1 through 4 and figures 1 through 3, below, and on the following pages. State breakdowns of data on complaints and complainants are provided in Appendices A-1 through A-5 and B-1 through B-10.

Table 1: Types of Complainants for Cases Closed for FY 1996

	All Facilities/ Settings	Nursing Facilities	Board & Care/Other Similar	Non-Facility Settings
Total Complainants	116,227	94,389	19,678	2,160
Resident	30.0%	31.5%	24.8%	15.6%
Relative/ Friend	26.1%	26.9%	22.4%	26.9%
Non-Relative Guardian, Legal Representative	1.2%	1.1%	1.5%	1.0%
Ombudsman, Ombudsman Volunteer	13.2%	12.8%	16.2%	1.6%
Facility Administration, Staff	18.0%	19.1%	13.9%	6.6%
Other Medical: Physician/ Staff	1.8%	1.3%	4.1%	1.5%
Other Agency Representative	4.5%	3.5%	9.2%	4.2%
Unknown/ Anonymous	3.0%	2.6%	5.1%	2.6%
Other	2.3%	1.4%	2.7%	40.0%

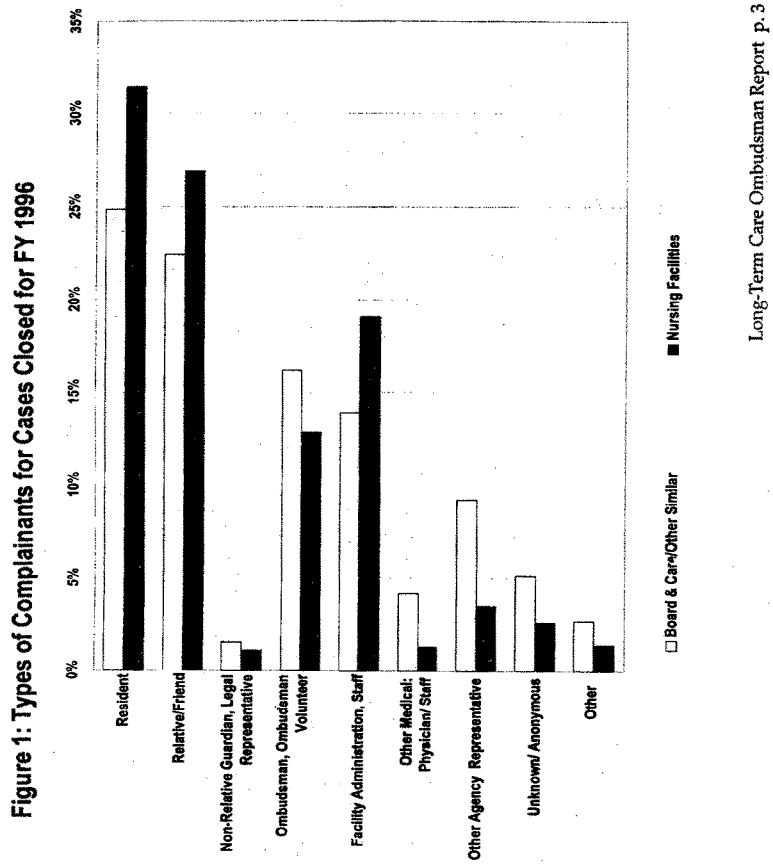

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Table 2: Number of Complaints By Group and Sub-Group for Fiscal Year 1996

Groups	Sub-Groups	Nursing Facilities		Board & Care/Other Similar		Non-Facility Settings
Total Complaints		**144,680**		**31,660**		**2,771**
Residents' Rights	**Total**	**46,909**	**32.4%**	**11,649**	**36.8%**	**Data on**
	A. Abuse, Gross Neglect, Exploitation	13,469	9.3%	3,701	11.7%	**types of**
	B. Access to Information	3,120	2.2%	942	3.0%	**complaints**
	C. Admission, Transfer, Discharge, Eviction	8,192	5.7%	1,550	4.9%	**not collected**
	D. Autonomy, Choice, Exercise of Rights, Privacy	14,383	9.9%	3,205	10.1%	**for non-**
	E. Financial, Property (Except for Financial Exploitation)	7,745	5.4%	2,251	7.1%	**facility**
Resident Care	**Total**	**44,392**	**30.7%**	**6,500**	**20.5%**	**settings**
	F. Care	37,707	26.1%	5,609	17.7%	
	G. Rehabilitation or Maintenance of Function	5,004	3.5%	542	1.7%	
	H. Restraints - Chemical and Physical	1,681	1.2%	349	1.1%	
Quality of Life	**Total**	**27,285**	**18.9%**	**6,916**	**21.8%**	
	I. Activities & Social Services	4,370	3.0%	1,000	3.2%	
	J. Dietary	10,533	7.3%	2,579	8.1%	
	K. Environment	12,382	8.6%	3,337	10.5%	
Administration	**Total**	**14,036**	**9.7%**	**3,493**	**11.0%**	
	L. Policies, Procedures, Attitudes, Resources	2,915	2.0%	1,360	4.3%	
	M. Staffing	11,121	7.7%	2,133	6.7%	
Not Against Facility	**Total**	**12,058**	**8.3%**	**3,102**	**9.8%**	
	N. Certification/ Licensing Agency	725	0.5%	165	0.5%	
	O. State Medicaid Agency	1,770	1.2%	194	0.6%	
	P. System/ Others	9,563	6.6%	2,743	8.7%	

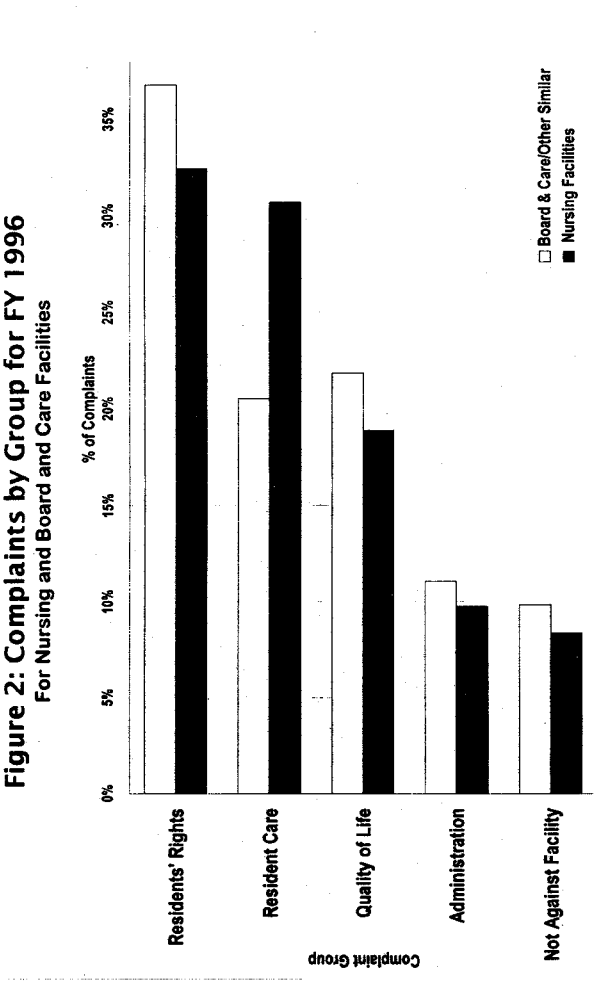

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Table 3: Most Frequently Received Complaints for FY 1996
(Top 20, approximately 50% of the total)

Nursing Facilities				Board & Care/Other Similar			
Group/Category Groups defined in Table 5 above		% of Total	Cumu-lative %	Group/Category Groups defined in Table 5 above		% of Total	Cumu-lative %
F40	Accidents, improper handling	4.60%	4.60%	J71	Menu-quantity, quality, variation, choice	4.61%	4.61%
F41	Call lights, requests for assistance	3.76%	8.36%	A1	Physical abuse	4.08%	8.69%
F45	Personal hygiene	3.66%	12.03%	F44	Medications-administration, organization	3.64%	12.33%
D26	Dignity, respect-staff attitudes	3.37%	15.40%	D26	Dignity, respect-staff attitudes	3.09%	15.42%
F42	Care plan/resident assessment	3.08%	18.48%	K79	Equipment/building-disrepair, hazard, poor lighting, fire safety	3.01%	18.43%
M97	Shortage of staff	2.99%	21.47%	C19	Discharge/eviction-planning, notice, procedure	2.89%	21.32%
A1	Physical abuse	2.99%	24.46%	F45	Personal hygiene	2.88%	24.20%
J71	Menu-quantity, quality, variation, choice	2.97%	27.43%	A3	Verbal/mental abuse	2.60%	26.79%
C19	Discharge/eviction-planning, notice, procedure	2.84%	30.27%	E37	Personal funds-mismanaged, access denied, deposits & other money not returned	2.56%	29.36%
E38	Personal property lost, stolen, used by others, destroyed	2.49%	32.76%	K78	Cleanliness, pests	2.27%	31.63%
F48	Symptoms unattended, no notice to others of change in condition	2.21%	34.97%	F40	Accidents, improper handling	2.14%	33.76%
F44	Medications-administration, organization	2.16%	37.13%	E36	Billing/charges notice, approval, questionable, accounting wrong or denied	2.05%	35.81%
A6	Resident to resident	1.75%	38.88%	M97	Shortage of staff	2.01%	37.82%
A3	Verbal/mental abuse	1.68%	40.56%	E38	Personal property lost, stolen, used by others, destroyed	1.98%	39.80%
M10	Staff unresponsive, unavailable	1.64%	42.20%	D27	Exercise choice and/or civil rights	1.81%	41.61%
P122	Legal-guardianship, conservatorship, power of attorney	1.62%	43.82%	F48	Symptoms unattended, no notice to others of change in condition	1.78%	43.40%
F52	Other: Care	1.57%	45.39%	F42	Care plan/resident assessment	1.68%	45.08%
E36	Billing/chargesnotice, approval, questionable, accounting wrong or denied	1.56%	46.95%	A5	Gross neglect	1.58%	46.66%
K78	Cleanliness, pests	1.55%	48.50%	L93	Offering inappropriate level of care	1.53%	48.18%
D27	Exercise choice and/or civil rights	1.53%	50.02%	K77	Air temperature, and quality	1.52%	49.70%

Table 4: Complaint Verification & Disposition for FY 1996

Total Complaints	179,111
Complaints Verified	
Number	132,491
Percent	74.0%
Disposition	
Requires government policy or regulatory change or legislative action to resolve	1.7%
Not resolved to the satisfaction of resident or complainant	6.6%
Withdrawn by resident or complainant	3.6%
Referred to other agency for resolution and	
Report of final disposition not obtained	5.6%
Other agency failed to act on complaint	0.5%
No action needed or appropriate	9.9%
Partially resolved but some problem remained	14.5%
Resolved to satisfaction of resident or complainant	57.7%

Program Operations

Most measures for the nationwide ombudsman program indicated relatively level funding and numbers of local programs and staff for the two-year period FY 1995 to 1996. As shown in Table 5 below, for FY 1996, program funding from all sources totaled $41,519,334, approximatly one million dollars above the FY 1995 funding level. There were 570 local programs, five more than in FY 1995, but the 847 full-time equivalent staff serving the program in FY 1996 were fewer than the number reported for FY 1995.[1]

Notwithstanding the level measures in other areas, the number of ombudsman volunteers increased markedly during this two-year period — from 6,421 certified and a total of 11,580 for FY 1995 to 6,622 certified and a total of 12,657 for FY 1996.

Although the state ombudsman reports show that the number of nursing facilities decreased from 18,911 in FY 1995 to 18,066 in FY 1996, and other data also show a decline in the number of nursing homes nationwide,[2] the number of

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[1] This drop, however, was largely due to a substantial drop in the number of staff reported by one program — South Carolina.

[2] The Health Care Financing Administration reported that there were 17,373 nursing homes in the U.S. certified for Medicare and Medicaid as of May 20, 1998.

beds in nursing facilities increased during the two-year period, demonstrating that fewer nursing facilities are growing larger in size. The number of licensed board and care-type facilities and beds, including assisted living, adult care, residential care and similar homes, increased dramatically, from 35,304 facilities with 662,199 beds in FY 1995 to 39,369 facilities with 673,903 beds in FY 1995. Comparing these totals with earlier data[3] on licensed facilities of this type demonstrates the growing importance of this segment of the continuum of long-term care.

The ratio of paid full-time equivalent (FTE) ombudsmen to total number of long-term care facility beds was one to 2,973 in FY 1996, approximately one-third greater than the ratio of one FTE to 2,000 beds which the Institute of Medicine, in their landmark study of the Long-Term Care Ombudsman Program,[4] said was required for ombudsman programs to fulfill the responsibilities assigned to them in the Older Americans Act.

Tables 5 through 9 and figures 4 and 5 provide national data on funding, local ombudsman programs, staff and volunteers, and multi-year funding and other program trends.

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[3] In 1990 there were approximately 34,000 licensed board and care homes with more than 613,000 beds. (Results from the 1990 National Health Provider Inventory, cited in "Analysis of the Effect of Regulation on the Quality of Care in Board and Care Homes", Research Triangle Institute and Brown University study sponsored by the U.S. Department of Health and Human Services, July 10, 1995.)

[4] Real People, Real Problems: An Evaluation of the Long-Term Care Ombudsman Programs of the Older Americans Act 1995

Table 5: Selected National Information FY 1995 and FY 1996

(Note: Comparison of complaints and complainants is not included because of inconsistencies due to switch to the new system.)

Category		FY 1995	FY 1996
Total Program Funding		$40,870,107	$41,519,334
Local Ombudsman Entities		565	570
Paid Program Staff (FTEs)		913	847
Volunteers			
Certified Volunteer Ombudsmen[1]		6,421	6,622
Other Volunteers		5,159	6,035
Total Volunteers		11,580	12,657
Licensed Facilities (National Totals)			
Nursing Facilities	Number	18,911	18,066
	Beds	1,819,069	1,845,791
Board & Care/Similar Facilities[2]	Number	35,304	39,369
	Beds	662,199	673,903
All Facilities	Number	54,215	57,435
	Beds	2,481,268	2,519,694
Number of LTC Facility Beds per Paid Program Staff (FTEs)		2,718	2,973

[1] Individuals who have completed a training course prescribed by the state ombudsman and are approved by the state ombudsman to participate in the statewide ombudsman program.

[2] Includes only those types of licensed facilities which state ombudsman programs include within their purview under the requirement of Section 102(34)(D) of the OAA.

Table 6: Designated Local Ombudsman Entities for FY 1995-6

Year	Total	Area Agency on Aging	Other Local Government Entity	Legal Services Provider	Social ServicesNo n-profit Agency	Freestanding Ombudsman Program	Regional Office of State Ombudsman Program	Other
FY 1996	**570**	366	3	28	88	22	47	16
FY 1995	**565**	374	9	29	81	13	44	15

Table 7: National Staff and Volunteers
Totals for FY 1995-6

	FY1995	FY1996
Paid program staff (FTE's)	**913**	**847**
working at state level	179	187
working at local level	734	661
Paid individuals working full-time on program	**598**	**551**
at state level	155	147
at local level	443	404
Volunteer ombudsmen trained and certified to investigate complaints	**6,421**	**6,622**
working at state level	380	304
working at local level	6,041	6,318
Other Volunteers (not involved in complaint work)	**5,159**	**6,035**
working at state level	157	298
working at local level	5,002	5737

Table 8: Change in Funding: Federal vs. Non-Federal—FY87-FY96

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96
Total Funds (000,000)	20.3	23.3	25.2	27.9	34	35.1	35.2	41.8	40.9	41.52
Source of Funds										
Federal (000,000)	12.6	13.8	14.4	15.6	19.1	21.7	21.5	25.5	26.5	26.3
Non-Federal (000,000)	7.7	9.5	10.8	12.3	14.9	13.4	13.7	16.3	14.4	15.2
Federal (%)	62.1	59.2	57.1	55.9	56.2	61.8	57.5	61.0	64.8	63.4
Non-Federal (%)	37.9	40.8	42.9	44.1	43.8	38.2	38.9	39.0	35.2	36.6

Table 9: Trends in the Ombudsman Program—FY 1987–1996

	FY87	FY88	FY89	FY90	FY91	FY92	FY93	FY94	FY95	FY96
Total Number Local Programs	557	578	570	578	551	571	549	559	565	570
Local Programs in AAAs[1,2]			435	412	395	406	366	414	374	366
Total Number Complainants (Cases) (000s)	Data not comparable with FY 96 data due to changes in reporting system.									116.2
Total Number Complaints (000s)										179.1
Funding (in millions of dollars)										
OAA Title III-B Funding[3]										
Allotted by State & Area Agencies	11.6	12.7	13.6	14.5	15.4	15.6	16.5	17.4	19.8	20.5
Allotted by State Agencies									9.7	10.1
Allotted by Area Agencies									10.1	10.4
Title III Ombudsman Allotment[4]					2	3.3	0.6			
Title III-G Abuse Prevention[4]					0.8	1.8				
Title VII Chapter Two[5]							3.5	4.2	4.4	3.8
Title VII, Chapter Three[5]							2.1	2.9	1.9	1.5
All other Federal	1	1.1	0.8	1.1	0.9	1	0.9	1	0.4	0.5
All State[6]	7.7	9.5	7.1	7.4	8.1	8.3	7.9	8.2	8.9	9.4
All Other Non-Federal[6]			3.7	4.9	6.8	5.1	5.8	8.1	5.5	5.8
Total Funding	**20.3**	**23.3**	**25.2**	**27.9**	**34**	**35.1**	**37.4**	**41.8**	**40.9**	**41.5**

[1] The reduced number in area agency on aging-sponsored programs may be due to more refined definitions in the National Ombudsman Reporting System (NORS) rather then to an actual drop in the number of programs located in AAAs.

[2] This information was not collected prior to FY 1989.

[3] A breakdown on the source of Title III funding between State and Area Agencies on Aging was one of the enhancements included in NORS.

[4] These allotments for ombudsmen and abuse prevention activities were provided for FY 1991-92. They were replaced by Title VII allotments in FY 1993.

[5] Beginning in FY 1996, Congress provided these funds for Title VII programs as an earmark in the State Title III allotments

Figure 1: Sources of Funding for FY 1996

Long-Term Care Ombudsman Program

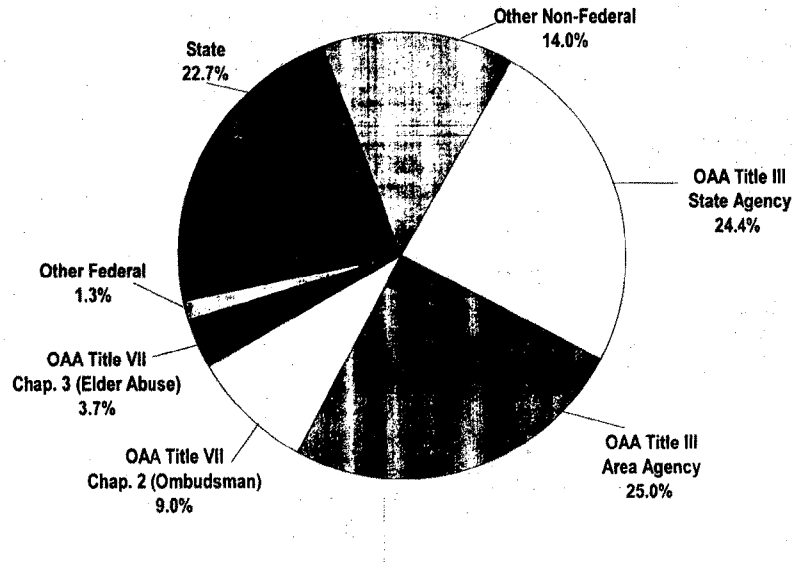

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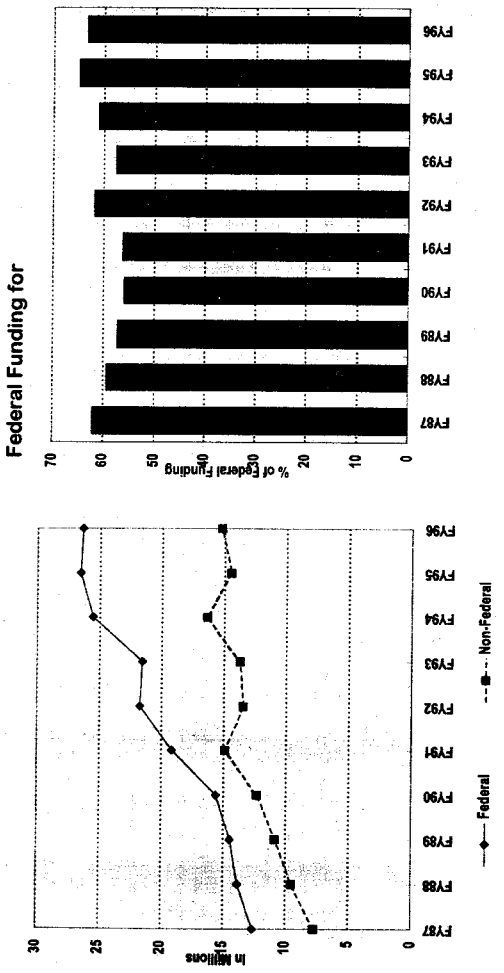
Figure 2: Sources of Funds for FY 1987 to FY 1996
Federal vs. Non-Federal



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Organizational Location of State Ombudsman Programs

Most state long-term care ombudsman programs are physically and organizationally located in the state units on aging, but programs in the 12 states listed in Table 10 are located outside of the state agency on aging.

Table 10: Ombudsman Programs Operated Outside of State Units on Aging

State	Name of Sponsoring Organization	Type of Sponsoring Organization
Colorado	The Legal Center	Agency which runs the protection and advocacy program for people with disabilities
District of Columbia	AARP, Legal Counsel for the Elderly	Legal assistance organization
Florida	State Long-Term Care Ombudsman Council	Government ombudsman program
Maine	Long-Term Care Ombudsman Program	Free-standing ombudsman program
Michigan	Citizens for Better Care	Advocacy organization
New Hampshire	Health and Human Services, Office of the Ombudsman	Government ombudsman program
Oregon	Office of the Long-Term Care Ombudsman	Free-standing ombudsman program
Virginia	Association of Area Agencies on Aging	AAA association
Vermont	Senior Citizens Law Project	Legal assistance organization
Washington	State Long-Term Care Ombudsman Program	Free-standing ombudsman program
Wisconsin	Board on Aging & Long-Term Care	Free-standing ombudsman program
Wyoming	Senior Citizens, Inc.	Legal assistance organization

Other Ombudsman Activities

Ombudsmen perform numerous functions in addition to investigating and resolving complaints. These include training ombudsman staff and volunteers, training and consulting with managers and staff of long-term care facilities, providing information and consultation to individuals, participating in facility surveys conducted by state regulatory agencies, working with resident and family councils, providing community education, and working with the media. These activities are listed in Table 11, below, with national totals measuring the extent of ombudsman work on each of the activities, nationwide.

In addition to these activities, ombudsmen also:

visit facilities on a regular basis, not in response to complaints; in FY 1996 ombudsmen reported visiting 70.7 percent of all nursing facilities and 28.1 percent of all board and care and similar types of homes (see Appendices A-1 and A-10); and,

monitor and work on laws, regulations, and government policies and actions.

Ombudsman work on laws, regulations and government policies and actions is referred to as issues advocacy. Appendix A-10 shows the amount of state ombudsman staff time each state estimated spending on this aspect of ombudsman work. It is significant that almost half (eight) of the seventeen states reporting that state ombudman staff spend thirty percent or more of their time on issues advocacy are among the twelve states whose programs are located outside the state agency on aging (CO, DC, FL, MI, VT, WA, WI and WY)[5].

[5]This is only one of several types of analysis which can be carried out with data in the "other ombudsman activities in addition to complaints" section of the report.

Table 11: Other Ombudsmen Activities for FY 1996		
Providing training and technical assistance to staff and volunteers in the statewide ombudsman program	training sessions:	9,199
	hours:	46,015
	ombudsman trainees:	27,568
Providing training and consultation to managers and staff of long-term care facilities	training sessions:	7,321
	consultations:	62,962
Providing information and consultation to individuals (usually by telephone)	consultations:	188,067
Participating in facility surveys	surveys:	9,776
Working with resident and family councils (attendence at meetings)	resident council meetings:	11,942
	family council meetings:	4,685
Providing community education	sessions:	8,985
Working with the media	interviews:	3,406
	press releases issued:	3,252

Major Long-Term Care Issues

States were asked to describe the priority issues which their program had identified and/or worked on during the reporting period; barriers to resolution; and recommendations for system-wide changes needed to resolve the issue, or how the issue was resolved in their state. Thirty-seven states responded to this question. As in previous state reports, the issues were often interconnected. Issues identified by the states are listed below in the order of the frequency with which they were mentioned in the state reports.

1. Regulation and enforcement issues, especially as related to poor performing facilities: 16 states (AK, CA, DC, MI, MA, NC, NV, OH, PA, KS, RI, TX, UT, VT, WI, WA)

2. Limited long-term care options, especially for Medicaid-eligible and moderate- income individuals: 11 states (DC, IN, MI, MN, NC, NH, TN, VT, WV, WA, MA)

3. Chronic shortage of qualified, trained, equitably compensated staff to assist residents-10 states (CO, DC, FL, IN, LA, MA, MT, NC, OH, TX)

4. Ombudsman program issues: 10 states (AK, CA, KS, MD, MS, NH, NJ, PR, WA)

5. Board and care homes/assisted living (also related to topic # 1, regulation and enforcement issues): 9 states (KS, LA, ME, NM, OR, PA, WI, WV, WA)

6. Involuntary transfers, discharge and readmission issues, especially related to residents with dementia and mental health problems: 9 states (AZ, IN, KS, KY, MA, MO, NH, OR, WA)

7. Resident abuse; adult protective services: 6 states (AK, MD, MN, NH, OR, SC)

8. Abuse registries: 3 states (AK, NJ, UT)

9. Bioethical (advance directives and right to refuse medical treatment) issues: 2 states (IN, NJ)

10. Medicare, Medicaid anti-fraud and abuse: 2 states (IL, NY)

11. Managed care: 2 states (FL, MA)

12. Guardianship and legal issues: 2 states: (MO, RI)

13. Family councils: 1 state (SC)

14. Physician accountability: 1 state. (WA)

15. Behavior of residents and families: 1 state (MO)

Narrative material from the states on the issues listed and other topics will be included in the FY 1997 Administration on Aging Long-Term Care Ombudsman Report.

Best Practices in State Ombudsman Programs

The following examples of ombudsman advocacy, public education and problem solving reflect the wide range of projects and activities which ombudsmen undertake to improve the long-term care system for residents.

Advocacy

Colorado — Alternative Method of Enforcing Nursing Home Rules

A local ombudsman program arranged for a meeting with the corporate owner of a troubled facility to review the types, and details, of complaints received about the facility during the previous 12 month period. The meeting was held as a last attempt to improve widespread problems at the home before a larger meeting with families, health officials and legislators would be called. The corporate representatives came to the pre-meeting having fired the administrator and director of nursing and with a workable action plan to correct problems at the facility.

Indiana — Information to Residents in Homes Threatened With Closure

The Ombudsman Program arranged for automatic notification by the program and the enforcement agency to all residents and their legal representatives in facilities deemed to be in "immediate jeopardy" of closure by the state due to conditions in the facility. If a facility is terminated, the survey agency and the ombudsman program send residents a second letter informing them of the reasons for the closure, outlining residents' rights pertaining to relocation and stressing that residents may move to the facility of their choice. Having this information allays residents' anxiety and affords them the rights and dignity they deserve in this stressful situation.

Kentucky — More Equitable Procedures for Determining Medicaid Eligibility

The state and local ombudsman programs launched a coordinated public campaign to highlight the lack of fair and impartial hearings for individuals being "adversed" from Medicaid and termination of payments while the case was under appeal. In response, the legislature passed a bill establishing rules more equitable to individuals appealing for Medicaid coverage and providing benefits while cases are under review.

Minnesota — Ombudsman Response in a Natural Disaster

When the flooding of the Red River forced evacuation and permanent relocation of 200 residents of two facilities, state and local ombudsmen helped determine relocation preferences of families and residents, cut through red tape to place residents of two states (MN and ND) in preferred locations, and assisted residents

residents to file claims for lost possessions. The only agency to track all residents affected by the flood, the ombudsman program made follow-up visits to all residents and assisted with additional relocations, as requested, and in securing attention to residents' mental health needs.

Nebraska — Ombudsman Notification of Facility Surveys

As a result of a formal policy that the health department would notify the Ombudsman Program of standard surveys, volunteer ombudsmen have met with resident councils and family members to provide information on the survey process and how they may provide input to surveyors. As a result, communication between residents, families and surveyors about both deficient and good care practices in the facility has improved and residents and families are more empowered to take steps to resolve their concerns.

West Virginia — Increased Income for Residents Who Return to Their Own Homes

The Ombudsman Program determined that a state policy requiring pro-rated payments by residents who left facilities to return home was not being implemented. As a result of ombudsman intervention, the responsible state agency is now enforcing their own policy. The ombudsman estimates that savings to residents could total three million dollars.

Wisconsin — Legislation to Benefit Programs and Residents as Result of Audit

Following a series of newspaper articles which were critical of the licensure/certification agency, the ombudsman suggested to key legislators that it might be useful to examine the ombudsman program with a focus on its relationship with the survey agency and the staffing needs of the ombudsman program. The resulting audit and report led to a flurry of legislation protecting whistle-blowers; raising nurse staffing ratios in facilities; expanding residents' right to know to include staffing levels and the latest citations and complaints against the facility; an increase in the ombudsman program appropriation, and substantially increased fines for violation of nursing home regulations. The survey agency accelerated its time frame for strengthening the nursing home code of regulations, agreed to let the ombudsman program edit their form letters to consumers to make them more "consumer friendly," and agreed to connect all ombudsmen into their computer system to share complaint information.

Education/Training

Alabama — Public Education About All Forms of Abuse

Ombudsmen in the Area Agency on Aging in Mobile joined in a coalition of local organizations to educate people on all aspects of abuse—child, spousal, elderly, disabled, and animal—to build better citizens and make this a better world. Activities include a poster contest, with entries shown on television; a candlelight vigil in memory of all victims of abuse; billboards denouncing violence and posting help line telephone numbers; informative flyers and bumper stickers distributed at schools, malls and other places of commerce; and wide dissemination of two-colored ribbons—blue for awareness and white for the victims.

Michigan — Consumer Guide to the Nursing Home Inspection Process

The Ombudsman Program wrote and published the first consumers' guide to the inspection processes, both survey and complaint investigation, and developed training for family members based on advice and suggestions in the booklet. The training program helps families define and prioritize the issues to be presented to the inspectors.

Missouri — Educational Program for Family Members and Friends on GUILT

A regional ombudsman program developed the one hour program, which deals with the guilt people often feel upon admitting a loved one to a nursing home. The program is offered free of charge to family councils and other family/friend groups and is well received by facility staff and managers as well as the family members and friends to whom it is presented. Of particular note is a list of creative activities entitled "101 Things to Do while Visiting Your Older Adult." *Examples:* do exercises together to keep in shape; share your own favorite stories and memories; plant and take care of an indoor windowsill garden together.

South Dakota — Local Ombudsman Training Targeted on Problem Areas

The State Ombudsman determined the topics in the State Operations Manual in which the greatest numbers of questions are asked and complaints filed (example: rules regarding use of restraints). He then assembled a list of videos and other resources and provided targeted training to local ombudsmen on those areas and topics.

Texas — Volunteer Recruitment and Education Through a Newsletter

The Ombudsman Program, working with the Texas chapter of the American Association of Retired Persons, sent over 5,700 letters to prospective volunteers, especially retired registered and licensed practical nurses, asking them to consider being volunteer ombudsmen. A quarterly newsletter for ombudsman volunteers links them to others in the state and to the state office and provides current information about nursing home regulatory and rule revisions and best practices in facilities.

Utah — Dealing with Resident Abuse by Family Members

In response to a request from a social worker in a nursing home where staff had witnessed various levels of resident abuse by family members, the ombudsman worked with an expert in domestic violence to put together an interactive workshop to explore ways in which facility staff could respond when residents are the victims of domestic violence. The workshop includes a questionnaire staff can use to assess how residents view their personal support system outside of the facility.

Florida — Statewide Mileage from Celebration of Residents' Rights Week in the State Capitol

In response to a call to nursing homes from the Ombudsman Program, residents made banners depicting residents' rights, over 60 of which hung in the Capitol rotunda during Residents' Rights Week. A program at the capitol featured legislative speakers; reading of the statewide proclamation; musical selections; community speakers; and poems, reflections and remarks from the over 50 enthusiastic residents who attended, along with 75 other people. The event was videotaped and distributed to local ombudsman councils to be used throughout the year in residents' rights education initiatives and in-service staff training. The effort was also featured in local news broadcasts throughout the state.

Illinois — Ribbons for Public Awareness of Nursing Home Residents and Rights

A local ombudsman program operated by the Illinois Retired Teacher's Association made looped cobalt blue and gold lapel ribbons as a symbol for shining the light of truth on nursing homes and the need for good care of residents. The blue symbolizes "truth," the gold "light." The goals of the ribbon

project were threefold: to enlighten the public on the need for quality care, recruit one volunteer for every 25 residents, and spread the idea nationwide. Ombudsman staff and volunteers distributed the ribbons to residents, nursing home staff, friends, reporters, discharge planners, social workers, elder abuse workers, and strangers. They gave one to each legislator, along with an article entitled "Shining the Light of Truth on Nursing Homes."

Oklahoma — Honoring Career Nurse Aides

The Ombudsman Program and the Nursing Home Association of Oklahoma encouraged each nursing home to involve staff, residents and local ombudsmen in selecting its Career Nurse Aide of the Year. From these nominees, regional winners were chosen and from these, the state winner was selected.

Iowa — Facility Quality Recognition Program

The Iowa Department of Elder Affairs, in coalition with other agencies and associations, launched a new program called the *Quality Recognition Program* to acknowledge and publicize nursing facilities that develop creative ways to more efficiently manage facilities and enhance the quality of life of residents

Ombudsman Protocols, Standards

California — Two Projects: Developing Program Regulations, Training, and Other Materials with Local Ombudsmen and Computerized Management Information System

State and local ombudsman staff worked in special task forces to develop a new core training curriculum, regulations for the program, memoranda of understanding with appropriate agencies and strategic direction/program oversight. The result was a broad-based pool of knowledge in each of these areas and improved working relations between the state and local staffs.

California also established OmView, a sophisticated information management software system which generates pre-defined management reports, provides on-line analysis functions that enable users to interactively explore significant issues, and includes extensive tools for creating custom reports and ad hoc queries. For example, OmView permits users to determine how complaint resolution is changing over time by type of complaint, facility, ombudsman and other

characteristics; focus on specific issues, such as complaints involving Medicare and Medicaid fraud and abuse; and carry out other specific queries.

District of Columbia — Pro Bono Legal Help on Institutional Care Cases and Issues

The Ombudsman Program sponsors a referral project, supported by the bar association and local legal services office, which enlists attorneys on a pro bono basis for such cases and issues as: involuntary transfer or discharge of individual residents; individual public benefits problems (SSI overpayments, medical bill problems); appointment of a receiver or monitor over substandard facilities; theft of residents' personal needs accounts; and a systemic case about state nursing home regulations which resulted in the judge nullifying all state nursing home regulations because they did not comply with the federal nursing home regulations. They have NOT referred cases of medical malpractice or negligence because they believe that this would be a conflict of interest.

Georgia — Using Data to Establish Standards and Develop Resources

Using statistics from its statewide case and program operations data collection system, the Ombudsman Program established quantifiable standards for local program operations. Not only have these provided a clear expression of the state's expectations of local programs and a tool for evaluating their performance, but the standards and statistics have been invaluable in advocating successfully for additional program funding at both the state and local levels.

Puerto Rico — Study of Board and Care Facilities

Ombudsman Program staff supervised collection of information on the personnel, residents and services in 599 board and care facilities. The study showed significant increases in the number of residents and facilities and a notable increase in administrators' level of education from 1993 through 1997.

September 1998

National Elder Abuse Incidence Study

Executive Summary

ncea National Center on Elder Abuse

Prepared for the
Administration for Children and Families
and the **Administration on Aging**
in the **U.S. Department of Health and Human Services**
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National Elder Abuse Incidence Study: Executive Summary
ISBN 0-910106-63-0

September 1998

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The development of this report was supported by a grant awarded to the American Public Human Services Association (APHSA) jointly by the Administration for Children and Families (ACF) and the Administration on Aging (AoA) of the U.S. Department of Health and Human Services. The grant was a supplement to APHSA's existing cooperative agreement (Grant No. 90-AM-0660) awarded by AoA to create the National Center on Elder Abuse (NCEA). APHSA is the lead agency for NCEA. The views expressed in this report are those of the authors and do not necessarily reflect the policies or views of the grantee organization, its subcontractor (Westat, Inc.), or the funding agencies.

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The National Elder Abuse Incidence Study

Executive Summary

Introduction and Background

America's burgeoning elder population has affected every segment of the social, political, and economic landscape. Public debate of the issues surrounding the special needs of the approximately 44 million persons in this country age 60 years and over has heightened national awareness and concern. As a result, public policies relating to issues such as retirement security, affordable long-term care, and quality of life are changing to meet the unique needs of the aging population. Yet, as the public looks toward improving the lives of the elderly, abuse and neglect of elders living in their own homes have gone largely unidentified and unnoticed. The National Elder Abuse Incidence Study has shed new light on this significant problem with the finding that **approximately 450,000 elderly persons in domestic settings were abused and/or neglected during 1996. When elderly persons who experienced self-neglect are added, the number increases to approximately 551,000 in 1996.** Additionally, through this study we have learned that:

- Female elders are abused at a higher rate than males, after accounting for their larger proportion in the aging population.
- Our oldest elders (80 years and over) are abused and neglected at two to three times their proportion of the elderly population.
- In almost 90 percent of the elder abuse and neglect incidents with a known perpetrator, the perpetrator is a family member, and two-thirds of the perpetrators are adult children or spouses.
- Victims of self-neglect are usually depressed, confused, or extremely frail.

The National Elder Abuse Incidence Study (NEAIS) was conducted by the National Center on Elder Abuse at the American Public Human Services Association (formally known as the American Public Welfare Association) and the Maryland-based social science and survey research firm, Westat. The Administration for Children and Families (ACF) and the Administration on Aging (AoA) in the U.S. Department of Health and Human Services jointly funded this research. The study asked the fundamental

question: **What is the incidence of domestic elder abuse and neglect in the United States today?** In public health and social research, the term "incidence" means the number of new cases occurring over a specific time period. The NEAIS used a rigorous methodology to collect national incidence data on what has been a largely undocumented phenomenon, and it provides the basis to estimate the incidence of domestic elder abuse and neglect among those aged 60 and above in 1996.

The NEAIS originated in 1992 when Congress, through the Family Violence Prevention and Services Act of 1992 (P.L. 102-295), directed that a study of the national incidence of abuse, neglect, and exploitation of elderly persons be conducted under the auspices of the Administration for Children and Families. ACF consulted with the federal Administration on Aging, resulting in the two agencies combining resources and expertise to support the national study. Because the legislative mandate primarily was concerned with the prevention of violence in domestic settings, the study focused only on the maltreatment of non-institutionalized elderly. Elders living in hospitals, nursing homes, assisted-living facilities, or other institutional or group facilities were not included in the study.

In order to maximize the utility of the research, the study also collected and analyzed data about elder self-neglect in domestic settings, and these findings are reported separately from the findings for abuse and neglect. In the NEAIS, the phrase "elder maltreatment" generally refers to the seven types of abuse and neglect that are measured in the study—physical abuse, sexual abuse, emotional or psychological abuse, financial or material exploitation, abandonment, neglect, and self-neglect. An early task of the NEAIS was to develop standardized definitions for each specific type of abuse and neglect, which are provided later in this executive summary.

Prior attempts to generate national data on domestic elder abuse in the United States relied on state-compiled statistics of suspected abuse, with considerable variations in definitions and comprehensiveness of reporting systems. These earlier studies, frequently designed to estimate the prevalence (i.e., the total number of cases at a designated time period) of elder abuse rather than the incidence (i.e., the new cases occurring over a specific period of time), varied considerably in their research questions, methodology, sources of data, analysis, and findings. Accordingly, comparisons of earlier research with the NEAIS findings should be done cautiously.

The NEAIS gathered data on domestic elder abuse, neglect, and self-neglect through a nationally representative sample of 20 counties in 15 states. For each county sampled, the study collected data from two sources: (1) reports from the local Adult Protective Services (APS) agency responsible for receiving and investigating reports in each county: and (2) reports from "sentinels"—specially trained individuals in a variety of community agencies having frequent contact with the elderly. The NEAIS study design and methods are described more fully later in this Executive Summary.

The NEAIS research is groundbreaking because it provides, for the first time, national incidence estimates of elder abuse, which can serve as a baseline for future research and service interventions in this critical problem. Its findings confirm some commonly held theories about elder abuse and neglect, notably that officially reported cases of abuse are only the "tip of the iceberg," or a partial measure of a much larger, unidentified problem. The NEAIS final report offers insight into critical questions, including: who are the victims of elder abuse and neglect, and who are the perpetrators? Who are the reporters of abuse and neglect? What are the characteristics of self-neglecting elders? What is the extent of the problem of abuse, neglect, and self-neglect in our communities and what forms do they take?

National Elder Abuse Incidence Estimates

To arrive at the most accurate estimate of the national incidence of elder abuse and neglect in 1996, researchers added two numbers: (1) reports submitted to APS agencies and substantiated (i.e., determined to have occurred or be occurring) by those agencies, and (2) reports made by sentinels and presumed to be substantiated. Consistent with three national incidence studies on child abuse and neglect, this methodology assumes the sentinel reports represent substantiated reports. Because the incidence estimate is statistically derived from the nationally representative sample, researchers also calculated the standard error to establish the range of the incidence estimate within a 95 percent confidence interval.[1]

Using the identical methodology, researchers also separately calculated the estimated national incidence of elder abuse, neglect, and/or self-neglect in 1996. Both incidence estimates are for unduplicated elderly persons. In other words, individuals are counted only once, even if: (1) they were

[1] The standard error of the estimates of APS agencies is relatively low because of the large number of actual reports (1,466) by those agencies in the sample, while the standard error for the sentinel data is relatively large because of the smaller number of reports (140) in the study sample. The range of the "true" value, at the 95 percent confidence level, for an estimated number is plus and minus two times the standard error.

abused and neglected and/or self-neglecting, (2) more than one report were received about the same incident, or (3) different incidents were reported for the same elderly person during the study period.

Estimated Incidence of Elder Abuse and/or Neglect in 1996

The best national estimate is that a total of 449,924 elderly persons, aged 60 and over, experienced abuse and/or neglect in domestic settings in 1996. Of this total, 70,942 (16 percent) were reported to and substantiated by APS agencies, but the remaining 378,982 (84 percent) were not reported to APS. From these figures, one can conclude that over five times as many new incidents of abuse and neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 688,948 elders or as few as 210,900 elders could have been victims of abuse and/or neglect in domestic settings in 1996.

Estimated Incidence of Elder Abuse, Neglect, and/or Self-Neglect in 1996

The best national estimate is that a total of 551,011 elderly persons, aged 60 and over, experienced abuse, neglect, and/or self-neglect in domestic settings in 1996. Of this total, 115,110 (21 percent) were reported to and substantiated by APS agencies, with the remaining 435,901 (79 percent) not being reported to APS agencies. One can conclude from these figures that almost four times as many new incidents of elder abuse, neglect, and/or self-neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 787,027 elders or as few as 314,995 elders could have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

Abuse and Neglect Reported by APS Agencies

Characteristics of Victims of Domestic Elder Abuse

Of 236,479 reports of abuse, neglect, and self-neglect to APS in 1996, 48.7 percent, or 115,110 reports were **substantiated after investigation**, 39.3 percent were unsubstantiated, and 8.2 percent were still under investigation at the end of 1996. The remaining 3.8 percent of reports had other outcomes (e.g., suspected victim died, could not be located, or had moved away).

Of the 115,110 substantiated reports in 1996 for which information was available, 61.6 percent (70,942) were reports of incidents in which elders were maltreated by other people (also called "perpetrators"), while the remaining 38.4 percent (44,168) were incidents of self-neglecting elders. Of the 70,942 unduplicated substantiated reports of elder abuse attributable to perpetrators (which excludes self-neglect), the most common types were: neglect (34,525), emotional/ psychological abuse (25,142), financial/material exploitation (21,427), and physical abuse (18,144).

While the substantiation rate for all types of investigations of elder abuse combined was 48.7 percent, the **substantiation rates for different types of maltreatment** varied considerably, as follows: physical abuse—61.9 percent; abandonment—56.0 percent; emotional/psychological abuse—54.1 percent; financial/material abuse—44.5 percent; and neglect—41.0 percent. (The substantiation rate for sexual abuse was not statistically significant.)

A wide variety of **reporters of domestic elder abuse** were found in the 70,942 substantiated reports of abuse and neglect. The most frequent reporters were family members, who were responsible for 20.0 percent of all reports, followed by hospitals (17.3 percent), and police and sheriffs (11.3 percent). In-home service providers, friends/neighbors, and physician/nurses/clinics each reported between 8 and 10 percent of total reports. The remaining reports were made by out-of-home service providers, banks, public health departments, and other reporters.

Hospitals (19.8 percent) and friends/neighbors (19.1 percent) were the most frequent **reporters of substantiated reports of self-neglect** in 1996. Police/sheriff, in-home service providers, and physicians/nurses/clinics each reported 12 percent of total reports. Out-of-home providers, family members, banks, the victims themselves, and other reporters made the remaining reports.

The report examines the **age of victims** of different types of abuse reported to APS. The oldest elders (those over 80 years of age), who made up about 19 percent of the U.S. elderly population in 1996, were far more likely to be the victims of all categories of abuse, with the exception of abandonment. They accounted for over half the reports of neglect (51.8 percent), and 48.0 percent of financial/material abuse, 43.7 percent of physical abuse, and 41.3 percent of emotional/psychological abuse. In all types of abuse and neglect, elderly victims in the 60–64 and 65–69 age groups accounted for the smallest percentages.

Female elders were more likely to be the victims of all categories of abuse, except for abandonment. While making up about 58 percent of the total national elderly population in 1996, women were the victims in 76.3 percent of emotional/psychological abuse, 71.4 percent of physical abuse, 63.0 percent of financial/material exploitation, and 60.0 percent of neglect, which was the most frequent type of maltreatment. A majority of the victims of abandonment were men (62.2 percent).

In 1996, **white elders** were 84.0 percent of the total elder population, while black elders comprised 8.3 percent, and Hispanic elders were 5.1 percent. While white elders were the victims in eight out of ten reports for most types of maltreatment, black elders were over-represented in neglect (17.2 percent), financial/material exploitation (15.4 percent), and emotional/psychological abuse (14.1 percent). Hispanic elders and those from other racial/ethnic groups were under-represented among victims in all types of maltreatment.

The study found that elders who are **unable to care for themselves** were more likely to suffer from abuse. Approximately one-half (47.9 percent) of the substantiated incidents of elder abuse involved elderly persons who were not able to care for themselves, 28.7 percent were somewhat able to do so, and 22.9 percent were able to care for themselves. For the national elderly population as a whole, the federal government estimates that 14 percent have difficulties with one or more activities of daily living.[2]

Approximately six out of ten substantiated elder abuse victims experienced some degree of **confusion** (31.6 percent were very confused, or disoriented, and 27.9 percent were sometimes confused). This represents a high degree of potential mental impairment among this group of abused elders, particularly when compared with the estimated 10 percent of the total national elderly population suffering with some form of dementia.

[2] Nov. 1997 U.S. Census Bureau report on disability status of persons 65 years and older in 1994-95.

About 44 percent of all substantiated abused elders were gauged to be **depressed** at some level, with about 6 percent of them severely depressed. This compares with the estimated 15 percent of all elders nationally who are depressed at any one time. One-third of substantiated elder abuse victims (35.4 percent) displayed no signs of depression.

Characteristics of Perpetrators of Domestic Elder Abuse

Overall, men were the perpetrators of abuse and neglect 52.5 percent of the time. Of the substantiated cases of abuse and neglect, **males were the most frequent perpetrators** for abandonment (83.4 percent), physical abuse (62.6 percent), emotional abuse (60.1 percent) and financial/material exploitation (59.0 percent). Only in cases of neglect were women slightly more frequent (52.4 percent) perpetrators than men.

The **age category** with the most perpetrators was the 41 to 59 age group (38.4 percent), followed by those in the 40 years or less group who were perpetrators in more than one quarter of reports (27.4 percent). About one-third of perpetrators (34.3 percent) were elderly persons themselves (60 and over). Perpetrators of financial/material exploitation were particularly younger compared to other types of abuse, with 45.1 percent being 40 or younger and another 39.5 percent being 41--59 years old. Eighty-five percent of the perpetrators of financial/material exploitation were under age 60.

About three-fourths (77.4 percent) of domestic elder abuse perpetrators in 1996 were white, and less than one-fifth (17.9 percent) were black. Other minority groups accounted for only 2 percent of the perpetrators, while the race of 2.7 percent of perpetrators was unknown.

Data show that **family members** were the perpetrators in nine out of ten (89.7 percent) substantiated incidents of domestic elder abuse and neglect. Adult children of elder abuse victims were the most likely perpetrators of substantiated maltreatment (47.3 percent). Spouses represented the second largest group of perpetrators (19.3 percent). In addition, other relatives and grandchildren, at 8.8 percent and 8.6 percent respectively, were the next largest groups of perpetrators. Non-family perpetrators included friends/neighbors (6.2 percent), in-home service providers (2.8 percent), and out-of home service providers (1.4 percent). The report provides details about the relationship of perpetrators to the victims for the different types of maltreatment.

Characteristics of Self-Neglecting Elders

Self-neglect was included in the NEAIS and a common definition and signs and symptoms were adopted for it, as with all the specific types of abuse and neglect. Self-neglect is characterized as the behaviors of an elderly person that threaten his/her own health or safety. Self-neglect generally manifests itself in an older person's refusal or failure to provide himself or herself with adequate food, water, clothing, shelter, safety, personal hygiene, and medication (when indicated).[3]

Approximately two-thirds (65.3 percent) of substantiated self-neglecting elders were female, compared with women being 58 percent of the overall elderly population. About two-thirds (65.1 percent) of self-neglecting elders were 75 years or older (or almost twice their proportion of the overall elderly). The largest proportion of self-neglecting elders were in the oldest age category of 80 and over (44.7 percent), while the proportion decreased in each declining age group, with only 6.3 percent of self-neglecting elders being in the 60–64 year age group (compared to their being 23 percent of the total elderly population).

Self-neglecting elders were predominately white (77.4 percent), while 20.9 percent were black and 1.7 percent were other or unknown. The black elderly are two-and-a-half times more likely to be self-neglecting than their proportion of the elderly population.

Not surprisingly, most (93.3 percent) self-neglecting elders have difficulty caring for themselves. Of these elders, 34.3 percent are not capable of caring for themselves, while 59.0 percent are somewhat able to care for themselves. Three out of ten self-neglecting elders (29.9 percent) are very confused or disoriented, while 45.4 percent are sometimes confused. Three-quarters (75.3 percent) of substantiated self-neglecting elders suffer from some degree of confusion.

Abuse and Neglect Reported by Sentinel Agencies

The remaining findings from the NEAIS address elder abuse reported by 1,156 sentinel reporters in the 248 sentinel agencies. Since sentinel data are not officially reported to the APS agencies, they are not officially substantiated. Sentinels were, however, carefully trained to screen out incidents

[3] For purposes of this study, the definition of "self-neglect" excludes a situation in which a mentally competent older person (who understands the consequences of her/his decisions) makes a conscious and voluntary decision to engage in acts that threaten her/his health or safety.

that would not be supported. The unduplicated sentinel reports were relatively small in number (140) and, therefore, standard errors are relatively high.

Characteristics of Elderly Victims of Nonreported Domestic Abuse and Neglect (Sentinel)

Neglect was highest among those 80 years and over (60.0 percent). Physical, emotional, and financial abuse were found at higher rates among those aged 60 to 70 than among those 80 and older.

As with APS reports, a majority of victims of all types of abuse were women, as reported by sentinels. Although women represented about 58 percent of the total U.S. elderly population in 1996, over 80 percent of the physical abuse recognized by sentinels, over 90 percent of the financial abuse, over 70 percent of the emotional abuse, and over 65 percent of the neglect cases was found among women rather than men. Abandonment was also more frequent for women (65.4 percent), in contrast to substantiated APS reports, which show men were more likely to be abandoned (62.2 percent).

The data do not show that rates of unreported abuse and neglect are higher among minorities than among nonminorities. Rather, minorities, which collectively accounted for 15.5 percent of the total elderly population in 1996, were victims of abuse, as reported by sentinels, between 3.6 and 7.6 percent depending on the type of abuse.

Data from sentinel reports reveal that only one-third (33.8 percent) of the victims were **able to care for themselves,** another one-third (33.1 percent) were somewhat able to care for themselves, and 18.8 percent were not able to care for themselves. (Sentinels were unable to make a determination 14.2 percent of the time.) Individuals experiencing neglect, abandonment, and self-neglect were most often reported by sentinels as not able or only somewhat able to care for themselves. Two-thirds (67.7 percent) of those that were physically abused were thought to have the ability to care for themselves, suggesting that such abuse is not perpetrated on just the most vulnerable individuals.

Sentinels reported, through observation not diagnosis, that over one-third (36.6 percent) of alleged victims were not **confused,** about an equal proportion (37.9 percent) were sometimes confused, and a relatively small percentage (7.5 percent) were very confused or disoriented. Sentinels were unable

to make one of these choices 18.0 percent of the time. Confusion was most common among those who experienced neglect, abandonment, and self-neglect.

In noting observations of **depression,** sentinels were unable to make a determination for a third of the elders they saw. Sentinel data show that 20.0 percent of the alleged victims were not depressed, 41.4 percent seemed to be moderately depressed, and a relatively small proportion (5.5 percent) appeared severely depressed. Signs and symptoms of moderate or severe depression were relatively high across all forms of abuse and neglect, but did not stand out for any one category when standard errors are taken into account.

Characteristics of Perpetrators of Nonreported Abuse and Neglect (Sentinel)

As with APS reports, perpetrators reported by sentinels were most frequently **family members** (89.6 percent), including the adult children (30.8 percent), spouses (30.3 percent), and a parent (24.0 percent). Parents are possible abusers of elders because elders were defined as persons aged 60 and over, and some persons in their 60s and 70s had parents in their late 70s and 80s.

Friends, neighbors, and service providers were believed to be responsible for the abuse and neglect 10 percent of the time.

The most common age range for perpetrators was the middle years, ages 36 to 59 (45.5 percent), with 28.6 percent of abuse being committed by people 60 and older, and 15.3 percent by those 35 and younger.

Nearly twice as many men as women were reported as perpetrators of abuse and neglect by sentinels (63.1 percent compared to 35.4 percent).

NEAIS Study Design and Methods

The National Elder Abuse Incidence Study gathered data on domestic elder abuse, neglect, and self-neglect through a nationally representative sample of 20 counties. For each county sampled, the study collected data from two sources: (1) reports from the local Adult Protective Service (APS) agency

responsible for receiving and investigating reports in each county; and (2) reports from approximately 1,100 "sentinels"—specially trained individuals in a variety of community agencies having frequent contact with the elderly. Many sentinels were mandatory or voluntary reporters of elder abuse, as defined by state laws. The sentinel approach to collecting data is an alternative to more costly general population surveys and has been used successfully in all three National Incidence Studies of Child Abuse commissioned by the federal government. This method was pioneered nearly 20 years ago by Westat, APHSA's collaborative partner for the NEAIS study, in the nation's first-ever incidence study on child abuse. The approach is based upon the hypothesis that officially reported cases of abuse represent only a small proportion of actual episodes of abuse in the community.

Establishing Definitions

Historically, a major impediment to collecting uniform data on elder maltreatment nationally has been a lack of comparability of definitions of abuse, neglect, and exploitation. In addition to differences among states, recognized elder experts themselves continue to disagree on definitions. Accordingly, the first task of NEAIS was to develop standardized definitions of elder maltreatment, thus ensuring greater comparability and reliability of results. The process involved several steps:

- Analysis of Current State Definitions—The existing state laws defining abuse, neglect, and exploitation were compiled and analyzed for all states and territories, and the most common components of the definitions across states were selected as potential definitions.
- Convening of Local Roundtables—Two roundtables of representative local professionals who deal with elder abuse, neglect, and exploitation were convened to obtain firsthand, community-level information on how elder abuse is detected, reported, and investigated, which aided in the development of the standardized definitions.
- Consensus Meeting—A group of elder abuse experts and researchers, including NCEA and NEAIS advisory committee members, provided an in-depth analysis of the draft definitions and revised and prepared them for pilot-testing. The final definitions included:
    - **Physical abuse** was defined as the use of physical force that may result in bodily injury, physical pain, or impairment. Physical punishments of any kind were examples of physical abuse.
    - **Sexual abuse** was defined as non-consensual sexual contact of any kind with an elderly person.
    - **Emotional or psychological abuse** was defined as the infliction of anguish, pain, or distress.

- **Financial or material exploitation** was defined as the illegal or improper use of an elder's funds, property, or assets.
- **Abandonment** was defined as the desertion of an elderly person by an individual who had physical custody or otherwise had assumed responsibility for providing care for an elder or by a person with physical custody of an elder.
- **Neglect** was defined as the refusal or failure to fulfill any part of a person's obligations or duties to an elder.
- **Self-neglect** was characterized as the behaviors of an elderly person that threaten his/her own health or safety. The definition of self-neglect excludes a situation in which a mentally competent older person (who understands the consequences of his/her decisions) makes a conscious and voluntary decision to engage in acts that threaten his/her health or safety.

- Pilot-Testing—Two Adult Protective Services agencies and seven local sentinel agencies (in the Washington, D.C., area, but not involved in the study) field pilot-tested the definitions and data collection instruments, which were revised based on the results of the tests. (The full definition and signs and symptoms for each type of abuse and neglect are provided in detail in the full report.)

Sampling Counties and Evaluation of Sample

NEAIS employed a stratified, multistage sample of 20 nationally representative counties, selected with probability proportional to the number of elders living in these areas. The counties were stratified by five variables: geographic region, metropolitan area, elder abuse reporting requirements (mandatory and nonmandatory), percentage of elders, and percentage of poor elders. The use of the probability proportional to size method ensures an approximately self-weighting sample—that is, every abused elder in the county has approximately the same chance of being identified, regardless of location, when the measure of size is the number of elders in the county. This methodology produced a sample of 20 counties in 15 states, with five counties in each of the four major geographic regions of the country. The sample also was reflective of the other four stratification variables.

Because the sample was based on 20 out of about 3,000 counties in the country, it was important to examine the accuracy of the elder abuse estimates using outside sources, to the extent possible. The National Center on Elder Abuse (NCEA), in spring 1997, conducted *A Survey of State APS and Aging Agencies on Domestic Abuse for FY 95 and 96*. All states shared counts of all domestic elder abuse reports to state report-receiving agencies and these data were compiled to be comparable to that

collected by the NEAIS. Using rigorous estimation methods, data were weighted to represent national totals and annualized. The numbers of cases in the data obtained from the states by NCEA were very close to the NEAIS national estimates. The total number of actual reports obtained from the states by NCEA was only 1.4 percent greater than the NEAIS estimated total. The statistical procedures used to produce the national estimates in this NEAIS appear to be extremely accurate.

Sampling Sentinel Agencies and Sentinels

One of the most important elements of the NEAIS was the selection of four types of community agencies from which community sentinels would be selected: law enforcement agencies (sheriff's departments and municipal police departments); hospitals (including public health departments); elder care providers (adult day care centers, senior centers, and home health care agencies); financial institutions (banks). Using the best sources of agency listings for each sentinel type, a sample was drawn for each of the 20 sampled counties, usually averaging 12–13 agencies per county. Two banks per county were selected to ensure that possible incidents of financial exploitation of elders would be identified. The remaining agencies were distributed among the other categories of agencies proportional to the number of agencies available in each county, resulting in a total of 248 sentinel agencies in the 20 counties participating in the study.

A rigorous methodology was used to select the actual sentinels within the designated sentinel agencies. To be eligible, individuals had to have frequent contact with the elderly and had to be able to identify abuse if they encountered it. A computer software program was used to randomly pick every *nth* sentinel from a roster of eligible sentinel candidates provided by the agency. The number of sentinels selected per agency was typically four to six, with a total of about 50 sentinels per county. This resulted in a total of 1,158 sentinels participating in the study across the 20 counties.

The designation of Adult Protective Services (APS) agencies, on the other hand, is made by each state, and the designated agency varies by state. For the 20 sampled counties, the distribution of APS agencies participating in the study were: 10 in the state human services agency; six in the state unit on aging, but within the human services agency; and four in the state unit on aging and outside the human services agency.

Data Forms and Training

The data collection forms for both the APS caseworkers and sentinel agency staff were designed to be easy to complete and to require as few references as possible to other documents. As with the abuse and neglect definitions, several versions of the instruments were extensively pilot-tested with local APS and service agency staff. The APS and sentinel data forms were identical with two exceptions: the APS instrument included sections for documenting the source of the report to the agency and for the disposition of the case following investigation (i.e., substantiated or unsubstantiated), while the sentinel forms did not.

In order to increase valid and reliable reporting across all 20 counties, an innovative approach was developed for training sentinels and APS agency personnel using a specially designed participant guide book and instructional videos. The training focused on identifying elder abuse according to the standardized definitions and related signs and symptoms, and recording data on the specially designed forms. Additionally, an "800" telephone number was available for APS and sentinel participants to call study staff with any questions about data collection procedures or client eligibility.

Data Collection, Receipt, and Management

Sentinel and APS data collection took place over an eight-week period. Starting in January 1996, all reporters in one or two counties started data collection each month, according to a preset schedule. Staggering reporting periods throughout this 12-month period (calendar year 1996) allowed the study to account for possible seasonal variations that might occur in elder abuse.

Sentinel data collection procedures were similar to APS agencies; however, sentinels were asked to forward reports of suspected cases of elder abuse to the NEAIS research staff as soon as possible after observing the suspected abuse. To encourage candid, confidential reporting, the designated coordinator in each sentinel agency did not review or edit forms completed by the individual sentinels. Sentinels also did not attempt to substantiate incidents of abuse. Sentinels, however, were carefully trained to screen out incidents that would not be supported as elder abuse or neglect. In contrast, all reports of suspected abuse received by the APS agencies were investigated and a determination of substantiation or nonsubstantiation made, as required by the laws of each state. It should be noted, however, that an APS agency's determination of nonsubstantiation of a report of abuse or neglect does

not mean conclusively that abuse or neglect did *not* happen. Rather, nonsubstantiation of a report can mean that the level of proof required by that state was not met, despite indications that abuse or neglect *may* have occurred.

NEAIS staff received and reviewed all submitted data collection forms for completeness and called the sending agency coordinators to discuss any missing or unclear data. Both APS and sentinel data forms required respondents to provide a brief narrative describing the maltreatment events. This maltreatment information was evaluated according to the study definitions and eligibility criteria, and reports that did not meet the study definitions were excluded from the database (e.g., victim lived in institutional setting; incident not based on common definitions).

Unduplication

The formal process of eliminating duplication in survey research data is called "unduplication." The NEAIS was interested in determining the number of new unduplicated elderly persons who were abused or neglected during 1996 in order to arrive at estimates of reported and unreported abuse and neglect. Sometimes more than one data form was received for the same maltreated elder, describing either the same or different abusive incidents. It was necessary to identify such duplicates and count each person only once for purposes of this study. Out of a total of 1,699 APS and sentinel reports, study staff identified 93 sets of genuine duplicates, resulting in 1,606 unduplicated reports (1,466 APS and 140 sentinel). Duplicate cases reported both to APS and sentinel agencies were removed from the sentinel data file, so that duplicated instances of abuse and neglect were counted as reports to APS. Duplicate sentinel reports were assigned to the sentinel agency that first sent in the form.

Obtaining National Estimates from the Study Data

The samples of agencies and sentinels who participated in the NEAIS were selected using scientific probability sampling methods to obtain a nationally representative sample. As a result, it is possible to make valid projections from the NEAIS data, to make national estimates of the numbers of elders who have been abused and neglected, and to describe their characteristics.

This estimation of national and subgroup totals and proportions is achieved by applying sample weights to each of the cases in the study. The weight applied to each elder abuse report can be thought of as indicating the number of cases nationally that are represented by the individual case in the study. By aggregating these sample weights for the relevant study cases, national and subgroup estimates are obtained, both of total numbers of elders, and their characteristics.

This methodology is routinely applied in national samples to measure social and economic issues. The Current Population Survey, which (among other things) produces the official U.S. monthly national estimates of unemployment and employment, is one well-known example. Another is the Health Interview Survey, which produces periodic national estimates for a wide range of health measures.

There were a number of steps involved in the process of developing weights for the NEAIS data. These are described in Chapter 3 of the full report, and in Appendix L.[4]

Interpreting Results in the Presence of Sampling Variability

A common technique used to present and interpret statistical data that are subject to sampling variability is through the use of confidence bands. A frequently used convention is to determine a 95 percent confidence band for each estimate. The statistical interpretation of a 95 percent confidence band is that, if such a band were constructed from all possible samples that might have been selected, 95 percent of such bands would contain the true answer.

If the confidence band for an estimate is wide, relative to the size of the estimate itself, then this indicates that there is considerable uncertainty as to what the true value actually is. If, however, the band is narrow, then there can be confidence that the estimate is close to the true answer. Thus, for example, consider an estimate that a certain population characteristic is at the 10 percent level. If the confidence band for this estimate ranges from 1 percent to 19 percent, we can have confidence that the true level is something below 20 percent, but cannot draw any other inference with confidence. If an

[4] The most important steps are the determination of overall probabilities of selection, calculation of nonresponse adjustments, and development of replicate weights. Unlike the sentinel records, there are no further sampling or nonresponse adjustments for the APS data, since all APS agencies in the sampled counties participated. One straightforward calculation is the annualization of the data. The staggering of different-sized counties throughout 1996 minimized the potential for seasonal affect to bias the estimates. Accordingly, this estimate of elder abuse over these two-month periods was transformed to an estimate for the full 1996-study year by multiplying the factor by six.

estimate of 10 percent is accompanied by a confidence band that ranges from 9 percent to 11 percent, then we can be confident that the true figure is little different from 10 percent.

Because the NEAIS sampled a relatively small number of counties, agencies, and sentinels, for many of the rarer characteristics described in this report the confidence bands are relatively wide (like in the first example given in the previous paragraph). When this has occurred, the estimates presented in the report are duly noted as having this characteristic.

Conclusions

The results of the National Elder Abuse Incidence Study (NEAIS) strongly confirm the validity of the "iceberg" theory of elder abuse that has been accepted in the aging research community for 20 years or more. The contribution the NEAIS has made to our understanding of the extent of elder abuse and neglect is graphically depicted by the large new middle area in Figure ES-1 below.

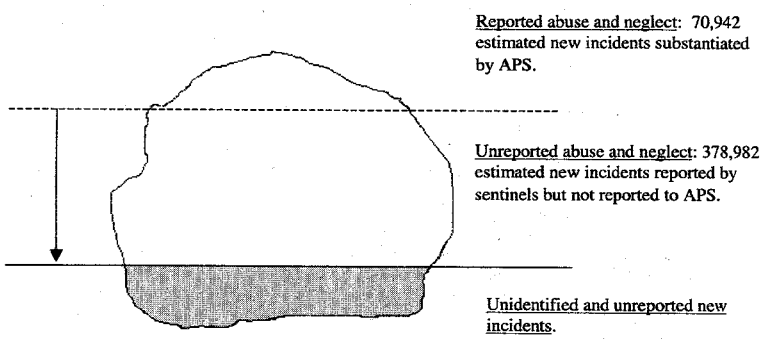

Figure ES-1. Iceberg theory showing NEAIS identified unreported abuse and neglect, excluding self-neglect

The NEAIS findings lead to the following conclusions:

- Domestic elder abuse and neglect is a significant problem. NEAIS research shows that about 450,000 unduplicated elders experienced abuse and neglect in domestic settings in 1996. More than five times as many of these incidents of abuse and neglect were unreported than were reported to and substantiated by APS agencies.[5]

- When elders who experienced only self-neglect are included with those that were abused and neglected, the number increases to 551,000 unduplicated elder persons in 1996. Almost four times as many of these incidents were unreported than were reported to and substantiated by APS agencies.[6]

- The NEAIS has measured a large and previously unidentified and unreported portion of elder abuse and neglect, and also has learned much about the characteristics of the victims and perpetrators of abuse and neglect.

- At the same time, it was not possible to identify and report on all previously hidden domestic elder abuse and neglect. Clearly, the NEAIS has not measured abuse, neglect, and self-neglect among those most isolated elders who do not leave their homes or who rarely come in contact with others in the community.

- Several of the characteristics of abused and neglected elderly persons are particularly worrisome and challenge us to prevent and intervene in this tragedy:

  - Our oldest elders (80 and over) are abused and neglected at two to three times their proportion of the elderly population.

  - Female elders are abused at a higher rate than males.

  - Almost half of substantiated abused and neglected elderly were not physically able to care for themselves.

  - In almost nine out of ten incidents of domestic elder abuse and neglect, the perpetrator is a family member. Adult children are responsible for almost half of elder abuse and neglect.

- Elderly self-neglect also is a problem, as evidenced by about 139,000 unduplicated reports (some of the self-neglecting elderly may also be counted as being abused and/or neglected). Most victims of self-neglect are unable to care for themselves and are confused. This is a difficult and troubling problem, which warrants further research and study.

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[5] Using precisely developed standard errors, the NEAIS estimates that as many as 688,948 or as few as 210,900 elder persons may have been abused and/or neglected in domestic settings in 1996.

[6] When self-neglecting elders are added, the estimate range is that as many as 787,027 or as few as 314,995 elder persons may have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

- Despite the study's identification of over five times as many unreported incidents of elder abuse and neglect as incidents that were reported to and substantiated by APS agencies, some professionals and researchers in the aging field may have expected this multiplier to be larger than NEAIS found. The NEAIS estimate may be lower than those expectations because:

  - Elder abuse and neglect are not as hidden and under-reported to APS agencies as they were at the time of earlier studies. Between 1986 and 1996, for example, official reports of abuse and neglect made to APS agencies throughout the country increased by 150 percent, while the total number of elderly persons aged 60 and over increased by only 10 percent. A much larger proportion of new incidents of domestic elder abuse and neglect was reported to official APS agencies in 1996 than was reported 10 years ago.

  - Still more of the unidentified and unreported area of the iceberg remains to be revealed, especially instances of abuse and neglect among seriously isolated elderly persons and those with little contact with community organizations.

Limitations of NEAIS

The NEAIS study design had some limitations that prevented it from making a definitive estimate of all incidents of elder abuse and neglect, including:

- The sentinel approach tends to cause a certain amount of "undercount" in the detection of domestic elder abuse because there are no community institutions in which most elders regularly assemble and from which sentinels can be chosen and elders observed (unlike schools in child abuse research).

- Sentinels cannot observe and report abuse and neglect of elders who are isolated and/or have no or very limited contact with any community organizations.

- Resource constraints for conducting the NEAIS limited the number of counties and sentinels sampled and the length of the reporting period. Consequently, the relatively small number of sentinel reports resulted in incidence estimates with wide confidence bands. Increasing the sample size and reporting period in future such studies would further improve the precision of incidence estimates through the calculation of narrower confidence bands.

Implications of Findings and Future Research Questions and Issues

The findings of the NEAIS suggest a number of important issues for policy development, practice, and training in addressing the problems of elder abuse, neglect, and self-neglect. Because states and localities historically have had responsibility for elder abuse reporting, investigation, and services, most of the implications are for state and local governments. These issues are discussed in the full report. Finally, the report raises a number of research questions and issues for researchers and service providers, including suggesting areas for future research of the incidence and nature of elder abuse and neglect.

Conclusion

The NEAIS has documented the existence of a previously unidentified and unreported stratum of elder abuse and neglect, thus confirming and advancing our understanding of the "iceberg" theory of elder abuse. NEAIS estimates that for every abused and/or neglected elder reported to and substantiated by APS, there are over five abused and/or neglected elders that are not reported. The study also documents similar patterns of underreporting of self-neglecting elders. NEAIS acknowledges that it did not measure all unreported abuse and neglect. Our collective challenge—as policy makers, service providers, advocates, researchers, and our society as a whole, is to utilize this information to better the lives of our elderly citizens.

September 1998

National Elder Abuse Incidence Study

Final Report

ncea National Center on Elder Abuse

Prepared for the
Administration for Children and Families
and the **Administration on Aging**
in the **U.S. Department of Health and Human Services**
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National Elder Abuse Incidence Study: Final Report
ISBN 0-910106-62-2

September 1998

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The development of this report was supported by a grant awarded to the American Public Human Services Association (APHSA) jointly by the Administration for Children and Families (ACF) and the Administration on Aging (AoA) of the U.S. Department of Health and Human Services. The grant was a supplement to APHSA's existing cooperative agreement (Grant No. 90-AM-0660) awarded by AoA to create the National Center on Elder Abuse (NCEA). APHSA is the lead agency for NCEA. The views expressed in this report are those of the authors and do not necessarily reflect the policies or views of the grantee organization, its subcontractor (Westat, Inc.), or the funding agencies.

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The National Elder Abuse Incidence Study

Executive Summary

Introduction and Background

America's burgeoning elder population has affected every segment of the social, political, and economic landscape. Public debate of the issues surrounding the special needs of the approximately 44 million persons in this country age 60 years and over has heightened national awareness and concern. As a result, public policies relating to issues such as retirement security, affordable long-term care, and quality of life are changing to meet the unique needs of the aging population. Yet, as the public looks toward improving the lives of the elderly, abuse and neglect of elders living in their own homes have gone largely unidentified and unnoticed. The National Elder Abuse Incidence Study has shed new light on this significant problem with the finding that **approximately 450,000 elderly persons in domestic settings were abused and/or neglected during 1996. When elderly persons who experienced self-neglect are added, the number increases to approximately 551,000 in 1996.** Additionally, through this study we have learned that:

- Female elders are abused at a higher rate than males, after accounting for their larger proportion in the aging population.
- Our oldest elders (80 years and over) are abused and neglected at two to three times their proportion of the elderly population.
- In almost 90 percent of the elder abuse and neglect incidents with a known perpetrator, the perpetrator is a family member, and two-thirds of the perpetrators are adult children or spouses.
- Victims of self-neglect are usually depressed, confused, or extremely frail.

The National Elder Abuse Incidence Study (NEAIS) was conducted by the National Center on Elder Abuse at the American Public Human Services Association (formally known as the American Public Welfare Association) and the Maryland-based social science and survey research firm, Westat. The Administration for Children and Families (ACF) and the Administration on Aging (AoA) in the U.S. Department of Health and Human Services jointly funded this research. The study asked the fundamental

question: **What is the incidence of domestic elder abuse and neglect in the United States today?** In public health and social research, the term "incidence" means the number of new cases occurring over a specific time period. The NEAIS used a rigorous methodology to collect national incidence data on what has been a largely undocumented phenomenon, and it provides the basis to estimate the incidence of domestic elder abuse and neglect among those aged 60 and above in 1996.

The NEAIS originated in 1992 when Congress, through the Family Violence Prevention and Services Act of 1992 (P.L. 102-295), directed that a study of the national incidence of abuse, neglect, and exploitation of elderly persons be conducted under the auspices of the Administration for Children and Families. ACF consulted with the federal Administration on Aging, resulting in the two agencies combining resources and expertise to support the national study. Because the legislative mandate primarily was concerned with the prevention of violence in domestic settings, the study focused only on the maltreatment of non-institutionalized elderly. Elders living in hospitals, nursing homes, assisted-living facilities, or other institutional or group facilities were not included in the study.

In order to maximize the utility of the research, the study also collected and analyzed data about elder self-neglect in domestic settings, and these findings are reported separately from the findings for abuse and neglect. In the NEAIS, the phrase "elder maltreatment" generally refers to the seven types of abuse and neglect that are measured in the study—physical abuse, sexual abuse, emotional or psychological abuse, financial or material exploitation, abandonment, neglect, and self-neglect. An early task of the NEAIS was to develop standardized definitions for each specific type of abuse and neglect, which are provided later in this executive summary.

Prior attempts to generate national data on domestic elder abuse in the United States relied on state-compiled statistics of suspected abuse, with considerable variations in definitions and comprehensiveness of reporting systems. These earlier studies, frequently designed to estimate the prevalence (i.e., the total number of cases at a designated time period) of elder abuse rather than the incidence (i.e., the new cases occurring over a specific period of time), varied considerably in their research questions, methodology, sources of data, analysis, and findings. Accordingly, comparisons of earlier research with the NEAIS findings should be done cautiously.

The NEAIS gathered data on domestic elder abuse, neglect, and self-neglect through a nationally representative sample of 20 counties in 15 states. For each county sampled, the study collected data from two sources: (1) reports from the local Adult Protective Services (APS) agency responsible for receiving and investigating reports in each county: and (2) reports from "sentinels"—specially trained individuals in a variety of community agencies having frequent contact with the elderly. The NEAIS study design and methods are described more fully later in this Executive Summary.

The NEAIS research is groundbreaking because it provides, for the first time, national incidence estimates of elder abuse, which can serve as a baseline for future research and service interventions in this critical problem. Its findings confirm some commonly held theories about elder abuse and neglect, notably that officially reported cases of abuse are only the "tip of the iceberg," or a partial measure of a much larger, unidentified problem. The NEAIS final report offers insight into critical questions, including: who are the victims of elder abuse and neglect, and who are the perpetrators? Who are the reporters of abuse and neglect? What are the characteristics of self-neglecting elders? What is the extent of the problem of abuse, neglect, and self-neglect in our communities and what forms do they take?

National Elder Abuse Incidence Estimates

To arrive at the most accurate estimate of the national incidence of elder abuse and neglect in 1996, researchers added two numbers: (1) reports submitted to APS agencies and substantiated (i.e., determined to have occurred or be occurring) by those agencies, and (2) reports made by sentinels and presumed to be substantiated. Consistent with three national incidence studies on child abuse and neglect, this methodology assumes the sentinel reports represent substantiated reports. Because the incidence estimate is statistically derived from the nationally representative sample, researchers also calculated the standard error to establish the range of the incidence estimate within a 95 percent confidence interval.[1]

Using the identical methodology, researchers also separately calculated the estimated national incidence of elder abuse, neglect, and/or self-neglect in 1996. Both incidence estimates are for unduplicated elderly persons. In other words, individuals are counted only once, even if: (1) they were

[1] The standard error of the estimates of APS agencies is relatively low because of the large number of actual reports (1,466) by those agencies in the sample, while the standard error for the sentinel data is relatively large because of the smaller number of reports (140) in the study sample. The range of the "true" value, at the 95 percent confidence level, for an estimated number is plus and minus two times the standard error.

abused and neglected and/or self-neglecting, (2) more than one report were received about the same incident, or (3) different incidents were reported for the same elderly person during the study period.

Estimated Incidence of Elder Abuse and/or Neglect in 1996

The best national estimate is that a total of 449,924 elderly persons, aged 60 and over, experienced abuse and/or neglect in domestic settings in 1996. Of this total, 70,942 (16 percent) were reported to and substantiated by APS agencies, but the remaining 378,982 (84 percent) were not reported to APS. From these figures, one can conclude that over five times as many new incidents of abuse and neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 688,948 elders or as few as 210,900 elders could have been victims of abuse and/or neglect in domestic settings in 1996.

Estimated Incidence of Elder Abuse, Neglect, and/or Self-Neglect in 1996

The best national estimate is that a total of 551,011 elderly persons, aged 60 and over, experienced abuse, neglect, and/or self-neglect in domestic settings in 1996. Of this total, 115,110 (21 percent) were reported to and substantiated by APS agencies, with the remaining 435,901 (79 percent) not being reported to APS agencies. One can conclude from these figures that almost four times as many new incidents of elder abuse, neglect, and/or self-neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 787,027 elders or as few as 314,995 elders could have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

Abuse and Neglect Reported by APS Agencies

Characteristics of Victims of Domestic Elder Abuse

Of 236,479 reports of abuse, neglect, and self-neglect to APS in 1996, 48.7 percent, or 115,110 reports were **substantiated after investigation**, 39.3 percent were unsubstantiated, and 8.2 percent were still under investigation at the end of 1996. The remaining 3.8 percent of reports had other outcomes (e.g., suspected victim died, could not be located, or had moved away).

Of the 115,110 substantiated reports in 1996 for which information was available, 61.6 percent (70,942) were reports of incidents in which elders were maltreated by other people (also called "perpetrators"), while the remaining 38.4 percent (44,168) were incidents of self-neglecting elders. Of the 70,942 unduplicated substantiated reports of elder abuse attributable to perpetrators (which excludes self-neglect), the most common types were: neglect (34,525), emotional/ psychological abuse (25,142), financial/material exploitation (21,427), and physical abuse (18,144).

While the substantiation rate for all types of investigations of elder abuse combined was 48.7 percent, the **substantiation rates for different types of maltreatment** varied considerably, as follows: physical abuse—61.9 percent; abandonment—56.0 percent; emotional/psychological abuse—54.1 percent; financial/material abuse—44.5 percent; and neglect—41.0 percent. (The substantiation rate for sexual abuse was not statistically significant.)

A wide variety of **reporters of domestic elder abuse** were found in the 70,942 substantiated reports of abuse and neglect. The most frequent reporters were family members, who were responsible for 20.0 percent of all reports, followed by hospitals (17.3 percent), and police and sheriffs (11.3 percent). In-home service providers, friends/neighbors, and physician/nurses/clinics each reported between 8 and 10 percent of total reports. The remaining reports were made by out-of-home service providers, banks, public health departments, and other reporters.

Hospitals (19.8 percent) and friends/neighbors (19.1 percent) were the most frequent **reporters of substantiated reports of self-neglect** in 1996. Police/sheriff, in-home service providers, and physicians/nurses/clinics each reported 12 percent of total reports. Out-of-home providers, family members, banks, the victims themselves, and other reporters made the remaining reports.

The report examines the **age of victims** of different types of abuse reported to APS. The oldest elders (those over 80 years of age), who made up about 19 percent of the U.S. elderly population in 1996, were far more likely to be the victims of all categories of abuse, with the exception of abandonment. They accounted for over half the reports of neglect (51.8 percent), and 48.0 percent of financial/material abuse, 43.7 percent of physical abuse, and 41.3 percent of emotional/psychological abuse. In all types of abuse and neglect, elderly victims in the 60–64 and 65–69 age groups accounted for the smallest percentages.

Female elders were more likely to be the victims of all categories of abuse, except for abandonment. While making up about 58 percent of the total national elderly population in 1996, women were the victims in 76.3 percent of emotional/psychological abuse, 71.4 percent of physical abuse, 63.0 percent of financial/material exploitation, and 60.0 percent of neglect, which was the most frequent type of maltreatment. A majority of the victims of abandonment were men (62.2 percent).

In 1996, **white elders** were 84.0 percent of the total elder population, while black elders comprised 8.3 percent, and Hispanic elders were 5.1 percent. While white elders were the victims in eight out of ten reports for most types of maltreatment, black elders were over-represented in neglect (17.2 percent), financial/material exploitation (15.4 percent), and emotional/psychological abuse (14.1 percent). Hispanic elders and those from other racial/ethnic groups were under-represented among victims in all types of maltreatment.

The study found that elders who are **unable to care for themselves** were more likely to suffer from abuse. Approximately one-half (47.9 percent) of the substantiated incidents of elder abuse involved elderly persons who were not able to care for themselves, 28.7 percent were somewhat able to do so, and 22.9 percent were able to care for themselves. For the national elderly population as a whole, the federal government estimates that 14 percent have difficulties with one or more activities of daily living.[2]

Approximately six out of ten substantiated elder abuse victims experienced some degree of **confusion** (31.6 percent were very confused, or disoriented, and 27.9 percent were sometimes confused). This represents a high degree of potential mental impairment among this group of abused elders, particularly when compared with the estimated 10 percent of the total national elderly population suffering with some form of dementia.

[2] Nov. 1997 U.S. Census Bureau report on disability status of persons 65 years and older in 1994-95.

About 44 percent of all substantiated abused elders were gauged to be **depressed** at some level, with about 6 percent of them severely depressed. This compares with the estimated 15 percent of all elders nationally who are depressed at any one time. One-third of substantiated elder abuse victims (35.4 percent) displayed no signs of depression.

Characteristics of Perpetrators of Domestic Elder Abuse

Overall, men were the perpetrators of abuse and neglect 52.5 percent of the time. Of the substantiated cases of abuse and neglect, **males were the most frequent perpetrators** for abandonment (83.4 percent), physical abuse (62.6 percent), emotional abuse (60.1 percent) and financial/material exploitation (59.0 percent). Only in cases of neglect were women slightly more frequent (52.4 percent) perpetrators than men.

The **age category** with the most perpetrators was the 41 to 59 age group (38.4 percent), followed by those in the 40 years or less group who were perpetrators in more than one quarter of reports (27.4 percent). About one-third of perpetrators (34.3 percent) were elderly persons themselves (60 and over). Perpetrators of financial/material exploitation were particularly younger compared to other types of abuse, with 45.1 percent being 40 or younger and another 39.5 percent being 41–59 years old. Eighty-five percent of the perpetrators of financial/material exploitation were under age 60.

About three-fourths (77.4 percent) of domestic elder abuse perpetrators in 1996 were white, and less than one-fifth (17.9 percent) were black. Other minority groups accounted for only 2 percent of the perpetrators, while the race of 2.7 percent of perpetrators was unknown.

Data show that **family members** were the perpetrators in nine out of ten (89.7 percent) substantiated incidents of domestic elder abuse and neglect. Adult children of elder abuse victims were the most likely perpetrators of substantiated maltreatment (47.3 percent). Spouses represented the second largest group of perpetrators (19.3 percent). In addition, other relatives and grandchildren, at 8.8 percent and 8.6 percent respectively, were the next largest groups of perpetrators. Non-family perpetrators included friends/neighbors (6.2 percent), in-home service providers (2.8 percent), and out-of home service providers (1.4 percent). The report provides details about the relationship of perpetrators to the victims for the different types of maltreatment.

Characteristics of Self-Neglecting Elders

Self-neglect was included in the NEAIS and a common definition and signs and symptoms were adopted for it, as with all the specific types of abuse and neglect. Self-neglect is characterized as the behaviors of an elderly person that threaten his/her own health or safety. Self-neglect generally manifests itself in an older person's refusal or failure to provide himself or herself with adequate food, water, clothing, shelter, safety, personal hygiene, and medication (when indicated).[3]

Approximately two-thirds (65.3 percent) of substantiated self-neglecting elders were female, compared with women being 58 percent of the overall elderly population. About two-thirds (65.1 percent) of self-neglecting elders were 75 years or older (or almost twice their proportion of the overall elderly). The largest proportion of self-neglecting elders were in the oldest age category of 80 and over (44.7 percent), while the proportion decreased in each declining age group, with only 6.3 percent of self-neglecting elders being in the 60–64 year age group (compared to their being 23 percent of the total elderly population).

Self-neglecting elders were predominately white (77.4 percent), while 20.9 percent were black and 1.7 percent were other or unknown. The black elderly are two-and-a-half times more likely to be self-neglecting than their proportion of the elderly population.

Not surprisingly, most (93.3 percent) self-neglecting elders have difficulty caring for themselves. Of these elders, 34.3 percent are not capable of caring for themselves, while 59.0 percent are somewhat able to care for themselves. Three out of ten self-neglecting elders (29.9 percent) are very confused or disoriented, while 45.4 percent are sometimes confused. Three-quarters (75.3 percent) of substantiated self-neglecting elders suffer from some degree of confusion.

Abuse and Neglect Reported by Sentinel Agencies

The remaining findings from the NEAIS address elder abuse reported by 1,156 sentinel reporters in the 248 sentinel agencies. Since sentinel data are not officially reported to the APS agencies, they are not officially substantiated. Sentinels were, however, carefully trained to screen out incidents

[3] For purposes of this study, the definition of "self-neglect" excludes a situation in which a mentally competent older person (who understands the consequences of her/his decisions) makes a conscious and voluntary decision to engage in acts that threaten her/his health or safety.

that would not be supported. The unduplicated sentinel reports were relatively small in number (140) and, therefore, standard errors are relatively high.

Characteristics of Elderly Victims of Nonreported Domestic Abuse and Neglect (Sentinel)

Neglect was highest among those 80 years and over (60.0 percent). Physical, emotional, and financial abuse were found at higher rates among those aged 60 to 70 than among those 80 and older.

As with APS reports, a majority of victims of all types of abuse were women, as reported by sentinels. Although women represented about 58 percent of the total U.S. elderly population in 1996, over 80 percent of the physical abuse recognized by sentinels, over 90 percent of the financial abuse, over 70 percent of the emotional abuse, and over 65 percent of the neglect cases was found among women rather than men. Abandonment was also more frequent for women (65.4 percent), in contrast to substantiated APS reports, which show men were more likely to be abandoned (62.2 percent).

The data do not show that rates of unreported abuse and neglect are higher among minorities than among nonminorities. Rather, minorities, which collectively accounted for 15.5 percent of the total elderly population in 1996, were victims of abuse, as reported by sentinels, between 3.6 and 7.6 percent depending on the type of abuse.

Data from sentinel reports reveal that only one-third (33.8 percent) of the victims were **able to care for themselves,** another one-third (33.1 percent) were somewhat able to care for themselves, and 18.8 percent were not able to care for themselves. (Sentinels were unable to make a determination 14.2 percent of the time.) Individuals experiencing neglect, abandonment, and self-neglect were most often reported by sentinels as not able or only somewhat able to care for themselves. Two-thirds (67.7 percent) of those that were physically abused were thought to have the ability to care for themselves, suggesting that such abuse is not perpetrated on just the most vulnerable individuals.

Sentinels reported, through observation not diagnosis, that over one-third (36.6 percent) of alleged victims were not **confused,** about an equal proportion (37.9 percent) were sometimes confused, and a relatively small percentage (7.5 percent) were very confused or disoriented. Sentinels were unable

to make one of these choices 18.0 percent of the time. Confusion was most common among those who experienced neglect, abandonment, and self-neglect.

In noting observations of **depression,** sentinels were unable to make a determination for a third of the elders they saw. Sentinel data show that 20.0 percent of the alleged victims were not depressed, 41.4 percent seemed to be moderately depressed, and a relatively small proportion (5.5 percent) appeared severely depressed. Signs and symptoms of moderate or severe depression were relatively high across all forms of abuse and neglect, but did not stand out for any one category when standard errors are taken into account.

Characteristics of Perpetrators of Nonreported Abuse and Neglect (Sentinel)

As with APS reports, perpetrators reported by sentinels were most frequently **family members** (89.6 percent), including the adult children (30.8 percent), spouses (30.3 percent), and a parent (24.0 percent). Parents are possible abusers of elders because elders were defined as persons aged 60 and over, and some persons in their 60s and 70s had parents in their late 70s and 80s.

Friends, neighbors, and service providers were believed to be responsible for the abuse and neglect 10 percent of the time.

The most common age range for perpetrators was the middle years, ages 36 to 59 (45.5 percent), with 28.6 percent of abuse being committed by people 60 and older, and 15.3 percent by those 35 and younger.

Nearly twice as many men as women were reported as perpetrators of abuse and neglect by sentinels (63.1 percent compared to 35.4 percent).

NEAIS Study Design and Methods

The National Elder Abuse Incidence Study gathered data on domestic elder abuse, neglect, and self-neglect through a nationally representative sample of 20 counties. For each county sampled, the study collected data from two sources: (1) reports from the local Adult Protective Service (APS) agency

responsible for receiving and investigating reports in each county; and (2) reports from approximately 1,100 "sentinels"—specially trained individuals in a variety of community agencies having frequent contact with the elderly. Many sentinels were mandatory or voluntary reporters of elder abuse, as defined by state laws. The sentinel approach to collecting data is an alternative to more costly general population surveys and has been used successfully in all three National Incidence Studies of Child Abuse commissioned by the federal government. This method was pioneered nearly 20 years ago by Westat, APHSA's collaborative partner for the NEAIS study, in the nation's first-ever incidence study on child abuse. The approach is based upon the hypothesis that officially reported cases of abuse represent only a small proportion of actual episodes of abuse in the community.

Establishing Definitions

Historically, a major impediment to collecting uniform data on elder maltreatment nationally has been a lack of comparability of definitions of abuse, neglect, and exploitation. In addition to differences among states, recognized elder experts themselves continue to disagree on definitions. Accordingly, the first task of NEAIS was to develop standardized definitions of elder maltreatment, thus ensuring greater comparability and reliability of results. The process involved several steps:

- Analysis of Current State Definitions—The existing state laws defining abuse, neglect, and exploitation were compiled and analyzed for all states and territories, and the most common components of the definitions across states were selected as potential definitions.
- Convening of Local Roundtables—Two roundtables of representative local professionals who deal with elder abuse, neglect, and exploitation were convened to obtain firsthand, community-level information on how elder abuse is detected, reported, and investigated, which aided in the development of the standardized definitions.
- Consensus Meeting—A group of elder abuse experts and researchers, including NCEA and NEAIS advisory committee members, provided an in-depth analysis of the draft definitions and revised and prepared them for pilot-testing. The final definitions included:
    - **Physical abuse** was defined as the use of physical force that may result in bodily injury, physical pain, or impairment. Physical punishments of any kind were examples of physical abuse.
    - **Sexual abuse** was defined as non-consensual sexual contact of any kind with an elderly person.
    - **Emotional or psychological abuse** was defined as the infliction of anguish, pain, or distress.

- **Financial or material exploitation** was defined as the illegal or improper use of an elder's funds, property, or assets.
- **Abandonment** was defined as the desertion of an elderly person by an individual who had physical custody or otherwise had assumed responsibility for providing care for an elder or by a person with physical custody of an elder.
- **Neglect** was defined as the refusal or failure to fulfill any part of a person's obligations or duties to an elder.
- **Self-neglect** was characterized as the behaviors of an elderly person that threaten his/her own health or safety. The definition of self-neglect excludes a situation in which a mentally competent older person (who understands the consequences of his/her decisions) makes a conscious and voluntary decision to engage in acts that threaten his/her health or safety.

- Pilot-Testing—Two Adult Protective Services agencies and seven local sentinel agencies (in the Washington, D.C., area, but not involved in the study) field pilot-tested the definitions and data collection instruments, which were revised based on the results of the tests. (The full definition and signs and symptoms for each type of abuse and neglect are provided in detail in the full report.)

Sampling Counties and Evaluation of Sample

NEAIS employed a stratified, multistage sample of 20 nationally representative counties, selected with probability proportional to the number of elders living in these areas. The counties were stratified by five variables: geographic region, metropolitan area, elder abuse reporting requirements (mandatory and nonmandatory), percentage of elders, and percentage of poor elders. The use of the probability proportional to size method ensures an approximately self-weighting sample—that is, every abused elder in the county has approximately the same chance of being identified, regardless of location, when the measure of size is the number of elders in the county. This methodology produced a sample of 20 counties in 15 states, with five counties in each of the four major geographic regions of the country. The sample also was reflective of the other four stratification variables.

Because the sample was based on 20 out of about 3,000 counties in the country, it was important to examine the accuracy of the elder abuse estimates using outside sources, to the extent possible. The National Center on Elder Abuse (NCEA), in spring 1997, conducted *A Survey of State APS and Aging Agencies on Domestic Abuse for FY 95 and 96*. All states shared counts of all domestic elder abuse reports to state report-receiving agencies and these data were compiled to be comparable to that

collected by the NEAIS. Using rigorous estimation methods, data were weighted to represent national totals and annualized. The numbers of cases in the data obtained from the states by NCEA were very close to the NEAIS national estimates. The total number of actual reports obtained from the states by NCEA was only 1.4 percent greater than the NEAIS estimated total. The statistical procedures used to produce the national estimates in this NEAIS appear to be extremely accurate.

Sampling Sentinel Agencies and Sentinels

One of the most important elements of the NEAIS was the selection of four types of community agencies from which community sentinels would be selected: law enforcement agencies (sheriff's departments and municipal police departments); hospitals (including public health departments); elder care providers (adult day care centers, senior centers, and home health care agencies); financial institutions (banks). Using the best sources of agency listings for each sentinel type, a sample was drawn for each of the 20 sampled counties, usually averaging 12–13 agencies per county. Two banks per county were selected to ensure that possible incidents of financial exploitation of elders would be identified. The remaining agencies were distributed among the other categories of agencies proportional to the number of agencies available in each county, resulting in a total of 248 sentinel agencies in the 20 counties participating in the study.

A rigorous methodology was used to select the actual sentinels within the designated sentinel agencies. To be eligible, individuals had to have frequent contact with the elderly and had to be able to identify abuse if they encountered it. A computer software program was used to randomly pick every *nth* sentinel from a roster of eligible sentinel candidates provided by the agency. The number of sentinels selected per agency was typically four to six, with a total of about 50 sentinels per county. This resulted in a total of 1,158 sentinels participating in the study across the 20 counties.

The designation of Adult Protective Services (APS) agencies, on the other hand, is made by each state, and the designated agency varies by state. For the 20 sampled counties, the distribution of APS agencies participating in the study were: 10 in the state human services agency; six in the state unit on aging, but within the human services agency; and four in the state unit on aging and outside the human services agency.

Data Forms and Training

The data collection forms for both the APS caseworkers and sentinel agency staff were designed to be easy to complete and to require as few references as possible to other documents. As with the abuse and neglect definitions, several versions of the instruments were extensively pilot-tested with local APS and service agency staff. The APS and sentinel data forms were identical with two exceptions: the APS instrument included sections for documenting the source of the report to the agency and for the disposition of the case following investigation (i.e., substantiated or unsubstantiated), while the sentinel forms did not.

In order to increase valid and reliable reporting across all 20 counties, an innovative approach was developed for training sentinels and APS agency personnel using a specially designed participant guide book and instructional videos. The training focused on identifying elder abuse according to the standardized definitions and related signs and symptoms, and recording data on the specially designed forms. Additionally, an "800" telephone number was available for APS and sentinel participants to call study staff with any questions about data collection procedures or client eligibility.

Data Collection, Receipt, and Management

Sentinel and APS data collection took place over an eight-week period. Starting in January 1996, all reporters in one or two counties started data collection each month, according to a preset schedule. Staggering reporting periods throughout this 12-month period (calendar year 1996) allowed the study to account for possible seasonal variations that might occur in elder abuse.

Sentinel data collection procedures were similar to APS agencies; however, sentinels were asked to forward reports of suspected cases of elder abuse to the NEAIS research staff as soon as possible after observing the suspected abuse. To encourage candid, confidential reporting, the designated coordinator in each sentinel agency did not review or edit forms completed by the individual sentinels. Sentinels also did not attempt to substantiate incidents of abuse. Sentinels, however, were carefully trained to screen out incidents that would not be supported as elder abuse or neglect. In contrast, all reports of suspected abuse received by the APS agencies were investigated and a determination of substantiation or nonsubstantiation made, as required by the laws of each state. It should be noted, however, that an APS agency's determination of nonsubstantiation of a report of abuse or neglect does

not mean conclusively that abuse or neglect did *not* happen. Rather, nonsubstantiation of a report can mean that the level of proof required by that state was not met, despite indications that abuse or neglect *may* have occurred.

NEAIS staff received and reviewed all submitted data collection forms for completeness and called the sending agency coordinators to discuss any missing or unclear data. Both APS and sentinel data forms required respondents to provide a brief narrative describing the maltreatment events. This maltreatment information was evaluated according to the study definitions and eligibility criteria, and reports that did not meet the study definitions were excluded from the database (e.g., victim lived in institutional setting; incident not based on common definitions).

Unduplication

The formal process of eliminating duplication in survey research data is called "unduplication." The NEAIS was interested in determining the number of new unduplicated elderly persons who were abused or neglected during 1996 in order to arrive at estimates of reported and unreported abuse and neglect. Sometimes more than one data form was received for the same maltreated elder, describing either the same or different abusive incidents. It was necessary to identify such duplicates and count each person only once for purposes of this study. Out of a total of 1,699 APS and sentinel reports, study staff identified 93 sets of genuine duplicates, resulting in 1,606 unduplicated reports (1,466 APS and 140 sentinel). Duplicate cases reported both to APS and sentinel agencies were removed from the sentinel data file, so that duplicated instances of abuse and neglect were counted as reports to APS. Duplicate sentinel reports were assigned to the sentinel agency that first sent in the form.

Obtaining National Estimates from the Study Data

The samples of agencies and sentinels who participated in the NEAIS were selected using scientific probability sampling methods to obtain a nationally representative sample. As a result, it is possible to make valid projections from the NEAIS data, to make national estimates of the numbers of elders who have been abused and neglected, and to describe their characteristics.

This estimation of national and subgroup totals and proportions is achieved by applying sample weights to each of the cases in the study. The weight applied to each elder abuse report can be thought of as indicating the number of cases nationally that are represented by the individual case in the study. By aggregating these sample weights for the relevant study cases, national and subgroup estimates are obtained, both of total numbers of elders, and their characteristics.

This methodology is routinely applied in national samples to measure social and economic issues. The Current Population Survey, which (among other things) produces the official U.S. monthly national estimates of unemployment and employment, is one well-known example. Another is the Health Interview Survey, which produces periodic national estimates for a wide range of health measures.

There were a number of steps involved in the process of developing weights for the NEAIS data. These are described in Chapter 3 of the full report, and in Appendix L.[4]

Interpreting Results in the Presence of Sampling Variability

A common technique used to present and interpret statistical data that are subject to sampling variability is through the use of confidence bands. A frequently used convention is to determine a 95 percent confidence band for each estimate. The statistical interpretation of a 95 percent confidence band is that, if such a band were constructed from all possible samples that might have been selected, 95 percent of such bands would contain the true answer.

If the confidence band for an estimate is wide, relative to the size of the estimate itself, then this indicates that there is considerable uncertainty as to what the true value actually is. If, however, the band is narrow, then there can be confidence that the estimate is close to the true answer. Thus, for example, consider an estimate that a certain population characteristic is at the 10 percent level. If the confidence band for this estimate ranges from 1 percent to 19 percent, we can have confidence that the true level is something below 20 percent, but cannot draw any other inference with confidence. If an

[4] The most important steps are the determination of overall probabilities of selection, calculation of nonresponse adjustments, and development of replicate weights. Unlike the sentinel records, there are no further sampling or nonresponse adjustments for the APS data, since all APS agencies in the sampled counties participated. One straightforward calculation is the annualization of the data. The staggering of different-sized counties throughout 1996 minimized the potential for seasonal affect to bias the estimates. Accordingly, this estimate of elder abuse over these two-month periods was transformed to an estimate for the full 1996-study year by multiplying the factor by six.

estimate of 10 percent is accompanied by a confidence band that ranges from 9 percent to 11 percent, then we can be confident that the true figure is little different from 10 percent.

Because the NEAIS sampled a relatively small number of counties, agencies, and sentinels, for many of the rarer characteristics described in this report the confidence bands are relatively wide (like in the first example given in the previous paragraph). When this has occurred, the estimates presented in the report are duly noted as having this characteristic.

Conclusions

The results of the National Elder Abuse Incidence Study (NEAIS) strongly confirm the validity of the "iceberg" theory of elder abuse that has been accepted in the aging research community for 20 years or more. The contribution the NEAIS has made to our understanding of the extent of elder abuse and neglect is graphically depicted by the large new middle area in Figure ES-1 below.

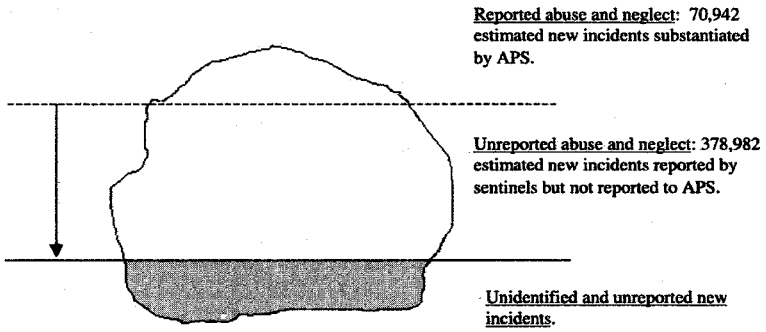


Figure ES-1. Iceberg theory showing NEAIS identified unreported abuse and neglect, excluding self-neglect

The NEAIS findings lead to the following conclusions:

- Domestic elder abuse and neglect is a significant problem. NEAIS research shows that about 450,000 unduplicated elders experienced abuse and neglect in domestic settings in 1996. More than five times as many of these incidents of abuse and neglect were unreported than were reported to and substantiated by APS agencies.[5]

- When elders who experienced only self-neglect are included with those that were abused and neglected, the number increases to 551,000 unduplicated elder persons in 1996. Almost four times as many of these incidents were unreported than were reported to and substantiated by APS agencies.[6]

- The NEAIS has measured a large and previously unidentified and unreported portion of elder abuse and neglect, and also has learned much about the characteristics of the victims and perpetrators of abuse and neglect.

- At the same time, it was not possible to identify and report on <u>all</u> previously hidden domestic elder abuse and neglect. Clearly, the NEAIS has not measured abuse, neglect, and self-neglect among those most isolated elders who do not leave their homes or who rarely come in contact with others in the community.

- Several of the characteristics of abused and neglected elderly persons are particularly worrisome and challenge us to prevent and intervene in this tragedy:

  - Our oldest elders (80 and over) are abused and neglected at two to three times their proportion of the elderly population.

  - Female elders are abused at a higher rate than males.

  - Almost half of substantiated abused and neglected elderly were not physically able to care for themselves.

  - In almost nine out of ten incidents of domestic elder abuse and neglect, the perpetrator is a family member. Adult children are responsible for almost half of elder abuse and neglect.

- Elderly self-neglect also is a problem, as evidenced by about 139,000 unduplicated reports (some of the self-neglecting elderly may also be counted as being abused and/or neglected). Most victims of self-neglect are unable to care for themselves and are confused. This is a difficult and troubling problem, which warrants further research and study.

[5] Using precisely developed standard errors, the NEAIS estimates that as many as 688,948 or as few as 210,900 elder persons may have been abused and/or neglected in domestic settings in 1996.

[6] When self-neglecting elders are added, the estimate range is that as many as 787,027 or as few as 314,995 elder persons may have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

- Despite the study's identification of over five times as many unreported incidents of elder abuse and neglect as incidents that were reported to and substantiated by APS agencies, some professionals and researchers in the aging field may have expected this multiplier to be larger than NEAIS found. The NEAIS estimate may be lower than those expectations because:

  - Elder abuse and neglect are not as hidden and under-reported to APS agencies as they were at the time of earlier studies. Between 1986 and 1996, for example, official reports of abuse and neglect made to APS agencies throughout the country increased by 150 percent, while the total number of elderly persons aged 60 and over increased by only 10 percent. A much larger proportion of new incidents of domestic elder abuse and neglect was reported to official APS agencies in 1996 than was reported 10 years ago.

  - Still more of the unidentified and unreported area of the iceberg remains to be revealed, especially instances of abuse and neglect among seriously isolated elderly persons and those with little contact with community organizations.

Limitations of NEAIS

The NEAIS study design had some limitations that prevented it from making a definitive estimate of all incidents of elder abuse and neglect, including:

- The sentinel approach tends to cause a certain amount of "undercount" in the detection of domestic elder abuse because there are no community institutions in which most elders regularly assemble and from which sentinels can be chosen and elders observed (unlike schools in child abuse research).

- Sentinels cannot observe and report abuse and neglect of elders who are isolated and/or have no or very limited contact with any community organizations.

- Resource constraints for conducting the NEAIS limited the number of counties and sentinels sampled and the length of the reporting period. Consequently, the relatively small number of sentinel reports resulted in incidence estimates with wide confidence bands. Increasing the sample size and reporting period in future such studies would further improve the precision of incidence estimates through the calculation of narrower confidence bands.

Implications of Findings and Future Research Questions and Issues

The findings of the NEAIS suggest a number of important issues for policy development, practice, and training in addressing the problems of elder abuse, neglect, and self-neglect. Because states and localities historically have had responsibility for elder abuse reporting, investigation, and services, most of the implications are for state and local governments. These issues are discussed in the full report. Finally, the report raises a number of research questions and issues for researchers and service providers, including suggesting areas for future research of the incidence and nature of elder abuse and neglect.

Conclusion

The NEAIS has documented the existence of a previously unidentified and unreported stratum of elder abuse and neglect, thus confirming and advancing our understanding of the "iceberg" theory of elder abuse. NEAIS estimates that for every abused and/or neglected elder reported to and substantiated by APS, there are over five abused and/or neglected elders that are not reported. The study also documents similar patterns of underreporting of self-neglecting elders. NEAIS acknowledges that it did not measure all unreported abuse and neglect. Our collective challenge—as policy makers, service providers, advocates, researchers, and our society as a whole, is to utilize this information to better the lives of our elderly citizens.

1. INTRODUCTION

Congress, under the Family Violence Prevention and Services Act of 1992 (P.L. 102-295), required that a study of the national incidence of abuse, neglect, and exploitation of elderly persons be conducted. The Administration for Children and Families (ACF) has responsibility for administering the provisions of this legislation. The ACF combined resources and expertise with the Administration on Aging (AoA) and jointly funded the study as a research activity of the AoA-supported National Center on Elder Abuse (NCEA).

The American Public Welfare Association,[1] the lead organization for the NCEA, and its subcontractor, Westat, Inc., a survey research company located in Rockville, Maryland, conducted the study between October 1994 and December 1997. Because the legislative mandate primarily was concerned with the prevention of violence in domestic settings, the study focused only on the maltreatment of non-institutionalized elderly. Elders living in hospitals, nursing homes, assisted living facilities, or other institutional or group facilities were not included in the report.

The National Elder Abuse Incidence Study (NEAIS) utilized a sentinel research design. This methodology for collecting data from nationally representative samples was new to the field of elder abuse, but this methodology already had been used for federally supported national incidence studies of child abuse and neglect, for example the Third National Incidence Study of Child Abuse and Neglect (NIS-3) by Westat for the National Center on Child Abuse and Neglect in ACF. Within ACF and other professional communities, the sentinel data collection approach has been accepted as a less costly alternative to a general population survey.

Accordingly, using a sentinel methodology, NEAIS collected data from two different sources in a nationally representative probability sample of 20 counties: (1) local Adult Protective Services (APS) agencies or the Area Agencies on Aging (AAA); and (2) approximately 1,100 trained "sentinels" from public and private agencies that had frequent contact with elderly community residents. The function of the sentinels was to be on the lookout for incidents of elder abuse and to document each event that met the study's definitions. Many sentinels were mandatory or voluntary reporters of elder

[1] Association members voted to change the name of the American Public Welfare Association to the American Public Human Services Association in July 1998, and it is hereafter referred to as APHSA.

abuse as defined by state laws and were employed by a variety of organizations (e.g., elder care providers, hospitals and clinics, law enforcement agencies, and financial institutions).

Most previous attempts to generate national data on domestic elder abuse in the United States relied on statistics of suspected elder abuse compiled by states. Over the past 20 years, states have become increasingly concerned with the problem of elder abuse, both domestic and institutional, and have enacted laws to prevent and treat the problem. As a result, all states now have statutes addressing elder abuse. Most elder abuse laws require that certain professionals report all suspected incidents of elder maltreatment to officially designated report-receiving agencies. Eight states (Colorado, Illinois, New Jersey, New York, North Dakota, Pennsylvania, South Dakota, and Wisconsin) administer domestic elder abuse laws, but make elder abuse reporting voluntary. In some states, like Massachusetts, the elder for whom a report of suspected abuse has been made may refuse an investigation. Both the states with laws on mandatory reporting and those where reporting is voluntary regularly gather statistics on reports of elder abuse, although the comprehensiveness of elder abuse information systems varies considerably from state to state.

The National Center on Elder Abuse, in a 1995 report (Tatara, 1995), documented 71 laws in the 50 states, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands that address abuse, neglect, and exploitation of elders. Across these 71 state laws, the five most common information elements are: (1) type of person covered by the law; (2) definitions of elder abuse, (3) reporter immunity, (4) age of persons covered by the law, and (5) agency designated to receive reports. Other elements include: the timing/method of reporting, mandatory reporting requirements, mandatory reporters, involvement of law enforcement, and confidentiality of client information.

Following the intake of a report of alleged abuse in an agency designated to receive these reports, such as APS, the case is assigned to a protective service worker for investigation. The length of time that elapses prior to the investigation varies both by state and by the nature of the abuse. Thirty states currently have laws that include provisions concerning the timing of investigating elder abuse reports. Five states (Alabama, District of Columbia, Florida, Idaho, and New Hampshire) require that reports involving a life-threatening or emergency situation be investigated immediately; five states (Guam, Kansas, Maryland, Minnesota, and Virgin Islands) specify that a report involving a life-threatening situation must be investigated within 24 hours; and 13 states (Alaska, Arkansas, California, Colorado, Kentucky, Louisiana, Maine, North Carolina, North Dakota, Oklahoma, Oregon, Tennessee,

and Virginia) have laws requiring that all reports must be investigated "as soon as possible," but do not specify a particular amount of time.

Once an investigation of an alleged elder abuse incident has begun, a case still may be "referred" to another agency for intervention or services. A case may be found substantiated, unsubstantiated, or in some states, "indicated but not confirmed." The requirements for case disposition vary by state.

This study explicitly has been designed to measure the incidence of elder abuse and neglect rather than prevalence. The term incidence refers to new cases occurring during a specific period of time (Freeman and Sherwood, 1970). In contrast to incidence, prevalence refers to the total number of ongoing cases in a given population at a designated point in time. Prevalence is similar to a census and does not address when the abuse or neglect occurred. The NEAIS examines the incidence of newly filed reports of abuse and neglect during calendar year 1996. Ongoing cases which were not reported or identified during the study period (e.g., the abuse occurred prior to 1996) are not counted.

In order to maximize the utility of the research, the study also collected and analyzed data about elder self-neglect in domestic settings, and these findings generally are reported separately from the findings for abuse and neglect. In the NEAIS, the phrase "elder maltreatment" refers to the seven types of abuse and neglect that are measured in the study, which are carefully defined later in this report. The incidence estimates calculated are for unduplicated elderly persons. In other words, individuals are counted only once, even if: (1) they were abused and neglected and/or self-neglecting, (2) more than one report were received about the same incident, or (3) different incidents were reported for the same elderly person during the study period

The Organization of This Report

This final report of the National Elder Abuse Incidence Study (NEAIS) contains estimates of the national incidence of abuse, neglect, and exploitation of older people in domestic settings and information about the characteristics of elder abuse perpetrators and victims, including self-neglecting elders. The report is organized into four additional chapters:

Chapter Two provides background about prior efforts to measure elder abuse and neglect.

Chapter Three details the inception of the National Elder Abuse Incidence Study and the reasons for conducting this important research. This chapter also provides an overview of the study design and discusses why a sentinel approach was used. Definitions of elder abuse, neglect, exploitation, and self-neglect are presented, as are the sampling plan for the study, instrument development, and recruitment and training procedures for APS and sentinel agencies. In addition, data collection processes and data handling are discussed, along with methods for weighting the data.

Chapter Four provides the findings from the NEAIS, from the estimated national incidence of abuse and neglect of elderly people, to in-depth analyses of characteristics of the abused, neglected, and self-neglecting elderly, those who were perpetrators of this abuse and neglect, and those who reported this abuse or neglect.

Chapter Five provides the summary, recommendations, and conclusions of this study.

2. BACKGROUND

Studies designed to estimate the prevalence or incidence of the maltreatment of non-institutionalized elders, or "elder abuse in domestic settings," have varied considerably in their research methodologies and sources of data. A review of these earlier studies reveals that one or more of the following five sources of data have been used to explore the extent and nature of elder abuse in domestic settings: (1) elderly people receiving services from an agency; (2) professionals and paraprofessionals working with elderly clients; (3) case records or reports of elderly clients prepared by professionals; (4) reports of alleged elder abuse received by Adult Protective Services (APS) or aging agencies; and (5) a probability sample of the elderly taken from the population in a specific geographic location. Study purposes and goals, age and abuse definitions, sample sizes, data-gathering methods, analytic tools, and results and their implications differ from one study to another. Some of these studies attempted to generate national estimates of the prevalence or incidence of domestic elder abuse, while others confined the discussion of results to the population from which data were drawn. The prevalence or incidence of domestic elder abuse estimated by these early studies ranged from one to nearly ten percent of the study sample or of the national elder population.

Gioglio and Blakemore (1982) found that only one percent of the elderly respondents of a random sample of elders in New Jersey were victims of some form of elder abuse. After examining the records of elderly patients served by a Chronic Illness Center in Cleveland, Ohio, Lau and Kosberg (1979) reported that 9.6 percent of 404 patients showed symptoms of abuse. Further, Block and Sinnott (1979) investigated the "battered elder syndrome" in Maryland and found 4.1 percent of the elderly survey respondents were being abused. Other researchers have surveyed or interviewed social workers serving the elderly (Dolon and Blakely, 1989; Douglas, Hickey, and Noel, 1980; O'Malley, Segars, Perez, Mitchell, and Knuepfel, 1979; Sengstock and Liang, 1982) about the abuse of noninstitutionalized elderly. These researchers, however, did not translate their findings into national elder abuse prevalence rates.

Based on a survey of state human service agencies and a review of secondary data, the House Select Committee on Aging (1981) released a statement that "some four percent of the Nation's elderly may be victims of some sort of abuse, ranging from moderate to severe." This estimate suggests that one out of every 25 older Americans, or about one million people in the early 1980s, were abused each year.

In another study conducted by Pillemer and Finkelhor in 1986, one of the main objectives was to generate a national prevalence rate of domestic elder abuse. After conducting interviews with a random sample of more than 2,000 elderly people in the Boston metropolitan area, these researchers (1988) reported that the prevalence of domestic elder abuse (excluding self-neglect and financial exploitation) was 32 per every 1,000 elders (or 3.2 percent). Using this rate, the researchers calculated an estimated prevalence number of abused elders in the United States, which ranged between 701,000 and 1,093,560.

Tatara (1989, 1990, 1993, Tatara and Blumerman, 1996, and Tatara and Kuzmeskus, 1997) disseminated national elder abuse data, primarily using state statistics for reports of alleged elder abuse. To help states achieve greater compatibility in definitions, reporting methods, and information management practices, Tatara published *Suggested State Guidelines for Gathering and Reporting Domestic Elder Abuse Statistics for Compiling National Data* (1990). Tatara began providing national data on domestic elder abuse about 10 years ago, but has recently analyzed national data on domestic elder abuse for 1995 and 1996 (Tatara and Kuzmeskus, 1997). These data indicated that there were 293,000 reports of domestic elder abuse to state Adult Protective Services in the United States for 1996, a 150 percent increase from the 117,000 reports in 1986, the first year a national estimate of domestic elder abuse reports was calculated.

Although these past studies have contributed to an increased understanding of the nature and extent of the maltreatment of non-institutionalized elders in this country, they were based on relatively small samples and did not provide national estimates of elder abuse incidence. The study described in this report provides, for the first time, national incidence estimates (i.e., new incidents occurring during 1996) of elder abuse that will serve as a baseline for future research in this important area.

2.1 Overview of the Study Design

The National Elder Abuse Incidence Study (NEAIS) gathered data on domestic elder abuse and neglect, using standardized definitions and data collection forms, in a nationally representative sample of 20 counties. The standardized abuse and neglect definitions used for the study were developed through the following steps: (1) an analysis of the current state definitions of domestic elder abuse; (2) the convening of roundtables of professionals working with elderly people to gather firsthand information about how domestic elder abuse is detected, reported, and investigated; and (3) the establishment of study

definitions of elder abuse by a group of elder abuse experts. The definitions, along with data collection forms, were pilot tested in several local sites before being finalized.

In each sampled county, data were collected from two sources: (1) the local officially designated APS agency or the Area Agency on Aging; and (2) professionals and nonprofessionals, called "sentinels." Using random selection procedures, approximately 1,100 sentinels were chosen from 248 agencies across the 20 sampled counties. The agencies chosen for the study were organizations that regularly work with the elderly (e.g., senior citizen centers and home health care providers), as well as others that serve everyone in the community (e.g., hospitals and clinics, law enforcement agencies, and banks).

Using a specially made video and instructional guide, APS and sentinel reporters were trained to identify elder abuse according to study definitions and specific signs and symptoms and to record data on specially designed forms. Sentinels reported on abuse in each sampled county over a 2-month period on a staggered, 12-month schedule. APS agencies supplied information on all incidents reported to them over comparable time periods. This plan permitted the study to account for possible seasonal affects in the occurrence of elder abuse. Duplicate reports by sentinel agencies and between sentinel agencies and APS agencies were removed to avoid overcounting the true number of incidents. Finally, the unduplicated cases were weighted to arrive at national estimates.

2.2 The Uniqueness of a Sentinel Approach

The method of collecting data used for this study is known as a "sentinel approach." Developed by Westat almost 20 years ago, this Maryland-based survey research company conducted the nation's first child abuse incidence study. The sentinel approach was proposed as an alternative to more costly studies of general population surveys and has been used for all three national incidence studies of child abuse commissioned by the Federal government, with the most recent one completed in 1997. A sentinel approach is based upon the assumption that officially reported cases of abuse represent only the tip of an iceberg and that many more abuse incidents take place in the community. Whatever the reasons, many incidents are not reported to authorities. The supposition that reported cases of child abuse and elder abuse are only the tip of a much larger unidentified and unreported problem is well accepted by both child and elder abuse professionals. Figure 2-1 on the next page depicts the iceberg theory of elder abuse.

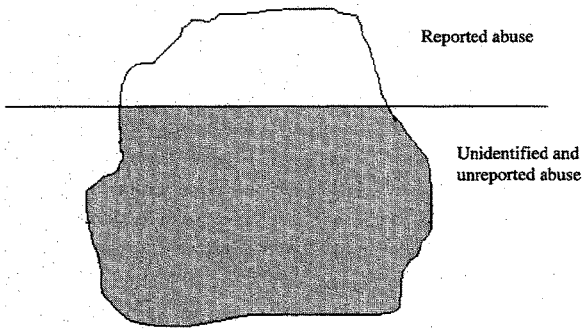


Figure 2-1. Iceberg theory of elder abuse

Using a sentinel approach, better information about unreported abuse can be obtained from individuals who are close to the victims by training them to be on the lookout for abuse incidents. With the strategic use of APS/aging professionals and well-trained sentinels from programs such as visiting nurses, home health care professionals, and hospital emergency room staff, this approach is capable of identifying many domestic elder abuse incidents that would not have been reported previously.

3. STUDY DESIGN AND METHODS

Chapter Three presents the study design and methodology used in the National Elder Abuse Incidence Study (NEAIS). The chapter begins with the definitions of elder abuse, neglect, and exploitation. It then presents the sampling methodology for both Adult Protective Services (APS) and sentinel agencies, and agency recruitment and training procedures. This chapter then describes the data collection methodology, the unduplication of reports, and weighting of final results. Finally, a brief discussion of interpreting research results in the presence of sampling variability is provided to assist the reader in understanding the study findings, which follow in the next chapter.

3.1 Definitions

One of the problems in collecting data on elder maltreatment from states is a lack of comparability in the definitions of abuse, neglect, and exploitation. This lack of comparability stems largely from the fact that ours is a federal system of 50 semi-sovereign states. In addition to the variability among state laws, experts continue to disagree on definitions; for example, there has not been a universal acceptance of the federal definitions of elder abuse found in the Older Americans Act. A common set of definitions across jurisdictions is essential for a national study. For this reason, NEAIS developed a set of standardized definitions of elder mistreatment for the study. The use of these standardized definitions, along with thorough training of the people who collected data in the study sites, ensured greater comparability and reliability of results.

Steps in Establishing Definitions

The development of standardized elder abuse definitions involved several steps, including (1) an initial analysis of current state definitions of domestic elder abuse; (2) the convening of local roundtables of practicing professionals to gather firsthand information about how elder abuse is detected, reported, and investigated; (3) a critical review of preliminary definitions by a group of elder abuse experts; and, finally, (4) pilot testing the consensus definitions in both APS and sentinel agencies.

Analysis of Current State Definitions. A table that documented the frequencies of the components of the definitions (see Appendix A) was prepared, following the analysis of existing state laws defining abuse, neglect, and exploitation. The components of the definitions were categorized by type of abuse and state. The specific types of abuse, and any subcategories, were identified. The most common components across the states were selected as potential elements of NEAIS definitions.

Convening of Local Roundtables. Two roundtables of local professionals who deal with elder abuse, neglect, and exploitation were convened in February 1995 in San Francisco and in Washington, DC. The purpose of these roundtables was to obtain firsthand information from professionals working at the community level regarding how elder abuse is detected, reported, and investigated. The information obtained from these roundtables aided in the development of the standardized elder abuse definitions. (See Appendix B.)

Consensus Meeting. A consensus meeting was held in Washington, DC, on May 1 and 2, 1995. Participants included the members of the advisory committees of both the National Elder Abuse Incidence Study and the National Center on Elder Abuse, the APWA staff of the National Center on Elder Abuse (NCEA), the staff of NCEA's Consortium organizations, and Westat. Participants discussed the design of the study and provided an in-depth analysis of the draft definitions. Based on the discussion at this meeting, the definitions were revised and prepared for pre-testing. (See Appendix C.)

Pilot-Testing. The definitions were pilot-tested in local Adult Protective Services (APS) and sentinel agencies and revised through iteration, based on the results of the tests. The pilot testing process is discussed in greater detail in a later section of this report.

Definitions of Elder Abuse, Neglect, and Exploitation

The following definitions of domestic elder abuse, neglect, and exploitation developed for the study pertain to elders living in non-institutionalized settings.

Physical abuse is the use of physical force that may result in bodily injury, physical pain, or impairment. Physical abuse may include but is not limited to such acts of violence as striking (with or without an object), hitting, beating, pushing, shoving, shaking, slapping, kicking, pinching, and burning.

The unwarranted administration of drugs and physical restraints, force-feeding, and physical punishment of any kind also are examples of physical abuse.

Sexual abuse is nonconsensual sexual contact of any kind with an elderly person. Sexual contact with any person incapable of giving consent also is considered sexual abuse; it includes but is not limited to unwanted touching, all types of sexual assault or battery such as rape, sodomy, coerced nudity, and sexually explicit photographing.

Emotional or psychological abuse is the infliction of anguish, emotional pain, or distress. Emotional or psychological abuse includes but is not limited to verbal assaults, insults, threats, intimidation, humiliation, and harassment. In addition, treating an older person like an infant; isolating an elderly person from family, friends, or regular activities; giving an older person a "silent treatment"; and enforced social isolation also are examples of emotional or psychological abuse.

Neglect is the refusal or failure to fulfill any part of a person's obligations or duties to an elder. Neglect may also include a refusal or failure by a person who has fiduciary responsibilities to provide care for an elder (e.g., failure to pay for necessary home care service, or the failure on the part of an in-home service provider to provide necessary care). Neglect typically means the refusal or failure to provide an elderly person with such life necessities as food, water, clothing, shelter, personal hygiene, medicine, comfort, personal safety, and other essentials included as a responsibility or an agreement.

Abandonment is the desertion of an elderly person by an individual who has assumed responsibility for providing care or by a person with physical custody of an elder.

Financial or material exploitation is the illegal or improper use of an elder's funds, property, or assets. Examples include but are not limited to cashing checks without authorization or permission; forging an older person's signature; misusing or stealing an older person's money or possessions; coercing or deceiving an older person into signing a document (e.g., contracts or a will); and the improper use of conservatorship, guardianship, or power of attorney.

Self-neglect is characterized as the behaviors of an elderly person that threaten his/her own health or safety. Self-neglect generally manifests itself in an older person's refusal or failure to provide himself/herself with adequate food, water, clothing, shelter, safety, personal hygiene, and medication

(when indicated). For the purpose of this study, the definition of self-neglect **excludes** a situation in which a mentally competent older person (who understands the consequences of his/her decisions) makes a conscious and voluntary decision to engage in acts that threaten his/her health or safety.

The signs and symptoms of the seven kinds of abuse and neglect are summarized in Table 3-1. It should be noted that some signs and symptoms characterize several kinds of maltreatment. The most important of these are the following:

- Frequent unexplained crying; and
- Unexplained fear of or suspicion of particular person(s) in the home.

Table 3-1. Signs and symptoms of abuse and neglect

Physical Abuse
■ Bruises, black eyes, welts, lacerations, and rope marks
■ Bone fractures, broken bones, and skull fractures
■ Open wounds, cuts, punctures, untreated injuries, and injuries in various stages of healing
■ Stains, dislocations, and internal injuries/bleeding
■ Broken eyeglasses/frames, physical signs of being subjected to punishment, and signs of being restrained
■ Laboratory findings of medication overdose or under utilization of prescribed drugs
■ An elder's report of being hit, slapped, kicked, or mistreated
■ An elder's sudden change in behavior
■ A caregiver's refusal to allow visitors to see an elder alone

Table 3-1. Signs and symptoms of abuse and neglect (continued)

Sexual Abuse
■ Bruises around the breasts or genital area
■ Unexplained venereal disease or genital infections
■ Unexplained vaginal or anal bleeding
■ Torn, stained, or bloody underclothing
■ An elder's report of being sexually assaulted or raped
Emotional/Psychological Abuse
■ Emotional upset or agitation
■ Extreme withdrawal and non-communication or non-responsiveness
■ An elder's report of being verbally or emotionally mistreated
Neglect
■ Dehydration, malnutrition, untreated bedsores, and poor personal hygiene
■ Unattended or untreated health problems
■ Hazardous or unsafe living conditions (e.g., improper wiring, no heat or no running water)
■ Unsanitary or unclean living conditions (e.g., dirt, fleas, lice on person, soiled bedding, fecal/urine smell, inadequate clothing)
■ An elder's report of being neglected
Abandonment
■ The desertion of an elder at a hospital, nursing facility, or other similar institution
■ The desertion of an elder at a shopping center or other public location
■ An elder's own report of being abandoned

Table 3-1. Signs and symptoms of abuse and neglect (continued)

Financial or Material Exploitation
■ Sudden changes in a bank account or banking practice, including an unexplained withdrawal of large sums of money by a person accompanying the elder
■ The inclusion of additional names on an elder's bank signature card
■ Unauthorized withdrawal of funds using an elder's ATM card
■ Abrupt changes in a will or in other financial documents
■ Unexplained disappearance of funds or valuable possessions
■ Provisions of substandard care or bills unpaid despite the availability of adequate financial resources
■ The provision of services that are not necessary
■ Discovery of an elder's signature forged for financial transactions or for the titles of the elder's possessions
■ Sudden appearance of previously uninvolved relatives claiming rights to an elder's affairs and possessions
■ Unexplained sudden transfer of assets to a family member or someone outside the family
■ An elder's report of financial exploitation
Self-Neglect
■ Dehydration, malnutrition, untreated or improperly attended medical conditions, and poor personal hygiene
■ Hazardous or unsafe living conditions (e.g., improper wiring, no indoor plumbing, no heat or no running water)
■ Unsanitary or unclean living quarters (e.g., animal/insect infestation, no functioning toilet, fecal/urine smell)
■ Inappropriate and/or inadequate clothing, lack of necessary medical aids (e.g., eyeglasses, hearing aid, dentures)
■ Grossly inadequate housing or homelessness

3.2 Sampling Counties, Agencies, and Sentinels

Sampling at the County Level

The design for NEAIS employed a stratified multistage sample of 20 nationally representative counties, selected with probability proportional to the number of elders living in these areas. These counties, called Primary Sampling Units (PSUs), were stratified by five variables: geographic region, metropolitan area, elder abuse reporting requirements (mandatory and non-mandatory), percentage of elders, and percentage of poor elders. The use of probability proportional to size (PPS) ensures an approximately self-weighting sample—that is, every abused elder in the country has approximately the same chance of being identified, regardless of location, when the measure of size is the number of elders in the PSU.

This methodology produced the sample presented in Table 3-2 on page 3-9. Note that five counties were selected in each of four regions defined by the Office of Business Economics (OBE). These four regions have approximately equal populations. Five counties were from non-metropolitan areas, and five were from non-mandatory reporting states (i.e., where there is no state law requiring professionals to report suspected elder abuse). Note also that the numbers and percentages of elders are shown, as well as the percentage of the total county population that is made up of persons 60 years of age and older. The description of sampling methodology, presented in Appendix D, provides additional details on the distribution of counties in each of these strata.

Figure 3-1 on the next page shows the states participating in the NEAIS separated into the four OBE regions: Northeast (Region 1); Southeast (Region 2); Central (Region 3), and West (Region 4).

Sampling Sentinel Agencies within Counties

The sentinel agencies were divided into four major categories: financial institutions (banks); law enforcement agencies (sheriff's departments and municipal police departments); hospitals (including public health departments); and elder care providers (ECPs), (e.g., adult day care centers, senior centers, home health care agencies). The sources for identifying sentinel agencies included the following:

- Law enforcement—National Directory of Law Enforcement Administrators;
- Hospitals—American Hospital Association Guide;
- Public Health Departments—National Directory of Local Health Departments;
- Banks—Dun & Bradstreet; and
- Elder care providers—National Directory for Eldercare Information and Referral and local Area Agency on Aging (AAA) Directories of Elder Care Providers.

Figure 3-1. States by OBE region, with participating NEAIS states in gray

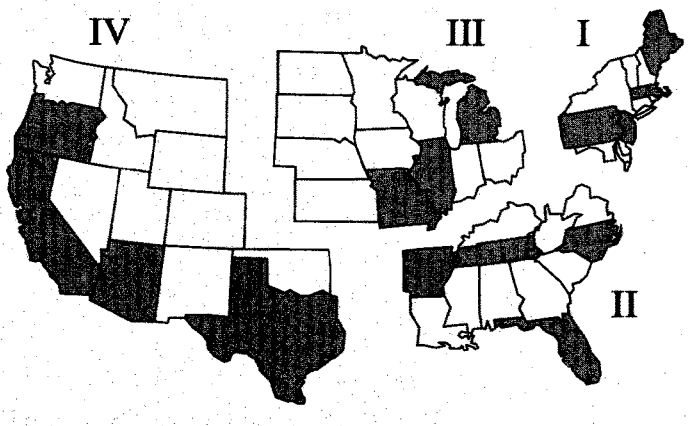


Table 3-2. Sampled counties for the National Elder Abuse Incidence Study

OBE Region	County	State	Metro status	Mandatory reporting	Number of elders (% of population of the county[1])	% of poorer elders[2]	PSU probability
1	Delaware County	PA	metro	no	113,225(20.67%)	6.99%	0.05418
1	Fayette County	PA	metro	no	34776(23.93%)	14.26%	0.01664
1	Bristol County	MA	metro	yes	96,576(19.07%)	10.40%	0.04621
1	Mercer County	NJ	metro	no	57,195(17.55%)	6.96%	0.02737
1	York County	ME	nonmetro	yes	27,911(16.96%)	9.28%	0.01336
2	Pulaski County	AR	metro	yes	54,111(15.48%)	14.10%	0.02607
2	Pinellas County	FL	metro	yes	271,330(31.86%)	7.70%	0.13071
2	Cleveland County	NC	nonmetro	yes	15,351(18.12%)	16.38%	0.00740
2	Madison County	NC	metro	yes	3,644(21.49%)	32.52%	0.00176
2	Giles County	TN	nonmetro	yes	5,311(20.63%)	21.79%	0.00256
3	Dupage County	IL	metro	no	95,655(12.24%)	3.67%	0.04624
3	St. Clair County	IL	metro	no	44,998(17.12%)	11.21%	0.02175
3	Platte County	MO	metro	yes	6,585(11.38%)	6.50%	0.00318
3	Bay County	MI	metro	yes	20,125(18.01%)	9.74%	0.00973
3	Presque Isle County	MI	nonmetro	yes	3,680(26.78%)	16.49%	0.00178
4	San Diego County	CA	metro	yes	360,842(14.45%)	6.00%	0.17265
4	Maricopa County	AZ	metro	yes	347,277(16.37%)	8.50%	0.16616
4	Grayson County	TX	metro	yes	20,088(21.14%)	15.47%	0.00961
4	Multnomah County	OR	metro	yes	101,659(17.41%)	10.08%	0.04864
4	Rusk County	TX	nonmetro	yes	9,575(21.89%)	19.57%	0.00458

[1] The regional average percentage of elders is 18.2 percent in Northeast, 18.3 percent in Southeast, 20.2 percent in the Central United States, and 17.7 percent in the West.

[2] Below the poverty line in 1989 as defined by the U.S. Bureau of the Census (1990 Census Population Data).

A sample of sentinel agencies was drawn from the 20 counties. In two rural counties, Rusk and Presque Isle, there were fewer than 12 eligible agencies (other than banks). Otherwise, on average, 12 to 13 agencies per county were selected. Two banks per county were selected to ensure that possible incidents of financial exploitation of elders would be identified. The remaining agencies were distributed among the other three categories proportional to the number of agencies available in each county. Proportional allocation methodology was based on a simple logic that different categories of agencies should be appropriately represented in the pool of agencies sampled.

Whenever possible, agencies were selected using a stratified probability proportional to the size of the agency. When a reasonable measure of size could not be ascertained, an equal probability sample of agencies was selected. A measure of size was available for most of the law enforcement agencies, hospitals, and banks, but not for the aging service providers. With slight modification for some sentinel agencies recruited late in the data collection period, the allocation of agencies in each county followed the following pattern:

- Two banks;
- At least one law enforcement agency;
- No more than two municipal police departments;
- No more than three law enforcement agencies (i.e., municipal police and sheriff's departments);
- At least three hospitals;
- Public health departments with certainty in small counties, if available; and
- Sheriff's departments with certainty in small counties.

Small counties, with fewer than 10,000 elders, included Madison, Giles, Presque Isle, and Rusk. These counties had too few agencies of one or more types required for the study. Rusk County did not have a public health department. Although the study design called for at least three hospitals per county, Bay County had only two hospitals; there was one each in Madison, Giles, Presque Isle, and Platt. There were no hospitals in Rusk County, and no banks in Presque Isle.

Table 3-3 contains the available number of agencies by type, along with the number selected. Using PPS sampling by strata, an average of 12.4 sentinel agencies were selected in each

county. Agencies chosen to replace agencies that had refused to participate were selected with the same probability as the sampled agencies. A description of sampling procedures for each type of agency and its potential replacements can be found in Appendix D.

Table 3-3. Sentinel agency allocation by agency type

County	Available Banks	Banks Partic-ipating	Available law enforcement agencies	Law enforcement agencies Partic-ipating	Available hospitals/ public health (PH)	Hospitals/ (PH) Partic-ipating	Available elder care providers (ECPs)	ECPs Partic-ipating	Total Partic-ipating agencies
Maricopa	25	2	19	1	27	3	99	7	13
Rusk	7	2	4	3	0	0	3	3	8
Bay	30	2	6	3	2	2	5	5	12
Pinellas	23	2	23	2	25	3	105	6	13
Bristol	36	2	20	2	25	3	45	6	13
San Diego	34	2	20	2	20	3	90	7	13
Madison	6	2	2	2	1	1	18	8	13
St. Clair	24	2	20	2	24	4	59	6	13
Mercer	18	2	11	1	14	3	88	7	13
Giles	4	2	2	2	2	2	18	7	13
Fayette	12	2	13	3	3	3	25	5	13
Grayson	8	2	7	1	5	3	70	7	13
Multnomah	37	2	5	1	12	3	58	7	13
York	15	2	14	3	3	3	19	5	13
Presque Isle	0	0	3	3	1	1	4	4	8
Delaware	36	2	37	2	18	3	51	6	13
Dupage	29	2	31	2	9	3	116	6	13
Cleveland	2	2	4	1	4	3	18	6	12
Platte	6	2	6	3	1	1	19	7	13
Pulaski	28	2	5	1	15	3	63	7	13
Total	380	38	251	39	182	49	973	122	248

Sampling Sentinels within Agencies

In the absence of knowledge of the propensity to observe elder abuse by different types of sentinels within a county, a self-weighting sample of 50 sentinels per county was proposed. This yielded a targeted total of 1,000 sentinels. One disadvantage of this self-weighting design was the possibility of overburdening some agencies, that is, attempting to recruit sentinels at a very high rate in counties with a small number of eligible agencies. One elder care provider, for example, had 78 eligible sentinels and, under the self-weighting design, almost all of these sentinels should have been sampled. Only 11 were recruited at that atypical agency, however, in order to distribute the respondent burden evenly. The following guidelines were used:

- Recruit at least one sentinel per agency;
- Recruit no more than eight sentinels per agency (except in unusually large agencies);
- On average, recruit four sentinels per agency; and
- Recruit about 250 sentinels per agency type (across all 20 counties).

If, during sentinel recruitment, it was learned that some potential types of sentinels were more likely to encounter abuse than others (e.g., the Elder Abuse task force in a police department), the self-weighting design was not used. Such special groups of sentinels were selected either with certainty or at a higher rate. During data collection it was learned that banks had fewer contacts with elders than ECPs; rates of sentinel recruitment were adjusted accordingly.

Evaluation of the Sample of Counties and the Estimates

Twenty counties (in 15 states) were selected to represent similar places across the continental United States, according to criteria discussed above and based on data from the 1990 Census. Altogether, there are more than 3,000 counties in the United States and, on average, more than 60 per state. The study's national annualized estimates are based on data obtained from a small fraction of these counties and, in addition, are derived from only 2 months of data. It is, therefore, important to examine the accuracy of the estimates using outside sources, to the extent possible.

The National Center on Elder Abuse, in the spring of 1997, conducted *A Survey of State APS and Aging Agencies on Domestic Elder Abuse [Data] for FY 95 and FY 96.* A survey instrument, designed to collect aggregate statistics for domestic elder abuse, was sent to state APS agencies and State Units on Aging. Figures received from states in this survey represent counts of domestic elder abuse reports to state report-receiving agencies. A report may involve more than one elderly person and, similarly, one person may be reported more than once as an alleged victim of abuse.

Data of similar character were collected from each of the county APS agencies in NEAIS for a 2-month period. These data were compiled to be comparable to the NCEA survey of domestic elder abuse reports, leaving duplicate and unsubstantiated cases in the totals. Then, using estimation methods described later, data were weighted to represent national totals and annualized. Table 3-4 below compares these annualized national estimates of APS data from NEAIS with totals obtained from the 48 contiguous states, by region. In each of the four regions, the proportion of cases in the data obtained from states by NCEA is very close to the national estimates. It was estimated, for example, that 16 percent of the weighted incidents reported by APS to the study came from Region 1, the Northeast; 17.5 percent of the reports from the states to NCEA were contributed by states in Region 1. Across the other three regions, there are differences of only a few percentage points between the NEAIS estimates and the NCEA actual totals. Furthermore, the total number of reports obtained directly from the states is fewer than 4,000 cases, (less than 1.5 percent) greater than the estimated total. The statistical procedures used to produce the national estimate appear to be extremely accurate.

Table 3-4. NEAIS annualized national estimates from APS data in 20 counties by region compared to NCEA's Survey of Domestic Elder Abuse Reports (duplicated totals)

	NCEA survey	NEAIS
Region	State-by-state totals 1996	National estimates 1996
1	50,746 (17.5%)	46,403 (16%)
2	74,881 (25.6%)	64,156 (22%)
3	47,368 (16.3%)	56,868 (20%)
4	117,318 (40.4%)	119,016 (42%)
Total	290,314 (100%)	286,443 (100%)

3.3 Instrument Development

Since APS case workers and sentinel agency staff, rather than professional interviewers, would be completing data forms, their design had to be simple, requiring as few references as possible to other documents. Several versions of instruments were pretested with local APS and service agency staff to fine tune them and simplify procedures as much as possible.

The APS and sentinel instruments were identical with two exceptions: the APS instrument included sections for reporting the sources of the report to the agency and for the disposition of the case. These items were not applicable to the sentinel instrument. Appendix E contains the data forms for APS and sentinel agencies. Insert pages ("Additional Parts A") were created for circumstances in which more than one elder in the household was abused. An additional Part A is also included in Appendix E. The final version of each instrument was a single 11" x 17" page printed back to back and folded in the middle.

Pretesting Data Collection Instruments

Pretests were conducted at six sentinel agencies and in two APS sites during the months of May, June, July, and August 1995. Participants were briefed in person on the purpose of the study and then asked to review each item on the form to see if the wording was clear and if the requested information was available in the records at the pretest location. Pretest participants were encouraged to critique the format and question order as well. Participants were given one or more forms and asked to complete them and return them to Westat by mail or fax. Eight APS forms and ten sentinel forms were received. Table 3-5 below summarizes the pretest dates and number of forms received from each agency.

Both APS and sentinel pretest offered many constructive comments agencies. During the 2½ months of pre-testing, the instruments were revised four times. Where appropriate, pre-testers' suggestions were incorporated into the final instruments.

Table 3-5. APS and sentinel agency pretest dates and number of forms received

Agency	Date completed	Number of forms received
Adult Protective Services		
Montgomery County	6/8/95	3
Fairfax County	6/27/95	5
Sentinel agencies		
The Support Group	5/23/95	4
Potomac Home Care	7/13/95	1
Fastran Transportation	5/31/95	1
Crestar Bank	7/31/95	1
Meals on Wheels	7/21/95	1
In-home Hospice Care	8/25/95	2
Total		18

Institutional Review Board (IRB)

The NEAIS study design and data collection forms and procedures were reviewed by the IRB at Westat on June 13, 1995, and twice annually after that. The project qualified for an exemption from the requirement to obtain informed consent because no identifiable information about victims of abuse, alleged maltreaters, or reporters of the abuse were recorded on any of the data collection forms. Because of the confidential nature of the information, however, the IRB cautioned that the data be safeguarded from any possibility of identifying the subjects of the reports or the reporters, and recommended several modifications to the forms and data collection procedures. (See Appendix F for IRB approval letter.) The final data set must be prepared in a format that eliminates the possibility of identifying counties, agencies, sentinels, or alleged victims.

3.4 APS Agency and Sentinel Agency Recruitment

Agency recruitment followed two different tracks: recruitment of APS agencies was the responsibility of APHSA; recruitment of sentinel agencies was the responsibility of Westat. Recruitment procedures for each type of agency are described below.

APS Recruitment

Adult Protective Services are provided by various agencies across the United States. The designation of the agency responsible for handling protective services is made at the state level, and the designated agency varies by state. In 29 states, the APS agency is located in the social services agency in the state. In 19 states, the APS program is located in the state unit on aging, but within the social service agency. In 6 states, the APS program is located in the state unit on aging and outside the social service agency. While the staff of most APS agencies receive and conduct investigations directly, in some states the APS agencies contract with local non-profit agencies to conduct elder abuse investigations and related activities (e.g., California and Illinois). These organizational variations mean that the NEAIS recruitment procedures involved different agencies in each state. (See Appendix G for the location of APS agencies by state.) Regardless of their locations in the state structure, many APS agencies limit their protective services to vulnerable elders (e.g., dependent, impaired, or incapacitated persons).

The recruitment of APS agencies involved several steps. In mid-April of 1995, a letter of introduction and an agreement form was sent to APS/aging agency directors in each sampled county. The agreement form, once signed by the agency director, committed an agency to participate in the study and designated a "local contact person." Between April and August of 1995, agreements to participate were received from 19 of the 20 sampled counties. During August of 1995, a letter and questionnaire were sent to designated local contact persons. The questionnaires were used to collect baseline data for each county, as well as information helpful in the design of the data collection forms and training materials. By December 1995, after determining that the remaining agency, Westchester County, NY, would not participate in the study, Delaware County, PA, was selected as a replacement. Delaware County was selected randomly from counties with characteristics as similar as possible to Westchester County. Delaware County agreed to participate in January 1996.

Sentinel Agency Recruitment

Local service agency directories typically did not include names of directors or agency employees. When such names were provided, they were not necessarily current or might not be the appropriate contact person. Accordingly, Westat staff contacted each sentinel agency and asked for the name and title of the person who would be able to decide about the agency's participation in a national

study on elder abuse. Westat then confirmed the decision-maker's telephone number, fax number, and street address.

The initial contact letters were sent sufficiently early to allow recruitment to be completed before the start of data collection. Two different contact procedures were utilized, depending on the type of agency. For smaller agencies, contact letters were sent 4 to 6 weeks before the beginning of data collection. For larger agencies or agencies likely to have several levels of bureaucracy, 6 to 8 weeks of lead time was allowed; for example, hospitals often referred our recruiters to three or four people before the decision maker could be identified. Even then, many required the approval of legal departments, research committees, or approval through their own IRB.

Selection of Sentinels within Agencies

If possible, sentinels were sampled during the recruitment telephone conversation with the person designated by the sentinel agency to be the point of contact with NEAIS. To be eligible for the sample frame of sentinels from the agency, persons had to have frequent contact with the elderly and had to be able to identify abuse if they encountered it. Each attempted call to an agency and the outcome of the call were recorded on a telephone log. When the person listed as the addressee or another person who could make a decision concerning the agency's participation was successfully contacted, a recruitment script was used to ask a series of questions on the structure and size of the agency. Because the kinds of agencies participating in the study had very different organizational features, different scripts were developed for different kinds of organizations such as law enforcement agencies, in-home service providers, out-of-home providers, senior centers, and banks.

A Microsoft Excel program was used to randomly pick every *nth* sentinel from a roster of sentinel candidates provided by the agency. Part-time as well as full-time agency staff were eligible for consideration. Professional staff were preferred, although volunteers were selected occasionally when professional staff were not available. The number of sentinels selected per agency was typically four to six, according to sampling guidance received from project statisticians. In some instances, an agency's participation was contingent on taking all eligible staff (e.g., an entire emergency room staff at a hospital). In such cases, the project accepted the agency's designated participants and noted the special circumstances so that proper weighting could be attached to these unusual agencies. Table 3-6 shows the numbers and percentages of sentinels who were sampled and who participated, after accounting for

refusals and sentinels who left the agency. Among the 1,158 sentinels who were asked to participate in the study, only 4 refused to do so.

APS and Sentinel Agency Followup Procedures

Data collection took place over a 12-month period, according to the schedule presented in Figure 3-2, with either one or two counties starting data collection each month for 12 months. Sentinel data collection took place over an 8-week period, while for APS agencies in the same counties, data collection extended 2 weeks beyond the second month so that any instances of abuse or neglect identified by sentinels at the end of the data collection period could be included in the APS database, if reported to the local APS agency.

Table 3-6. Sentinel participation status, by agency type

	Agency type						
Sentinel Status	Sheriffs	Municipal police	Public health departments	Hospitals	Banks	Service providers	Total
Total selected	51	230	18	192	72	602	1165
	4.38%	19.74%	1.55%	16.48%	6.18%	51.67%	100.00%
Left agency[1]	0	2	0	1	0	0	3
	0.00	0.17%	0.00	0.09%	0.00	0.00	0.26%
Refused	0	2	0	1	0	1	4
	0.00	0.17%	0.00	0.09%	0.00	0.09%	0.34%
Active participant	51	226	18	190	72	601	1158
	4.38%	19.40%	1.55%	16.31%	6.18%	51.59%	99.40%
Participation rate	100%	99%	100%	99%	100%	99.8%	

[1] Excluded from participation rate

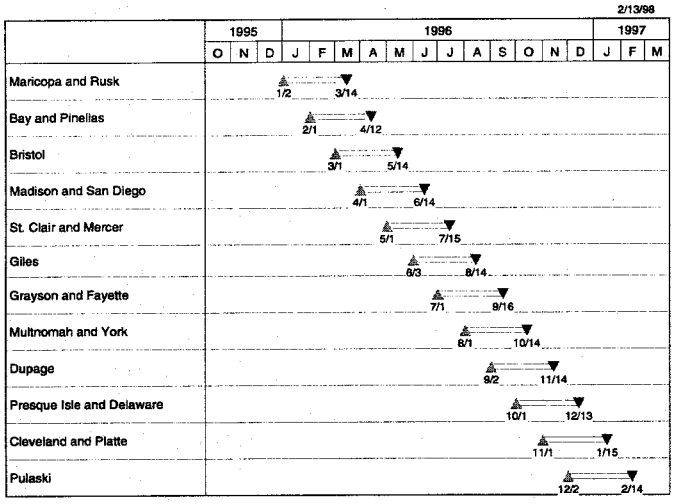


Figure 3-2. Start and stop dates for each participating county

Because of the substantial time lag between recruitment and data collection in many counties, it was important to remind agencies not currently involved in the study of their commitment to participate. For APS agencies, this was done by periodically sending a reminder letter and an incentive, for example, complimentary copies of *Elder Abuse: Questions and Answers An Information Guide for Professionals and Concerned Citizens*, the *NCEA Exchange*, and *Fact Sheets.* Sentinel agency contacts were called periodically to remind them of the upcoming data collection schedule and to alert them to expect an express package containing training materials and data collection forms.

Adult Protective Services and Sentinel Training

An innovative approach was developed for training sentinels and APS agency personnel using specially designed materials and a video. Training included the following items:

- An attractive 17-page participant guide book (see Appendix E) provided information on the study design, confidentiality, responsibilities of study participants, definitions of elder abuse, and procedures for returning completed data forms;

- Two 35-minute videos were developed—one for APS staff and the other for sentinel agencies; and
- An "800" telephone number was available for participants to call with any questions about data collection procedures or client eligibility.

Except for small differences in items on reporting sources and disposition of reported cases, the APS and sentinel videos shared the same core material. Westat prepared the scripts, with revisions suggested by the American Public Welfare Association (APWA) and the Administration on Aging (AoA) Project Officer. Two professional readers recorded the revised script in a professional sound studio. Next, Westat's graphics department merged the sound track with artwork produced in-house, making master tapes that were then copied onto VHS videotapes for distribution to APS and sentinel agencies during recruitment.

In addition to being more cost effective than in-person training, a video approach has several other advantages. A training video is a reference tool that can be used to refresh the memories of sentinels and agency contact persons. In addition, it is easier to maintain the anonymity of participating sentinels and sentinel agencies through video training.

Several weeks before data collection in a particular county, a call or letter reminded the local contact person that data collection would begin the following month. Approximately 1 week later, the following training package and data collection materials were sent:

- A letter reconfirming the agreement to participate in the study;
- A letter from the Assistant Secretary for Aging, AoA, Fernando Torres-Gil
- A packing slip;
- Training videotapes (typically, one for each of four participants);
- Sentinel and APS/aging agency guidebooks (one copy for each participant, employee, or sentinel participating in the study);
- Video viewing instructions;
- Data collection forms;
- Additional Parts A;
- Transmittal sheets;

- Pre-addressed/pre-stamped mailers;
- Additional instructions for APS employees; and
- Label sheets.

The day after the training materials were scheduled to be received, the local contact person was called to ensure that the package had arrived and to schedule a conference call after APS workers and sentinels had an opportunity to view the training video and read the guide. See Appendices H and I for the Adult Protective Services/aging agencies training materials.

The discussion of the contents of the video typically took place 1 week before the beginning of data collection. Site visits were scheduled midway through the data collection period at the first data collection site and at several others where assistance was needed.

Recruitment of Alternate Sentinel Agencies

Recruiters, project staff trained to persuade agencies to participate in the study, sometimes discovered during attempts to contact administrators that agencies had gone out of business, merged with another agency, or did not serve elderly clients. In such instances, an alternate agency was selected from a list of randomly assigned substitutes. The substitute agency was contacted after a recruitment package had been forwarded, as described above.

Sentinel Agency Refusals and Refusal Conversions

Several strategies were employed for "refusal agencies." These included, depending on the reason for the refusal, (1) express mailing a package with a persuasive letter and with the training video; (2) faxing a copy of the data collection instrument; (3) reassigning the agency to another recruiter; and (4) assigning the agency to senior project staff. Attempts to recruit a single refusal agency might employ all four strategies. Unless the refusal came from the most senior person at an agency, recruiters tried to persuade the contact person to identify someone else more senior to whom the recruiter or senior staff could speak. During weekly staff meetings, project staff discussed alternative recruitment strategies, and a plan of action was developed for each refusal. A replacement agency was selected only after all recruitment efforts had been exhausted. Bank participation rates were particularly low. Most banks

declined to participate on the advice of corporate counsel or senior bank staff. Efforts to secure a letter of endorsement from the American Bankers Association were unsuccessful. It is noteworthy that only one completed form was returned from a bank sentinel among the 16 participating banks. Agency participation status by type of agency is shown in Table 3-7.

Table 3-7. Participation status, by agency type

	Agency type						
Status	Sheriffs	Municipal police	Public health departments	Hospitals	Banks	Service providers	Total
Total selection	13	41	13	58	59	280	464 (405)
Ineligible/ Merged	1 (7.6%)	1 (2.4%)	8 (61.5%)	7 (12.1%)	6 (10.2%)	109 (39%)	132 (126)
Refused	1	3	0	10	37	35	86 (49)
Participating agencies	11 (91.6%)	37 (92.5%)	5 (100%)	41 (80.4%)	16 (30%)	136 (80%)	246 (230)

Participation Rate: Seventy-four percent including banks; 82.4 percent without banks. Total numbers in parentheses exclude banks. Total percentages in parentheses exclude ineligible or merged agencies.

3.5 Data Collection

As described earlier, data collection was spread over 12 months, beginning in January 1996, following the pattern presented in Figure 3-2. APS and sentinel procedures are described below.

APS Data Collection

On the first scheduled day for data collection in each county, a telephone call was made to remind the local contact person in the APS agency and to answer last-minute questions. Approximately every 10 days, the contact person was called to determine how many reports had been received by the agency and how many forms had been completed. These telephone calls provided continuous monitoring

of the progress of the agency and allowed study staff to estimate the number of expected data forms. Finally, they provided the study participants with another opportunity to ask questions.

The local contact person was reminded when 1 week remained in the data collection period. On the last day, the local contact person was asked to send in all completed forms. Within a month after the end of data collection in each county, forms received from the APS/aging agency were reviewed, coded, and entered into the database. Similar procedures were followed with sentinel agencies, in addition to the procedures noted below.

Sentinel Data Collection

Sentinel data collection procedures were similar to APS agencies; however, sentinels were asked to send reports without the approval or review by the agency contact. This procedure ensured that the agency contact—the person with responsibility for disseminating the data collection materials and talking weekly to Westat's home office about sentinel absences or replacements—did not inhibit the sentinel from forwarding cases. Information about sentinel absences or replacements obtained during these periodic telephone calls was used in weighting the data. Sentinels were also asked to forward reports of suspected cases of elder abuse as soon as possible after observing the suspected abuse. Sentinels did not attempt to substantiate incidents of abuse.

Site Visits to APS/Aging Agencies and Sentinel Agencies

Site visits to APS agencies were conducted for several reasons. Maricopa and Rusk were the first sites to begin data collection, and APHSA wanted to monitor how the study was being implemented. Bristol and San Diego Counties were visited at the request of the APS agencies. Multnomah was visited because a large number of cases were expected there. Madison County, on the other hand, was a very small county and APHSA wanted to observe any differences from larger sites in the implementation of the study.

Table 3-8 shows the location and dates of site visits to six counties that were made to APS/aging agencies.

Table 3-8. APHSA site visits to APS agencies

County/state	Site visit dates
Maricopa County, Arizona	02/05/96 thru 02/09/96
Rusk County, Texas	02/05/96 thru 02/09/96
Bristol County, Massachusetts	03/13/96 thru 3/15/96
San Diego County, California	04/10/96
Madison County, North Carolina	04/30/96
Multnomah County, Oregon	08/16/96

Table 3-9 shows the location and dates of site visits conducted by Westat to five counties. These visits included the first (Maricopa and Rusk) and last (Pulaski) participating counties. Multnomah was visited because a large number of forms were expected from Multonomah sentinels. Cleveland County was visited because it was a nonmetropolitan county with a large percentage of elderly residents. Project staff met with sentinels and agency contacts at nearly all participating agencies in the five counties. Site visits were conducted to determine if sentinel agencies were following the procedures presented in the training video and APS/sentinel guide, to answer any questions from sentinels and agency contacts, and to gauge the degree of interest in the study by the participating agencies. Project staff found great interest in the study and diligence in following study procedures. (See Appendix J for site visit information.)

Table 3-9. Westat site visits to sentinel agencies

County/state	Site visit dates	Number of agencies visited
Maricopa County, Arizona	02/05/96 thru 02/09/96	12
Rusk County, Texas	02/05/96 thru 02/09/96	8
Multnomah County, Oregon	08/26/96 thru 08/28/96	11
Cleveland County, North Carolina	11/18/96 thru 11/19/96	12
Pulaski, Arkansas	01/06/97 thru 01/08/97	13

Certificates of Appreciation

After data collection was completed in each county, a certificate of appreciation was mailed to each sentinel and sentinel agency contact, and to APS/aging agency staff. The certificates were produced on high-quality bond paper, with a gold, embossed seal certifying that the recipient had participated in the NEAIS. An example of the certificate is included in Appendix K.

Special Procedures in San Diego, California

San Diego County sentinel agencies required special data collection procedures because of difficulty in getting sentinel agencies there to return completed forms. Westat employed an experienced interviewer, who visited each agency to assist sentinels in completing and collecting forms. Prior to the interviewer's visit, a letter was sent to each agency contact informing that person of the data collector's visit. Despite the diligence of the interviewers, this procedure resulted in only three completed forms. It was not necessary to use in-person data collection visits in the other 19 participating counties.

3.6 Data Receipt

Data collection forms from both APS and sentinel agencies were sent to Westat. Westat staff reviewed sentinel forms for completeness and called the sending sentinel directly if there were any questions. Similarly, APHSA staff reviewed APS data forms and called the APS agency contacts to discuss missing or unclear data.

APS agencies followed specific procedures for transmitting completed data forms to the home office, as detailed in the training video. The local contact person at the APS/aging agency was responsible for the collection and transmission of completed APS data forms. Following a review of the forms, the contact person then completed a two-ply transmittal form, kept a copy for his/her records, and forwarded the completed forms and transmittal sheet in a prestamped, pre-addressed envelope. Procedures varied slightly between the larger and smaller agencies. In larger APS agencies, several staff members checked the completed forms before the contact person sent them to the home office. In the smaller agencies, the data forms were often photocopied before the originals were sent to the home office.

Sentinels followed procedures similar to those for APS agencies. The principal difference was that the role of the sentinel agency contact was limited to providing information to sentinels, training them, and distributing study materials. To encourage candid, confidential reporting, we asked agency contacts not to review or edit the forms completed by the sentinels. Moreover, sentinels were instructed to send forms directly to the home office, further insulating them from the possibility of influence by the agency contact. Sentinels were asked to complete and mail the data form on the same day a case was identified to minimize the possibility that events surrounding the abuse might be forgotten or incorrectly recollected. Sentinels kept a copy of the transmittal sheet and sent the forms in a pre-addressed prepaid mailer.

Keying

Both APS and sentinel data forms were entered into a data receipt system according to ID number, form type (APS or sentinel), and date of receipt; they were then batched in groups of 20. After batching, forms were keyed directly into a data entry program created in Microsoft Access. The data were entered using PCs with screens that mirrored the data collection instrument.

Coding Data Forms

Both APS and sentinel data forms required respondents to provide a brief narrative describing the maltreatment events. After keying, this maltreatment information was evaluated according to the study definitions and eligibility criteria.

Cases that did not meet the study definitions were excluded from the database. A case was excluded for the following reasons:

- Victim resides in an institutional setting (e.g., nursing home, foster care);
- Victim is under 60 years of age;
- Victim resides outside county; or
- The incident was not abuse by definitions used in NEAIS.

In some instances, additional categories of maltreatment, other than the one coded by the respondent, were indicated based on the description of the alleged incident. A second trained staff person reviewed any proposed change in code before a final change was made. If necessary, miscoded items were reclassified into the proper category.

A review of the APS data forms resulted in recording the maltreatment codes in 180 cases. During coding, 41 APS data forms were removed from the database for not meeting any of the seven definitions of elder abuse described earlier in this report. Only five sentinel forms were removed because they did not meet criteria.

3.7 Unduplication

Sometimes more than one data form was received for the same alleged maltreated elder describing either the same or different abusive incidents. It was necessary to identify such duplicates and count each person only once for purposes of this study. This process is known as "unduplication."

Various types of duplicate reports were submitted to the study concerning the same alleged maltreated elder. The first type was **APS-APS duplication**, in which an APS agency submitted two or more data forms on the same person. The second was **sentinel-sentinel duplication**, in which two or more sentinel forms were received on the same alleged maltreated elder. The forms could have come from the same sentinel or from different sentinels and/or from different participating agencies (e.g., a police station and a hospital). The third type was **APS-sentinel duplication**, which occurred either because the sentinel forwarded the incident to APS and both agencies subsequently submitted a data form to the study, or because the same incident was reported independently to APS by another source.

To accommodate all possibilities for duplicate reporting, the data collected on the forms were sorted across three different groups using Microsoft Access, comparing elder's first name, last initial, date of birth, and age:

- Exclusively across all APS data forms;
- Exclusively across all sentinel forms; and
- Crossing APS and sentinel forms.

Possible duplicate cases across all possible combinations were identified after comments and other key data associated with the duplicate reports had been reviewed. Ninety-three sets of reports were determined to be genuine duplicates. Extra or duplicate cases reported both to APS and sentinel agencies were removed from the sentinel data file, so that such duplicated instances of abuse and neglect were counted as reports to APS. The largest number of duplicates (57 of the 93) were this type. Duplicate sentinel reports were assigned to the sentinel agency that first sent in the form. These numbers are presented graphically in Figure 3-3.

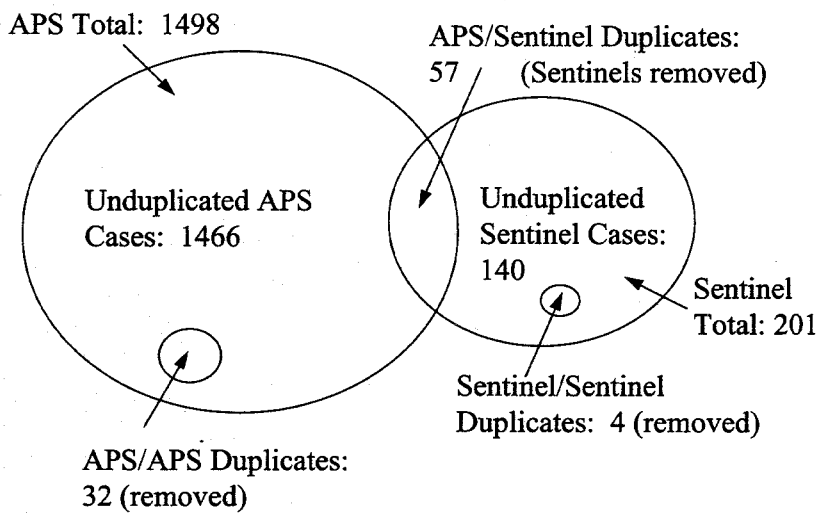


Figure 3-3. Duplicated and unduplicated APS and sentinel reports

3.8 Participant Tracking

During the 2-month data collection period, sentinel agencies were called each week to confirm that the sampled sentinels were present on the job and thus were able to observe elder abuse if they encountered it. The outcome of each call was recorded in a database using a specially designed program that summarized information for each week. The information included whether the sentinel was a part-time or full-time sentinel during the week, and whether the sentinel was present most of the time or part of the time during scheduled hours. Sentinel tracking data were used in weighting the data.

APS agencies were not tracked, since data were not collected from individuals within the agency, and the APS agency was presumed to be open during normal business hours. Nevertheless, APWA staff made frequent calls to APS agency contacts to monitor the progress of cases that were still under review to determine whether or not they had been substantiated.

3.9 Weighting the Responses

The process of weighting involves the computation of case-specific sampling weights used to produce unbiased estimates of the population parameters of interest. The weights are needed in the statistical analysis to compensate for the variable probabilities of inclusion in the sample. Even for samples in which units are selected with equal probabilities, weighting may still be necessary to compensate for differential rates of nonresponse and deficiencies in the sampling frame. Weighting complex survey data, such as the data from NEAIS, generally involves many steps. The most important steps are the determination of overall probabilities of selection, calculation of base weights, calculation of nonresponse adjustments, and development of replicate weights. A detailed explanation of the following components is provided in Appendix L.

PSU Base Weights

The base weight of a sampled county is defined as the reciprocal of the probability of selecting that county. The base weights are unbiased in that the expected value of a weighted estimate, based on the sample data, is equal to the corresponding population value that would have been obtained if all the counties (rather than a sample) in the United States were surveyed. The base weights of the

sampled counties ranged from 5.79 (San Diego County, California) to 569.66 (Madison County, North Carolina).

Weighting of APS Data

Unlike the sentinel records, there are no further sampling stages for the APS data. In addition, there is no nonresponse adjustment, since all APS agencies in the sampled counties participated in the study. Therefore, all the records received from the APS agencies were assigned their respective PSU base weight and multiplied by an annualization factor of six (described below), to give the full sample final weight.

Annualization

The NEAIS data collection period extended from January 2, 1996, to February 2, 1997. Data were collected over a period of 2 months in each of the sampled counties. The counties were distributed in such a way that there were four or five counties reporting in any particular month, except at the beginning and the end of this period. In addition, a start date was assigned such that in most months, two large counties and two small counties were reporting, except at the beginning and the end of the study. This approach minimized the potential for a seasonal affect to bias the estimate of the incidence of elder abuse. The estimate of elder abuse over these 2-month periods was transformed to an estimate for the study year by multiplying by a factor of six.

Agency Weight (non-APS Agencies)

The agency base weight (ABW) of each non-APS agency is, in most cases, the inverse of the probability of selection. As described in the agency sampling description in Section 3.2, the probability of selection, in most cases, was obtained from the WESSAMP output. Within each county the selection probability was proportional to a measure of size of the agency so that the ABW was inversely proportional to the agency size.

However, the selection probabilities of the elder care provider agencies were adjusted to account for the fact that there was deliberate oversampling in anticipation of many non-existent or ineligible agencies, since it was not possible to construct a completely reliable frame.

Agency Nonresponse Adjustments (Sentinel Agencies)

The base weights are unbiased weights that inflate the sample data to population levels. Nonresponse in the study results in losses in the sample data that must be compensated for in the weights. In this case, the sentinel agency weights must be adjusted to compensate for the reduction in sample size. If nonresponse occurs at random, such adjustments are unbiased; however, nonresponse almost never occurs randomly. Consequently, such adjustments are typically made within classes that are internally as homogeneous as possible with respect to the agency characteristics. Thus, nonresponse adjustments are used to attenuate the biases that result from the likelihood that reports supplied by the nonrespondents (if they had been obtained) would have been different from those of the respondents.

Sentinel Weights

Because an equal probability scheme was used to select the sentinels, within each agency the sentinel base weight for each participating sentinel is the simple ratio of number of eligible sentinels divided by the number of participating sentinels. The sentinel base weight was inflated by the rate of participation (or percentage of coverage). The rationale behind this is the assumption that a sentinel participating 50 percent of the time would have witnessed twice as many elder abuse incidents if he/she had participated 100 percent of the time.

Sentinel Case-Level Weight

There were 140 forms returned (after unduplication) by 74 reporting sentinels from 53 agencies. Each form was assigned a sentinel case-level weight. The aggregate weight distribution by agency type, during the reporting period of 2 months, is presented in Table 3-10 for the sentinel case-level weights.

Table 3-10. Aggregate sentinel case-level weights by PSU and agency type

OBE region	Site ID (fielding order)	County	Agency type*	Reporting agencies	Reporting sentinels	Forms returned (RR)	Aggregate weight (W)	W percentage	W percentage within OBE
1	05	Bristol	03	1	1	9	6,628	7.6%	37.0%
1	05	Bristol	05	1	1	2	165	0.2%	0.9%
1	05	Bristol	07	2	3	3	1,856	2.1%	10.4%
1	09	Mercer	05	1	1	1	232	0.3%	1.3%
1	09	Mercer	07	2	3	3	1,418	1.6%	7.9%
1	12	Fayette	07	2	3	3	867	1.0%	4.8%
1	14	York	03	1	1	1	1,275	1.5%	7.1%
1	14	York	07	2	5	9	5,168	5.9%	28.9%
1	17	Delaware	05	3	5	9	299	0.3%	1.7%
2	04	Pinellas	05	1	1	1	88	0.1%	0.5%
2	04	Pinellas	07	1	1	3	565	0.6%	2.9%
2	06	Madison	07	1	1	1	14,608	16.7%	76.3%
2	10	Giles	07	1	1	2	2,093	2.4%	10.9%
2	18	Cleveland	07	2	4	5	896	1.0%	4.7%
2	20	Pulaski	02	1	1	1	48	0.1%	0.2%
2	20	Pulaski	05	2	2	3	168	0.2%	0.9%
2	20	Pulaski	06	1	2	3	570	0.7%	3.0%
2	20	Pulaski	07	2	2	2	113	0.1%	0.6%
3	03	Bay	04	1	3	5	1,571	1.8%	4.0%
3	03	Bay	05	1	1	1	785	0.9%	2.0%
3	03	Bay	07	1	1	1	1,087	1.2%	2.7%

Table 3-10. Aggregate sentinel case-level weights by PSU and agency type (continued)

OBE region	Site ID (fielding order)	County	Agency type*	Reporting agencies	Reporting sentinels	Forms returned (RR)	Aggregate weight (W)	W percentage	W percentage within OBE
3	08	St. Clair	07	1	1	1	327	0.4%	0.8%
3	15	DuPage	07	2	2	5	25,388	29.1%	64.2%
3	16	Presque Isle	07	1	1	2	8,222	9.4%	20.8%
3	19	Platte	03	1	1	1	1,204	1.4%	3.0%
3	19	Platte	07	1	1	3	972	1.1%	2.5%
4	01	Maricopa	03	1	1	2	1,019	1.2%	9.5%
4	01	Maricopa	05	3	4	5	765	0.9%	7.1%
4	01	Maricopa	07	2	2	6	1,518	1.7%	14.1%
4	02	Rusk	03	1	1	1	218	0.2%	2.0%
4	02	Rusk	07	1	2	2	489	0.6%	4.6%
4	07	San Diego	05	1	2	2	53	0.1%	0.5%
4	07	San Diego	07	1	1	1	59	0.1%	0.5%
4	11	Grayson	03	1	1	1	1,241	1.4%	11.5%
4	11	Grayson	07	3	4	9	2,719	3.1%	25.3%
4	13	Multnomah	03	1	5	27	2,329	2.7%	21.7%
4	13	Multnomah	04	1	1	3	179	0.2%	1.7%
4	13	Multnomah	07	1	1	1	153	0.2%	1.4%
Total				53	74	140	87,356	100.0%	

* Agency Type Codes: 02=County Sheriffs; 03=Municipal Police; 04=Public Health Depts.; 05=Hospitals; 06=Banks; 07=Elder Care Providers

Weight Trimming

It was observed that six forms (one from Madison County and five from Dupage County) contributed to nearly 46 percent of the aggregate weights; that is, the national estimate of unreported (not reported to APS) elder abuse incidents was heavily influenced by these six forms.

When just a few cases contribute such a large proportion of the total weight, national estimates became very unstable; that is, they have high sampling error. Thus, it is desirable to consider reducing the size of these extreme weights before carrying out analyses. The very slight bias that this procedure introduces into the estimates is of little consequence compared to the gains in sampling precision that result from weight trimming.

The next step was to determine suitable trimming factors to apply. The typical number of forms returned by sentinels from elder care providers (ECP) in metropolitan counties was determined, since sentinels from such agencies reported all six cases with extreme weights. The median number of reports per sentinel was found to be 0.41667. It was decided to adjust the weights of these six cases so that, after weighting, the average number of cases per sentinel did not exceed 0.41667. Under this criterion, four of the five cases from DuPage County received a trimming factor of 0.41667. The fifth case from DuPage and the one case from Madison County received trimming factors of 1.0 (i.e., no trimming was applied).

Even after this trimming process, a few cases contributed a large proportion of the total weight. One case from Madison County contributes 20 percent of the total, 28 times as large as the mean weight. Some records dominate the estimates in the study because suitable size measures for the ECP agencies included on the sampling frames were not available. Any further attempt to trim the weights would likely have led to a significant underrepresentation of reports from sentinels in relatively large ECP agencies. We judged that further trimming might introduce significant biases into the results.

Table 3-11 presents the aggregate weights of the reporting forms after weight trimming.

Table 3-11. Aggregate weights attached to sentinel forms after weight trimming

OBE region	Site ID (fielding order)	County	Agency type	Reporting agencies	Reporting sentinels	Forms returned (RR)	Aggregate weight (W)	W percentage	W percentage within OBE
1	05	Bristol	03	1	1	9	6,628	9.1%	37.0%
1	05	Bristol	05	1	1	2	165	0.2%	0.9%
1	05	Bristol	07	2	3	3	1,856	2.5%	10.4%
1	09	Mercer	05	1	1	1	232	0.3%	1.3%
1	09	Mercer	07	2	3	3	1,418	1.9%	7.9%
1	12	Fayette	07	2	3	3	867	1.2%	4.8%
1	14	York	03	1	1	1	1,275	1.7%	7.1%
1	14	York	07	2	5	9	5,168	7.1%	28.9%
1	17	Delaware	05	3	5	9	299	0.4%	1.7%
2	04	Pinellas	05	1	1	1	88	0.1%	0.5%
2	04	Pinellas	07	1	1	3	565	0.8%	2.9%
2	06	Madison	07	1	1	1	14,608	20.0%	76.3%
2	10	Giles	07	1	1	2	2,093	2.9%	10.9%
2	18	Cleveland	07	2	4	5	896	1.2%	4.7%
2	20	Pulaski	02	1	1	1	48	0.1%	0.2%
2	20	Pulaski	05	2	2	3	168	0.2%	0.9%
2	20	Pulaski	06	1	2	3	570	0.8%	3.0%
2	20	Pulaski	07	2	2	2	113	0.2%	0.6%
3	03	Bay	04	1	3	5	1,571	2.2%	6.2%
3	03	Bay	05	1	1	1	785	1.1%	3.1%
3	03	Bay	07	1	1	1	1,087	1.5%	4.3%
3	08	St. Clair	07	1	1	1	327	0.4%	1.3%
3	15	Dupage	07	2	2	5	11,026	15.1%	43.8%
3	16	Presque Isle	07	1	1	2	8,222	11.3%	32.6%
3	19	Platte	03	1	1	1	1,204	1.6%	4.8%
3	19	Platte	07	1	1	3	972	1.3%	3.9%
4	01	Maricopa	03	1	1	2	1,019	1.4%	9.5%
4	01	Maricopa	05	3	4	5	765	1.0%	7.1%
4	01	Maricopa	07	2	2	6	1,518	2.1%	14.1%
4	02	Rusk	03	1	1	1	218	0.3%	2.0%
4	02	Rusk	07	1	2	2	489	0.7%	4.6%
4	07	San Diego	05	1	2	2	53	0.1%	0.5%
4	07	San Diego	07	1	1	1	59	0.1%	0.5%
4	11	Grayson	03	1	1	1	1,241	1.7%	11.5%
4	11	Grayson	07	3	4	9	2,719	3.7%	25.3%
4	13	Multnomah	03	1	5	27	2,329	3.2%	21.7%
4	13	Multnomah	04	1	1	3	179	0.2%	1.7%
4	13	Multnomah	07	1	1	1	153	0.2%	1.4%
Total				53	74	140	72,994	100.0%	

3.10 Measuring Sampling Variability

Because the statistics presented in this report are estimates of national and subgroup characteristics and population sizes, based on samples of reports and sentinels, there is a degree of uncertainty in them. Had by chance a different sample been drawn, somewhat different results would have been achieved. This uncertainty in the results is referred to as sampling variability, or sampling variance. The degree of sampling variability present as a result of using a sample can be assessed from the sample data itself. For a particular estimate from the study, the associated measure of sampling variability is known as the standard error.

Because the study used a complex sampling design, conventional formulae for estimating sampling variability (that assume a simple random sampling procedure) are inappropriate. The standard errors presented in this report have been calculated using a technique known as jackknife replicated variance estimation. For a full presentation of the methods and properties of the jackknife procedure, see Wolter (1985) or Lehtonen and Pahkinen (1996).

When data are collected as part of a complex sample survey, there is often no easy way to produce approximately unbiased and design-consistent estimates of variance. The variance of survey statistics, including means and proportions, using standard statistical packages such as SAS or SPSS, are inappropriate and usually too small. A class of techniques called **replication methods** provides a general method of estimating variances for the types of complex sample designs and weighting procedures usually encountered in practice. The replication approach selects subsamples repeatedly from the whole sample, calculates the statistic of interest for each of these subsamples, and then uses the variability among these subsample or replicate statistics to estimate the variance of the full sample statistics. There are different ways of creating subsamples from the full sample. The subsamples are called **replicates** and the statistics calculated from these replicates are called **replicate estimates**.

Replication is not the only way to compute the variance of statistics from complex samples; however, replication is able to handle complex sampling designs, complex estimates, and complex weighting schemes. Replication can be used when other methods are not easily applicable. This method also has advantages even when other methods, such as Taylor series approximation, can be applied.

One of the main advantages of the replication approach is its ease of use during analysis. The same estimation procedure is used for the full sample and for each replicate. The variance estimates are then readily computed by a simple procedure. Furthermore, the same procedure is applicable to statistics such as means, percentages, ratios, and correlations. These estimates can also be calculated for analytic groups or subpopulations. It is not necessary for the analyst to understand the sampling or estimation methods if the replicate weights are included with the data.

The replication procedure used to estimate sampling variance for NEAIS data was a stratified jackknife procedure. The four OBE regions used as primary stratifiers in the sample design were used to define four strata for variance estimation purposes. Thus, within each stratum there were five county PSUs. A detailed description of variance procedures is included with the description of weighting in Appendix L.

3.11 Interpreting Results in the Presence of Sampling Variability

A common technique used to present and interpret statistical data that are subject to sampling variability is through the use of confidence bands. A 95 percent confidence band for an estimate is obtained by adding twice the standard error to the estimate of interest, to give the upper bound, and subtracting twice the standard error from the estimate of interest, to obtain the lower bound. The statistical interpretation of a 95 percent confidence band is that, if such a band were constructed from all possible samples that might have been selected, 95 percent of such bands would contain the true answer.

If the confidence band for an estimate is wide, relative to the size of the estimate itself, then this indicates that there is considerable uncertainty as to what the true value actually is. If, however, the band is narrow, then there can be confidence that the estimate is close to the true answer. Thus, for example, consider an estimate that a certain population characteristic is at the 10 percent level. If the confidence band for this estimate ranges from 1 percent to 19 percent, we can have confidence that the true level is something below 20 percent, but cannot draw any other inference with confidence. If an estimate of 10 percent is accompanied by a confidence band that ranges from 9 percent to 11 percent, then we can be confident that the true figure is little different from 10 percent.

Because the NEAIS sampled a relatively small number of counties, agencies, and sentinels, for many of the rarer characteristics described in this report, the confidence bands are relatively wide, like in the first example given in the previous paragraph. When this has occurred, the estimates presented in the report are duly noted as having this characteristic.

The width of the confidence band does depend to some extent upon the size of the estimate itself, but for a complex sample design such as this, there are several other factors involved as well. Thus two estimates of different characteristics, that happen to be of similar size, can well have quite different confidence bandwidths, and this happens in many cases for the results included in this report. A key factor that determines the width of the confidence interval is the extent to which the characteristic of interest varies from county to county, and from agency to agency and sentinel to sentinel in the non-APS sector of the study. Estimates for those characteristics that tend to vary little across these domains will tend to have smaller standard errors, and thus narrower confidence bands, than those characteristics that are highly variable across counties, agencies, and sentinels.

4. FINDINGS—INCIDENCE OF ABUSE AND NEGLECT OF THE ELDERLY

Chapter Four presents the findings of the National Elder Abuse Incidence Study (NEAIS). First, the numbers of reports of abuse, neglect, and self-neglect of elders over 60 that are not reported are compared with those that are reported to official agencies. Two national incidence estimates of abuse and neglect of elders 60 years and older in domestic settings in 1996 are then calculated—one without self-neglect and one with self-neglect included. Then, characteristics of victims, reporters and perpetrators known to Adult Protective Services (APS) agencies are described. Abuse reported by sentinel agencies is presented next, with a focus on the characteristics of elderly victims and perpetrators.

4.1 Comparison of Reported and Unreported Abuse and Neglect and Calculation of National Estimates of the Incidence of Abuse and Neglect During 1996

Table 4-1 provides important data for calculating the national incidence of domestic abuse, neglect, and self-neglect of elderly people in the continental United States in 1996 (Hawaii, Alaska, and the U.S. territories were not included in the study). Numbers represent new unduplicated reports to agency sentinels (column one) and to APS agencies (column two) during 1996. Column three is the number of those reports to APS agencies that were substantiated after an investigation. Column four is the sum of columns one and three. Standard errors, representing 95 percent confidence intervals, are shown in parentheses for all figures. The standard errors of the estimates for APS agencies are relatively low because of the large number of actual reports received by those agencies (1,466), while the standard errors for the sentinel data are relatively large because of the smaller number of actual reports (140 after duplicates were removed).

If a report on the same individual was obtained from both an APS agency and from a sentinel, the case was included in the APS total, but not in the sentinel totals. Consequently, the numbers shown in the table in column one represent only those individuals reported uniquely by sentinel agencies. The term "incident" is also used and represents a report for only one individual for the calendar year, regardless of how many times other episodes of abuse were reported for that person. Typically, APS data include more than one report during a year for some victims. Since the numbers routinely reported by the states for the APS agencies within their boundaries do not represent individuals, total counts of abuse and

neglect based on such data will be higher than the unduplicated estimates presented in this report. Because there is no duplication in the NEAIS data, the terms "incident" and "elder" are used interchangeably.

Table 4-1. National estimates of the incidence of abuse, neglect, and self-neglect of persons 60 years and older, 1996 (unduplicated)

	Estimated Number of Elderly[1]			
	(1) Reported by Sentinels	(2) Reported to APS	(3) Reported to APS: Substantiated Only	(4) Total: Columns (1) and (3)
Total Abuse, Neglect and Self Neglect	435,901	236,479	115,110	551,011
(Standard error)	(114,887)	(34,298)	(20,326)	(118,008)
			48.7%	
Total Abuse and Neglect	378,982	151,408	70,942	449,924
(Standard error)	(117,758)	(18,999)	(11,881)	(119,512)
			46.9%	
Abuse	355,218	95,761	47,069	402,287
(Standard error)	(116,875)	(15,579)	(9,814)	(116,084)
			49.2%	
Neglect[2]	147,035	85,143	35,333	182,368
(Standard error)	(52,290)	(12,966)	(6,706)	(58,743)
			41.5%	
Self-Neglect	81,635	113,573	57,345	138,980
(Standard error)	(21,966)	(28,907)	(15,350)	(24,232)
			50.5%	

[1] Subtotals do not add to totals because more than one type of abuse was reported for some cases.
[2] Includes abandonment.

To arrive at the most accurate estimate of the national incidence of elder abuse and neglect in 1996, researchers added two numbers: reports submitted to APS agencies and substantiated by those agencies [column 3], and reports made by sentinels and presumed to be substantiated [column 1]. Sentinel reports are treated as substantiated incidents for three reasons. First, the sentinels were selected because they had frequent daily contact with the elderly and had the ability to identify abuse if they encountered it. Second, the sentinels were trained carefully to carry out this role in a rigorous manner, including having an "800" telephone contact to call with any questions about client eligibility or data

collection. The third reason is that only those incidents the sentinels believed met the definition of elder abuse and neglect were reported. In contrast, APS agencies receive reports from any and all sources, all of which must be investigated and many of which are not substantiated.

Two separate incidence estimates are calculated—one without self-neglect and one with self-neglect included:

Estimated Incidence of Elder Abuse and/or Neglect in 1996

The best national estimate is that a total of 449,924 elderly persons, aged 60 and over, experienced abuse and/or neglect in domestic settings in 1996. Of this total, 70,942 (16 percent) were reported to and substantiated by APS agencies, but the remaining 378,982 (84 percent) were not reported to APS. From these figures, one can conclude that over five times (5.3) as many new incidents of abuse and neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 688,948 elders or as few as 210,900 elders could have been victims of abuse and/or neglect in domestic settings in 1996. This range indicates that between 1.7 and 9.0 times as many elders were abused and neglected and not reported to APS agencies as were reported to and substantiated by APS agencies.

Estimated Incidence of
Elder Abuse, Neglect, and/or Self-Neglect in 1996

The best national estimate is that a total of 551,011 elderly persons, aged 60 and over, experienced abuse, neglect, and/or self-neglect in domestic settings in 1996. Of this total, 115,110 (21 percent) were reported to and substantiated by APS agencies, with the remaining 435,901 (79 percent) not being reported to APS agencies. One can conclude from these figures that almost four times (3.8) as many new incidents of elder abuse, neglect, and/or self-neglect were unreported than those that were reported to and substantiated by APS agencies in 1996. The standard error suggests that nationwide as many as 787,027 elders or as few as 314,995 elders could have been abused, neglected, and/or self-neglecting in domestic settings in 1996. This range indicates that between 1.4 and 6.2 times as many elders were abused, neglected, and/or self-neglecting and not reported to APS as were reported to and substantiated by APS agencies.

Table 4-1 also shows the incidence of abuse and neglect by category: abuse only, including physical, sexual, emotional, and financial; neglect by caretakers (including abandonment); and self-neglect. More than three times as many incidents of abuse were observed by sentinels as were reported to APS. Self-neglect, on the other hand, was more commonly reported to APS agencies, at a rate of 1.4 to 1. Nearly one-half of all the incidents reported to APS (48.7%) were substantiated overall. Cases of neglect were somewhat less likely to be substantiated than other forms of abuse or neglect (41.5%).

Please note: Throughout the following discussion of the NEAIS findings, there is frequent reference to "confidence bands," as described on pages 3-37 and 38 of this report. This is an important and appropriate way of communicating information to the reader about the degree of certainty for specific data findings. While asterisks (*) are used in the tables included in this chapter to signify wide confidence bands, the actual numerical standard errors for all data elements for each table are included in Appendix M.

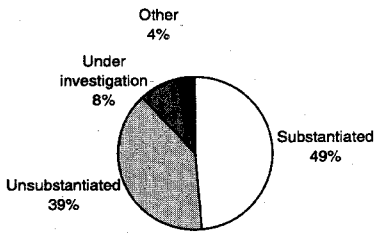
4.2 Abuse Reported by APS Agencies

Outcomes of Investigations

As noted above, the total (unduplicated) estimated number of domestic elder abuse, neglect, and/or self-neglect reports investigated by APS agencies during 1996, nationwide, was 236,479. Each APS agency utilized the investigation process and criteria already in place in that state for determining whether a report was substantiated. Of these total reports, 115,110 (or nearly one-half – 48.7 percent) were substantiated after investigations, while almost another two-fifths (39.3 percent) were unsubstantiated, as shown in Figure 4-1on the next page. In addition, nearly one-tenth (8.2 percent) of the reports were still under investigation at the end of 1996, and a small portion of the reports (3.8 percent) had other outcomes (e.g., the alleged victim died, refused an investigation, could not be located, or had moved out of the area).

It should be noted that an APS agency's determination of non-substantiation of a report of suspected abuse or neglect does not conclusively mean that abuse or neglect did *not* happen. Rather an unsubstantiated report can mean that the level of proof required by that state was not sufficiently met, despite indications that abuse or neglect *may have occurred* (e.g., there is a reason to suspect abuse or neglect).

Figure 4-1. Outcomes of APS investigations of domestic elder abuse, neglect, and self-neglect [1]

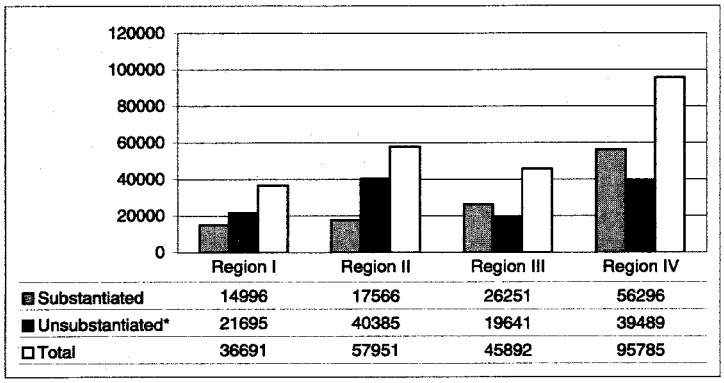


Outcomes	Estimated number of reports
Substantiated	115,110
Unsubstantiated	92,796
Still under investigation	19,440
Other	8,976
Total	236,322

[1] Unduplicated estimate of elderly victims reported to APS agencies, 1996.

Figure 4-2 shows substantiated and unsubstantiated reports by Office of Business Economics (OBE) Region. The largest number of incidents was reported in Region IV, the Western United States. A total of 95,875 incidents (weighted and annualized), or 40 percent of the national total, were supplied by APS agencies from this region. The West also had the highest rate of substantiation, 58.8 percent. Region III, the Central United States, had the next highest proportion of substantiated incidents (57.2 percent). Region II, in the Southeast, had the lowest substantiation rate of the four regions, 30.3 percent. Keeping in mind that these regions are equal in total population, the West clearly leads the other areas of the country on a per capita basis in total reports of elder abuse and neglect and rates of substantiation. This may be due to a heightened awareness of elder abuse in this part of the country and this possibility warrants further study.

Figure 4-2. Substantiated and unsubstantiated reports to APS/aging agencies by OBE region



	Region I	Region II	Region III	Region IV
Substantiated	14996	17566	26251	56296
Unsubstantiated*	21695	40385	19641	39489
Total	36691	57951	45892	95785

*Includes cases under investigation and other cases with undetermined outcomes.

Substantiated Reports of Abuse by Others

As shown in Table 4-2, nearly one-half of substantiated reported incidents (48.7 percent) involved neglect, while slightly more than one-third (35.4 percent) were concerned with emotional/psychological abuse. Next, financial/material exploitation accounted for somewhat less than one-third (30.2 percent) of all substantiated reports. Approximately one-fourth (25.6%) of substantiated reports involved physical abuse. Findings on abandonment (3.6 percent), sexual abuse (0.3 percent), and other types of maltreatment (1.4 percent) had wide confidence bands.

Table 4-2. Types of elder maltreatment substantiated by APS agencies.

Maltreatment	Number of Reports	Percentages[1]
Neglect	34,525	(48.7%)
Emotional/psychological abuse	25,142	(35.4%)
Financial/material exploitation	21,427	(30.2%)
Physical abuse	18,144	(25.6%)
Abandonment	2,560*	(3.6%)
Sexual abuse	219*	(0.3%)
Other	994*	(1.4%)
Total incidents	70,942**	

[1] Estimated number of substantiated reports of domestic elder abuse with each type of maltreatment, 1996. Cases of self-neglect only are excluded.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

** Total incidents do not equal totals across abuse categories because more than one substantiated type of abuse was often reported for an incident.

Reporters of Substantiated Abuse by Others

As presented in Table 4-3, family members of victims reported one-fifth (20.0 percent) of the 70,942 substantiated reports of domestic elder abuse and neglect in 1996. Hospitals (17.3 percent) and police/sheriff's departments (11.3 percent) followed. In addition, in-home service providers (9.6 percent), friends/neighbors (9.1 percent), victims (8.8 percent), and physicians, nurses, and clinics (8.4 percent) each accounted for slightly less than one-tenth of the substantiated domestic elder abuse reports where elders were abused by perpetrators. Further, banks (0.4 percent) and public health departments

(0.1 percent) were responsible for small percentages of the substantiated reports, but the numbers of their reports are negligible and may not be much greater than zero.

Table 4-3. Reporters of substantiated abuse by others

Reporter	Number of reports (percentage)[1]		Reporter	Number of reports (percentage)[1]	
Family members	14,169	(20.0%)	Physician, nurse, clinic	5,925	(8.4%)
Hospital	12,290	(17.3%)	Out-of-home service provider	3,716	(5.2%)
Police/sheriff	8,031	(11.3%)	Bank	305*	(0.4%)
In-home service Provider	6,816	(9.6%)	Public health department	35*	(0.1%)
Friend/neighbor	6,476	(9.1%)	Other	10,729	(15.1%)
Victim	6,216	(8.8%)			
			Total	70,942**	

[1] Estimated number of substantiated elder abuse reports, by type of reporter 1996. Cases of self-neglect only are excluded.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

** Respondents recorded one or more reporters for each incident.

Reporters of Substantiated Reports of Self-Neglect

As shown in Table 4-4, hospitals (19.8 percent) and friends/neighbors (19.1 percent) were the most frequent reporters of the substantiated reports of self-neglect in 1996, followed by police/sheriff's department (11.7 percent), and family members (6.5 percent). Other reporters, who account for 26.5 percent, involved a long list including churches, apartment managers, fire departments, landlords, residential facilities, utility companies, and anonymous reporters. (Some incidents were reported by more than one reporter.)

Table 4-4. Reporters of substantiated reports of self-neglect[1]

Reporter	Number of reports (percentage)		Reporter	Number of reports (percentage)	
Hospital	8,727	(19.8%)	Out-of-home service provider	3,431*	(7.8%)
Friend/neighbor	8,433	(19.1%)	Victim	624*	(1.4%)
Police/sheriff	5,152	(11.7%)	Bank	247*	(0.6%)
Family member	2,877	(6.5%)	Public health department	0*	(0.0%)
In-home service Provider	5,435*	(12.3%)	Other	11,685	(26.5%)
Physician, nurse, clinic	5,076*	(11.5%)			
			Total	44,168**	

[1] Estimated number of substantiated incidents of self-neglect by type of reporter.
* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.
** Total number of substantiated incidents of self-neglect includes one or more reports by type of reporter.

Three Most Frequent Reporters for Each Maltreatment Type

The three most frequent reporters for each type of substantiated maltreatment with perpetrators (i.e., excluding self-neglect) are shown in Table 4-5.

Table 4-5. Three most frequent reporters for each maltreatment type[1]

Reporter	Neglect	Emotional/ Psychological	Financial/ material	Physical	Abandonment	Sexual abuse
Family member	24.3%		14.0%			
Hospital	16.1%	17.9%	14.2%	11.8%	56.2%*	
Friend/neighbor	14.1%*		15.0%		12.4%*	
Victim		17.8%				
In-home service		16.9%*		23.9%		100.0%
Police/sheriff				24.3%		
Physician, nurse, clinic					17.6%*	

[1] This table is based on estimated 70,942 substantiated reports of domestic elder abuse, where perpetrators maltreated elders in 1996. The substantiated reports of self-neglect are not included.
* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Neglect. Family members (24.3 percent), hospitals (16.1 percent), and friends/neighbors (14.1 percent) together accounted for more than half of the reports of neglect substantiated in 1996.

Emotional/psychological abuse. Hospitals (17.9 percent), victims (17.8 percent), and in-home service providers (16.9 percent) were the three most frequent reporters of substantiated emotional/psychological abuse.

Financial/material exploitation. Friends/neighbors (15.0 percent), hospitals (14.2 percent), and family members (14.0 percent) were the three most frequent reporters of substantiated financial/material exploitation.

Physical abuse. Police/sheriff's departments (24.3 percent), in-home service providers (23.9 percent), and hospitals (11.8 percent) were the most frequent reporters of the substantiated reports of physical abuse.

Abandonment. Hospitals alone accounted for 56.2 percent of the substantiated reports of abandonment. In addition, physicians, nurses, and clinics (17.6 percent) and friends/neighbors (12.4 percent) constituted the second and third most frequent reporters of the substantiated reports of abandonment, respectively.

Sexual abuse. In-home service providers reported all of the substantiated reports of sexual abuse.

Outcomes of Investigations for Different Types of Maltreatment

As noted earlier, the overall substantiation rate of domestic elder abuse and neglect reports was 48.7 percent in 1996. Table 4-6 on the next page presents the outcomes of investigations for different types of maltreatment. As the table shows, slightly more than three-fifths (61.9 percent) of the reports of physical abuse were substantiated after investigations, and this type of maltreatment marked the highest substantiation rate. Abandonment recorded the second highest substantiated rate, with somewhat over one-half (56.0 percent) of the reports of abandonment substantiated. Emotional/psychological abuse followed closely with the third highest substantiation rate (54.1 percent). Next, financial/material exploitation (44.5 percent) and neglect (41 percent) shared similar substantiation rates. The "other" category includes persons with unclassified abuse, some of whom died.

Table 4-6. Outcomes of investigations for different types of maltreatment[1]

Maltreatment type	Substantiated	Unsubstantiated	Still under Investigation	Other
Physical abuse	61.9%	33.6%	3.9%*	0.5%*
Abandonment	56.0%	36.8%	4.5%*	2.7%*
Emotional/psychological	54.1%	31.6%	12.9%	1.4%*
Financial/material	44.5%	35.8%	13.4%	6.3%*
Neglect	41.0%	44.6%	7.7%	6.1%
Sexual abuse	7.4%*	84.8%*	0.0%	7.8%*
Other	89.0%	11.0%	0.0%	0.0%

[1] Based on estimated 151,408 weighted reports of "abuse by others" category.

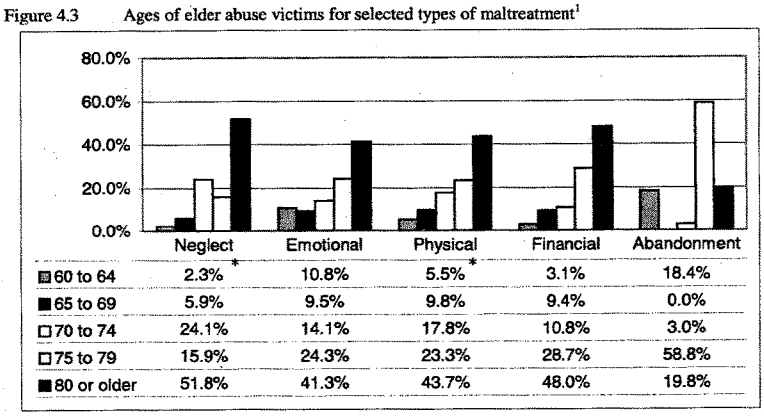
* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

4.3 Characteristics of Elderly Victims, Reported to APS

Ages of Elder Abuse Victims for Selected Types of Maltreatment

An analysis of substantiated reports of domestic elder abuse (where perpetrators were present) reveals information about the ages of victims of different types of maltreatment as shown in Figure 4-3. Nationwide in 1996, approximately 23% of elders 60 and over were age 60-64. This proportion declines gradually in each 5-year interval until ages 85+, representing only 8.5 percent of elders.

Figure 4.3 Ages of elder abuse victims for selected types of maltreatment[1]



	Neglect	Emotional	Physical	Financial	Abandonment
60 to 64	2.3% *	10.8%	5.5% *	3.1%	18.4%
65 to 69	5.9%	9.5%	9.8%	9.4%	0.0%
70 to 74	24.1%	14.1%	17.8%	10.8%	3.0%
75 to 79	15.9%	24.3%	23.3%	28.7%	58.8%
80 or older	51.8%	41.3%	43.7%	48.0%	19.8%
Percent of victims experiencing abuse	48.7%	35.4%	25.7%	29.9%	2.9%*

[1]Based on estimated 70,556 substantiated incidents of elder abuse. Some entries have missing values

* The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Neglect. More than one-half (51.8 percent) of the victims of neglect were 80 years of age and older in 1996, while almost one-fourth (24.1 percent) were between 70 and 74 years of age. Next, those who were between 75 and 79 years of age and those who were between 65 and 69 years of age accounted for 15.9 percent and 5.9 percent, respectively. Only 2.3 percent of neglect victims were between 60 and 64 years of age, but this has a wide confidence band.

Emotional/psychological abuse. Like neglect, the largest age group of victims of emotional/psychological abuse was elders who were 80 years of age and older (41.3 percent). In addition, almost one-fourth of the victims (24.3 percent) were between 75 and 79 years of age, and another one-seventh (14.1 percent) were between 70 and 74. Next, two other age groups each accounted for approximately one-tenth of the victims, as follows: the 60 to 64 group (10.8 percent) and the 65 to 69 group (9.5 percent).

Physical abuse. More than two-fifths (43.7 percent) of the victims of physical abuse were 80 years of age and older, while somewhat less than one-fourth (23.3 percent) were between 75 and 79 years of age. In addition, those who were between 70 and 74 and between 65 and 69 accounted for 17.8 percent and 9.8 percent, respectively. Only 5.5 percent of physical abuse victims were between 60 and 64 years old, but this has a wide confidence band.

Financial/material exploitation. Nearly one-half (48.0 percent) of the victims of financial/material exploitation were 80 years of age and older, while another 28.7 percent were between 75 and 79 years of age. Next, the elderly victims between 70 and 74 years of age and those between 65 and 69 accounted for 10.8 percent and 9.4 percent, respectively. Victims between 60 and 64 years old accounted for 3.1 percent of financial/material exploitation.

Abandonment. The victims of abandonment appear to be somewhat younger than the victims of other types of maltreatment, as the percentages in the table show; however, because most of these analytical findings have wide confidence bands it is not possible to confirm what the table suggests.

Incomes of Elder Abuse Victims

The APS data form asked for an estimate of the income of the maltreated elder and spouse (if any). For 71 percent of the elders, the APS worker was able to make this estimate, while in 29% percent of the reports, the worker was not able to do so. Due to the sensitivity of the issue and the focus on recording other important information, the APS worker did not attempt to gather additional information on income from other sources. An analysis of 53,667 substantiated reports of domestic elder abuse (excluding reports of self-neglect), for which income information was available, was performed. The data are shown in Table 4-7.

Table 4-7. Incomes of elder abuse victims for selected types of maltreatment[1]

Income category	Neglect	Emotional/ psychological	Physical abuse	Financial/ material	Abandonment
Less than $5,000	2.4%*	6.2%*	7.6%*	1.9%*	0.0%
$5,000-$9,999	66.8%	37.8%	49.5%	46.0%	96.1%
$10,000-$14,999	21.4%	31.0%	18.5%*	29.8%	3.9%*
15,000 and up	9.5%	25.0%	24.5%*	22.4%	0.0%
Total	100%	100%	100%	100%	100%
Percentage of victims experiencing abuse	51.8%	34.9%	23.9%	30.7%	3.5%*

[1] Based on an estimated 53,667 substantiated incidents of elder abuse. Income was missing for 28.8 percent of reports.

* The confidence band for this number is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Neglect. Two-thirds (66.8 percent) of the victims of neglect had annual incomes that were between $5,000 and $9,999, and another slightly more than one-fifth (21.4 percent) had annual incomes that fell between $10,000 and $14,999. In addition, the annual incomes of nearly one-tenth (9.5 percent) of neglect victims were $15,000 or higher.

Emotional/psychological abuse. Somewhat less than two-fifths (37.8 percent) of the victims had incomes that were between $5,000 and $9,999, while nearly one-third (31.0 percent) were those whose incomes fell between $10,000 and $14,999. In addition, exactly one-fourth (25.0 percent) of

the victims of emotional/psychological abuse had incomes of $15,000 or more. All of these findings were statistically significant.

Physical abuse. Like the victims of neglect and emotional/psychological abuse, the largest portion (49.5 percent) of physical abuse victims had incomes between $5,000 and $9,999. All other findings on victims' incomes in this maltreatment category had wide confidence bands.

Financial/material exploitation. Nearly one-half (46.0 percent) of the elder victims had incomes between $5,000 and $9,999, while almost one-third (29.8 percent) were those whose incomes fell between $10,000 and $14,999. In addition, slightly more than one-fifth (22.4 percent) of financial/ material exploitation victims had incomes that were $15,000 or more.

Abandonment. Almost all victims (96.1 percent) of abandonment had incomes that were between $5,000 and $9,999, and this finding was statistically significant ($p < .05$).

Sex of Elder Abuse Victims

Nationwide, females comprised 57.6 percent of the elderly population over 60 years old in 1996; males were 42.4 percent. Consequently, percentages of females over 58% in any category may indicate that they are over represented; lower proportions do not.[1]

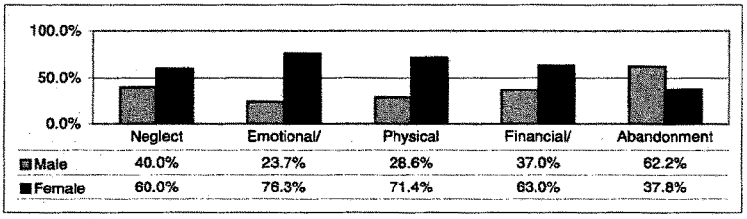
Neglect was the most frequent type of maltreatment, affecting 48.7 percent of all victims of elder abuse, as presented in Figure 4-4. More than one-half (60.0 percent) of the victims of neglect were female elders, while the remaining neglect victims (40.0 percent) were male elders. Next, emotional/psychological abuse was the second most frequent type, with 35.4 percent of the victims. Data show that about three-quarters (76.3 percent) of the victims of this type of maltreatment were female elders, while the remaining 23.7 percent were male elders. Emotional abuse is the category of abuse in which women are most heavily over-represented compared to their portion of the total elderly population (76.3 vs. 57.6 percent).

[1] Source: U.S. Bureau of the Census, Population Paper Listing 57.

Financial/material exploitation was the third most frequent type involving 30.2 percent of the victims. Female elders were victims of financial/material exploitation somewhat more than their proportion of the elder population (63.0 percent vs. 57.6 percent), while male elders were victims of exploitation 37.0 percent of the time. Physical abuse was the fourth most frequent type of elder maltreatment, accounting for 25.6 percent of all victims. Over two-thirds (71.4 percent) of the victims of physical abuse were female elders, while the remaining one-third (28.6 percent) were male elders. Physical abuse is the second category in which women are most over represented as victims compared to overall population statistics (71.4 vs. 57.6 percent).

Abandonment only accounted for 3.6 percent of all victims of abuse, but men were disproportionally represented compared with their proportion of the elderly population (62.2 vs. 42.4 percent).

Figure 4-4. Sex of elder abuse victims for selected types of maltreatment



	Neglect	Emotional/	Physical	Financial/	Abandonment
Male	40.0%	23.7%	28.6%	37.0%	62.2%
Female	60.0%	76.3%	71.4%	63.0%	37.8%
Percent of victims experiencing abuse	48.7%	35.4%	25.6%	30.2%	3.6%

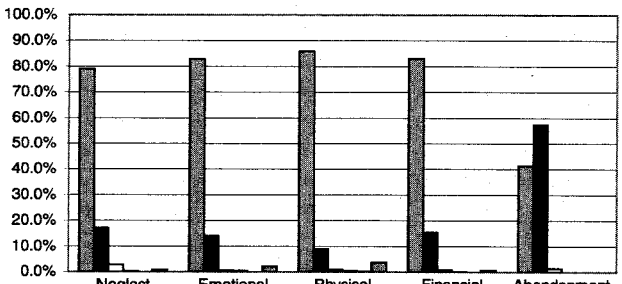
Race/Ethnicity of Elder Abuse Victims

Figure 4-5 on the next page presents the race/ethnicity of elder abuse victims for selected types of maltreatment. Nationwide in 1996 among those 60 and older, 84 percent were White, 8.3 percent were Black, 5.1 percent were Hispanic, 2.1 percent were Asian or Pacific Islander, and 0.4 percent were

American Indian or Alaskan Natives. White elders account for 79.0 percent of the victims of neglect, which was the most frequent type of maltreatment, affecting 48.7 percent of all abuse victims. Black elders accounted for 17.2 percent of neglect victims. Elders from other racial/ethnic groups, however, were underrepresented among the victims of neglect, as shown in Figure 4-5. Emotional/psychological abuse was the second most frequent type of maltreatment, with 35.5 percent of victims. Over four-fifths (82.8 percent) of the victims of this type of maltreatment where white elders, while 14.1 percent were black. Physical abuse was the third most frequent type of elder maltreatment, with 25.6 percent of abuse victims. White elders represented 86.0 percent of victims of physical abuse, while black elders comprised approximately 9.0 percent. Elders from other racial/ethnic categories were underrepresented.

Financial/material exploitation was the fourth most frequent type of maltreatment, with 30.2 percent of all elder abuse victims. The proportion of white victims of this type of elder maltreatment was 83.0 percent. Black elders comprised 15.4 percent of abuse victims of this type. Again, elders from other racial/ethnic groups were underrepresented among victims. Abandonment accounted for only 3.6 percent of all victims of elder abuse. Interestingly, the percentages of white victims (41.3 percent) and black victims (57.3 percent) for this type of abuse were very close, but with the black population significantly over-represented than its proportion of the elderly population (8.3 percent). In addition, abandonment was the only type of abuse for which the racial/ethnic breakdown data had wide confidence bands in every category.

Figure 4-5. Race/ethnicity of elder abuse victims for selected types of maltreatment



	Neglect	Emotional	Physical	Financial	Abandonment
White	79.0%	82.8%	86.0%	83.0%	41.3%
Black	17.2%	14.1%	9.0% *	15.4% *	57.3% *
Hispanic	2.7% *	0.6% *	0.9% *	0.8% *	1.4% *
Asian/Pacific Islander	0.3%	0.4%	0.4%	0.2%	0.0%
Am. Indian/ Alaskan Native	0.0%	0.0%	0.2%	0.0%	0.0%
Other/Unknown	0.8%	2.1%	3.6%	0.6%	0.0%
Percent of victims experiencing abuse	48.6%	35.5%	25.6%	30.2%	3.6%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Physical and Mental Frailty

Elderly people with physical and mental frailties are more likely to be vulnerable to abusive behavior. Nationwide, approximately 15 percent of older people are depressed at any one time; 10 percent suffer from some form of dementia, and approximately 14 percent have difficulties with one or more activities of daily living.[2] While rates of depression remain fairly stable across the adult life span, physical and mental frailties increase, especially among those over the age of 85. It has long been suspected that these impairments are more common among elders who are victims of abuse and neglect, although no such estimates are available. The NEAIS obtained estimates of these frailty measures.

Self-Care Ability. The data suggest that a large proportion—about three out of four--of elder abuse and neglect victims suffer from physical frailty. Approximately one half (47.9 percent) of the substantiated incidents of abuse and neglect involved elderly persons who were not physically able to care for themselves. Another 28.7 percent of elders were only somewhat able to care for themselves, while only about one in five (22.9 percent) elders were judged able to care for themselves, as shown below.

Table 4-8. Ability to Care for Self Physically (APS)[1]

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Able to Care for Self	34,009	47.9
Somewhat Able to Care for Self	20,380	28.7
Able to Care for Self	16,259	22.9
Don't Know, Cannot Determine	294*	0.4*

[1]Based on an estimated 70,942 substantiated cases of abuse, excluding self-neglecting elders.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion. Six out of 10 elder abuse victims experienced some degree of confusion, which represents a high degree of mental impairment among this group of elders. Approximately one third (31.6 percent) of these elders were very confused or disoriented. Another more than one quarter (27.9 percent) was sometimes confused, while 38.7 percent were not confused, as shown in Table 4-9 on the next page.

[2] Disability in the United States: Prevalence and causes, 1992, U.S. Department of Education Cases and Rehabilitative Services, July 1996, Table 3, p.75; and U.S. Census Bureau Report on Disability Status of Persons 65 Years and Older in 1994-95, November 1997.

Table 4-9. Confusion (APS)[1]

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Confused	27,425	38.7
Sometimes Confused	19,820	27.9
Very Confused, Disoriented	22,417	31.6
Don't Know, Cannot Determine	1,279*	1.8*

[1]Based on an estimated 70,942 substantiated cases of abuse, excluding self-neglecting elders.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression. The data on depression among victims of abuse and neglect are less conclusive, but do suggest a somewhat smaller problem than self-care ability and confusion. In 21.1 percent of the incidents of substantiated elder abuse and neglect, the APS agency was not able to determine whether depression was present or not. About 45 percent of the total group had some degree of depression (6.3 percent severe and 37.3 percent moderate) and about one third (35.4 percent) were not depressed.

Table 4-10 Depression (APS)[1]

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Depressed	25,051	35.4
Moderate Depression	26,407	37.3
Severe Depression	4,424	6.3
Don't Know, Cannot Determine	14,915	21.1

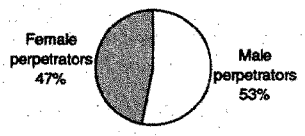
[1]Based on an estimated 70,797 substantiated cases of abuse, excluding self-neglecting elders.

4.3.1 Characteristics of Perpetrators of Domestic Elder Abuse

Sex of Perpetrators of Elder Abuse

An analysis of the substantiated incidents of elder abuse reveals that 52.5 percent of the incidents involved male perpetrators, while the remaining 47.5 percent were female perpetrators, as shown below in Figure 4-6:

Figure 4-6. Sex of perpetrators of elder abuse



Total: 59,979; male perpetrators: 31,499; female perpetrators: 28,450.

Neglect was the most frequent type of maltreatment committed, as presented in Table 4-11. Slightly more than one-half (52.4 percent) of the perpetrators of neglect were female, while the remaining perpetrators (47.6 percent) were male. Emotional/psychological abuse was the second most frequent type of maltreatment. Data show that just over one-half of the perpetrators were male (60.1 percent) while the remainder were female (39.9 percent). Financial/material exploitation was the next most frequent type of abuse perpetrated. Perpetrators of this type of abuse were approximately 60 percent male, while the remaining were females. Almost two-thirds of the perpetrators of physical abuse were males (62.6 percent) while the remaining one-third (37.5 percent) were females. Abandonment was predominately perpetrated by males (83.4%) while the remainder was females. Interestingly, neglect is the only type of maltreatment that was committed with approximately equal frequency by females and males. For the remainder of the maltreatment types, males clearly were more likely to commit abuse and neglect.

Table 4-11. Sex of perpetrators of domestic elder abuse for selected types of maltreatment[1]

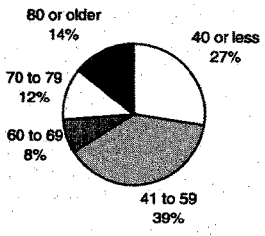
Sex	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
Male	47.6%	60.1%	62.6%	59.0%	83.4%
Female	52.4%	39.9%	37.4%	41.0%	16.6%*
Total	100%	100%	100%	100%	100%
Percentage of victims experiencing abuse.	47.4%	35.8%	27.0%	30.8%	4.2%*

[1] Based on an estimated 59,672 substantiated incidents of elder abuse. Some entries have missing values.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Ages of Perpetrators of Domestic Elder Abuse

The distribution of perpetrators of domestic abuse by age is shown in Figure 4-7 on the next page. The majority of elder abuse perpetrators were younger than 60 years of age. Approximately two-thirds (65.8 percent) of the perpetrators of elder abuse were persons who were 59 years old and younger, while approximately 25 percent of the perpetrators were persons who were 70 and older. In addition, slightly less than 10 percent of the perpetrators were between the ages of 60 and 69.

Figure 4-7. Ages of perpetrators of domestic elder abuse



The ages of the perpetrators of domestic elder abuse reveal an interesting relationship. The majority of perpetrators, as shown above, are in the youngest age groups; however, there is a relatively large proportion of perpetrators in the oldest age group. This relationship becomes more visible when the ages of perpetrators are examined for selected types of maltreatment. Table 4-12 presents this relationship.

Table 4-12. Age of perpetrators of domestic elder abuse for selected types of maltreatment[1]

Age	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
40 and under	20.1%	34.3%	20.3%	45.1%	1.4%*
41 to 59	34.2%	42.4%	41.9%	39.5%	67.5%
60 to 69	9.2%*	10.4%*	8.1%*	3.4%*	0.0%*
70 to 79	18.9%*	4.8%*	12.4%*	1.6%*	1.5%*
80/older	17.7%	8.2%	17.4%*	10.4%*	29.6%*
Total	100%	100%	100%	100%	100%
Percentage of victims experiencing abuse	48.5%	34.8%	26.9%*	30.2%*	4.3%*

[1] Based on an estimated 57,933 substantiated incidents of elder abuse. Some entries have missing values.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

For the majority of maltreatment types, the perpetrators are concentrated in two age groups--those younger than age 40 and those older than age 80. However, when the specific age groups are examined by type of abuse, no two types follow the same pattern. Perpetrators of neglect were relatively evenly distributed across all age groups. Approximately one-fifth (20.1 percent) of the perpetrators of neglect were younger than age 40, while one-third (34.2 percent) of the perpetrators were between the ages of 41 and 59. It is worth noting that confidence bands are such that values may not be much greater than zero for all except these two age groups. A small proportion (9.2 percent) of the perpetrators of neglect was between the ages of 60 and 69. Further, the age groups of 70 to 79 and 80 and older each had nearly one-fifth of the perpetrators (70 to 79, with 18.9 percent; 80 and older with 17.7 percent).

Perpetrators of emotional/psychological abuse were concentrated among the younger age groups. Approximately one-third (34.3 percent) of the perpetrators of emotional/psychological abuse were younger than age 40 and 42.4 percent of the perpetrators were between the ages of 41 and 59. Again, it is only the younger age groups for which the data are significant. A small proportion (10.4 percent) of the perpetrators of emotional/psychological abuse was between the ages of 60 and 69. The proportions of perpetrators of emotional/psychological abuse in other age categories were very small. Of the perpetrators of physical abuse, 41.9 percent were between the ages of 41 and 59. An additional 20.3 percent were in the youngest age category—younger than 40. A small proportion of perpetrators of physical abuse was between the ages of 60 and 69, while 12.4 percent of the perpetrators were between the ages of 70 and 79. Last, 17.4 percent of the perpetrators of physical abuse were older than 80 years of age.

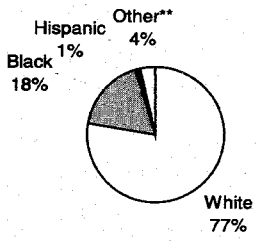
Perpetrators of financial/material exploitation were generally concentrated in the youngest age categories. Approximately 45 percent of the perpetrators were below the age of 40, while an additional 39.5 percent of the perpetrators were between the ages of 41 and 59. In addition, 3.5 percent of the perpetrators of financial/material exploitation were between the ages of 60 and 69, and 1.6 percent of the perpetrators were between the ages of 70 and 79. Last, 10.4 of the perpetrators were older than 80 years of age. For the older age groups of perpetrators, those older than 60, confidence bands are wide and values may not differ significantly from zero. Perpetrators of abandonment accounted for only 4.3

percent of all perpetrators of elder abuse. Approximately two-thirds (67.5 percent) of the abandonment perpetrators were between the ages of 41 and 59, while the remainder were older than 80 years of age. The age categories of less than 40 and 70 to 79 each comprised about 1.5 percent of the perpetrators of abandonment.

Race/Ethnicity of Perpetrators of Domestic Elder Abuse

Approximately three-fourths (77.4 percent) of elder abuse perpetrators in the substantiated cases in 1996 were white, and somewhat less than one-fifth (17.9 percent) were black, as shown below in Figure 4-8; however, only small percentages of persons from other racial/ethnic groups were represented among the perpetrators of elder maltreatment.

Figure 4-8. Race/ethnicity of perpetrators of domestic elder abuse*



*Based on an estimated 44,168 substantiated incidents of elder abuse.
**Includes American Indian/Alaskan Native, Asian/Pacific Islander, and other/unknown.

Table 4-13 on the next page presents the race/ethnicity of perpetrators of domestic elder abuse for selected types of maltreatment. White perpetrators account for 76.6 percent of the perpetrators of neglect, while 20.4 percent of the perpetrators of neglect were black. Percentages of perpetrators of neglect from other racial/ethnic groups were very small, as shown in the table.

Table 4-13. Race/ethnicity of perpetrators of domestic elder abuse for selected types of maltreatment[1]

Race/ Ethnicity	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
White	76.6%	77.3%	83.0%	77.1%	34.4%*
Black	20.4%	17.8%*	11.3%*	18.7%*	59.0%*
Hispanic	0.8%*	0.8%*	1.4%*	0.8%*	1.4%*
Asian/Pacific Islander	0.3%*	0.5%*	0.3%*	0.2%*	0.0%*
Am. Indian/ Alaskan Native	0.1%*	0.0%*	0.1%*	1.5%*	0.0%*
Other/unknown	1.9%*	3.6%*	3.8%*	1.7%*	5.2%*
Percentage of total perpetrators	47.5%	35.4%	26.9%	31.0%	4.2%*

[1] Based on an estimated 59,517 substantiated incidents of elder abuse. Some entries have missing values.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

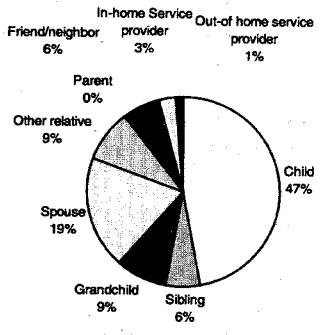
Emotional/psychological abuse was the second most frequent type of elder maltreatment, with 35.4 percent of perpetrators involved with it. Over three-quarters (77.3 percent) of the perpetrators of this type of maltreatment were white, while 17.8 percent were black. Once again, percentages of perpetrators of emotional/psychological abuse from other racial/ethnic groups were very small. Financial/material exploitation was the next most frequent type of maltreatment under this analysis. The proportion of white perpetrators in this type of elder maltreatment was 77.1 percent. About 19 percent of the perpetrators of emotional/psychological abuse were black, and the perpetrators from other racial/ethnic populations were greatly underrepresented among the perpetrators of financial/material exploitation.

Of the perpetrators of physical abuse, 83.0 percent were white, while black perpetrators accounted for 11.3 percent. The remaining racial/ethnic groups all comprised less than 5 percent of the perpetrators. Perpetrators of abandonment accounted for only 4.2 percent of all perpetrators of elder abuse. Just over one-half (59.0 percent) of the abandonment perpetrators were black, while one-third of the perpetrators (34.4 percent) were white. Hispanic elders accounted for 1.4 percent of the victims of abandonment. Because of the high standard errors, the data overall should be regarded as tentative.

Relationship of Perpetrators to Victims of Domestic Elder Abuse

The largest category of perpetrators (47.3 percent) of the substantiated incidents of elder abuse was the adult children of the victims. Spouses represented the second largest group of perpetrators comprising 19.3 percent. In addition, other relatives were the third most frequent category of perpetrators (8.8 percent), with grandchildren following closely (8.6 percent).

Figure 4-9. Relationship of perpetrators to victims of domestic abuse



When the relationship of perpetrator of domestic elder abuse to victim is examined by type of abuse, it is apparent that children are the most likely perpetrators of all types of maltreatment. Neglect is the most frequent type of maltreatment, and children accounted for 43.2 percent of the perpetrators. Spouses were the next category most likely to neglect victims (30.3 percent). Siblings and grandchildren each represented about 9 percent of the perpetrators of neglect. The remainder of the categories of perpetrators all represented less than 5 percent of the perpetrators of neglect.

Perpetrators of emotional/psychological abuse were again most likely to be the children of the victim (53.9 percent) followed by the victim's spouse (12.6 percent). Other relatives and friends/neighbors were almost equally as likely to be perpetrators of emotional/psychological abuse (11.7 and 10.3 percent respectively). Grandchildren comprised 8.9 percent of the perpetrators of

emotional/psychological abuse. The remainder of the perpetrators all represented less than 1 percent. Physical abuse was most likely to be committed by adult children (48.6 percent) of the victims of domestic elder abuse. The victim's spouse was the next most likely perpetrator of abuse (23.4 percent), and friends/neighbors represented one-tenth of the perpetrators of physical abuse (10.2 percent).

Perpetrators of financial/material exploitation were, again, most likely to be the adult children (60.4 percent). The victim's other relative, grandchild, and friends/neighbors were almost equally as likely to be perpetrators of financial/material exploitation (9.7 percent, 9.2 percent, and 8.7 percent respectively). The remainder of perpetrators all represented less than 5 percent of the perpetrators of neglect. Perpetrators of abandonment were related to victims of domestic elder abuse in four ways. The perpetrators were the adult children (79.5 percent), in-home service providers (7.4 percent), grandchildren (6.6 percent), and other relatives (6.4 percent). The confidence bands for estimates of most categories of perpetrators (other than children) were too wide to be confident that they are much greater than zero, however. Table 4-14 summarizes these findings.

Table 4-14. Relationship of perpetrators to victims of domestic elder abuse for selected types of maltreatment[1]

Income Category	Neglect	Emotional/ Psychological	Physical abuse	Financial/ material	Abandonment
Child	43.2%	53.9%	48.6%	60.4%	79.5%*
Sibling	8.7%*	1.8%*	4.7%*	1.3%*	0.0%
Grandchild	8.8%*	8.9%*	5.6%*	9.2%*	6.6%*
Parent	0.5%*	0.0%*	0.8%*	0.0%*	0.0%*
Spouse	30.3%*	12.6%	23.4%	4.9%*	6.4%*
Other relative	3.7%*	11.7%*	5.4%*	9.7%*	0.0%*
Friend/neighbor	0.6%*	10.3%	10.2%	8.7%*	0.0%*
In-home service provider	4.2%*	0.9%*	0.2%*	1.7%*	7.4%*
Out-of-home service provider	0.0%*	0.0%*	1.2%*	4.1%*	0.0%*
Percentage of total perpetrators	47.8%	36.1%	26.9%	30.4%	4.2%*

[1] Based on an estimated 59,218 substantiated incidents of elder abuse. Some entries have missing values.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

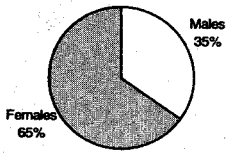
The nature of caregiving relationships among family members is an important and complex issue with regard to the perpetrators of elder abuse and neglect. The NEAIS was not able to explore this issue, however, due to the type and scope of data being gathered by the APS workers and sentinels. While a broad range of information was collected through interviews and observations, more in-depth interviews with both the abused or neglected elders and their family members and caregivers, which are necessary to appropriately explore caregiving relationships, were not included in the design of the NEAIS. This is certainly an area worthy of a future study that is specifically designed and conducted to gather such interview and case study data.

4.3.2 Characteristics of Self-Neglecting Elders

Sex of Self-Neglecting Elders

The data on the substantiated incidents of self-neglect reveal that approximately two-thirds of the self-neglecting elders were female, while one-third were male, as shown below in Figure 4-10. This is somewhat higher than the 58 percent representation of females in the total elderly population.

Figure 4-10. Sex of self-neglecting elders*



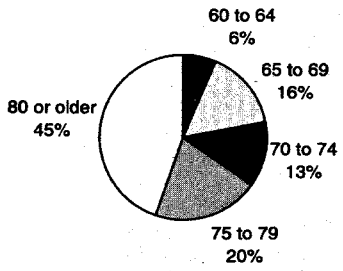
Males, 15,341; females, 28,827

*Based on an estimated 44,168 substantiated incidents of elder abuse.

Age of Self-Neglecting Elders

The largest proportions of self-neglecting elders are in the oldest age category (80 and older), as the data on the substantiated incidents of self-neglect indicate. As shown in Figure 4-11, slightly less than one-half (44.7 percent) of the self-neglecting elders were age 80 and older, compared with only six percent who were between 60 and 64 years old. This disparity is strengthened when the age breakdown of self-neglecting elders is compared with the age breakdown of the elderly population in general. For each of the first three age categories (i.e., 60-64, 65-69, and 70-74), self-neglecting elders are under-represented. For example, while 60 to 64 year olds comprise 23 percent of the elderly population, they are only 6 percent of self-neglecting elders. This pattern of under-representation changes with the 75 to 79 year olds, which make up 16 percent of the elderly population, but are 20 percent of self-neglecting elders. The starkest, yet predictable finding was that elders aged 80 or older, who comprise 19 percent of the elder population, make-up 45 percent of self-neglecting elders. The older an elderly person gets, the more likely it is that she/he will be self-neglecting.

Figure 4-11. Age of self-neglecting elders*

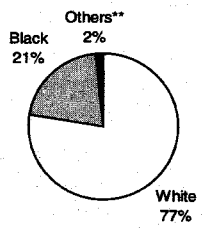


*Based on an estimated 44,168 substantiated incidents of elder abuse.

Race/Ethnicity of Self-Neglecting Elders

Figure 4-12 shows that self-neglecting elders fell predominately into three racial/ethnic groups. Approximately three-quarters (77.4 percent) of the self-neglecting elders were white. Black self-neglecting elders accounted for 20.9 percent of this population, while American Indians/Alaskan Natives and others accounted for 1.7 percent. It should be noted that, because of the large standard errors for this variable, the findings presented below should be regarded as tentative.

Figure 4-12. Race/ethnicity of self-neglecting elders*



*Based on the 44,168 estimated substantiated incidents of elder abuse for which the necessary information was available.
**Includes American Indian/Alaskan Native, 1.1%; other/unknown, 0.6%; Hispanic and Asian/Pacific Islander categories were not represented

Self Care Ability of Self-Neglecting Elders

An extremely high proportion (93.4 percent) of elders with substantiated self-neglect has some difficulty caring for themselves, with one-third overall not being able to care for themselves. Six out of ten were only somewhat able to care for themselves. Only five percent were judged as able to care for themselves. These data, shown in Table 4-15, strongly confirm the extremely high, almost totally overlapping, relationship between self-neglect and inability to care for one self.

Table 4-15. Self-Neglecting Elders -- Ability to Care for Self Physically (APS)[1]

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Able to Care for Self	14,925	34.3
Somewhat Able to Care for Self	25,708	59.0
Able to Care for Self	2,149	4.9*
Don't Know, Cannot Determine	762*	1.8*

[1]This table is based on an estimated 43,544 substantiated incidents of self-neglect. Some entries have missing values.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion of Self-Neglecting Elders

Three quarters of substantiated self-neglecting elders suffer from some degree of confusion. Three out of ten such elders are very confused or disoriented, while another 45.4 percent are sometimes confused. Approximately one quarter (23.6 percent) is not confused and appears to be aware of their actions.

Table 4-16. Self-Neglecting Elders -- Confusion (APS)[1]

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Confused	9,815*	23.6
Sometimes Confused	18,890	45.4
Very Confused, Disoriented	12,455	29.9
Don't Know, Cannot Determine	498*	1.2*

[1]This table is based on an estimated 41,659 substantiated incidents of self-neglect. Some entries have missing values.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression of Self-Neglecting Elders

In 28.4 percent of the incidents of substantiated self-neglect, the APS agency was not able to determine whether depression was present or not. Over half (53.9 percent) of the self-neglecting elders were assessed to not be depressed, while 14.7 percent were judged as moderately depressed. Only a relatively small proportion (3.1 percent) was severely depressed.

Table 4-17. Self-Neglecting Elders – Depression (APS)[1]

Characteristics of Maltreated Elders	Number of Estimated Reports	Percentage
Not Depressed	23,387	53.9
Moderate Depression	6,366	14.7
Severe Depression	1,333*	3.1*
Don't Know, Cannot Determine	12,335	28.4

[1]This table is based on an estimated 43,421 substantiated incidents of self-neglect. Some entries have missing values.
*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

4.4 Abuse and Neglect Reported by Sentinel Agencies

Characteristics of Elderly Victims of Non-Reported Abuse and Neglect

Overall, sentinels submitted 201 data forms describing incidents they observed during their daily work activities. Sentinels were carefully trained to complete forms only for events that met study definitions and conformed to specific signs and symptoms. Of these 201 incidents, two different sentinels reported four, and 57 were also reported to APS agencies. The duplicate incidents were assigned to APS agencies leaving 140 incidents reported only by sentinels. These 140 reports were weighted to provide national, annualized estimates of unreported abuse, neglect, and/or self-neglect which extrapolated to 435,901 new unduplicated incidents during 1996.

The following tables present data on types of abuse and neglect by age, minority group status, gender, and according to physical and mental frailty for incidents reported by the 1,158 sentinels in the study counties. Although the weighted numbers estimated from the forms that were collected are relatively large, they are based on a small number of actual reports. Consequently, only two or three descriptive categories are presented in the tables below. These small numbers also result in large standard errors for many values.

Age. Of the three age categories shown in Table 4-18, the oldest old (those over 80) were most likely to suffer from neglect. Sixty percent of the neglected elderly were 80 years or older compared to their being 19 percent of the total elderly population (i.e., four times their proportion of the total elderly population). Elders aged 80 and over also are over represented in self-neglect and financial exploitation. Several forms of abuse and neglect were more commonly experienced by the youngest elderly, aged 60 to

70. Physical abuse was particularly noteworthy, with 60-70 year olds comprising almost 70 percent despite being only approximately 45 percent of the elderly population. This age group is also slightly over represented in financial and emotional abuse. Given the large standard errors, however, these estimates should be considered tentative.

Table 4-18. Type of abuse by age: Percentages (Sentinel)

	Age			
Type of abuse	60-70	71-80	80+	Total
Physical	69.0*	10.1*	20.1*	100%
Emotional	47.2*	30.2	21.9	100%
Financial	49.3*	24.3*	25.3*	100%
Neglect	23.5*	25.6*	60.0	100%
Abandonment	.88*	39.1*	6.0*	100%
Self-neglect	35.7	28.9*	35.5	100%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Race/Ethnicity. The data do not show that rates of unreported abuse and neglect are higher in nonminority communities than among minorities. Blacks, Hispanics, and other minorities were combined into one category in Table 4-19 (on the next page) because of the small numbers of reports received about these groups. Altogether, across the counties in the sample, the Census Bureau classified 15.5 percent of the population as minority in 1990. Given the relatively high rate of increase in minorities throughout the United States since 1990, there is no reason to expect this average percentage to have declined substantially in the study counties or, indeed, at all. If minorities were represented proportionately in sentinel reports of abuse and neglect, rates of abuse across all categories should be close to 15.5. For all five types of abuse and neglect with known perpetrators, the proportion of minority victims identified by sentinels ranged between 3.6 and 7.6 percent, whereas the proportion of nonminority victims was always greater than 90 percent. Figures for nonminorities have small confidence bands.

Table 4-19. Type of abuse, by minority status: Percentages (Sentinel)

Type of Abuse	Minority status	
	Minority	Nonminority
Physical	3.9*	96.1
Emotional	4.1*	95.9
Financial	7.6*	92.4
Neglect	3.6*	96.4
Abandonment	5.4*	94.6
Self-neglect	12.1*	88.1

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Gender. When the data are examined by category of abuse, a majority of victims of all types of abuse were women. Over 80 percent of the physical abuse recognized by sentinels, over 90 percent of the financial abuse, over 70 percent of the emotional/psychological abuse, and over 65 percent of neglect cases were found among women rather than men, as shown in Table 4-20. This is a high level of over-representation by women, who comprised only 58 percent of the total elderly population in 1996. Although rates of abandonment have wide confidence bands, they also show higher proportions of women than men do. Cases of self-neglect are more nearly divided exactly as men and women comprised the total elderly population.

Table 4-20. Type of abuse, by gender: Percentages (Sentinel)

Type of abuse	Gender		
	Female	Male	Total
Physical	83.2	16.9*	100%
Emotional	72.7	27.3	100%
Financial	91.8	8.2*	100%
Neglect	67.2	32.8	100%
Abandonment	65.4*	34.6*	100%
Self-neglect	57.0	43.0	100%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Income. The sentinel data form asked for an estimate of the income of the maltreated elder and spouse (if any). Sentinels had sufficient information to make this estimate in only a small number of reports, and therefore reliable national estimates could not be made. Sentinels were reporting only initial information and observations, as compared with more in-depth information gathered during an APS worker's investigation of abuse or neglect, which allowed APS workers to estimate income 71 percent of the time. Sentinels also had less experience than APS reporters did in making income estimates based on partial information, for example about Social Security benefits and other complex pension arrangements. It is not surprising, therefore, that income estimates from sentinels were not feasible. The economic condition of victims of elder abuse and neglect is an important issue and is worthy of future research that will specifically gather reliable income and financial resource data.

Physical and Mental Frailty

Sentinel reporters were trained to identify the level of depression and confusion of elderly victims, where appropriate, as well as their ability to care for themselves. Many professionals in contact with elderly clients are accustomed to paying attention to limitations in abilities to perform activities of daily living, and to look for signs of confusion and depression. Along any particular dimension of frailty, people may not show evidence of symptoms at all times. It may be necessary to observe a person for a considerable period of time or to ask specific questions to determine the presence of symptoms. Sentinels were asked only to report on what they observed, and not to ask probing questions. They also were asked to indicate when they were not able to determine the presence of symptoms by answering "don't know."

Depression is probably the most difficult of the three characteristics to diagnose by observation only, since a relatively long term, underlying mood may not be manifested in outward behavior. It has been reported that the proportion of elders believed to be depressed ranges from 9.6 to 12.6 percent.[3] Not surprisingly, approximately a third of the time the sentinels in our study were unable to judge whether the person they suspected to be abused seemed depressed.

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[3] Cynthia Thomas, et al., "Depressive Symptoms and Mortality in Elderly People," Journal of Gerontology, Social Sciences 1992, Vol. 47, Number 2, 580-87.

Self-Care Ability. Sentinels were given three choices of descriptors of an alleged victim's ability to care for himself. Persons could be described as "able to care for self," "somewhat able to care for self," or "not able to care for self." Sentinels were unable to make one of these choices 14 percent of the time. Half of all persons (51.9 percent) were described either as somewhat able or not able to take care of physical needs. Only a third of all persons appeared to be able to take care of themselves (33.8 percent). See table 4-21. This suggests a high rate of physical frailty among these victims.

Table 4-21. Ability to Care for Self Physically (Sentinel)

Characteristics of Maltreated Elder	Number of Estimated Report	Percentages
Not Able To Care For Self	81,981	18.8%*
Somewhat Able To Care For Self	144,432	33.1%
Able to Care For Self	147,446	33.8%*
Don't Know, Cannot Determine	62,042	14.2%*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion. Brief mental impairment tests often are required to assess whether elderly people are able to perform mental activities at an appropriate level of competence. Older persons often can compensate for minor difficulties, or conceal problems in the early stages of impairment. Furthermore, mental impairments may not manifest themselves in all situations. Sentinels were asked to look for "confusion" rather than to diagnose an "impairment," since such a diagnosis would require testing. Sentinels were unable to assess whether or not persons were confused for only 18 percent of their observations. Nearly half (45.5 percent) of the persons they reported to us were described as "sometimes" or "very" confused. Only a third of the time (36.6 percent) did sentinels indicate that no confusion appeared to be present. (See Table 4-22 on the next page.) This represents an extremely high rate of potential mental impairment among this group of older people.

Table 4-22. Confusion (Sentinel)

Characteristics of Maltreated Elder	Number of Estimated Reports	Percentages
Not Confused	159,498*	36.6%
Sometimes Confused	165,232	37.9%
Very Confused, Disoriented	32,777	7.5%
Don't Know, Cannot Determine	78,394	18.0%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression. Sentinels were asked to observe whether the victims they reported to us appeared to be experiencing "severe depression," "moderate depression," or seemed "not depressed." As noted above, they were unable to determine whether depression was present in a third of the cases they saw. Nearly half of the elders (46.9 percent), however, seemed to be depressed to some extent (46.9 percent). Only 20 percent showed no signs of depression in the presence of the sentinel. See Table 4-23.

Table 4-23. Depression (Sentinel)

Characteristics of Maltreated Elder	Number of Estimated Reports	Percentage
Not Depressed	87,315	20.0%
Moderate Depression	180,278	41.4%
Severe Depression	24,036*	5.5%*
Don't Know, Cannot Determine	144,273	33.1%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Signs of Physical and Mental Frailty for Specific Forms of Abuse and Neglect

Tables 4-24 through 4-26 present information on self care ability, confusion and depression across all six categories of reported abuse and neglect. Because the number of cases in any one category is small, resulting in large standard errors, these estimates need to be considered altogether according to

the patterns they display, rather than by each single measure. The numbers are discussed here according to whether there is any apparent indication of frailty, or not, for each type of abuse or neglect.

Self-Care Ability. Cases of self neglect are often difficult to classify, since, strictly speaking, an individual believed to have the physical and mental resources to manage his own personal care was not defined by the study as self-neglectful. Persons experiencing neglect, abandonment, and self-neglect were most often reported as not able or only somewhat able to take care of themselves. Very few of those classified as self-neglecting were reported to be physically independent (11.2 percent). Two-thirds of those alleged to have been physically abused were thought to have the ability to care for themselves, suggesting that such abuse is not just perpetrated on the very weakest persons. Somewhat around half of those facing financial or emotional abuse were considered able to take physical care of themselves. Standard errors are large for most categories. See Table 4-24.

Table 4-24. Ability to Care for Self Physically by Type of Abuse (Sentinel)

Forms of Abuse	Not Able to Care For Self	Somewhat Able To Care For Self	Able to Care for Self	Don't Know, Cannot Determine
Physical	16.1%*	12.6%*	67.6%*	3.8%*
Emotional	17.8%*	26.3%	40.7%*	15.3%*
Financial	23.5%*	19.9%*	52.9%*	3.8%*
Neglect	47.7%*	26.8%*	1.4%*	24.2%*
Abandonment	64.9%*	35.1%*	0.0%	0.0%
Self-Neglect	26.2%*	60.2%	11.2%*	2.4%*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Confusion. Confusion was most common among those who experienced neglect, abandonment, and self-neglect. Very few of those who were abandoned were free from confusion (only 1.3 percent). Only 7 percent of those reported to have been neglected, and 20 percent of persons who were victims of self-neglect evidenced no signs of confusion. Most of those who were reported to have been physically abused (66.8 percent) did not appear to be confused. Half of those subjected to financial

abuse, however, were thought to be confused at least some of the time. Standard errors for most table values are large. (See Table 4-25).

Table 4-25. Confusion by Type of Abuse (Sentinel)

Forms of Abuse	Not Confused	Sometimes Confused	Very Confused, Disoriented	Don't Know, Cannot Determine
Physical	66.8%*	10.0%*	14.6%*	8.7%*
Emotional	43.8%*	34.5%*	3.3%*	18.5%*
Financial	51.7%*	33.4%*	11.9%*	3.1%*
Neglect	7.1%*	46.8%	21.7%*	24.4%*
Abandonment	1.3%*	34.6%*	64.0%*	0.0%
Self-Neglect	19.5%	68.8%	2.1%*	9.6%*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Depression. Rates of signs and symptoms of depression were high across all forms of abuse and neglect, but standard errors were large for all except two categories. Among those who were abandoned, only 1.3 percent was seen as moderately depressed; however, no determination could be made as to depression status for nearly two-thirds of them. Except for abandonment, between 35 and 70 percent of alleged victims of abuse were believed to show signs of moderate or severe depression. In only 11 – 35 percent of instances were sentinels able to say that they did not think the victim of abuse was depressed. (See Table 4-26).

Table 4-26. Depression by Type of Abuse (Sentinel)

Forms of Abuse	Not Depressed	Moderate Depression	Severe Depression	Don't Know, Cannot Determine
Physical	11.1%*	62.9%*	0.8%*	25.2%*
Emotional	22.7%	46.1%*	7.0%*	24.2%*
Financial	10.8%*	61.4%*	8.5%*	19.3%*
Neglect	21.0%*	20.3%*	12.4%*	46.3%
Abandonment	34.6%*	1.3%*	0.0%	64.0%
Self-Neglect	18.5%*	52.8%	4.6%*	24.0%

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Characteristics of Perpetrators of Abuse and Neglect Reported by Sentinels

Approximately 85 percent of incidents of abuse and neglect reported by sentinels had one or more alleged perpetrators (10.4 percent had more than one perpetrator). Sentinels were asked to supply information about the sex, age, and ethnicity of the person(s) alleged to have committed the abuse, as well as the relationship to the victim. Sentinels did not always have complete information about the suspected perpetrator. They were most likely to be able to identify the relationship of the person alleged as the abuser, which they did for all but .6 percent of the instances, and least likely to report age (10.8 percent), according to the weighted numbers. Tables 4-27 and 4-28 present information about the characteristics of these alleged perpetrators. Although standard errors are large so that many absolute values of percentages are not reliable, the rank order of characteristics is of interest.

As shown in Table 4-27, family members accounted for most of the suspected perpetrators, with spouses (30.3 percent), children (30.8 percent), and parents (24.0 percent) representing 85 percent. Although the percentage of alleged parental perpetrators is relatively large, at 24 percent, the confidence band is wide, indicating that this estimate is unreliable. Table 4-28 shows that only 29 percent of perpetrators with known ages (11 percent of ages are unknown) were at least 60 years old and over. (This percentage also has a wide confidence band.) Since parents are likely to be at least 15 years older than their children are, these numbers together suggest that very few parents are likely to have perpetrated abuse or neglect.

In small proportions of cases, siblings and grandchildren were involved. Friends, neighbors, and service providers in the home were believed to be responsible 10 percent of the time. Data reported for most individual categories of people alleged as abusers have large standard errors. Children, however, accounted for a significant proportion of alleged abusers, at 30.8 percent.

Table 4-27. Relationship of alleged perpetrators of abuse for sentinel data

Relationship	Percentage
Child	30.8
Spouse	30.3*
Parent	24.0*
Friend/Neighbor	5.7*
Grandchild	4.2*
Service Provider	4.2*
Sibling	.3*
Not determined	.6*

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

The most common age range for perpetrators was the middle years (ages 36 to 59), which accounted for 45.4 percent of perpetrators, with close to 30 percent being age 60 and over, and 15 percent under age 35, as shown in Table 4-28. Age was not known 10 percent of the time. Nearly twice as many were reported perpetrators were men as women (63 percent versus 35 percent). Approximately two-thirds of the perpetrators were identified as nonminorities.

Table 4-28. Characteristics of alleged perpetrators of abuse for sentinel data

Age	Percentage
35 and under	15.3*
36-59	45.4
60 and over	28.6*
Not determined	10.8*
Sex	**Percentage**
Male	63.1
Female	35.4
Not determined	1.5*
Ethnicity	**Percentage**
Minority	36.5*
Nonminority	63.5

*The confidence band for these numbers is wide, relative to the size of the estimate. The true number may be close to zero or much larger than the estimate.

Sentinel reports represent nearly 80 percent of the total number of incidents, nationwide (and would represent an even higher proportion, if the duplicates had been "assigned" to sentinels rather than to APS). However, specific characteristics of victims and of perpetrators often have large confidence bands due to the relatively small number of events upon which the estimates were based. Nonetheless, these results complement and support the data supplied by APS.

5. CONCLUSIONS

Overview and "Iceberg" Theory

The results of the National Elder Abuse Incidence Study (NEAIS) confirm the validity of the "iceberg" theory of elder abuse that has been accepted in the aging research community for 20 years or more. According to this theory, official reporting sources (e.g., Adult Protective Services), receive reports about the most visible types of abuse and neglect, but a large number of other incidents are unidentified and unreported. Community sentinels, solicited by the study for information on their professional encounters with elderly clients and contacts, observed such abuse and neglect and learned of incidents that are less obvious and that would not be reported to an official agency.

The best national estimate is that a total of 449,924 elderly persons, aged 60 and over, experienced abuse and/or neglect in domestic settings in 1996. Of this total, 70,942 (16 percent) were reported to and substantiated by APS agencies, but the remaining 378,982 (84 percent) were not reported to APS. From these figures, one can conclude that over five times as many new incidents of abuse and neglect were unreported than those that were reported to and substantiated by APS agencies in 1996.[1]

The best national estimate is that a total of 551,011 elderly persons, aged 60 and over, experienced abuse, neglect, and/or self-neglect in domestic settings in 1996. Of this total, 115,110 (21 percent) were reported to and substantiated by APS agencies, with the remaining 435,901 (79 percent) not being reported to APS agencies. One can conclude from these figures that almost four times as many new incidents of elder abuse, neglect, and/or self-neglect were unreported than those that were reported to and substantiated by APS agencies in 1996.[2]

[1] The standard error suggests that nationwide as many as 688,948 elders or as few as 210,900 elders could have been victims of abuse and/or neglect in domestic settings in 1996.

[2] The standard error suggests that nationwide as many as 787,027 elders or as few as 314,995 elders could have been abused, neglected, and/or self-neglecting in domestic settings in 1996.

These estimates of the incidence of abuse and neglect (i.e., new incidents) during 1996 from the NEAIS are lower than other previous estimates. However, it is difficult to compare results across these various studies directly because of significant differences in research objectives, designs and methodologies. Some studies have examined the prevalence of elder abuse (i.e., the total number of cases of abuse in a given population at a designated time), while others have explored the incidence (i.e., the number of new cases of abuse occurring over a specified period of time). Prevalence studies, by their very definition, produce larger estimates. The geographic coverage of studies has differed, with some studies extrapolating to larger areas on the basis of selected, but non-random smaller areas. Also, definitions of abuse and neglect and research time frames vary considerably across studies, making direct comparison impossible.

It is also important to acknowledge that there has been a very substantial increase in the number of official APS elder abuse and neglect reports over the past ten years. In 1986, a total of 117,000 reports (not unduplicated elderly) were received by APS agencies in the states for elders age 60 and over. Ten years later in 1996, a total of 293,000 reports (not unduplicated elderly) were received by these APS agencies throughout the country for this age group (Tatara and Kuzmeskus, 1997). This is an increase of 150 percent over this ten-year period. The elderly population, of course, also increased during this time period, and if the rate of reporting to APS agencies had simply remained the same the number of reports would have increased just because there was a larger elderly cohort that potentially might be abused or neglected. The elderly population 60 years old and over did increase by 10 percent between 1986 and 1996, from 38.9 to 43.9 million. (These numbers are for all elders, including those in institutional settings.)

Clearly, however, the increase in the total number of elder persons in the country explains very little of the phenomenal increase in official APS reporting. Had APS reports simply grown in the same proportion as the increase in the size of the elder population itself between 1986 and 1996 we could expect 128,700 reports, not 293,000. Even accounting for population growth, the number of APS reports increased by 128 percent in these ten years. In short, by 1996 a much larger proportion of new incidents of domestic elder abuse and neglect was reported to official APS agencies than was reported in 1986. Elder abuse and neglect were not as hidden and under-reported to APS as they were earlier.

This study is the first to attempt to estimate the number of elders abused or neglected during a particular year in the United States, whether officially reported to Adult

Protective Services agencies or unreported and perhaps largely unnoticed or ignored by the general population. APS agencies keep data on the total number of cases that they accept for investigation each year, but generally they count each report they receive as a separate incident. Often, the same event is reported more than once, but these duplicate cases are not removed from the counts. Consequently, APS totals overestimate the number of individuals who are reported to them as abused or neglected each year. The NEAIS estimates provide data on unduplicated numbers of abused, neglected, and self-neglecting elders recognized by these official sources.

At the same time, as described in the report, most incidents are never reported to APS, probably for many different reasons, some of which were mentioned to the field research staff during the course of the study. Some NEAIS sentinels claimed they have attempted to report cases to APS and, if appropriate actions are not taken, they do not provide additional reports. Some of this problem is inherent in the APS process itself because reporters generally are not apprised of the outcome of investigations of abuse. Other NEAIS sentinels noted that they often encounter situations where elderly persons do not want incidents reported because relatives might be implicated who are their only source of support or because they might risk abandonment or reprisals.

Overall, elder abuse is even more difficult to detect than child abuse, since the social isolation of some elderly persons may increase both the risk of maltreatment itself and the difficulty of identifying that maltreatment. Approximately a quarter of elders live alone, and many others interact primarily with family members and see very few outsiders. Children, in contrast, never live alone and, furthermore, are required by law to attend school from age 5 until 16. Consequently, by kindergarten, children come into contact with at least one institution outside the home almost daily during much of the year for most of their childhood. Although community sentinels are valuable sources of information about abuse and neglect of elders, neither they nor other reporting sources can conclusively account for victims of domestic abuse and neglect who do not leave their homes and who rarely come in contact with others. Consequently, the NEAIS undoubtedly undercounts abuse, neglect, and self-neglect among isolated elderly people in domestic settings.

Figure 5.1 depicts the impact of the NEAIS findings on the " iceberg" theory of elder abuse. The NEAIS data represent the measurement, or mapping, of a large and previously unknown segment of the elder abuse iceberg under the water line. A significant, submerged area

of previously unidentified and unreported elder abuse has been exposed and estimated. NEAIS has found that there were over five times as many new incidents of elder abuse and neglect previously unidentified and unreported as those that were reported to and substantiated by APS. NEAIS researchers also acknowledge that the sentinel methodology (or any methodology) cannot identify and report on all hidden domestic abuse and neglect, and that a submerged core of abuse and neglect remains unidentified, unreported, and inestimable at this time. The continued "mapping" of this final terrain represents a challenge for future research on elder abuse.

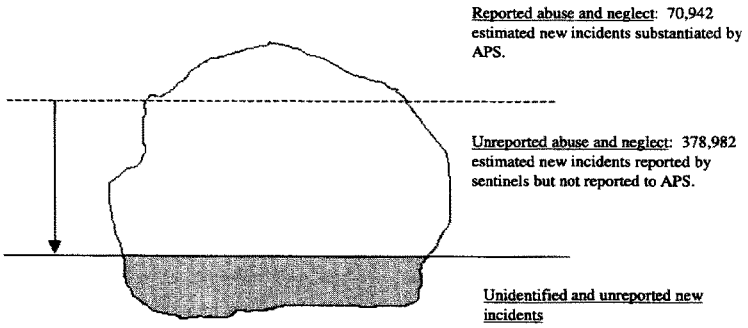

Figure 5-1. Iceberg theory showing NEAIS identified unreported abuse and neglect, excluding self-neglect

Summary of Findings

Victims of Abuse, Neglect, and Self-Neglect

Victims reported to APS resemble the characteristics of victims identified by sentinel agencies, for many categories of abuse and neglect. Women are disproportionately represented as victims, according to reports from both APS and sentinel sources. In APS reports, women represent from 60 percent to 76 percent of those subjected to all forms of abuse and neglect except abandonment, even though, overall, women represent only 58 percent of the elderly population (over 60 years of age). In reports received exclusively from sentinels, from 67 percent to 92 percent of those reported as abused were women, depending on the type of abuse.

The greatest disparity between men and women was in reported rates of emotional or psychological abuse, according to APS data. Three-fourths of those subjected to this form of abuse were women rather than men. According to sentinel reports, the greatest disparity between men and women was in the category of financial abuse, in which 92 percent of the victims were women.

A substantial proportion of the victims of neglect was the oldest old (age 80 and over), according to both APS and sentinel reports. APS reports showed that 52 percent of neglect victims were over age 80. Sentinels found 60 percent in this oldest age range. APS reports also suggest that this older category was disproportionately subjected to physical abuse, emotional abuse, and financial exploitation. Overall, our oldest elders are abused and neglected at two to three times their proportion of the elderly population.

Sentinel data show that of those subjected to any form of abuse, fewer than 10 percent were minorities (including Blacks, Hispanics, Asians, Pacific Islanders and others). On the other hand, higher proportions of victims of most forms of abuse and neglect reported to APS agencies were Black, ranging from 9.percent for physical abuse, the lowest, to 17 percent for neglect. Only small proportions of Hispanics and other minorities are represented in most categories of abuse reported to APS, generally less than 3 percent altogether. These low proportions for these other minorities are supported by the sentinel data. Further research is needed to ascertain whether low rates for Hispanics in particular are due to lower rates of reporting and detection of abuse and neglect, perhaps because of language barriers, or are due to lower rates of actual abuse in these communities.

Elderly self-neglect also is a serious problem, with about 139,000 new unduplicated reports in 1996. (Some of those described as self-neglecting were also subjected to other forms of abuse.) Approximately two thirds of self-neglecting elders reported to APS were women. In addition, 45 percent of them were over the age of 80. Most victims of self-neglect are unable to care for themselves and/or are confused; many are depressed. This is a difficult and troubling finding, which warrants attention as well as further research.

Perpetrators of Abuse and neglect

Across all categories of abuse and neglect, the distribution of perpetrators by gender is almost equal, according to reports received by APS. However, this overall equity is due to the preponderance of neglect as a category and the somewhat greater frequency of neglect perpetrated by women (52 percent versus 48 percent by men). For all other categories of abuse reported to APS, men outnumbered women as perpetrators by at least 3 to 2. Among reports by sentinels, which are not broken down by type of abuse because the numbers are too small, male perpetrators outnumbered female perpetrators by 1.8 to 1. This preponderance of abuse by men is significant both in reports obtained from APS and in sentinel data.

According to reports received by APS and data supplied by sentinels, most perpetrators were younger than their victims. According to information supplied by APS, 65 percent of total perpetrators were under age 60; close to the same percentage of perpetrators identified by sentinels were under age 60. Of course, even perpetrators who are older than 60 may still be younger than the persons they abuse are. Among reports to APS, the relative "youth" of perpetrators of financial abuse is particularly striking compared to other types of abuse, with 45 percent being 40 or younger and another 40 percent being 41–59 years old.

Relatives or spouses of the victims commit most domestic elder abuse according to reports supplied both by APS and sentinels. Approximately 90 percent of alleged abusers, according to both types of sources, were related to victims. APS data suggest that adult children are the largest category of abusers, across all forms of abuse, with proportions ranging from 43 percent for cases of neglect to nearly 80 percent for abandonment, although there were relatively few reported instances of abandonment. Adult children also account for the largest category of alleged abusers in sentinel reports (39 percent). Since family members are frequently the primary caregivers for elderly relatives in domestic settings, this finding that family members are the primary perpetrators of elderly abuse is not surprising.

Limitations of NEAIS Research

The NEAIS study design had some limitations that prevented it from making an estimate of all new incidents of elder abuse and neglect in 1996. First, the sentinel approach tends to cause a certain amount of "undercount" in the detection of domestic elder abuse because there are no community institutions in which all elders regularly assemble and from which

sentinels can be chosen and elders observed. In the case of child abuse research, on the other hand, schools serve as such a community institution from which primary sentinels are selected. The NEAIS was aware of this inherent limitation in the sentinel research design and tried to ameliorate this challenge by assigning as many sentinels as appropriate from the four large categories of professionals most regularly in contact with elderly people.

A second and related inherent limitation of the sentinel research design is that sentinels cannot observe and report abuse and neglect of elders that are isolated or do not have any (or very limited) contact with any community organizations. The sentinel method is most effective when well-trained sentinel reporters (which NEAIS's were) have opportunities to observe the same elders over a reasonable period of time. If there is minimal contact between the elderly person and sentinels, the opportunities for observing the signs and symptoms of abuse and neglect are lessened.

Finally, limitations in resources available to the NEAIS may have limited the total count of elders and the precision of the results. With more resources, it would have been possible to sample a larger number of study counties and to follow events in each of them for a longer time period. Estimates of child abuse and neglect for the third federally funded incidence study, for example, were obtained in 40 primary sampling units (i.e., counties) using more than 3,000 sentinels over a three-month period, rather than in NEAIS's 20 sampling units, with 1,200 sentinels in two months. One of the effects of the smaller number of counties, sentinels, and months of reporting was the smaller number of total sentinel reports and the resulting relatively large standard errors and wide confidence bands used in calculating the incidence estimates. With smaller standard errors, the NEAIS findings could be more definitive, or precise.

Implications of NEAIS Findings

The findings of the NEAIS raise a number of important issues for policy development, practice, and training in addressing the problems of elder abuse, neglect, and self-neglect. Study findings can provide a basis for designing new and enlightened public policies and practices, which are programmatically responsible, fiscally sound, and compassionate. This report also presents data to support practitioners, caregivers, social researchers and others in identifying new approaches to reduce and prevent abuse, neglect, exploitation, and self-neglect of

the elderly. Because states and localities historically have had responsibility for elder abuse reporting, investigation, intervention, and services, most of the following implications are for state and local governments:

- An important target for policy planners is the abuse and neglect among the oldest elders, which becomes ever more urgent since those aged 85 and over are the most rapidly growing elderly age group.

- Elderly persons who are unable to care for themselves, and/or are mentally confused and depressed are especially vulnerable to abuse and neglect as well as self-neglect. Perhaps our local community organizations and corporations can be mobilized to recognize such potential problems and provide support (e.g., by mobilizing neighborhood programs; by educating and sensitizing employees about elder abuse and neglect).

- Given the large number of incidents of abuse and neglect that are unidentified and unreported, service providers, caregivers, and all citizens who relate to elderly people need to be alerted to the problem of abuse and neglect, taught to recognize it, and encouraged to report suspected abuse.

- Maintain a comprehensive system of services to respond to reports of elder abuse and to provide follow-up services to elder abuse victims.

- Physicians and health care workers may be especially well placed to detect instances of abuse, neglect, and self-neglect given that even the most isolated elderly persons come in contact with the health care system at some point. The education of physicians, nurses, and other health care workers should be focused on how to recognize and report signs and symptoms of elder abuse, neglect, and self-neglect and where to refer victims for other human and support services.

- Increased standardization of state definitions and general reporting procedures for elder abuse and neglect would allow the more meaningful and expedited collection and analysis of data about elder abuse, including monitoring national trends in incidence over time.

- The Western region of the county reported the largest number of reports to APS of any of the regions. With approximately 25 percent of the U.S. population, the Western region was the source of 40 percent of the reports. Additionally, almost 60 percent of the Western region reports were substantiated, in contrast to an overall substantiation rate of 49 percent. More detailed study of these Western states may provide information on promising policies and practices for identifying and reporting abuse that can be replicated elsewhere in the country.

Future Research Questions and Issues

The findings of the NEAIS raise a number of questions and issues for researchers and service providers to think about in addressing the problems of elder abuse, neglect, and self-neglect. Clearly some of these complex issues will require additional research:

- The confluence of a high proportion of adult children, spouses, and particularly parents being perpetrators, along with the high proportion of perpetrators being 80 and over, suggests that the following may be important areas for further study:
  - the relationship between abusive family members and caregiving responsibilities;
  - the relationship between abusive spouses and parents and their caregiving responsibilities, particularly for neglect; and
  - the relationship between 80+ year old perpetrators and caregiving responsibilities.
- Are there characteristics of the perpetrators, aged 60 and over, that aging service providers could affect by reaching out and providing services so that abuse committed by perpetrators aged 60+ is reduced?
- Are there characteristics of the caregiving relationships among younger family members who financially exploit their older relatives that could be affected by service interventions for the perpetrators? What are those interventions? Are there services or education for persons aged 60+ that would help them from becoming victims of financial abuse, particularly by younger family members?
- What is the economic condition of victims of abuse and neglect compared with elders overall?
- In-home service providers reported all substantiated sexual abuse cases. Why is this so? What do they know/see that other reporters do not? How can we capitalize on their knowledge?
- Why are black elders more likely to be self-neglecters (18 percent of the substantiated APS reports compared to being 8 percent of the elder population)?
- Why do sentinels recognize abuse among women at a much higher rate than is reflected among APS reports? Do we need to train people better to recognize and detect abuse among men?
- Why do sentinels not see more self-neglect cases than are reported to APS agencies, as sentinels do for abuse and neglect?
- How can employees of banks be educated and encouraged to identify and report incidents of financial exploitation that may come to their attention while serving elderly customers? Although the NEAIS was not very successful in obtaining reports from bank sentinels, banks are in a good position to observe financial abuse and concerted attention should be given to how to better involve them in future research on elder abuse incidence. States and communities with particularly strong bank reporting of financial exploitation (e.g., Massachusetts and San Diego) may provide promising practices for such larger replication.

Conclusion

In conclusion, the NEAIS has documented the existence of a previously unidentified and unreported stratum of elder abuse and neglect, thus confirming and advancing our understanding of the "iceberg" theory of elder abuse. NEAIS estimates that for every abused and neglected elder reported to and substantiated by APS, there are over five additional abused and neglected elders that are not reported. NEAIS also acknowledges that it did not measure all unreported abuse and neglect. Our collective challenge — as policy makers, service providers, advocates, researchers, and society as a whole, is to utilize this information to better the lives of our elder citizens.

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Program Performance Summaries

1996 State program Report
For Titles III and VII of the
Older Americans Act

Program Performance Summaries

On the pages which follow, twelve different tables of summary performance data are presented for 1995. Collectively, these tables provide a snapshot of Title III program performance. Each table has a topical focus and data are presented for each state, the District of Columbia, Puerto Rico and the U.S. as a whole. The following summary tables are included:

- Table 1: Estimated Unduplicated Count of Persons -- for the participants of all services and programs supported by the Older Americans Act.
- Table 2: Characteristics of Persons Served -- for the participants of all services and programs supported by the Older Americans Act.
- Table 3: Minority Persons Served -- by minority group.
- Table 4: Service Units Provided For Selected Services -- units of service for 14 listed services based on service and service unit definitions provided by the AoA.
- Table 5: Title III Service Expenditures By Cluster -- Title III federal expenditures for each of three service clusters as well as Title III expenditures for "other" services.
- Table 6: Title III Service Expenditures For Selected Services -- Federal Title III expenditures for each of fourteen separately listed services.
- Table 7: Service Expenditures By Title III Part -- Title III expenditures by Title III B, C1, C2, D and F.
- Table 8: Service Providers For Selected Services -- A summary count of providers for each of 14 listed services.
- Table 9. Minority Providers and AAA Direct Services Provision -- A profile of minority providers and the count of AAAs engaged in direct services provision, for each of 14 listed services.
- Table 10. Focal Points and Senior Centers -- A profile of the number of designated focal points and the number of senior centers operating in the state.
- Table 11. State and Area Agency Staffing -- Two separate profiles of staffing by functional responsibility, one for state units on aging and another for the aggregate AAA staffing in each state.

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Table 1. Estimated Unduplicated Count of Persons Served Under Title III of the OAA: FY 1996

(Numbers reflect estimated unduplicated counts - See SPR Specifications for definition of key terms)

State	Total Unduplicated Count Persons Served 1/	Personal Care	Homemaker	Chore	Home Delivered Meals	Adult Day Care	Case Management	Congregate Meals	Nutrition Counseling	Assisted Transportation
Total US	7,045,360	86,093	160,315	53,569	875,093	26,587	400,575	2,147,756	35,521	72,805
AK	17,338	0	407	186	2,180	0	0	9,900	346	1,300
AL	47,570	0	5,517	1,216	10,087	1,500	0	28,209	3,800	2,223
AR	70,289	0	627	342	11,419	142	0	16,901	0	0
AZ	134,013	5,817	6,914	0	13,090	534	11,574	50,359	0	0
CA	520,976	4,150	21,420	3,039	53,576	2,913	27,850	153,779	6,503	10,945
CO	127,138	775	1,208	630	11,362	109	61	34,140	0	593
CT	44,749	499	965	1,093	9,486	728	42	16,766	0	39
DC	39,150	0	235	0	2,813	376	1,083	5,939	813	2,036
DE	20,560	368	187	0	3,380	249	4,102	11,282	1,380	0
FL	200,723	36	6,074	3,315	28,233	1,210	2,968	42,183	297	500
GA	39,231	2,699	4,049	52	26,915	668	5,851	20,984	0	722
HI	55,970	1,218	792	341	3,144	234	1,082	5,393	24	1,484
IA	108,221	0	915	2,512	20,194	1,099	3,925	59,648	117	279
ID	115,000	0	3,057	1,012	7,093	687	1,311	39,003	0	675
IL	489,819	1,087	238	3,776	35,681	25	89,478	92,498	0	302
IN	221,146	384	1,619	190	10,215	136	3,426	20,724	0	1,333
KS	131,989	2,515	796	340	16,007	0	2,716	35,363	15	0
KY	122,111	176	2,678	1,072	13,819	11	2,063	27,418	0	1,476
LA	66,064	479	6,280	895	19,889	0	16,722	24,040	663	286
MA	212,634	390	84	163	35,467	204	4,641	37,578	917	1,485
MD	144,566	1,055	865	195	6,091	478	5,296	27,495	806	3,482
ME	33,868	178	0	37	4,203	869	0	5,450	0	75
MI	260,483	5,428	12,554	7,302	46,240	2,687	18,540	77,507	0	2,920
MN	193,309	963	1,250	6,674	17,412	19	885	87,916	0	0
MO	270,802	402	1,771	0	30,889	277	4,228	102,972	0	0
MS	33,820	0	5,657	0	12,708	511	1,613	7,313	0	191
MT	33,383	284	2,692	676	6,560	0	0	33,383	221	47
NC	60,932	4,122	4,060	0	15,730	786	0	31,997	0	0
ND	54,614	0	0	914	7,930	0	0	23,473	159	49
NE	71,222	868	2,128	2,693	9,120	0	0	32,340	0	462
NH	35,361	335	841	0	5,232	169	0	12,122	0	0
NJ	438,239	1,650	1,023	1,551	24,095	296	4,258	36,649	1,686	764
NM	130,498	152	1,952	705	10,487	957	4,700	39,755	0	2,106
NV	25,804	0	650	0	5,393	562	1,712	15,858	0	0
NY	613,733	8,490	9,035	0	53,148	1,935	37,384	168,140	10,562	7,017
OH	185,109	3,140	7,424	3,221	39,108	1,495	335	65,553	0	5,286
OK	94,540	20	2,331	354	9,260	1,250	0	22,787	571	1,343
OR	138,959	1,265	3,292	223	15,494	245	8,526	39,969	0	1,166
PA	258,176	22,359	13,822	0	43,535	0	66,410	143,160	0	0
PR	149,702	4,494	2,961	464	5,349	0	17,725	9,673	2,482	6,759
RI	54,903	54	0	0	4,875	0	15,474	19,091	0	0
SC	33,574	1,952	2,330	0	10,323	251	5,555	13,543	276	0
SD	19,483	0	461	0	2,412	216	4,673	7,899	0	0
TN	57,773	155	2,344	0	11,958	47	3,417	15,670	14	75
TX	195,542	960	4,458	88	54,944	91	8,262	101,116	1,137	14
UT	112,317	114	108	1,049	9,780	0	0	29,193	0	1,503
VA	185,174	2,213	2,376	714	12,333	356	3,511	16,189	0	0
VT	19,454	13	14	20	3,684	30	4,478	10,199	371	0
WA	119,090	2,139	0	0	27,344	478	3,503	87,827	0	0
WI	158,765	1,575	5,790	5,338	21,283	1,431	0	84,524	383	9,336
WV	48,794	225	1,938	562	9,005	161	123	23,109	1	2,174
WY	28,700	895	2,126	615	5,118	165	1,072	23,777	1,997	2,358

1/ This number includes persons receiving services not listed in this table. Persons receiving more than one listed service are counted separately for those services but are counted only once in this column.

Table compiled by the U.S. Administration on Aging.

Source: FY 1996 State Performance Reports for Title III of the Older Americans Act

Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 2. Characteristics of Persons Served Under Title III of OAA: FY 1996

(Numbers reflect estimated unduplicated counts - See SPR Specifications for definition of key terms)

State	Total Unduplicated Count Persons Served 1/	Poverty		Minority		Poverty & Minority		Rural	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total US	7,045,360	2,671,772	37.9%	1,336,603	19.0%	850,369	63.6%	2,351,224	33.4%
AK	17,338	5,400	31.1%	4,500	26.0%	2,250	50.0%	6,450	37.2%
AL	47,570	21,761	45.7%	12,484	26.2%	8,186	65.6%	25,566	53.7%
AR	70,289	40,545	57.7%	17,771	25.3%	14,617	82.3%	39,869	56.7%
AZ	134,013	57,899	43.2%	52,464	39.1%	31,512	60.1%	59,013	44.0%
CA	620,976	188,695	30.2%	144,224	27.7%	96,380	66.8%	51,271	9.8%
CO	127,138	32,062	25.2%	20,809	16.4%	14,965	71.9%	45,348	35.7%
CT	44,749	14,284	31.9%	6,761	15.1%	4,284	63.4%	3,385	7.6%
DC	39,150	30,576	78.1%	21,550	55.0%	21,000	97.4%	0	0.0%
DE	20,560	6,788	33.0%	4,563	22.2%	2,433	53.3%	8,610	41.9%
FL	200,723	39,143	19.5%	30,246	15.1%	16,728	55.3%	25,785	12.8%
GA	39,231	12,726	32.4%	14,474	36.9%	6,869	47.5%	16,200	41.3%
HI	55,970	15,216	27.2%	21,056	37.6%	11,649	55.3%	22,065	39.5%
IA	108,221	23,035	21.3%	2,105	1.9%	1,265	60.1%	65,586	60.6%
ID	115,000	13,000	11.3%	2,700	2.3%	2,150	79.6%	35,000	30.4%
IL	469,819	146,329	29.9%	94,708	19.3%	59,387	62.7%	126,810	25.9%
IN	221,146	61,353	27.7%	20,913	9.5%	10,019	47.9%	65,415	29.6%
KS	131,969	40,836	30.9%	12,855	9.7%	5,484	42.7%	84,789	64.2%
KY	122,111	60,256	49.3%	11,311	9.3%	8,984	79.4%	63,013	51.6%
LA	66,064	16,424	24.9%	22,439	34.0%	12,914	57.6%	32,009	48.5%
MA	212,634	72,274	34.0%	17,451	8.2%	16,924	97.0%	38,818	18.3%
MD	144,566	25,179	17.4%	30,457	21.1%	17,594	57.8%	35,904	24.8%
ME	33,868	5,262	15.5%	169	0.5%	46	27.2%	21,837	64.5%
MI	260,483	101,228	38.9%	40,871	15.7%	29,233	71.5%	59,770	22.9%
MN	193,309	77,126	39.9%	8,645	4.5%	5,055	58.5%	112,250	58.1%
MO	270,802	110,970	41.0%	22,802	8.4%	18,578	81.5%	190,051	70.2%
MS	33,820	17,453	51.6%	9,317	27.5%	0	0.0%	14,862	43.9%
MT	33,383	4,997	15.0%	1,454	4.4%	0	0.0%	18,358	55.0%
NC	60,932	36,040	59.1%	20,703	34.0%	15,629	75.5%	25,049	41.1%
ND	54,614	18,418	33.7%	1,338	2.4%	1,231	92.0%	31,421	57.5%
NE	71,222	25,863	36.3%	3,479	4.9%	2,913	83.7%	42,979	60.3%
NH	35,361	18,176	51.4%	137	0.4%	0	0.0%	21,767	61.6%
NJ	438,239	111,506	25.4%	83,883	19.1%	47,340	56.4%	0	0.0%
NM	130,498	79,935	61.3%	52,930	40.6%	37,921	71.6%	46,554	35.7%
NV	25,804	7,600	29.5%	2,577	10.0%	1,440	55.9%	14,175	54.9%
NY	613,733	252,226	41.1%	103,421	16.9%	63,607	61.5%	130,405	21.2%
OH	185,109	68,025	36.7%	20,451	11.0%	10,784	52.7%	58,719	31.7%
OK	94,540	60,825	64.3%	17,783	18.8%	14,262	80.2%	69,959	74.0%
OR	138,959	41,310	29.7%	6,291	4.5%	3,304	52.5%	92,356	66.5%
PA	258,176	129,237	50.1%	49,049	19.0%	21,235	43.3%	60,240	23.3%
PR	149,702	83,833	56.0%	149,702	100.0%	83,833	56.0%	40,419	27.0%
RI	54,903	26,912	49.0%	4,347	7.9%	3,236	74.4%	4,610	8.4%
SC	33,574	18,712	55.7%	14,930	44.5%	9,357	62.7%	18,814	56.0%
SD	19,483	9,035	46.4%	758	3.9%	477	62.9%	16,796	86.2%
TN	57,773	24,140	41.8%	8,345	14.4%	5,934	71.8%	13,950	24.1%
TX	195,542	158,608	81.1%	70,469	36.0%	64,652	91.7%	76,698	39.2%
UT	112,317	48,654	43.3%	5,263	4.7%	3,915	74.4%	56,796	50.6%
VA	185,174	82,589	44.6%	59,012	31.9%	35,435	60.0%	74,784	40.4%
VT	19,454	6,045	31.1%	84	0.5%	44	46.8%	16,080	82.7%
WA	119,090	8,768	7.4%	6,723	5.6%	1,804	26.8%	5,390	4.5%
WI	158,765	94,779	59.7%	2,536	1.6%	2,275	89.7%	107,610	67.8%
WV	48,794	14,281	29.3%	1,607	3.3%	723	45.0%	30,292	62.1%
WY	28,700	5,428	18.9%	1,646	5.7%	452	27.5%	27,307	95.1%

1/ Persons receiving more than one listed service
are counted separately for those services but are counted only once in this column.
Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 3. Minority Persons Served Under Title III of OAA: FY 1996

(Numbers reflect estimated unduplicated counts - See SPR Specifications for definition of key terms)

	Totals		African American		Hispanic Origin		American Indian / Native Alaskan		Asian American / Pacific Islander	
State	Total Unduplicated Count Persons Served 1/	Total Minority	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total US	7,045,360	1,336,603	703,078	10.0%	444,430	6.3%	70,884	1.0%	118,213	1.7%
AK	17,338	4,500	300	1.7%	150	0.9%	3,450	19.9%	600	3.5%
AL	47,570	12,484	12,295	25.8%	36	0.1%	122	0.3%	31	0.1%
AR	70,289	17,771	17,578	25.0%	99	0.1%	53	0.1%	41	0.1%
AZ	134,013	52,464	4,045	3.0%	13,555	10.1%	33,619	25.1%	1,245	0.9%
CA	620,976	144,224	31,604	6.1%	57,310	11.0%	3,831	0.7%	51,679	9.9%
CO	127,138	20,809	3,412	2.7%	15,359	12.1%	629	0.5%	1,409	1.1%
CT	44,749	6,761	4,264	9.5%	2,266	5.1%	67	0.1%	164	0.4%
DC	39,150	21,550	18,069	46.2%	1,799	4.6%	235	0.6%	1,447	3.7%
DE	20,560	4,563	4,087	19.9%	176	0.9%	205	1.0%	95	0.5%
FL	200,723	30,246	18,479	9.2%	11,388	5.7%	198	0.1%	181	0.1%
GA	39,231	14,474	14,223	36.3%	118	0.3%	16	0.0%	117	0.3%
HI	55,970	21,056	77	0.1%	536	1.0%	20	0.0%	20,423	36.5%
IA	108,221	2,105	1,257	1.2%	536	0.5%	132	0.1%	180	0.2%
ID	115,000	2,700	165	0.1%	1,650	1.6%	375	0.3%	310	0.3%
IL	489,819	94,708	80,508	16.4%	10,090	2.1%	251	0.1%	3,859	0.8%
IN	221,146	20,913	18,875	8.5%	1,488	0.7%	245	0.1%	305	0.1%
KS	131,969	12,855	9,725	7.4%	2,368	1.8%	348	0.3%	414	0.3%
KY	122,111	11,311	11,193	9.2%	60	0.0%	11	0.0%	47	0.0%
LA	66,064	22,439	21,895	33.1%	190	0.3%	237	0.4%	117	0.2%
MA	212,634	17,451	7,387	3.5%	6,358	3.0%	158	0.1%	3,548	1.7%
MD	144,566	30,457	26,934	18.6%	815	0.6%	245	0.2%	2,463	1.7%
ME	33,868	169	46	0.1%	2	0.0%	60	0.2%	61	0.2%
MI	260,483	40,871	31,793	12.2%	5,940	2.3%	1,717	0.7%	1,421	0.5%
MN	193,309	8,645	3,248	1.7%	1,009	0.5%	2,351	1.2%	2,037	1.1%
MO	270,802	22,802	21,384	7.9%	733	0.3%	438	0.2%	247	0.1%
MS	33,820	9,317	9,315	27.5%	2	0.0%	0	0.0%	0	0.0%
MT	33,383	1,454	18	0.1%	84	0.3%	1,322	4.0%	30	0.1%
NC	60,932	20,703	20,179	33.1%	53	0.1%	59	0.1%	412	0.7%
ND	54,614	1,338	53	0.1%	59	0.1%	1,187	2.2%	39	0.1%
NE	71,222	3,479	2,880	4.0%	307	0.4%	225	0.3%	67	0.1%
NH	35,361	137	32	0.1%	54	0.2%	17	0.0%	34	0.1%
NJ	438,239	83,893	56,082	12.8%	22,931	5.2%	405	0.1%	4,475	1.0%
NM	130,498	52,930	2,963	2.3%	47,804	36.6%	1,681	1.3%	482	0.4%
NV	25,804	2,577	915	3.5%	953	3.7%	448	1.7%	261	1.0%
NY	613,733	103,421	59,257	9.7%	32,597	5.3%	2,214	0.4%	9,353	1.5%
OH	185,109	20,451	19,137	10.3%	831	0.4%	82	0.0%	401	0.2%
OK	94,540	17,783	7,435	7.9%	964	1.0%	8,670	9.2%	714	0.8%
OR	138,959	6,291	1,117	0.8%	2,880	2.1%	1,282	0.9%	1,012	0.7%
PA	258,176	49,049	45,057	17.5%	2,626	1.0%	367	0.1%	999	0.4%
PR	149,702	149,702	0	0.0%	149,702	100.0%	0	0.0%	0	0.0%
RI	54,903	4,347	2,832	5.2%	1,229	2.2%	110	0.2%	176	0.3%
SC	33,674	14,930	14,876	44.3%	18	0.1%	18	0.1%	18	0.1%
SD	19,483	758	12	0.1%	27	0.1%	714	3.7%	5	0.0%
TN	57,773	8,345	8,223	14.2%	49	0.1%	16	0.0%	57	0.1%
TX	195,542	70,489	28,346	14.5%	39,897	20.4%	690	0.4%	1,556	0.8%
UT	112,317	5,263	381	0.3%	3,603	3.2%	128	0.1%	1,141	1.0%
VA	185,174	59,012	56,806	30.7%	761	0.4%	43	0.0%	1,402	0.8%
VT	19,454	94	18	0.1%	9	0.0%	50	0.3%	17	0.1%
WA	119,090	6,723	1,574	1.3%	1,421	1.2%	1,044	0.9%	2,684	2.3%
WI	168,765	2,536	1,083	0.7%	431	0.3%	679	0.4%	343	0.2%
WV	48,794	1,607	1,526	3.1%	39	0.1%	30	0.1%	12	0.0%
WY	28,700	1,646	106	0.4%	868	3.0%	590	2.1%	82	0.3%

1/ Persons receiving more than one listed service
are counted separately for those services but are counted only once in this column.
Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 4a. Cluster 1 - Service Units Provided for Selected Services Under Title III of OAA: FY 1996
(See SPR Specifications for definition of key terms)

State	Personal Care (Hours)	Home-maker (Hours)	Chore (Hours)	Home Delivered Meals (Meals)	Adult Day Care (Hours)	Case Manage-ment (Hours)
US Total	7,681,590	7,199,144	991,269	119,110,318	5,529,614	3,426,542
AK	0	7,758	4,184	213,215	0	0
AL	0	310,498	23,986	1,234,536	10,000	0
AR	0	39,883	37,427	2,401,332	119,254	0
AZ	166,467	218,264	0	1,407,793	150,912	93,084
CA	111,559	510,080	33,028	9,232,166	845,222	161,941
CO	30,836	45,233	5,245	1,093,848	18,047	705
CT	43,370	60,971	28,887	1,662,353	221,767	526
DC	0	58,278	0	538,632	138,322	25,805
DE	56,783	17,646	0	496,898	23,508	34,867
FL	994	271,747	58,425	4,022,615	407,448	12,083
GA	81,354	122,030	316	2,459,320	48,448	15,863
HI	48,980	13,816	6,062	412,295	47,864	16,037
IA	0	37,791	61,688	1,710,335	325,867	45,710
ID	0	125,038	9,211	512,407	21,430	10,113
IL	27,868	10,241	208,592	5,458,684	45	334,270
IN	138,382	232,474	27,891	1,330,766	99,379	49,005
KS	18,964	30,216	3,407	1,985,996	0	4,046
KY	4,949	74,051	9,616	2,040,892	2,900	17,947
LA	44,473	195,288	9,580	2,978,982	0	16,038
MA	63,129	2,166	793	5,297,568	15,164	8,990
MD	102,186	33,103	7,935	1,031,323	112,352	145,588
ME	508	0	2,943	707,879	26,885	0
MI	244,947	426,498	77,548	7,298,222	406,059	85,576
MN	41,527	74,110	81,722	1,686,430	3,176	6,479
MO	25,267	139,452	0	3,477,722	62,312	23,686
MS	0	258,620	0	2,164,748	58,219	65,301
MT	7,343	89,086	7,354	629,347	0	0
NC	629,719	425,531	0	2,521,797	76,205	0
ND	0	0	8,647	563,570	0	0
NE	169,694	94,689	35,913	974,985	0	0
NH	49,731	221,680	0	979,226	116,542	0
NJ	79,209	34,060	11,032	2,790,534	47,008	29,181
NM	8,108	78,217	10,911	1,086,203	123,251	30,201
NV	0	21,367	0	509,847	268,037	1,933
NY	1,809,870	621,743	0	10,908,709	654,831	546,024
OH	112,697	287,797	35,349	4,955,137	46,202	1,901
OK	2,029	70,892	3,691	1,624,151	217,302	0
OR	66,362	235,538	1,360	1,493,820	9,152	79,655
PA	2,064,088	453,341	0	6,483,330	0	969,586
PR	94,211	245,380	15,697	1,021,257	0	123,971
RI	1,051	0	0	588,963	0	60,138
SC	137,730	88,849	0	1,303,293	139,856	20,813
SD	0	8,300	0	458,613	107,410	47,850
TN	59,480	74,454	0	1,698,926	3,933	21,634
TX	92,421	287,690	1,613	6,592,218	7,770	47,140
UT	9,970	3,231	10,371	920,556	0	0
VA	565,538	198,148	7,691	2,145,489	172,254	61,631
VT	395	194	159	439,650	2,369	29,061
WA	387,207	0	0	1,526,164	53,213	166,803
WI	50,163	185,000	115,238	2,424,564	210,853	0
WV	6,254	43,055	8,364	1,206,237	51,651	988
WY	25,777	115,650	19,393	406,775	37,195	14,372

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 4b. Cluster 2 - Service Units Provided for Selected Services Under Title III of OAA: FY 1996
(See SPR Specifications for definition of key terms)

State	Congregate Meals (Meals)	Nutrition Counseling (Hours)	Assisted Transportation (1 Way Trips)
US Total	118,632,573	128,116	2,635,347
AK	321,038	173	99,270
AL	2,417,376	16,000	102,117
AR	2,073,932	0	0
AZ	1,451,511	0	0
CA	10,865,994	10,631	334,205
CO	1,218,655	0	1,446
CT	1,159,410	0	882
DC	722,589	3,947	142,741
DE	458,706	1,360	0
FL	4,129,424	757	31,565
GA	1,779,038	0	83,249
HI	436,057	23	43,606
IA	2,604,299	176	4,780
ID	823,735	0	7,500
IL	3,818,552	0	4,905
IN	1,701,652	0	49,664
KS	1,996,480	15	0
KY	1,485,280	0	17,426
LA	1,917,104	694	7,424
MA	2,586,180	1,378	38,185
MD	2,119,844	6,200	175,452
ME	333,594	0	1,624
MI	3,780,317	0	52,635
MN	3,366,915	0	0
MO	3,365,130	0	0
MS	829,927	0	6,214
MT	1,221,208	350	908
NC	2,730,000	0	0
ND	853,331	159	5,571
NE	1,522,103	0	18,356
NH	420,605	0	0
NJ	2,420,562	1,686	7,296
NM	1,474,707	0	40,328
NV	646,972	0	0
NY	13,459,788	18,225	166,090
OH	3,336,235	0	522,223
OK	2,743,822	660	23,313
OR	1,320,027	0	39,343
PA	5,677,779	0	0
PR	2,282,581	2,641	250,397
RI	695,549	0	0
SC	1,131,369	1,393	0
SD	1,180,750	0	0
TN	1,162,449	1,413	5,709
TX	7,129,061	20,658	51
UT	918,005	0	33,931
VA	1,133,811	0	0
VT	366,588	107	0
WA	1,721,549	0	0
WI	3,116,560	28,531	141,003
WV	1,221,069	1	35,520
WY	863,354	10,938	140,418

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 4c. Cluster 3 - Service Units Provided for Selected Services Under Title III of OAA: FY 1996
(See SPR Specifications for definition of key terms)

State	Transportation (1 Way Trips)	Legal Assistance (Hours)	Nutrition Education (Sessions)	Information & Assistance (Contacts)	Outreach (Contacts)
US Total	36,902,111	1,043,398	661,708	13,739,633	2,536,285
AK	135,331	2,952	77	34,955	4,939
AL	1,226,033	25,906	65,345	533,025	93,670
AR	892,965	7,699	0	70,064	0
AZ	953,786	11,207	0	0	148,494
CA	1,096,321	193,902	43,942	1,344,923	231,637
CO	474,706	7,883	2,400	380,382	80,707
CT	243,507	8,423	7,002	48,352	29,056
DC	328,609	12,909	11,970	0	0
DE	8,503	2,649	215	2,862	1,387
FL	2,118,520	36,986	6,408	794,521	59,639
GA	1,028,743	34,848	3,621	56,185	12,636
HI	268,482	6,413	923	47,287	20,359
IA	768,897	7,101	3,450	548,271	73,628
ID	227,524	2,281	0	25,593	21,140
IL	984,968	52,846	7,638	476,444	93,019
IN	650,380	21,286	61,870	316,862	26,152
KS	215,534	9,692	23,360	168,410	2,673
KY	1,008,414	9,209	0	200,711	63,440
LA	930,461	10,323	61,232	118,984	15,143
MA	297,749	27,683	7,588	95,067	66,845
MD	516,663	16,329	69,074	547,105	49,984
ME	4,797	7,903	0	46,666	38,378
MI	252,637	40,798	0	166,837	58,970
MN	436,451	25,475	20,658	57,149	197,697
MO	1,380,904	6,619	1,208	1,087,140	1,824
MS	474,870	1,848	0	27,493	27,031
MT	237,085	1,606	1,837	2,473	98,218
NC	1,466,697	10,133	0	3,300	27,141
ND	214,063	3,500	1,570	1,231	185,960
NE	237,673	8,792	0	95,345	71,445
NH	321,495	4,885	0	0	14,376
NJ	1,044,402	24,550	2,856	348,370	33,908
NM	589,051	15,061	0	565,685	20,248
NV	152,723	15,809	0	7,292	0
NY	2,588,111	80,074	14,823	2,280,421	142,982
OH	2,114,724	45,434	2,718	0	39,038
OK	1,017,659	15,704	6,250	125,291	90,194
OR	246,875	12,093	255	272,213	28,900
PA	0	34,577	0	1,349,395	0
PR	1,514,730	1,203	1,608	116,079	3,414
RI	273,277	4,705	19,015	190,000	17,726
SC	1,610,708	2,047	26,361	8,439	20,647
SD	472,285	2,928	0	0	0
TN	356,660	8,413	6,682	88,435	38,672
TX	2,380,877	34,230	0	155,782	3,655
UT	288,992	5,662	0	169,327	13,165
VA	983,805	6,889	0	225,736	52,934
VT	108,030	6,234	402	14,561	1,751
WA	379,348	9,624	2,765	226,164	2,816
WI	529,859	95,066	41,051	85,444	148,832
WV	571,191	1,895	4,008	20,237	11,311
WY	276,036	1,114	131,506	193,125	50,504

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 5a. Title III Service Expenditures by Cluster: FY 1996

(See SPR Specifications for definition of key terms)

	All Services	Cluster 1		Cluster 2		Cluster 3		Other Services	
State	Expenditures	Expenditures	% of Title III	Expenditures	% of Title III	Expenditures	% of Title III	Expenditures	% of Title III
Total US	$666,716,010	$208,931,331	31.3%	$244,639,032	36.7%	$127,635,497	19.1%	$85,510,150	12.8%
AK	$2,981,755	$476,368	16.0%	$1,669,335	56.0%	$677,894	22.7%	$158,158	5.3%
AL	$11,890,593	$2,843,235	23.7%	$5,571,291	46.5%	$2,788,788	23.3%	$787,279	6.6%
AR	$9,337,739	$2,511,899	26.9%	$3,521,467	37.7%	$1,690,907	18.1%	$1,613,466	17.3%
AZ	$9,083,479	$2,255,624	24.8%	$2,651,557	29.2%	$1,208,444	13.3%	$2,967,854	32.7%
CA	$60,247,773	$22,552,486	37.4%	$22,685,326	37.7%	$10,132,529	16.8%	$4,877,432	8.1%
CO	$6,064,378	$1,924,200	31.7%	$2,051,500	33.8%	$1,538,532	25.4%	$550,146	9.1%
CT	$8,934,382	$3,177,575	35.6%	$3,281,131	36.7%	$1,140,913	12.8%	$1,334,763	14.9%
DC	$4,056,106	$1,578,200	38.9%	$1,880,302	46.4%	$360,580	8.9%	$237,024	5.8%
DE	$3,264,000	$2,171,653	66.5%	$887,638	27.2%	$128,565	3.9%	$76,144	2.3%
FL	$44,957,505	$16,092,200	35.8%	$13,617,475	30.3%	$10,108,325	22.5%	$5,139,505	11.4%
GA	$17,075,387	$6,038,781	35.4%	$5,592,067	32.7%	$3,407,695	20.0%	$2,036,844	11.9%
HI	$2,590,130	$816,592	31.5%	$769,922	29.7%	$651,469	25.2%	$352,147	13.6%
IA	$8,592,710	$2,054,569	23.9%	$4,135,020	48.1%	$1,617,376	18.8%	$785,745	9.1%
ID	$2,522,886	$717,281	28.4%	$1,139,234	45.2%	$592,248	23.5%	$74,103	2.9%
IL	$26,950,915	$9,737,920	36.1%	$9,960,521	37.0%	$5,482,104	20.3%	$1,770,370	6.6%
IN	$11,147,307	$4,152,859	37.3%	$4,219,334	37.9%	$2,229,279	20.0%	$545,835	4.9%
KS	$6,648,762	$2,058,278	31.0%	$2,747,540	41.3%	$1,196,398	18.0%	$646,546	9.7%
KY	$10,475,321	$3,007,778	28.7%	$4,027,041	38.4%	$2,400,525	22.9%	$1,039,977	9.9%
LA	$9,227,649	$2,701,583	29.3%	$3,406,050	36.9%	$2,490,492	27.0%	$629,524	6.8%
MA	$16,091,566	$7,284,759	45.3%	$3,683,678	22.9%	$3,236,293	20.1%	$1,886,886	11.7%
MD	$10,119,863	$2,282,529	22.6%	$5,073,074	50.1%	$1,570,614	15.5%	$1,193,646	11.8%
ME	$3,606,432	$1,213,770	33.7%	$760,077	21.1%	$1,485,023	41.2%	$147,562	4.1%
MI	$24,282,332	$12,231,986	50.4%	$7,754,584	31.9%	$2,276,726	9.4%	$2,019,036	8.3%
MN	$9,632,858	$2,637,333	27.4%	$4,023,241	41.8%	$2,646,036	27.5%	$326,248	3.4%
MO	$14,392,404	$4,256,137	29.6%	$5,298,656	36.8%	$3,021,649	21.0%	$1,815,962	12.6%
MS	$6,139,342	$2,959,665	48.2%	$1,745,918	28.4%	$817,062	13.3%	$616,697	10.0%
MT	$2,811,851	$864,613	30.7%	$1,434,048	51.0%	$372,049	13.2%	$141,141	5.0%
NC	$14,368,461	$5,600,984	38.9%	$4,883,118	33.9%	$2,801,577	19.5%	$1,102,782	7.7%
ND	$3,596,040	$718,623	20.0%	$1,150,134	32.0%	$1,280,941	35.6%	$446,342	12.4%
NE	$4,074,539	$1,307,657	32.1%	$2,174,186	53.4%	$592,696	14.5%	$0	0.0%
NH	$3,781,943	$1,336,046	35.3%	$1,439,820	38.1%	$875,171	23.1%	$130,906	3.5%
NJ	$23,638,303	$5,752,846	24.3%	$8,885,220	37.6%	$5,023,575	21.3%	$3,976,662	16.8%
NM	$3,664,693	$474,382	12.9%	$1,919,758	52.4%	$859,269	23.4%	$411,284	11.2%
NV	$4,005,117	$1,555,147	38.8%	$1,286,370	32.1%	$627,118	15.7%	$536,482	13.4%
NY	$57,166,501	$10,218,290	17.9%	$26,213,057	45.8%	$12,709,138	22.2%	$8,026,016	14.0%
OH	$26,109,440	$9,017,674	34.5%	$8,324,371	31.9%	$4,476,642	17.1%	$4,290,753	16.4%
OK	$11,017,823	$3,515,530	31.9%	$4,367,954	39.6%	$2,691,214	24.4%	$443,125	4.0%
OR	$7,528,087	$2,834,022	37.6%	$2,633,588	35.0%	$1,395,740	18.5%	$664,737	8.8%
PA	$39,747,110	$6,826,924	17.2%	$14,211,688	35.8%	$3,906,027	9.8%	$14,802,471	37.2%
PR	$5,152,012	$1,588,371	30.8%	$2,356,845	45.7%	$715,668	13.9%	$491,128	9.5%
RI	$3,296,114	$933,040	28.3%	$1,361,190	41.3%	$955,569	29.0%	$46,315	1.4%
SC	$7,333,088	$2,073,831	28.3%	$2,929,276	39.9%	$2,203,952	30.1%	$126,029	1.7%
SD	$3,465,472	$1,550,884	44.8%	$1,476,109	42.6%	$337,865	9.7%	$100,614	2.9%
TN	$11,088,207	$4,933,853	44.5%	$3,614,196	32.6%	$2,429,996	21.9%	$110,162	1.0%
TX	$38,952,882	$12,081,510	31.0%	$11,493,636	29.5%	$6,121,165	15.7%	$9,256,569	23.8%
UT	$3,624,552	$878,214	24.2%	$1,424,870	39.3%	$640,964	17.7%	$680,504	18.8%
VA	$13,560,423	$4,261,941	31.4%	$3,962,132	29.2%	$4,003,703	29.5%	$1,332,647	9.8%
VT	$3,250,167	$1,516,604	46.7%	$582,847	17.9%	$479,928	14.8%	$670,788	20.6%
WA	$9,676,696	$3,042,340	31.4%	$3,774,482	39.0%	$2,096,404	21.7%	$763,470	7.9%
WI	$15,525,883	$3,010,439	19.4%	$7,065,714	45.5%	$2,740,710	17.7%	$2,709,020	17.4%
WV	$5,910,879	$2,208,308	37.4%	$1,902,171	32.2%	$1,257,191	21.3%	$543,209	9.2%
WY	$3,936,173	$1,093,998	27.8%	$1,619,271	41.1%	$1,144,789	29.1%	$78,115	2.0%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 5b. Total Service Expenditures by Cluster: FY 1996

(Includes Both) Title III and Other Funding Sources - See SPR Specifications for definition of key terms)

	All Services	Cluster 1		Cluster 2		Cluster 3		Other Services	
State	Expenditures	Expenditures	% of Total Service Expenditures	Expenditures	% of Total Service Expenditures	Expenditures	% of Total Service Expenditures	Expenditures	% of Total Service Expenditures
Total US	$1,871,567,618	$797,656,966	42.6%	$553,579,096	29.6%	$296,809,443	15.9%	$223,522,113	11.9%
AK	$11,701,689	$2,776,119	23.7%	$5,454,550	46.6%	$2,638,610	22.5%	$832,411	7.1%
AL	$21,794,476	$5,094,590	23.4%	$9,699,190	44.5%	$5,619,504	25.8%	$1,381,191	6.3%
AR	$21,517,552	$6,709,822	31.2%	$5,679,785	26.4%	$4,155,784	19.3%	$4,972,160	23.1%
AZ	$42,784,274	$22,485,388	52.6%	$8,035,021	18.8%	$5,518,742	12.9%	$6,745,123	15.8%
CA	$165,760,234	$61,720,031	37.2%	$68,139,166	41.1%	$19,062,306	11.5%	$16,818,731	10.1%
CO	$12,883,860	$4,335,276	33.6%	$4,556,450	35.4%	$2,991,869	23.2%	$1,000,265	7.8%
CT	$28,538,993	$11,952,942	41.9%	$7,806,589	27.4%	$4,853,689	17.0%	$3,925,774	13.8%
DC	$12,925,889	$4,737,155	36.6%	$5,434,939	42.0%	$2,377,567	18.4%	$376,229	2.9%
DE	$7,141,771	$4,688,888	65.7%	$2,094,643	29.3%	$282,097	3.9%	$76,144	1.1%
FL	$51,381,592	$19,134,372	37.2%	$15,295,383	29.8%	$11,044,360	21.5%	$5,907,477	11.5%
GA	$27,174,023	$11,363,759	41.8%	$8,706,414	32.0%	$5,067,006	18.6%	$2,036,844	7.5%
HI	$13,215,867	$4,882,044	36.9%	$3,256,353	24.6%	$2,482,429	18.8%	$2,595,041	19.6%
IA	$27,592,802	$9,969,581	36.1%	$11,152,721	40.4%	$2,898,931	10.5%	$3,571,568	12.9%
ID	$10,824,256	$4,360,892	40.3%	$4,760,441	44.0%	$1,312,908	12.1%	$390,016	3.6%
IL	$81,930,699	$26,353,744	42.6%	$21,167,329	34.2%	$11,248,251	18.2%	$3,161,375	5.1%
IN	$40,942,327	$18,989,925	46.4%	$12,866,801	31.4%	$7,266,150	17.7%	$1,819,450	4.4%
KS	$17,066,063	$7,368,152	43.2%	$7,044,673	41.3%	$1,802,519	10.6%	$850,718	5.0%
KY	$20,819,022	$8,906,062	43.2%	$6,198,522	30.1%	$4,089,791	19.8%	$1,424,626	6.9%
LA	$29,962,203	$14,245,808	47.5%	$5,819,096	22.7%	$7,260,657	24.2%	$1,656,642	5.5%
MA	$41,093,425	$22,310,415	54.3%	$10,859,512	26.4%	$4,928,473	12.0%	$2,995,025	7.3%
MD	$29,416,892	$7,875,701	26.8%	$9,862,958	33.5%	$5,710,002	19.4%	$5,968,230	20.3%
ME	$8,191,912	$3,494,254	42.7%	$2,029,243	24.8%	$2,490,630	30.4%	$177,786	2.2%
MI	$50,174,425	$33,035,173	65.8%	$12,090,187	24.1%	$2,780,485	5.5%	$2,268,580	4.5%
MN	$31,612,951	$10,148,924	32.1%	$15,474,004	48.9%	$5,362,623	17.0%	$627,400	2.0%
MO	$34,923,968	$13,681,993	39.2%	$12,322,456	35.3%	$6,591,363	18.9%	$2,328,156	6.7%
MS	$9,353,460	$5,227,542	55.9%	$2,219,039	23.7%	$1,290,183	13.8%	$616,697	6.6%
MT	$8,829,615	$2,798,451	31.7%	$3,770,905	42.7%	$848,849	9.6%	$1,411,410	16.0%
NC	$32,211,861	$16,772,544	52.1%	$7,512,489	23.3%	$5,957,574	18.5%	$1,969,254	6.1%
ND	$7,885,060	$1,927,336	25.1%	$3,375,011	43.9%	$1,696,033	22.1%	$686,680	8.9%
NE	$12,386,669	$4,267,108	34.4%	$6,248,453	50.4%	$1,871,108	15.1%	$0	0.0%
NH	$13,416,734	$8,791,728	65.5%	$2,285,429	17.0%	$2,208,672	16.5%	$130,906	1.0%
NJ	$41,997,768	$14,814,810	35.3%	$12,606,390	30.0%	$8,813,289	21.0%	$5,763,278	13.7%
NM	$16,485,636	$5,946,205	32.2%	$6,442,963	34.9%	$3,677,150	19.9%	$2,419,318	13.1%
NV	$9,438,543	$4,022,412	42.6%	$2,572,740	27.3%	$1,526,225	16.2%	$1,317,167	14.0%
NY	$274,179,164	$104,550,694	38.1%	$77,485,892	28.3%	$42,291,547	15.4%	$49,851,031	18.2%
OH	$72,471,578	$31,711,476	43.8%	$17,951,208	24.8%	$13,057,182	18.0%	$9,751,711	13.5%
OK	$21,408,565	$5,590,675	26.1%	$9,970,715	46.6%	$5,154,792	24.1%	$692,383	3.2%
OR	$26,365,489	$12,663,405	48.0%	$6,996,769	26.5%	$5,159,414	19.6%	$1,545,900	5.9%
PA	$166,929,320	$111,978,265	67.1%	$23,686,147	14.2%	$8,836,922	5.3%	$22,427,986	13.4%
PR	$6,054,280	$1,761,364	29.1%	$2,942,391	48.6%	$792,425	13.1%	$558,100	9.2%
RI	$10,045,655	$2,726,601	27.1%	$3,093,614	30.8%	$4,132,810	41.1%	$92,630	0.9%
SC	$19,524,965	$9,377,286	48.0%	$5,133,548	26.3%	$4,579,548	23.5%	$434,583	2.2%
SD	$9,399,517	$4,735,060	50.4%	$3,989,484	42.4%	$539,008	5.7%	$135,965	1.4%
TN	$26,708,467	$10,252,947	38.4%	$5,640,105	21.1%	$5,307,315	19.9%	$5,508,100	20.6%
TX	$104,434,687	$36,239,405	34.7%	$31,061,681	29.7%	$15,606,696	14.9%	$21,526,905	20.6%
UT	$12,211,714	$4,436,097	36.3%	$3,390,460	27.8%	$1,954,785	16.0%	$2,430,371	19.9%
VA	$36,969,678	$18,194,218	49.2%	$7,619,485	20.6%	$8,258,916	22.3%	$2,897,059	7.8%
VT	$7,442,651	$3,516,570	47.2%	$1,533,608	20.6%	$1,194,438	16.0%	$1,197,836	16.1%
WA	$38,878,568	$17,212,962	44.3%	$8,205,396	21.1%	$4,996,020	12.9%	$8,464,191	21.8%
WI	$40,981,519	$9,929,832	24.2%	$12,290,966	30.0%	$12,153,255	29.7%	$6,607,366	16.1%
WV	$14,229,692	$5,302,156	37.3%	$4,733,455	33.3%	$3,128,966	22.0%	$1,065,116	7.5%
WY	$8,335,602	$2,288,691	27.5%	$4,014,128	48.2%	$1,919,573	23.0%	$113,210	1.4%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 6a - Title III Service Expenditures for Selected Services: FY 1996 *Continued*
(See SPR Specifications for Definition of Key Terms)

State	Adult Day Care/Health		Case Management		Congregate Meals		Nutrition Counseling	
	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures
US Total	$ 8,796,889	1.32%	$ 17,327,156	2.60%	$ 239,878,594	35.98%	$ 1,086,779	0.16%
AK	$0	0.00%	$0	0.00%	$1,316,918	44.17%	$3,016	0.10%
AL	$33,891	0.28%	$0	0.00%	$5,264,014	43.90%	$213,708	1.78%
AR	$227,347	2.43%	$0	0.00%	$3,521,467	37.71%	$0	0.00%
AZ	$250,603	2.76%	$248,667	2.74%	$2,651,557	29.19%	$0	0.00%
CA	$1,039,715	1.73%	$3,294,709	5.47%	$22,071,519	36.63%	$249,885	0.41%
CO	$10,960	0.18%	$4,495	0.07%	$2,043,347	33.69%	$0	0.00%
CT	$506,484	5.67%	$16,560	0.19%	$3,271,131	36.61%	$0	0.00%
DC	$296,715	7.32%	$438,151	10.80%	$1,691,250	41.70%	$7,140	0.18%
DE	$429,915	13.17%	$452,972	13.88%	$874,038	26.78%	$13,600	0.42%
FL	$1,394,570	3.10%	$316,039	0.70%	$13,526,204	30.09%	$6,895	0.02%
GA	$262,528	1.54%	$483,186	2.83%	$5,536,617	32.42%	$0	0.00%
HI	$1,536	0.06%	$56,222	2.17%	$696,804	26.90%	$2,094	0.08%
IA	$150,085	1.75%	$212,812	2.48%	$4,114,313	47.88%	$2,603	0.03%
ID	$27,105	1.07%	$45,068	1.79%	$1,126,801	44.66%	$0	0.00%
IL	$1,500	0.01%	$2,074,516	7.70%	$9,917,634	36.80%	$0	0.00%
IN	$183,694	1.65%	$310,016	2.78%	$4,018,822	36.05%	$0	0.00%
KS	$0	0.00%	$141,823	2.13%	$2,747,331	41.32%	$209	0.00%
KY	$13,854	0.13%	$84,604	0.81%	$3,964,097	37.84%	$0	0.00%
LA	$0	0.00%	$213,784	2.32%	$3,376,316	36.59%	$23,312	0.25%
MA	$41,489	0.26%	$122,595	0.76%	$3,451,985	21.45%	$113,883	0.71%
MD	$38,431	0.38%	$357,663	3.53%	$4,993,282	49.34%	$19,251	0.19%
ME	$7,220	0.20%	$0	0.00%	$709,669	19.68%	$0	0.00%
MI	$805,067	3.32%	$849,817	3.50%	$7,707,738	31.74%	$0	0.00%
MN	$3,510	0.04%	$62,834	0.66%	$4,023,241	41.77%	$0	0.00%
MO	$186,533	1.30%	$280,845	1.95%	$5,298,656	36.82%	$0	0.00%
MS	$236,316	3.85%	$143,218	2.33%	$1,326,358	21.60%	$0	0.00%
MT	$0	0.00%	$0	0.00%	$1,431,124	50.90%	$1,642	0.06%
NC	$172,616	1.20%	$0	0.00%	$4,883,118	33.94%	$0	0.00%
ND	$0	0.00%	$0	0.00%	$1,145,917	31.67%	$2,887	0.08%
NE	$0	0.00%	$0	0.00%	$2,090,670	51.31%	$0	0.00%
NH	$94,727	2.50%	$0	0.00%	$1,439,820	38.07%	$0	0.00%
NJ	$135,327	0.57%	$450,235	1.90%	$8,826,207	37.34%	$0	0.00%
NM	$7,535	0.21%	$7,157	0.20%	$1,906,627	52.03%	$0	0.00%
NV	$224,979	5.62%	$48,750	1.22%	$1,286,370	32.12%	$0	0.00%
NY	$406,166	0.71%	$66,899	0.12%	$25,604,404	44.79%	$351,745	0.62%
OH	$616,828	2.36%	$26,956	0.10%	$7,995,672	30.62%	$0	0.00%
OK	$97,009	0.88%	$0	0.00%	$4,218,792	38.29%	$11,998	0.11%
OR	$11,012	0.15%	$766,823	10.19%	$2,602,478	34.57%	$0	0.00%
PA	$0	0.00%	$927,243	2.33%	$14,211,688	35.76%	$0	0.00%
PR	$0	0.00%	$83,660	1.62%	$2,326,128	45.15%	$1,282	0.02%
RI	$0	0.00%	$413,283	12.54%	$1,361,190	41.30%	$0	0.00%
SC	$14,935	0.20%	$26,979	0.37%	$2,918,932	39.80%	$10,344	0.14%
SD	$234,863	6.78%	$740,751	21.38%	$1,476,109	42.59%	$0	0.00%
TN	$11,673	0.11%	$300,145	2.71%	$3,554,570	32.06%	$21,900	0.20%
TX	$85,583	0.22%	$1,501,299	3.85%	$11,491,947	29.50%	$1,260	0.00%
UT	$0	0.00%	$0	0.00%	$1,412,085	38.96%	$0	0.00%
VA	$61,606	0.45%	$362,754	2.68%	$3,962,132	29.22%	$0	0.00%
VT	$7,260	0.22%	$655,426	20.17%	$582,847	17.93%	$0	0.00%
WA	$24,684	0.26%	$660,920	6.83%	$3,774,482	39.01%	$0	0.00%
WI	$308,856	1.99%	$0	0.00%	$7,003,666	45.11%	$8,794	0.06%
WV	$79,487	1.34%	$4,118	0.07%	$1,776,338	30.05%	$19	0.00%
WY	$52,669	1.34%	$53,152	1.35%	$1,354,172	34.40%	$19,312	0.49%

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Table 6a. Title III Service Expenditures for Selected Services: FY 1996
(See SPR Specifications for Definition of Key Terms)

State	Personal Care		Homemaker		Chore		Home Delivered Meals	
	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures
US Total	$ 12,578,913	1.89%	$ 24,902,232	3.74%	$ 4,852,385	0.73%	$ 140,473,756	21.07%
AK	$0	0.00%	$13,888	0.47%	$3,701	0.12%	$458,779	15.39%
AL	$0	0.00%	$505,027	4.21%	$19,746	0.16%	$2,284,571	19.05%
AR	$0	0.00%	$141,360	1.51%	$41,211	0.44%	$2,101,981	22.51%
AZ	$175,554	1.93%	$84,296	0.93%	$0	0.00%	$1,496,504	16.48%
CA	$1,189,158	1.97%	$2,745,609	4.56%	$289,484	0.48%	$13,993,811	23.23%
CO	$225,472	3.72%	$325,825	5.37%	$31,272	0.52%	$1,326,176	21.87%
CT	$120,835	1.35%	$292,351	3.27%	$226,085	2.53%	$2,015,260	22.56%
DC	$0	0.00%	$369,576	9.11%	$0	0.00%	$473,758	11.68%
DE	$376,056	11.52%	$158,114	4.84%	$0	0.00%	$754,596	23.12%
FL	$8,899	0.02%	$3,344,366	7.44%	$574,267	1.28%	$10,454,059	23.25%
GA	$912,216	5.34%	$1,368,323	8.01%	$11,740	0.07%	$3,000,788	17.57%
HI	$117,309	4.53%	$17,731	0.68%	$5,461	0.21%	$618,333	23.87%
IA	$0	0.00%	$349,210	4.06%	$86,840	1.01%	$1,255,622	14.61%
ID	$0	0.00%	$15,006	0.59%	$74	0.00%	$630,028	24.97%
IL	$265,049	0.98%	$45,532	0.17%	$1,035,403	3.84%	$6,315,920	23.43%
IN	$278,982	2.50%	$852,980	7.65%	$101,655	0.91%	$2,425,532	21.76%
KS	$196,635	2.96%	$230,481	3.47%	$27,855	0.42%	$1,461,484	21.98%
KY	$64,386	0.61%	$613,154	5.85%	$48,777	0.47%	$2,183,001	20.84%
LA	$143,034	1.55%	$700,062	7.59%	$56,749	0.61%	$1,587,944	17.21%
MA	$82,708	0.51%	$12,586	0.08%	$12,113	0.08%	$7,013,268	43.58%
MD	$253,133	2.50%	$82,648	0.82%	$9,586	0.09%	$1,541,068	15.23%
ME	$4,574	0.13%	$0	0.00%	$16,674	0.46%	$1,185,302	32.87%
MI	$1,212,781	4.99%	$1,671,792	6.88%	$699,959	2.88%	$6,992,570	28.80%
MN	$268,227	2.78%	$258,120	2.68%	$490,884	5.10%	$1,533,758	15.92%
MO	$169,441	1.18%	$937,088	6.51%	$0	0.00%	$2,682,230	18.64%
MS	$0	0.00%	$521,713	8.50%	$0	0.00%	$2,058,416	33.53%
MT	$13,116	0.47%	$240,411	8.55%	$32,049	1.14%	$579,037	20.59%
NC	$1,398,327	9.72%	$956,877	6.65%	$0	0.00%	$3,073,164	21.36%
ND	$0	0.00%	$0	0.00%	$72,610	2.02%	$646,013	17.96%
NE	$180,697	4.43%	$299,947	7.36%	$221,149	5.43%	$605,864	14.87%
NH	$117,655	3.11%	$180,474	4.77%	$0	0.00%	$943,190	24.94%
NJ	$877,361	3.71%	$348,655	1.47%	$116,976	0.49%	$3,624,292	16.18%
NM	$4,668	0.13%	$56,374	1.54%	$7,013	0.19%	$391,635	10.69%
NV	$0	0.00%	$296,341	7.40%	$0	0.00%	$985,077	24.60%
NY	$568,712	0.99%	$149,930	0.26%	$0	0.00%	$9,026,583	15.79%
OH	$556,984	2.13%	$1,647,784	6.31%	$192,215	0.74%	$5,976,907	22.89%
OK	$25,264	0.23%	$465,293	4.22%	$24,978	0.23%	$2,902,986	26.35%
OR	$24,484	0.33%	$145,518	1.93%	$5,846	0.08%	$1,880,339	24.98%
PA	$509,261	1.28%	$4,035	0.01%	$0	0.00%	$5,386,385	13.55%
PR	$93,122	1.81%	$474,462	9.21%	$26,933	0.52%	$910,194	17.67%
RI	$14,710	0.45%	$0	0.00%	$0	0.00%	$505,047	15.32%
SC	$415,421	5.67%	$495,375	6.76%	$0	0.00%	$1,121,121	15.29%
SD	$0	0.00%	$37,148	1.07%	$0	0.00%	$538,122	15.53%
TN	$169,951	1.53%	$965,844	8.71%	$0	0.00%	$3,486,240	31.44%
TX	$551,618	1.42%	$1,348,535	3.46%	$12,478	0.03%	$8,581,997	22.03%
UT	$69,218	1.91%	$41,468	1.14%	$42,893	1.18%	$724,635	19.99%
VA	$469,638	3.46%	$391,910	2.88%	$27,934	0.21%	$2,948,097	21.74%
VT	$2,853	0.09%	$9,932	0.31%	$3,216	0.10%	$837,917	25.78%
WA	$168,028	1.74%	$0	0.00%	$0	0.00%	$2,188,708	22.62%
WI	$184,997	1.19%	$293,097	1.89%	$186,327	1.20%	$2,037,160	13.12%
WV	$29,573	0.50%	$180,193	3.05%	$48,097	0.81%	$1,866,840	31.58%
WY	$68,804	1.75%	$215,791	5.48%	$42,135	1.07%	$661,447	16.80%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 6a - Title III Service Expenditures for Selected Services: FY 1996 *Continued*
(See SPR Specifications for Definition of Key Terms)

State	Information & Assistance		Outreach		Other	
	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures
US Total	$ 31,757,450	4.76%	$ 13,391,221	2.01%	$ 85,510,150	12.83%
AK	$192,189	6.45%	$19,860	0.67%	$158,158	5.30%
AL	$488,119	4.07%	$85,779	0.72%	$787,279	6.57%
AR	$163,841	1.75%	$0	0.00%	$1,613,466	17.28%
AZ	$0	0.00%	$36,087	0.40%	$2,967,854	32.67%
CA	$4,779,662	7.93%	$0	0.00%	$4,877,432	8.10%
CO	$260,308	4.29%	$94,382	1.56%	$550,146	9.07%
CT	$111,849	1.25%	$179,875	2.01%	$1,334,763	14.94%
DC	$0	0.00%	$0	0.00%	$237,024	5.84%
DE	$13,709	0.42%	$22,362	0.69%	$76,144	2.33%
FL	$1,259,102	2.80%	$1,271,000	2.83%	$5,139,505	11.43%
GA	$470,174	2.75%	$133,432	0.78%	$2,036,844	11.93%
HI	$135,280	5.22%	$203,218	7.85%	$352,147	13.60%
IA	$302,001	3.51%	$420,040	4.89%	$785,745	9.14%
ID	$208,501	8.26%	$102,740	4.07%	$74,103	2.94%
IL	$2,238,707	8.31%	$903,009	3.35%	$1,770,370	6.57%
IN	$454,050	4.07%	$23,787	0.21%	$545,835	4.90%
KS	$580,559	8.73%	$56,731	0.85%	$646,546	9.72%
KY	$294,504	2.81%	$342,247	3.27%	$1,039,977	9.93%
LA	$317,246	3.44%	$166,317	1.80%	$629,524	6.82%
MA	$727,554	4.52%	$372,814	2.32%	$1,886,866	11.73%
MD	$825,803	8.16%	$116,580	1.15%	$1,193,646	11.80%
ME	$285,896	7.93%	$962,838	26.70%	$147,562	4.09%
MI	$408,211	1.68%	$690,231	2.84%	$2,019,036	8.31%
MN	$626,817	6.51%	$597,036	6.20%	$326,248	3.39%
MO	$673,747	4.68%	$2,371	0.02%	$1,815,962	12.62%
MS	$130,644	2.13%	$196,190	3.20%	$616,697	10.05%
MT	$6,841	0.24%	$54,202	1.93%	$141,141	5.02%
NC	$5,017	0.03%	$49,262	0.34%	$1,102,782	7.66%
ND	$41,582	1.16%	$824,687	22.93%	$446,342	12.41%
NE	$173,794	4.27%	$64,662	1.59%	$0	0.00%
NH	$0	0.00%	$72,829	1.93%	$130,906	3.46%
NJ	$1,894,093	8.01%	$58,016	0.25%	$3,976,662	16.82%
NM	$336,344	9.18%	$51,419	1.40%	$411,284	11.22%
NV	$188,688	4.71%	$0	0.00%	$536,482	13.39%
NY	$4,643,246	8.12%	$1,067,534	1.87%	$8,026,016	14.04%
OH	$0	0.00%	$411,933	1.58%	$4,290,753	16.43%
OK	$269,728	2.63%	$925,661	8.40%	$443,125	4.02%
OR	$586,329	7.79%	$345,040	4.58%	$664,737	8.83%
PA	$2,779,129	6.99%	$0	0.00%	$14,802,471	37.24%
PR	$242,020	4.70%	$56,002	1.09%	$491,128	9.53%
RI	$757,777	22.99%	$33,326	1.01%	$46,315	1.41%
SC	$19,576	0.27%	$45,146	0.62%	$126,029	1.72%
SD	$0	0.00%	$0	0.00%	$100,614	2.90%
TN	$276,581	2.49%	$181,538	1.64%	$110,162	0.99%
TX	$918,280	2.36%	$56,520	0.15%	$9,256,569	23.76%
UT	$126,139	3.48%	$71,875	1.98%	$680,504	18.77%
VA	$924,035	6.81%	$1,362,522	10.05%	$1,332,647	9.83%
VT	$137,019	4.22%	$60,405	1.86%	$670,788	20.64%
WA	$664,567	6.87%	$91,499	0.95%	$763,470	7.89%
WI	$363,911	2.34%	$356,127	2.29%	$2,709,020	17.45%
WV	$100,713	1.70%	$74,750	1.26%	$543,209	9.19%
WY	$333,568	8.47%	$77,250	1.96%	$78,115	1.98%

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Table 6a - Title III Service Expenditures for Selected Services: FY 1996 *Continued*
(See SPR Specifications for Definition of Key Terms)

State	Assisted Transportation		Transportation		Legal Assistance		Nutrition Education	
	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures	Expenditures	% of Title III Expenditures
US Total	$ 3,673,659	0.55%	$ 59,190,127	8.88%	$ 20,621,374	3.09%	$ 2,675,325	0.40%
AK	$349,401	11.72%	$334,909	11.23%	$130,169	4.37%	$767	0.03%
AL	$93,569	0.78%	$1,616,144	13.48%	$426,391	3.56%	$172,355	1.44%
AR	$0	0.00%	$1,453,793	15.57%	$73,273	0.78%	$0	0.00%
AZ	$0	0.00%	$863,259	9.50%	$309,098	3.40%	$0	0.00%
CA	$363,922	0.60%	$2,031,264	3.37%	$3,061,573	5.08%	$260,030	0.43%
CO	$8,153	0.13%	$992,386	16.36%	$180,388	2.97%	$11,068	0.18%
CT	$10,000	0.11%	$536,089	6.02%	$273,781	3.06%	$37,319	0.42%
DC	$181,912	4.48%	$316,960	7.81%	$22,200	0.55%	$21,420	0.53%
DE	$0	0.00%	$16,586	0.57%	$71,758	2.20%	$2,150	0.07%
FL	$84,376	0.19%	$5,736,685	12.76%	$1,242,395	2.76%	$599,143	1.33%
GA	$55,450	0.32%	$2,435,945	14.27%	$342,771	2.01%	$25,373	0.15%
HI	$71,024	2.74%	$142,984	5.52%	$117,541	4.54%	$52,446	2.02%
IA	$18,104	0.21%	$707,985	8.24%	$173,214	2.02%	$14,136	0.16%
ID	$12,433	0.49%	$221,354	8.77%	$59,653	2.36%	$0	0.00%
IL	$42,887	0.16%	$1,503,701	5.58%	$770,055	2.86%	$66,632	0.25%
IN	$200,512	1.80%	$1,566,014	14.05%	$166,752	1.50%	$18,696	0.17%
KS	$0	0.00%	$240,344	3.61%	$264,420	3.98%	$54,344	0.82%
KY	$62,944	0.60%	$1,609,678	15.37%	$154,096	1.47%	$0	0.00%
LA	$6,422	0.07%	$1,854,229	20.09%	$96,361	1.04%	$56,339	0.61%
MA	$117,810	0.73%	$934,593	5.81%	$1,083,027	6.73%	$118,275	0.74%
MD	$60,541	0.60%	$161,868	1.60%	$355,995	3.52%	$110,258	1.09%
ME	$50,408	1.40%	$77,059	2.14%	$159,230	4.42%	$0	0.00%
MI	$46,846	0.19%	$493,587	2.03%	$684,697	2.82%	$0	0.00%
MN	$0	0.00%	$740,602	7.69%	$630,779	6.55%	$50,802	0.53%
MO	$0	0.00%	$2,164,907	15.04%	$180,624	1.25%	$0	0.00%
MS	$419,560	6.83%	$419,560	6.83%	$70,668	1.15%	$0	0.00%
MT	$1,282	0.05%	$281,517	10.01%	$21,498	0.76%	$7,991	0.28%
NC	$0	0.00%	$2,503,582	17.40%	$243,716	1.69%	$0	0.00%
ND	$1,330	0.04%	$281,099	7.82%	$125,000	3.48%	$8,573	0.24%
NE	$83,516	2.05%	$131,445	3.23%	$222,795	5.47%	$0	0.00%
NH	$0	0.00%	$694,121	18.35%	$108,221	2.86%	$0	0.00%
NJ	$59,013	0.25%	$2,219,606	9.39%	$851,860	3.60%	$0	0.00%
NM	$13,131	0.36%	$373,836	10.20%	$97,670	2.67%	$0	0.00%
NV	$0	0.00%	$289,430	7.23%	$149,000	3.72%	$0	0.00%
NY	$256,908	0.45%	$4,715,344	8.25%	$1,988,256	3.48%	$294,758	0.52%
OH	$328,699	1.26%	$3,408,523	13.05%	$589,769	2.26%	$66,417	0.25%
OK	$137,164	1.24%	$1,164,761	10.57%	$219,116	1.99%	$91,948	0.83%
OR	$31,110	0.41%	$225,095	2.99%	$236,213	3.14%	$3,063	0.04%
PA	$0	0.00%	$0	0.00%	$1,126,898	2.84%	$0	0.00%
PR	$29,435	0.57%	$356,175	6.91%	$51,578	1.00%	$9,893	0.19%
RI	$0	0.00%	$4,320	0.13%	$105,146	3.19%	$55,000	1.67%
SC	$0	0.00%	$2,028,194	27.86%	$54,414	0.74%	$56,622	0.77%
SD	$0	0.00%	$284,553	8.21%	$53,312	1.54%	$0	0.00%
TN	$37,726	0.34%	$1,520,743	13.71%	$341,548	3.08%	$109,586	0.99%
TX	$431	0.00%	$4,316,583	11.08%	$829,782	2.13%	$0	0.00%
UT	$12,785	0.35%	$409,700	11.30%	$33,250	0.92%	$0	0.00%
VA	$0	0.00%	$1,545,876	11.40%	$171,270	1.26%	$0	0.00%
VT	$0	0.00%	$52,090	1.60%	$225,314	6.93%	$5,100	0.16%
WA	$0	0.00%	$778,922	8.05%	$529,118	5.47%	$32,298	0.33%
WI	$53,254	0.34%	$957,672	6.17%	$1,031,680	6.64%	$31,320	0.20%
WV	$125,614	2.13%	$996,437	16.86%	$73,541	1.24%	$11,750	0.20%
WY	$245,787	6.24%	$474,018	12.04%	$40,500	1.03%	$219,453	5.58%

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Table 6b - Total Service Expenditures for Selected Services: FY 1996 (includes both Title III and Other Funding sources) *Continued*

(See SPR Specifications for Definition of Key Terms.)

State	Adult Day Care/Health		Case Management		Congregate Meals		Nutrition Counseling	
	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures
US Total	$ 37,814,331	2.02%	$ 94,206,645	5.03%	$ 537,312,210	28.71%	$ 1,949,698	0.10%
AK	$0	0.00%	$0	0.00%	$4,389,727	37.51%	$6,032	0.05%
AL	$40,346	0.19%	$0	0.00%	$9,235,112	42.37%	$251,421	1.15%
AR	$291,471	1.35%	$0	0.00%	$5,679,785	26.40%	$0	0.00%
AZ	$3,132,538	7.32%	$4,144,450	9.69%	$8,035,021	18.78%	$0	0.00%
CA	$5,472,184	3.30%	$5,780,191	3.49%	$64,916,232	39.16%	$423,534	0.26%
CO	$27,400	0.21%	$8,990	0.07%	$4,540,771	35.24%	$0	0.00%
CT	$3,617,743	12.68%	$33,120	0.12%	$7,788,407	27.29%	$0	0.00%
DC	$618,156	4.78%	$617,114	4.77%	$3,598,404	27.84%	$17,415	0.13%
DE	$955,367	13.38%	$452,972	6.34%	$2,081,043	29.14%	$13,600	0.19%
FL	$1,787,910	3.48%	$336,212	0.65%	$15,197,982	29.58%	$11,303	0.02%
GA	$625,067	2.30%	$847,695	3.12%	$8,650,984	31.84%	$0	0.00%
HI	$236,308	1.79%	$634,560	4.80%	$2,555,204	19.33%	$2,094	0.02%
IA	$1,250,708	4.53%	$1,637,015	5.93%	$11,119,765	40.30%	$5,104	0.02%
ID	$159,441	1.47%	$173,338	1.60%	$4,695,004	43.37%	$0	0.00%
IL	$1,500	0.00%	$5,762,544	9.30%	$21,101,349	34.07%	$0	0.00%
IN	$1,080,553	2.64%	$1,937,600	4.73%	$10,861,681	26.53%	$0	0.00%
KS	$0	0.00%	$159,352	0.93%	$7,044,438	41.28%	$235	0.00%
KY	$18,229	0.09%	$138,695	0.67%	$6,098,811	29.58%	$0	0.00%
LA	$0	0.00%	$628,806	2.10%	$6,752,632	22.52%	$47,576	0.16%
MA	$50,596	0.12%	$200,975	0.49%	$10,460,561	25.46%	$214,874	0.52%
MD	$480,388	1.63%	$1,375,627	4.68%	$9,078,695	30.86%	$27,501	0.09%
ME	$180,500	2.20%	$0	0.00%	$1,971,303	24.06%	$0	0.00%
MI	$1,750,146	3.49%	$1,249,731	2.49%	$12,043,341	24.00%	$0	0.00%
MN	$10,969	0.03%	$172,571	0.55%	$15,474,004	48.95%	$0	0.00%
MO	$270,338	0.77%	$315,556	0.90%	$12,322,456	35.28%	$0	0.00%
MS	$407,445	4.36%	$716,090	7.66%	$1,326,358	14.18%	$0	0.00%
MT	$0	0.00%	$0	0.00%	$3,766,116	42.65%	$2,415	0.03%
NC	$821,981	2.55%	$0	0.00%	$7,512,489	23.32%	$0	0.00%
ND	$0	0.00%	$0	0.00%	$3,370,344	43.86%	$3,173	0.04%
NE	$0	0.00%	$0	0.00%	$6,149,029	49.64%	$0	0.00%
NH	$676,621	5.04%	$0	0.00%	$2,285,429	17.03%	$0	0.00%
NJ	$229,368	0.55%	$789,886	1.88%	$12,431,277	29.60%	$0	0.00%
NM	$753,500	4.08%	$715,700	3.87%	$6,355,423	34.38%	$0	0.00%
NV	$1,597,862	16.83%	$121,875	1.29%	$2,572,740	27.26%	$0	0.00%
NY	$3,702,516	1.35%	$19,676,176	7.18%	$76,045,156	27.74%	$829,196	0.30%
OH	$1,504,459	2.08%	$53,912	0.07%	$17,012,068	23.47%	$0	0.00%
OK	$465,045	2.27%	$0	0.00%	$9,811,144	45.83%	$15,187	0.07%
OR	$122,356	0.46%	$2,323,706	8.81%	$6,848,626	25.98%	$0	0.00%
PA	$0	0.00%	$30,908,100	18.52%	$23,686,147	14.19%	$0	0.00%
PR	$0	0.00%	$92,956	1.54%	$2,907,660	48.03%	$1,282	0.02%
RI	$0	0.00%	$751,424	7.48%	$3,093,614	30.80%	$0	0.00%
SC	$746,750	3.82%	$449,650	2.30%	$5,120,933	26.23%	$12,615	0.06%
SD	$499,709	5.32%	$2,645,539	28.15%	$3,989,484	42.44%	$0	0.00%
TN	$32,425	0.12%	$492,041	1.84%	$5,554,016	20.79%	$33,692	0.13%
TX	$103,112	0.10%	$2,461,146	2.36%	$31,059,316	29.74%	$1,260	0.00%
UT	$0	0.00%	$0	0.00%	$3,283,919	26.89%	$0	0.00%
VA	$770,100	2.08%	$1,648,882	4.46%	$7,619,485	20.61%	$0	0.00%
VT	$103,714	1.39%	$1,394,523	18.74%	$1,533,808	20.61%	$0	0.00%
WA	$617,100	1.59%	$2,279,034	5.86%	$8,205,396	21.11%	$0	0.00%
WI	$2,206,129	5.38%	$0	0.00%	$12,075,286	29.47%	$10,857	0.03%
WV	$283,882	1.99%	$25,738	0.18%	$4,440,845	31.21%	$19	0.00%
WY	$92,402	1.11%	$53,152	0.64%	$3,563,611	42.75%	$19,312	0.23%

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Table 6b. Total Service Expenditures for Selected Services: FY 1996 (Includes both Title III and Other Funding sources)
(See SPR Specifications for Definition of Key Terms.)

State	Personal Care		Homemaker		Chore		Home Delivered Meals	
	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures
US Total	$ 123,459,754	6.60%	$ 77,235,294	4.13%	$ 11,739,585	0.63%	$ 453,201,358	24.22%
AK	$0	0.00%	$277,760	2.37%	$83,733	0.72%	$2,414,626	20.63%
AL	$0	0.00%	$744,219	3.41%	$164,550	0.76%	$4,145,475	19.02%
AR	$0	0.00%	$204,870	0.95%	$374,645	1.74%	$5,838,836	27.14%
AZ	$3,511,080	8.21%	$4,214,800	9.85%	$0	0.00%	$7,482,520	17.49%
CA	$2,426,853	1.46%	$4,992,016	3.01%	$643,298	0.39%	$42,405,488	25.58%
CO	$563,680	4.38%	$525,524	4.08%	$52,120	0.40%	$3,157,562	24.51%
CT	$863,107	3.02%	$679,666	2.38%	$461,398	1.62%	$6,297,688	22.07%
DC	$0	0.00%	$1,606,652	12.43%	$0	0.00%	$1,895,032	14.66%
DE	$835,680	11.70%	$405,421	5.68%	$0	0.00%	$2,039,449	28.56%
FL	$9,367	0.02%	$3,483,715	6.78%	$610,922	1.19%	$12,906,246	25.12%
GA	$1,341,494	4.94%	$2,012,240	7.41%	$13,812	0.05%	$6,523,452	24.01%
HI	$1,294,801	9.80%	$220,809	1.67%	$65,012	0.49%	$2,430,554	18.39%
IA	$0	0.00%	$591,881	2.15%	$510,824	1.85%	$5,979,152	21.67%
ID	$0	0.00%	$1,500,600	13.86%	$7,400	0.07%	$2,520,112	23.28%
IL	$384,129	0.62%	$89,278	0.14%	$2,070,806	3.34%	$18,045,486	29.14%
IN	$1,468,326	3.59%	$3,877,162	9.47%	$924,136	2.26%	$9,702,128	23.70%
KS	$248,905	1.46%	$281,074	1.65%	$35,712	0.21%	$6,643,109	38.93%
KY	$83,621	0.41%	$796,304	3.86%	$72,801	0.35%	$7,796,432	37.81%
LA	$366,754	1.22%	$1,750,155	5.84%	$157,636	0.53%	$11,342,457	37.83%
MA	$100,863	0.25%	$20,633	0.05%	$20,884	0.05%	$21,816,463	53.33%
MD	$2,301,209	7.82%	$317,877	1.08%	$50,453	0.17%	$3,350,146	11.39%
ME	$4,574	0.06%	$0	0.00%	$16,674	0.20%	$3,292,506	40.19%
MI	$3,109,695	6.20%	$3,462,900	6.94%	$886,024	1.77%	$22,556,877	44.96%
MN	$638,636	2.02%	$956,000	3.02%	$1,067,139	3.38%	$7,303,610	23.10%
MO	$217,232	0.62%	$1,218,997	3.46%	$0	0.00%	$11,661,870	33.39%
MS	$0	0.00%	$555,014	5.93%	$0	0.00%	$3,548,993	37.94%
MT	$38,576	0.44%	$686,889	7.76%	$76,307	0.86%	$1,896,879	22.61%
NC	$6,356,032	19.73%	$4,556,557	14.15%	$0	0.00%	$5,037,974	15.64%
ND	$0	0.00%	$0	0.00%	$81,584	1.06%	$1,845,751	24.02%
NE	$410,675	3.32%	$598,894	4.84%	$502,611	4.06%	$2,753,827	22.23%
NH	$618,237	4.62%	$2,255,925	16.81%	$0	0.00%	$5,239,944	39.06%
NJ	$1,539,230	3.67%	$601,129	1.43%	$205,221	0.49%	$11,449,976	27.26%
NM	$27,459	0.15%	$1,127,480	6.10%	$58,442	0.32%	$3,263,625	17.65%
NV	$0	0.00%	$406,296	4.33%	$0	0.00%	$1,894,378	20.07%
NY	$22,390,236	8.17%	$7,610,660	2.78%	$0	0.00%	$51,171,105	18.66%
OH	$2,142,246	2.96%	$4,336,274	5.98%	$686,482	0.95%	$22,988,104	31.72%
OK	$31,180	0.15%	$646,240	3.02%	$29,736	0.14%	$4,398,464	20.55%
OR	$816,133	3.10%	$2,425,300	9.20%	$11,692	0.04%	$6,964,219	26.41%
PA	$50,926,100	30.51%	$6,725,000	4.03%	$0	0.00%	$23,419,065	14.03%
PR	$107,037	1.77%	$533,103	8.81%	$28,055	0.46%	$1,000,213	16.52%
RI	$32,689	0.33%	$0	0.00%	$0	0.00%	$1,842,488	19.34%
SC	$1,538,596	7.88%	$1,303,618	6.68%	$0	0.00%	$5,338,671	27.34%
SD	$0	0.00%	$52,321	0.56%	$0	0.00%	$1,537,491	16.36%
TN	$209,816	0.79%	$2,682,900	10.05%	$0	0.00%	$6,835,765	25.59%
TX	$619,796	0.59%	$2,391,020	2.29%	$14,343	0.01%	$30,649,989	29.35%
UT	$256,363	2.10%	$49,367	0.40%	$104,617	0.86%	$4,025,750	32.97%
VA	$6,709,114	18.15%	$1,959,550	5.30%	$87,294	0.24%	$7,019,279	18.99%
VT	$9,838	0.13%	$10,032	0.13%	$3,421	0.05%	$1,995,040	26.81%
WA	$8,401,400	21.61%	$0	0.00%	$0	0.00%	$5,915,427	15.22%
WI	$385,410	0.94%	$681,621	1.66%	$1,433,285	3.50%	$5,223,487	12.75%
WV	$53,769	0.38%	$409,530	2.88%	$84,381	0.59%	$4,444,857	31.24%
WY	$68,804	0.83%	$378,591	4.54%	$42,135	0.51%	$1,653,618	19.84%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 6b. Total Service Expenditures for Selected Services: FY 1996 (includes both Title III and Other Funding sources) *Continued*
(See SPR Specifications for Definition of Key Terms.)

State	Information & Assistance		Outreach		Other	
	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures
US Total	$ 74,051,121	3.96%	$ 24,395,442	1.30%	$ 223,522,113	11.94%
AK	$1,067,717	9.12%	$104,526	0.89%	$832,411	7.11%
AL	$1,135,160	5.21%	$199,486	0.92%	$1,381,191	6.34%
AR	$252,063	1.17%	$0	0.00%	$4,972,160	23.11%
AZ	$0	0.00%	$189,932	0.44%	$6,745,123	15.77%
CA	$7,835,511	4.73%	$0	0.00%	$16,818,731	10.15%
CO	$326,385	2.53%	$224,719	1.74%	$1,000,265	7.76%
CT	$215,094	0.75%	$449,688	1.58%	$3,925,774	13.76%
DC	$0	0.00%	$0	0.00%	$376,229	2.91%
DE	$13,709	0.19%	$44,724	0.63%	$76,144	1.07%
FL	$1,430,798	2.78%	$1,294,297	2.52%	$5,907,477	11.50%
GA	$681,412	2.51%	$175,568	0.65%	$2,036,844	7.50%
HI	$578,614	4.38%	$494,207	3.74%	$2,595,041	19.64%
IA	$377,501	1.37%	$531,696	1.93%	$3,571,568	12.94%
ID	$336,292	3.11%	$263,436	2.43%	$390,016	3.60%
IL	$3,670,011	5.93%	$1,641,835	2.65%	$3,161,375	5.10%
IN	$1,746,346	4.27%	$792,233	1.93%	$1,819,450	4.44%
KS	$624,257	3.66%	$72,732	0.43%	$850,718	4.98%
KY	$525,900	2.55%	$698,463	3.39%	$1,424,626	6.91%
LA	$906,417	3.02%	$489,168	1.63%	$1,656,642	5.53%
MA	$1,102,355	2.68%	$532,591	1.30%	$2,995,025	7.29%
MD	$2,064,508	7.02%	$259,311	0.86%	$5,968,230	20.29%
ME	$680,705	8.31%	$1,552,965	18.96%	$177,788	2.17%
MI	$716,160	1.43%	$758,496	1.51%	$2,268,580	4.52%
MN	$1,182,674	3.74%	$1,011,925	3.20%	$627,400	1.98%
MO	$821,643	2.35%	$3,648	0.01%	$2,328,156	6.67%
MS	$130,644	1.40%	$196,190	2.10%	$616,697	6.59%
MT	$22,068	0.25%	$108,404	1.23%	$1,411,410	15.98%
NC	$11,149	0.03%	$57,955	0.18%	$1,969,254	6.11%
ND	$45,695	0.59%	$1,005,716	13.09%	$686,680	8.94%
NE	$310,346	2.51%	$157,712	1.27%	$0	0.00%
NH	$0	0.00%	$269,737	2.01%	$130,906	0.98%
NJ	$3,322,970	7.91%	$101,782	0.24%	$5,763,278	13.72%
NM	$1,121,147	6.06%	$197,765	1.07%	$2,419,318	13.09%
NV	$224,629	2.38%	$0	0.00%	$1,317,167	13.96%
NY	$22,047,702	8.04%	$2,414,143	0.88%	$49,851,031	18.18%
OH	$0	0.00%	$915,407	1.26%	$9,751,711	13.46%
OK	$362,160	1.69%	$1,517,477	7.09%	$692,383	3.23%
OR	$1,196,590	4.54%	$638,963	2.42%	$1,545,900	5.86%
PA	$7,511,159	4.50%	$0	0.00%	$22,427,886	13.44%
PR	$260,237	4.30%	$60,872	1.01%	$558,100	9.22%
RI	$1,024,023	10.19%	$61,715	0.61%	$92,630	0.92%
SC	$103,032	0.53%	$98,143	0.50%	$434,583	2.23%
SD	$0	0.00%	$0	0.00%	$135,965	1.45%
TN	$389,551	1.46%	$248,682	0.93%	$5,508,100	20.62%
TX	$1,311,829	1.26%	$79,606	0.08%	$21,526,905	20.61%
UT	$394,184	3.23%	$171,131	1.40%	$2,430,371	19.90%
VA	$1,301,458	3.52%	$1,703,153	4.61%	$2,897,059	7.84%
VT	$441,997	5.94%	$167,792	2.25%	$1,197,836	16.09%
WA	$2,291,610	5.89%	$91,499	0.24%	$8,464,191	21.77%
WI	$1,137,222	2.77%	$2,094,865	5.11%	$6,607,366	16.12%
WV	$214,283	1.51%	$173,837	1.22%	$1,065,116	7.49%
WY	$585,207	7.02%	$77,250	0.93%	$113,210	1.36%

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Table 6b. Total Service Expenditures for Selected Services: FY 1996 (Includes both Title III and Other Funding sources) *Continued*

(See SPR Specifications for Definition of Key Terms.)

State	Assisted Transportation		Transportation		Legal Assistance		Nutrition Education	
	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures	Expenditures	% of All Service Expenditures
US Total	$ 14,317,191	0.76%	$ 156,824,552	8.38%	$ 37,022,099	1.98%	$ 4,516,230	0.24%
AK	$1,058,781	9.05%	$1,240,404	10.60%	$224,429	1.92%	$1,634	0.01%
AL	$212,657	0.98%	$3,405,276	15.62%	$676,811	3.11%	$202,771	0.93%
AR	$0	0.00%	$3,825,771	17.78%	$77,950	0.36%	$0	0.00%
AZ	$0	0.00%	$4,795,883	11.21%	$532,928	1.25%	$0	0.00%
CA	$2,799,400	1.69%	$3,906,277	2.36%	$6,958,120	4.20%	$382,397	0.23%
CO	$15,679	0.12%	$2,111,460	16.39%	$316,470	2.46%	$13,835	0.11%
CT	$18,162	0.06%	$3,587,260	12.57%	$547,562	1.92%	$54,086	0.19%
DC	$1,819,120	14.07%	$1,864,471	14.42%	$444,000	3.43%	$69,097	0.53%
DE	$0	0.00%	$68,837	0.96%	$152,677	2.14%	$2,150	0.03%
FL	$86,098	0.17%	$6,374,094	12.41%	$1,307,784	2.55%	$637,386	1.24%
GA	$55,450	0.20%	$3,635,739	13.38%	$544,081	2.00%	$30,206	0.11%
HI	$699,055	5.29%	$1,127,634	8.53%	$229,527	1.74%	$52,446	0.40%
IA	$27,852	0.10%	$1,685,679	6.11%	$288,690	1.05%	$15,365	0.06%
ID	$65,437	0.60%	$651,041	6.01%	$62,139	0.57%	$0	0.00%
IL	$65,980	0.11%	$4,176,947	6.74%	$1,674,033	2.70%	$85,426	0.14%
IN	$2,005,120	4.90%	$4,121,089	10.07%	$450,681	1.10%	$155,800	0.38%
KS	$0	0.00%	$686,697	4.02%	$352,560	2.07%	$66,273	0.39%
KY	$99,911	0.48%	$2,638,816	12.80%	$226,612	1.10%	$0	0.00%
LA	$18,888	0.06%	$5,453,615	18.19%	$283,415	0.95%	$128,043	0.43%
MA	$184,078	0.45%	$1,698,260	4.14%	$1,406,529	3.42%	$187,736	0.46%
MD	$756,763	2.57%	$2,697,800	9.17%	$539,386	1.83%	$148,997	0.51%
ME	$57,940	0.71%	$87,567	1.07%	$169,394	2.07%	$0	0.00%
MI	$46,846	0.09%	$536,508	1.07%	$769,322	1.53%	$0	0.00%
MN	$0	0.00%	$2,001,627	6.33%	$1,106,630	3.50%	$59,767	0.19%
MO	$0	0.00%	$5,551,044	15.89%	$215,029	0.62%	$0	0.00%
MS	$892,681	9.54%	$892,681	9.54%	$70,668	0.76%	$0	0.00%
MT	$2,374	0.03%	$670,279	7.59%	$25,901	0.29%	$22,197	0.25%
NC	$0	0.00%	$5,563,516	17.27%	$324,955	1.01%	$0	0.00%
ND	$1,494	0.02%	$493,156	6.42%	$142,045	1.85%	$9,421	0.12%
NE	$99,424	0.80%	$938,893	7.58%	$464,156	3.75%	$0	0.00%
NH	$0	0.00%	$1,692,978	12.62%	$245,857	1.83%	$0	0.00%
NJ	$175,113	0.42%	$3,894,046	9.27%	$1,494,491	3.56%	$0	0.00%
NM	$87,540	0.47%	$1,967,558	10.64%	$390,680	2.11%	$0	0.00%
NV	$0	0.00%	$556,596	5.90%	$745,000	7.89%	$0	0.00%
NY	$611,540	0.22%	$13,996,272	5.10%	$3,109,565	1.13%	$723,865	0.26%
OH	$939,140	1.30%	$10,025,068	13.83%	$2,033,686	2.81%	$83,021	0.11%
OK	$144,383	0.67%	$2,426,585	11.33%	$273,895	1.28%	$574,675	2.68%
OR	$148,143	0.56%	$2,501,056	9.49%	$814,528	3.09%	$8,278	0.03%
PA	$0	0.00%	$0	0.00%	$1,325,762	0.79%	$0	0.00%
PR	$33,449	0.55%	$404,744	6.69%	$56,679	0.94%	$9,893	0.16%
RI	$0	0.00%	$2,700,000	26.88%	$292,072	2.91%	$55,000	0.55%
SC	$0	0.00%	$4,225,404	21.64%	$67,178	0.34%	$85,791	0.44%
SD	$0	0.00%	$482,293	5.13%	$56,715	0.60%	$0	0.00%
TN	$52,397	0.20%	$4,110,116	15.39%	$426,935	1.60%	$132,031	0.49%
TX	$1,105	0.00%	$12,808,852	12.26%	$1,406,410	1.35%	$0	0.00%
UT	$106,542	0.87%	$1,321,613	10.82%	$67,857	0.56%	$0	0.00%
VA	$0	0.00%	$4,986,697	13.49%	$267,609	0.72%	$0	0.00%
VT	$0	0.00%	$347,267	4.67%	$232,282	3.12%	$5,100	0.07%
WA	$0	0.00%	$2,049,795	5.27%	$529,118	1.36%	$33,998	0.09%
WI	$204,823	0.50%	$6,364,480	15.58%	$2,456,381	5.99%	$80,308	0.20%
WV	$292,591	2.06%	$2,622,203	18.43%	$104,313	0.73%	$14,329	0.10%
WY	$431,205	5.17%	$831,611	9.98%	$40,500	0.49%	$385,005	4.62%

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Table 7. Service Expenditures by Title III Part of the OAA: FY 1996
(See SPR Specifications for Definition of Key Terms.)

State	All Services Title III $	Title III B Expendi-tures	Title III B % of Total Title III	Title III C1 Expendi-tures	Title III C1 % of Total Title III	Title III C2 Expendi-tures	Title III C2 % of Total Title III	Title III D Expendi-tures	Title III D % of Total Title III	Title III F Expendi-tures	Title III F % of Total Title III
Total US	$606,716,010	$265,160,786	39.9%	$244,779,359	36.7%	$136,956,700	20.5%	$7,995,949	1.2%	$10,823,316	1.6%
AK	$2,981,765	$1,099,705	36.9%	$1,316,918	44.2%	$458,779	15.4%	$37,572	1.3%	$68,781	2.3%
AL	$11,990,693	$3,584,912	29.9%	$5,764,814	48.1%	$2,252,181	18.8%	$120,672	1.0%	$268,014	2.2%
AR	$9,337,739	$3,398,832	36.4%	$3,421,956	36.6%	$2,194,223	23.5%	$113,803	1.2%	$208,925	2.2%
AZ	$9,083,479	$3,335,449	36.7%	$3,912,561	43.1%	$1,488,688	16.4%	$120,946	1.3%	$225,836	2.5%
CA	$60,247,773	$22,810,504	37.9%	$22,230,160	36.9%	$14,067,015	23.3%	$862,024	1.4%	$278,070	0.5%
CO	$6,064,378	$2,420,414	39.9%	$2,059,387	34.0%	$1,332,446	22.0%	$77,637	1.3%	$174,493	2.9%
CT	$8,934,382	$3,372,223	37.7%	$3,338,542	37.4%	$2,027,799	22.7%	$41,963	0.5%	$153,855	1.7%
DC	$4,056,106	$1,672,263	41.2%	$1,805,406	44.5%	$452,254	11.1%	$44,534	1.1%	$81,648	2.0%
DE	$3,264,000	$1,507,367	46.2%	$886,898	27.2%	$757,486	23.2%	$36,105	1.1%	$76,144	2.3%
FL	$44,957,605	$18,927,711	42.1%	$14,149,535	31.5%	$10,922,410	24.3%	$675,312	1.5%	$282,537	0.6%
GA	$17,075,387	$7,530,795	44.1%	$6,562,284	38.4%	$2,506,567	14.7%	$205,852	1.2%	$269,889	1.6%
HI	$2,590,130	$963,689	37.2%	$869,202	33.6%	$703,838	27.2%	$36,477	1.4%	$16,723	0.6%
IA	$8,592,710	$2,952,278	34.4%	$4,118,899	47.9%	$1,245,232	14.5%	$99,871	1.2%	$176,429	2.1%
ID	$2,622,866	$649,619	25.7%	$1,126,801	44.7%	$630,028	25.0%	$46,315	1.8%	$70,103	2.8%
IL	$26,950,915	$9,737,242	36.1%	$10,028,009	37.2%	$6,418,857	23.8%	$316,225	1.2%	$450,582	1.7%
IN	$11,147,307	$4,384,228	39.3%	$4,025,877	36.1%	$2,418,539	21.7%	$110,105	1.0%	$208,558	1.9%
KS	$6,648,762	$1,748,275	26.3%	$3,042,755	45.8%	$1,622,067	24.4%	$77,978	1.2%	$157,688	2.4%
KY	$10,475,321	$4,013,014	38.3%	$3,963,719	37.8%	$2,182,793	20.8%	$68,250	0.7%	$247,545	2.4%
LA	$9,227,649	$3,880,114	42.0%	$3,416,441	37.0%	$1,597,126	17.3%	$105,607	1.1%	$228,361	2.5%
MA	$16,091,566	$4,933,267	30.7%	$3,630,971	22.6%	$7,015,314	43.6%	$148,300	0.9%	$363,714	2.3%
MD	$10,119,863	$3,264,245	32.3%	$4,990,009	49.3%	$1,521,245	15.0%	$149,152	1.5%	$195,212	1.9%
ME	$3,606,432	$1,326,571	36.8%	$1,052,023	29.2%	$1,122,350	31.1%	$46,177	1.3%	$59,310	1.6%
MI	$24,282,332	$12,474,105	51.4%	$11,070,055	45.6%	$10,042	0.0%	$359,960	1.5%	$368,170	1.5%
MN	$9,832,858	$3,540,159	36.8%	$4,267,070	44.3%	$1,590,011	16.5%	$155,160	1.6%	$80,458	0.8%
MO	$14,392,404	$5,688,472	39.4%	$5,298,656	36.8%	$2,682,230	18.6%	$203,605	1.4%	$539,441	3.7%
MS	$6,138,342	$2,403,707	39.2%	$1,390,967	22.7%	$2,158,685	35.2%	$160,814	2.6%	$25,168	0.4%
MT	$2,811,851	$717,284	25.5%	$1,453,037	51.7%	$587,075	20.9%	$38,843	1.4%	$15,603	0.6%
NC	$14,388,461	$6,058,434	42.1%	$4,883,118	33.9%	$3,073,164	21.4%	$111,200	0.8%	$262,545	1.8%
ND	$3,596,040	$1,673,595	46.5%	$1,157,377	32.2%	$646,013	18.0%	$46,652	1.3%	$72,403	2.0%
NE	$4,074,539	$1,230,411	30.2%	$2,198,957	54.0%	$605,864	14.9%	$39,307	1.0%	$0	0.0%
NH	$3,781,943	$1,265,516	33.5%	$1,491,444	39.4%	$977,008	25.8%	$47,976	1.3%	$0	0.0%
NJ	$23,638,303	$10,593,083	44.8%	$8,826,207	37.3%	$3,824,292	16.2%	$202,949	0.9%	$191,772	0.8%
NM	$3,664,693	$1,225,866	33.5%	$1,919,179	52.4%	$393,923	10.7%	$38,364	1.0%	$87,361	2.4%
NV	$4,005,117	$1,609,240	40.2%	$1,286,370	32.1%	$985,077	24.6%	$46,315	1.2%	$78,115	2.0%
NY	$57,166,501	$19,420,210	34.0%	$26,713,326	46.7%	$9,150,350	16.0%	$448,273	0.8%	$1,434,342	2.5%
OH	$26,109,440	$19,441,283	74.5%	$91,073	0.3%	$6,025,567	23.1%	$313,829	1.2%	$237,668	0.9%
OK	$11,017,823	$3,098,054	28.1%	$4,775,745	43.3%	$3,021,458	27.4%	$84,446	0.8%	$38,119	0.3%
OR	$7,528,087	$2,631,513	35.0%	$2,632,739	35.0%	$1,890,817	25.1%	$151,837	2.0%	$221,180	2.9%
PA	$39,747,110	$18,762,154	47.2%	$14,303,692	36.0%	$5,294,381	13.3%	$513,296	1.3%	$873,567	2.2%
PR	$5,152,012	$1,802,384	35.0%	$2,337,284	45.4%	$913,931	17.7%	$83,391	1.6%	$15,022	0.3%
RI	$3,296,114	$1,104,685	33.5%	$1,500,205	45.5%	$554,589	16.8%	$50,858	1.5%	$85,778	2.6%
SC	$7,333,888	$2,999,600	40.9%	$2,918,932	39.8%	$1,121,121	15.3%	$106,252	1.4%	$187,183	2.6%
SD	$3,465,472	$1,332,242	38.4%	$1,476,109	42.6%	$538,122	15.5%	$39,500	1.1%	$79,499	2.3%
TN	$11,088,207	$3,561,050	32.1%	$3,612,561	32.6%	$3,458,742	31.2%	$347,244	3.1%	$108,611	1.0%
TX	$38,952,882	$15,502,160	39.8%	$13,177,220	33.8%	$9,840,531	25.3%	$108,478	0.3%	$324,493	0.8%
UT	$3,624,552	$1,358,621	37.5%	$1,423,330	39.3%	$724,636	20.0%	$56,952	1.6%	$61,013	1.7%
VA	$13,560,423	$6,176,478	45.5%	$3,962,132	29.2%	$2,948,097	21.7%	$209,998	1.5%	$263,718	1.9%
VT	$3,250,167	$1,511,086	46.5%	$834,033	25.7%	$831,524	25.6%	$37,091	1.1%	$36,433	1.1%
WA	$9,676,696	$2,560,102	26.5%	$4,202,602	43.4%	$2,428,877	25.1%	$141,070	1.5%	$344,046	3.6%
WI	$15,625,883	$5,779,818	37.2%	$7,273,566	46.8%	$2,008,618	12.9%	$170,996	1.1%	$292,885	1.9%
WV	$6,910,879	$2,068,783	35.0%	$1,776,338	30.1%	$1,866,840	31.6%	$74,802	1.3%	$124,116	2.1%
WY	$3,936,173	$1,796,124	45.6%	$1,354,172	34.4%	$661,447	16.8%	$46,315	1.2%	$78,115	2.0%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 8. Service Providers for Selected Services Funded by Title III of the OAA: FY 1996
(See SPR Specifications for Definition of Key Terms)

State	Personal Care	Home-maker	Chore	Home Delivered Meals	Adult Day Care	Case Manage-ment	Congre-gate Meals	Nutrition Counse-ling	Assist ed Trans por-tation	Transpor-tation	Legal Assist-ance	Nutrition Education	Informa-tion & Assis-tance	Outreach
Total US	1,667	2,362	745	3,872	913	864	3,699	672	1,286	3,124	1,178	1,882	2,666	2,137
AK	0	5	5	20	0	0	33	2	13	14	1	5	13	16
AL	0	383	108	444	79	0	400	146	437	555	97	385	561	413
AR	0	11	4	39	6	0	40	0	0	41	12	0	18	0
AZ	73	31	0	65	13	21	29	0	0	41	7	0	0	6
CA	57	82	40	164	55	80	217	57	48	103	39	149	137	141
CO	21	30	5	11	7	3	14	0	3	34	18	15	51	18
CT	11	14	10	14	35	2	17	0	2	29	8	12	8	20
DC	0	1	0	6	6	5	6	6	1	15	2	6	1	1
DE	5	3	0	5	5	1	4	5	0	2	1	5	1	1
FL	5	54	40	65	22	26	70	21	14	76	32	70	76	71
GA	34	34	4	84	5	14	102	0	23	108	24	54	63	67
HI	11	6	4	5	4	5	4	2	5	7	4	4	7	6
IA	0	60	25	117	28	15	110	2	2	22	13	0	14	17
ID	0	6	0	8	1	4	7	0	48	30	6	0	9	30
IL	12	10	32	64	4	50	70	0	7	86	16	26	91	63
IN	57	97	6	26	12	14	24	0	9	66	16	7	36	11
KS	13	13	8	22	0	10	18	2	0	5	11	11	11	6
KY	28	66	44	60	2	5	60	0	44	62	15	4	71	80
LA	21	53	11	73	0	58	73	18	8	67	43	59	68	63
MA	10	7	6	61	10	12	58	19	24	56	24	21	94	119
MD	136	76	14	38	19	47	45	11	41	29	26	70	24	37
ME	1	0	5	84	1	0	115	1	1	6	2	1	29	35
MI	82	97	35	68	86	38	77	0	13	42	20	0	19	37
MN	26	21	13	25	2	1	18	0	0	25	9	30	29	17
MO	15	45	0	146	12	5	149	0	0	61	6	171	12	28
MS	0	22	0	29	9	7	29	3	5	28	14	0	14	0
MT	9	75	38	76	0	0	105	9	1	52	50	59	2	29
NC	103	110	0	85	43	0	80	0	0	103	37	0	23	5
ND	0	0	7	29	0	0	29	29	1	11	1	29	1	30
NE	19	19	28	108	0	0	165	0	35	62	6	0	68	57
NH	13	11	0	11	5	0	10	0	0	15	1	0	0	4
NJ	27	19	13	44	15	25	30	26	14	50	24	30	67	39
NM	7	23	5	38	5	14	38	0	15	53	4	0	57	39
NV	0	7	0	24	3	1	26	0	0	24	2	0	6	0
NY	214	209	0	605	178	77	148	113	199	297	177	289	292	60
OH	53	87	31	128	34	2	142	0	52	145	43	49	7	72
OK	3	10	10	25	1	0	25	6	4	30	13	25	13	29
OR	21	123	14	38	6	23	48	0	8	33	21	14	51	37
PA	220	55	0	175	0	82	202	0	0	0	111	0	91	0
PR	88	88	88	88	0	88	88	88	88	88	7	88	88	88
RI	3	0	0	6	0	5	5	0	0	5	2	6	20	20
SC	27	27	0	47	6	10	47	8	0	47	13	26	28	29
SD	0	1	0	17	13	1	17	0	0	23	3	0	0	0
TN	8	19	1	14	5	5	14	2	1	32	9	23	120	110
TX	15	73	3	220	6	36	245	2	1	181	43	0	43	5
UT	38	39	13	32	0	0	27	0	25	40	13	0	52	52
VA	91	43	7	70	13	19	54	0	0	53	28	0	31	25
VT	0	5	8	59	5	5	82	2	0	22	2	19	5	5
WA	29	0	0	35	13	22	41	0	0	18	11	3	24	6
WI	18	25	24	82	19	0	72	82	43	51	72	82	53	29
WV	20	40	20	48	8	4	48	1	43	52	10	12	39	38
WY	23	27	16	25	12	22	30	7	8	27	9	23	26	26

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 9a. Minority Providers for Selected Services Funded by Title III OAA: FY 1996 *Continued*

(See SPR Specifications for Definition of Key Terms.)

State	Adult Day Care/Health		Case Management		Congregate Meals		Nutrition Counseling	
	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers
US Total	47	5.8%	162	18.8%	392	10.9%	128	19.0%
AK	0	0.0%	0	0.0%	7	21.2%	0	0.0%
AL	1	1.3%	0	0.0%	12	3.0%	0	0.0%
AR	1	16.7%	0	0.0%	4	10.0%	0	0.0%
AZ	0	0.0%	0	0.0%	19	95.0%	0	0.0%
CA	5	9.1%	17	21.3%	51	23.5%	9	15.8%
CO	0	0.0%	0	0.0%	1	7.1%	0	0.0%
CT	2	5.7%	0	0.0%	1	5.9%	0	0.0%
DC	5	83.3%	3	60.0%	4	66.7%	4	66.7%
DE	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FL	0	0.0%	0	0.0%	7	10.0%	0	0.0%
GA	0	0.0%	1	7.1%	4	3.9%	0	0.0%
HI	4	100.0%	3	60.0%	4	100.0%	1	50.0%
IA	0	0.0%	0	0.0%	0	0.0%	0	0.0%
ID	0	0.0%	0	0.0%	1	14.3%	0	0.0%
IL	0	0.0%	0	0.0%	9	12.9%	0	0.0%
IN	0	0.0%	1	7.1%	0	0.0%	0	0.0%
KS	0	0.0%	0	0.0%	0	0.0%	0	0.0%
KY	0	0.0%	0	0.0%	4	6.7%	0	0.0%
LA	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MA	1	10.0%	2	16.7%	4	6.9%	0	0.0%
MD	1	5.3%	16	34.0%	5	11.1%	0	0.0%
ME	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MI	4	4.7%	2	5.3%	3	3.9%	0	0.0%
MN	0	0.0%	0	0.0%	3	16.7%	0	0.0%
MO	0	0.0%	0	0.0%	9	6.0%	0	0.0%
MS	5	55.6%	2	28.6%	10	34.5%	0	0.0%
MT	0	0.0%	0	0.0%	12	11.4%	0	0.0%
NC	2	4.7%	0	0.0%	1	1.3%	0	0.0%
ND	0	0.0%	0	0.0%	2	6.9%	2	6.9%
NE	0	0.0%	0	0.0%	7	4.2%	0	0.0%
NH	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NJ	1	6.7%	4	16.0%	3	10.0%	0	0.0%
NM	0	0.0%	0	0.0%	5	13.2%	0	0.0%
NV	1	33.3%	0	0.0%	2	7.7%	0	0.0%
NY	3	1.7%	11	14.3%	4	2.7%	12	10.6%
OH	3	8.8%	0	0.0%	15	10.6%	0	0.0%
OK	0	0.0%	0	0.0%	0	0.0%	0	0.0%
OR	0	0.0%	0	0.0%	3	6.3%	0	0.0%
PA	0	0.0%	2	2.4%	26	12.9%	0	0.0%
PR	0	0.0%	88	100.0%	88	100.0%	88	100.0%
RI	0	0.0%	0	0.0%	0	0.0%	0	0.0%
SC	2	33.3%	2	20.0%	6	12.8%	2	25.0%
SD	0	0.0%	0	0.0%	4	23.5%	0	0.0%
TN	0	0.0%	0	0.0%	0	0.0%	0	0.0%
TX	1	16.7%	3	8.3%	20	8.2%	0	0.0%
UT	0	0.0%	0	0.0%	2	7.4%	0	0.0%
VA	0	0.0%	1	5.3%	7	13.0%	0	0.0%
VT	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WA	1	7.7%	4	18.2%	12	29.3%	0	0.0%
WI	4	21.1%	0	0.0%	10	13.9%	10	12.2%
WV	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WY	0	0.0%	0	0.0%	1	3.3%	0	0.0%

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Table 9a. Minority Providers for Selected Services Funded by Title III OAA: FY 1996

(See SPR Specifications for Definition of Key Terms.)

State	Personal Care		Homemaker		Chore		Home Delivered Meals	
	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers
US Total	191	11.5%	206	8.7%	133	17.9%	391	10.1%
AK	0	0.0%	2	40.0%	2	40.0%	3	15.0%
AL	0	0.0%	20	5.2%	4	3.7%	10	2.3%
AR	0	0.0%	0	0.0%	0	0.0%	4	10.3%
AZ	0	0.0%	0	0.0%	0	0.0%	19	29.2%
CA	6	10.5%	15	18.3%	4	10.0%	26	15.9%
CO	3	14.3%	2	6.7%	2	40.0%	0	0.0%
CT	1	9.1%	3	21.4%	2	20.0%	2	14.3%
DC	0	0.0%	0	0.0%	0	0.0%	4	66.7%
DE	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FL	0	0.0%	1	1.9%	3	7.5%	5	7.7%
GA	2	5.9%	2	5.9%	0	0.0%	2	2.4%
HI	7	63.6%	6	100.0%	3	75.0%	3	60.0%
IA	0	0.0%	0	0.0%	0	0.0%	0	0.0%
ID	0	0.0%	0	0.0%	0	0.0%	2	25.0%
IL	0	0.0%	0	0.0%	3	9.4%	3	4.7%
IN	2	3.5%	0	0.0%	0	0.0%	0	0.0%
KS	0	0.0%	0	0.0%	0	0.0%	0	0.0%
KY	0	0.0%	2	3.0%	1	2.3%	2	3.3%
LA	1	4.8%	0	0.0%	0	0.0%	0	0.0%
MA	2	20.0%	0	0.0%	0	0.0%	2	3.3%
MD	31	22.8%	5	6.6%	0	0.0%	2	5.3%
ME	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MI	4	4.9%	6	6.2%	4	11.4%	2	2.9%
MN	1	3.8%	2	9.5%	0	0.0%	3	12.0%
MO	1	6.7%	3	6.7%	0	0.0%	8	6.2%
MS	0	0.0%	10	45.5%	0	0.0%	10	34.5%
MT	0	0.0%	11	14.7%	1	2.6%	13	17.1%
NC	0	0.0%	0	0.0%	0	0.0%	0	0.0%
ND	0	0.0%	0	0.0%	1	14.3%	2	6.9%
NE	0	0.0%	0	0.0%	3	10.7%	5	4.6%
NH	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NJ	1	3.7%	1	5.3%	3	23.1%	3	6.8%
NM	0	0.0%	2	8.7%	0	0.0%	5	13.2%
NV	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NY	12	5.6%	6	2.9%	0	0.0%	87	14.4%
OH	2	3.8%	2	2.3%	4	12.9%	9	7.0%
OK	0	0.0%	0	0.0%	0	0.0%	0	0.0%
OR	0	0.0%	1	0.8%	0	0.0%	0	0.0%
PA	11	5.0%	0	0.0%	0	0.0%	10	5.7%
PR	88	100.0%	88	100.0%	88	100.0%	88	100.0%
RI	0	0.0%	0	0.0%	0	0.0%	0	0.0%
SC	4	14.8%	2	7.4%	0	0.0%	6	12.8%
SD	0	0.0%	0	0.0%	0	0.0%	4	23.5%
TN	2	25.0%	3	15.8%	0	0.0%	0	0.0%
TX	1	6.7%	5	6.8%	1	33.3%	20	9.1%
UT	0	0.0%	0	0.0%	0	0.0%	2	6.3%
VA	4	4.4%	2	4.7%	2	28.6%	6	8.6%
VT	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WA	2	6.9%	0	0.0%	0	0.0%	7	20.0%
WI	3	16.7%	4	16.0%	2	8.3%	10	12.2%
WV	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WY	0	0.0%	0	0.0%	0	0.0%	1	4.0%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 9a. Minority Providers for Selected Services Funded by Title III OAA: FY 1996 *Continued*

(See SPR Specifications for Definition of Key Terms.)

State	Information & Assistance		Outreach	
	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers
US Total	324	12.2%	254	11.9%
AK	3	23.1%	4	25.0%
AL	23	4.1%	20	4.8%
AR	0	0.0%	0	0.0%
AZ	0	0.0%	0	0.0%
CA	21	15.3%	19	13.5%
CO	7	13.7%	5	27.8%
CT	2	25.0%	2	10.0%
DC	1	100.0%	1	100.0%
DE	0	0.0%	0	0.0%
FL	0	0.0%	6	8.5%
GA	1	1.6%	3	4.5%
HI	4	57.1%	3	50.0%
IA	0	0.0%	2	11.8%
ID	4	44.4%	4	13.3%
IL	2	2.2%	2	3.2%
IN	0	0.0%	0	0.0%
KS	0	0.0%	0	0.0%
KY	2	2.8%	3	3.8%
LA	0	0.0%	0	0.0%
MA	13	13.8%	19	16.0%
MD	1	4.2%	3	8.1%
ME	0	0.0%	0	0.0%
MI	1	5.3%	13	35.1%
MN	0	0.0%	7	41.2%
MO	0	0.0%	1	3.6%
MS	6	42.9%	0	0.0%
MT	0	0.0%	2	6.9%
NC	2	8.7%	2	40.0%
ND	0	0.0%	3	10.0%
NE	0	0.0%	0	0.0%
NH	0	0.0%	0	0.0%
NJ	15	22.4%	16	41.0%
NM	6	10.5%	4	10.3%
NV	0	0.0%	0	0.0%
NY	92	31.5%	4	6.7%
OH	0	0.0%	2	2.8%
OK	0	0.0%	1	3.4%
OR	1	2.0%	0	0.0%
PA	2	2.2%	0	0.0%
PR	88	100.0%	88	100.0%
RI	2	10.0%	2	10.0%
SC	2	7.1%	3	10.3%
SD	0	0.0%	0	0.0%
TN	3	2.5%	3	2.7%
TX	2	4.7%	1	20.0%
UT	0	0.0%	0	0.0%
VA	2	6.5%	0	0.0%
VT	0	0.0%	0	0.0%
WA	7	29.2%	3	50.0%
WI	8	15.1%	2	6.9%
WV	0	0.0%	0	0.0%
WY	1	3.6%	1	3.8%

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Table 9a. Minority Providers for Selected Services Funded by Title III OAA: FY 1996 *Continued*

(See SPR Specifications for Definition of Key Terms.)

State	Assisted Transportation		Transportation		Legal Assistance		Nutrition Education	
	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers	# Minority Providers	% Minority Providers
US Total	239	18.6%	329	10.5%	93	7.9%	295	15.7%
AK	1	7.7%	1	7.1%	0	0.0%	0	0.0%
AL	27	6.2%	37	6.7%	8	8.2%	18	4.7%
AR	0	0.0%	5	12.2%	1	8.3%	0	0.0%
AZ	0	0.0%	0	0.0%	0	0.0%	0	0.0%
CA	12	25.0%	18	17.5%	6	15.4%	28	18.8%
CO	2	66.7%	1	2.9%	0	0.0%	0	0.0%
CT	0	0.0%	6	20.7%	0	0.0%	1	8.3%
DC	1	100.0%	13	86.7%	1	50.0%	4	66.7%
DE	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FL	1	7.1%	5	6.6%	0	0.0%	5	7.1%
GA	0	0.0%	2	1.9%	0	0.0%	2	3.7%
HI	3	60.00%	4	57.1%	1	25.0%	2	50.0%
IA	0	0.00%	0	0.0%	0	0.0%	0	0.0%
ID	0	0.00%	5	16.7%	1	16.7%	0	0.0%
IL	0	0.00%	2	2.3%	0	0.0%	2	7.7%
IN	1	11.11%	0	0.0%	0	0.0%	0	0.0%
KS	0	0.00%	0	0.0%	0	0.0%	0	0.0%
KY	2	4.55%	2	3.2%	1	6.7%	2	50.0%
LA	0	0.00%	0	0.0%	0	0.0%	0	0.0%
MA	1	4.17%	10	17.9%	0	0.0%	1	4.8%
MD	16	39.02%	4	13.8%	3	11.5%	9	12.9%
ME	0	0.00%	0	0.0%	0	0.0%	0	0.0%
MI	1	7.69%	3	7.1%	0	0.0%	0	0.0%
MN	0	0.00%	1	4.0%	1	11.1%	4	13.3%
MO	0	0.00%	7	11.5%	0	0.0%	9	5.3%
MS	3	60.00%	11	39.3%	7	50.0%	3	0.0%
MT	0	0.00%	12	23.1%	2	4.0%	11	18.6%
NC	0	0.00%	4	3.9%	0	0.0%	0	0.0%
ND	1	100.00%	3	27.3%	0	0.0%	2	6.9%
NE	3	8.57%	0	0.0%	0	0.0%	0	0.0%
NH	0	0.00%	0	0.0%	0	0.0%	0	0.0%
NJ	2	14.29%	3	6.0%	3	12.5%	2	6.7%
NM	2	13.33%	6	11.3%	0	0.0%	0	0.0%
NV	0	0.00%	1	4.2%	0	0.0%	0	0.0%
NY	56	28.14%	24	8.1%	33	18.6%	88	30.4%
OH	7	13.46%	10	6.9%	0	0.0%	0	0.0%
OK	1	25.00%	0	0.0%	0	0.0%	0	0.0%
OR	2	25.00%	0	0.0%	0	0.0%	0	0.0%
PA	0	0.00%	0	0.0%	9	8.1%	0	0.0%
PR	88	100.00%	88	100.0%	7	100.0%	88	100.0%
RI	0	0.00%	1	20.0%	0	0.0%	0	0.0%
SC	0	0.00%	6	12.8%	1	7.7%	2	7.7%
SD	0	0.00%	0	0.0%	0	0.0%	0	0.0%
TN	1	100.00%	0	0.0%	1	11.1%	2	8.7%
TX	0	0.00%	20	11.0%	4	9.3%	0	0.0%
UT	0	0.00%	0	0.0%	1	7.7%	0	0.0%
VA	0	0.00%	6	11.3%	1	3.6%	0	0.0%
VT	0	0.00%	0	0.0%	0	0.0%	0	0.0%
WA	0	0.00%	2	11.1%	0	0.0%	0	0.0%
WI	5	11.63%	5	9.8%	1	1.4%	10	12.2%
WV	0	0.00%	0	0.0%	0	0.0%	0	0.0%
WY	0	0.00%	1	3.7%	0	0.0%	0	0.0%

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Table 9b. AAA Direct Service Providers for Selected Services Funded by Title III OAA: FY 1996
Continued

(See SPR Specifications for Definition of Key Terms.)

State	Adult Day Care/Health		Case Management		Congregate Meals		Nutrition Counseling	
	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers
US Total	36	4.4%	272	31.5%	230	6.4%	87	12.9%
AK	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AL	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AR	0	0.0%	0	0.0%	2	5.0%	0	0.0%
AZ	0	0.0%	4	19.0%	1	5.0%	0	0.0%
CA	1	1.8%	9	11.3%	6	2.8%	5	8.8%
CO	0	0.0%	2	66.7%	5	35.7%	0	0.0%
CT	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DC	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DE	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FL	0	0.0%	0	0.0%	0	0.0%	0	0.0%
GA	0	0.0%	0	0.0%	3	2.9%	0	0.0%
HI	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IA	0	0.0%	5	33.3%	7	6.4%	0	0.0%
ID	0	0.0%	4	100.0%	0	0.0%	0	0.0%
IL	0	0.0%	0	0.0%	1	1.4%	0	0.0%
IN	2	16.7%	10	71.4%	6	25.0%	0	0.0%
KS	0	0.0%	10	100.0%	4	22.2%	0	0.0%
KY	0	0.0%	5	100.0%	0	0.0%	0	0.0%
LA	0	0.0%	23	39.7%	23	31.5%	7	38.9%
MA	0	0.0%	2	16.7%	13	22.4%	12	63.2%
MD	3	15.8%	16	34.0%	12	26.7%	8	72.7%
ME	1	100.0%	0	0.0%	20	17.4%	1	100.0%
MI	1	1.2%	1	2.6%	2	2.6%	0	0.0%
MN	0	0.0%	0	0.0%	0	0.0%	0	0.0%
MO	0	0.0%	4	80.0%	7	4.7%	0	0.0%
MS	1	11.1%	7	100.0%	5	17.2%	1	33.3%
MT	0	0.0%	0	0.0%	9	8.6%	3	33.3%
NC	0	0.0%	0	0.0%	3	3.8%	0	0.0%
ND	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NE	0	0.0%	0	0.0%	2	1.2%	0	0.0%
NH	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NJ	1	6.7%	3	12.0%	11	36.7%	11	42.3%
NM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NV	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NY	7	3.9%	49	63.6%	31	20.9%	31	27.4%
OH	0	0.0%	0	0.0%	0	0.0%	0	0.0%
OK	0	0.0%	3	0.0%	0	0.0%	0	0.0%
OR	1	16.7%	13	56.5%	12	25.0%	0	0.0%
PA	0	0.0%	48	58.5%	3	1.5%	0	0.0%
PR	0	0.0%	7	8.0%	0	0.0%	7	8.0%
RI	0	0.0%	0	0.0%	0	0.0%	0	0.0%
SC	0	0.0%	0	0.0%	0	0.0%	0	0.0%
SD	0	0.0%	0	0.0%	0	0.0%	0	0.0%
TN	0	0.0%	0	0.0%	0	0.0%	0	0.0%
TX	4	66.7%	19	52.8%	2	0.8%	0	0.0%
UT	0	0.0%	0	0.0%	8	29.6%	0	0.0%
VA	3	23.1%	15	78.9%	16	29.6%	0	0.0%
VT	2	40.0%	5	100.0%	4	4.9%	1	50.0%
WA	9	69.2%	8	36.4%	12	29.3%	0	0.0%
WI	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WV	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WY	0	0.0%	0	0.0%	0	0.0%	0	0.0%

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Table 9b. AAA Direct Service Providers for Selected Services Funded by Title III OAA: FY 1996

(See SPR Specifications for Definition of Key Terms.)

State	Personal Care		Homemaker		Chore		Home Delivered Meals	
	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers
US Total	77	4.6%	96	4.1%	38	5.1%	215	5.6%
AK	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AL	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AR	1	0.0%	1	9.1%	3	75.0%	2	5.1%
AZ	0	0.0%	0	0.0%	0	0.0%	1	1.5%
CA	3	5.3%	3	3.7%	1	2.5%	7	4.3%
CO	1	4.8%	1	3.3%	3	60.0%	6	54.5%
CT	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DC	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DE	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FL	0	0.0%	0	0.0%	0	0.0%	0	0.0%
GA	0	0.0%	0	0.0%	0	0.0%	3	3.6%
HI	6	54.5%	1	16.7%	0	0.0%	0	0.0%
IA	1	0.0%	0	0.0%	2	8.0%	6	5.1%
ID	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IL	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IN	1	1.8%	2	2.1%	0	0.0%	6	23.1%
KS	0	0.0%	0	0.0%	0	0.0%	4	18.2%
KY	1	3.6%	1	1.5%	1	2.3%	0	0.0%
LA	2	9.5%	14	26.4%	5	45.5%	22	30.1%
MA	0	0.0%	0	0.0%	0	0.0%	13	21.3%
MD	5	3.7%	3	3.9%	3	21.4%	12	31.6%
ME	0	0.0%	0	0.0%	5	100.0%	9	10.7%
MI	1	1.2%	1	1.0%	0	0.0%	2	2.9%
MN	1	3.8%	0	0.0%	0	0.0%	0	0.0%
MO	0	0.0%	0	0.0%	0	0.0%	7	4.8%
MS	0	0.0%	4	18.2%	0	0.0%	5	17.2%
MT	1	11.1%	1	1.3%	2	5.3%	4	5.3%
NC	1	1.0%	0	0.0%	0	0.0%	3	3.5%
ND	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NE	1	5.3%	1	5.3%	1	3.6%	0	0.0%
NH	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NJ	0	0.0%	1	5.3%	1	7.7%	10	22.7%
NM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NV	0	0.0%	0	0.0%	0	0.0%	0	0.0%
NY	9	4.2%	9	4.3%	0	0.0%	31	5.1%
OH	0	0.0%	0	0.0%	0	0.0%	0	0.0%
OK	0	0.0%	0	0.0%	0	0.0%	0	0.0%
OR	7	33.3%	8	7.3%	8	57.1%	11	28.9%
PA	8	3.6%	13	23.6%	0	0.0%	4	2.3%
PR	0	0.0%	0	0.0%	0	0.0%	0	0.0%
RI	0	0.0%	0	0.0%	0	0.0%	0	0.0%
SC	0	0.0%	0	0.0%	0	0.0%	0	0.0%
SD	0	0.0%	0	0.0%	0	0.0%	0	0.0%
TN	0	0.0%	0	0.0%	0	0.0%	0	0.0%
TX	10	66.7%	16	21.9%	0	0.0%	7	3.2%
UT	2	5.3%	2	5.1%	2	15.4%	8	25.0%
VA	6	6.6%	12	27.9%	1	14.3%	17	24.3%
VT	0	0.0%	0	0.0%	0	0.0%	4	6.8%
WA	9	31.0%	0	0.0%	0	0.0%	11	31.4%
WI	0	0.0%	1	4.0%	0	0.0%	0	0.0%
WV	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WY	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

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Table 9b. AAA Direct Service Providers for Selected Services Funded by Title III OAA: FY 1996 *Continued*

(See SPR Specifications for Definition of Key Terms.)

State	Information & Assistance		Outreach	
	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers
US Total	412	15.5%	225	10.5%
AK	0	0.0%	0	0.0%
AL	0	0.0%	0	0.0%
AR	4	22.2%	0	0.0%
AZ	0	0.0%	6	100.0%
CA	28	20.4%	9	6.4%
CO	16	31.4%	10	55.6%
CT	5	62.5%	0	0.0%
DC	0	0.0%	0	0.0%
DE	0	0.0%	0	0.0%
FL	0	0.0%	0	0.0%
GA	5	7.9%	0	0.0%
HI	3	42.9%	3	50.0%
IA	6	42.9%	8	47.1%
ID	0	0.0%	0	0.0%
IL	6	6.6%	0	0.0%
IN	7	19.4%	2	18.2%
KS	10	90.9%	4	66.7%
KY	0	0.0%	0	0.0%
LA	27	39.7%	24	38.1%
MA	18	18.1%	7	5.9%
MD	19	79.2%	13	35.1%
ME	3	10.3%	9	25.7%
MI	0	0.0%	0	0.0%
MN	5	17.2%	0	0.0%
MO	9	75.0%	4	14.3%
MS	7	50.0%	0	0.0%
MT	2	100.0%	3	10.3%
NC	0	0.0%	0	0.0%
ND	0	0.0%	0	0.0%
NE	0	0.0%	0	0.0%
NH	0	0.0%	0	0.0%
NJ	19	28.4%	13	33.3%
NM	1	1.8%	1	2.6%
NV	0	0.0%	0	0.0%
NY	59	20.2%	53	88.3%
OH	0	0.0%	0	0.0%
OK	11	84.6%	0	0.0%
OR	13	25.5%	8	21.6%
PA	52	57.1%	0	0.0%
PR	7	8.0%	7	8.0%
RI	0	0.0%	0	0.0%
SC	5	17.9%	5	17.2%
SD	0	0.0%	0	0.0%
TN	0	0.0%	0	0.0%
TX	19	44.2%	2	40.0%
UT	9	17.3%	9	17.3%
VA	24	77.4%	22	88.0%
VT	5	100.0%	3	60.0%
WA	8	33.3%	0	0.0%
WI	0	0.0%	0	0.0%
WV	0	0.0%	0	0.0%
WY	0	0.0%	0	0.0%

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Table 9b. AAA Direct Service Providers for Selected Services Funded by Title III OAA: FY 1996
Continued

(See SPR Specifications for Definition of Key Terms.)

State	Assisted Transportation		Transportation		Legal Assistance		Nutrition Education	
	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers	# AAA Providers	% AAA Providers
US Total	51	4.0%	144	4.6%	109	9.3%	151	8.0%
AK	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AL	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AR	0	0.0%	4	9.8%	3	25.0%	0	0.0%
AZ	0	0.0%	0	0.0%	3	42.9%	0	0.0%
CA	2	4.2%	2	1.9%	2	5.1%	9	6.0%
CO	1	33.3%	3	8.8%	2	11.1%	7	46.7%
CT	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DC	0	0.0%	0	0.0%	0	0.0%	0	0.0%
DE	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FL	0	0.0%	0	0.0%	0	0.0%	0	0.0%
GA	0	0.0%	1	0.9%	0	0.0%	0	0.0%
HI	1	20.00%	0	0.0%	0	0.0%	0	0.0%
IA	0	0.00%	1	4.5%	0	0.0%	4	0.0%
ID	0	0.00%	0	0.0%	0	0.0%	0	0.0%
IL	0	0.00%	0	0.0%	0	0.0%	0	0.0%
IN	2	22.22%	7	10.6%	4	25.0%	2	28.6%
KS	0	0.00%	0	0.0%	0	0.0%	4	36.4%
KY	0	0.00%	0	0.0%	0	0.0%	0	0.0%
LA	3	37.50%	22	32.8%	12	27.9%	21	35.6%
MA	1	4.17%	3	5.4%	0	0.0%	14	66.7%
MD	12	29.27%	11	37.9%	3	11.5%	17	24.3%
ME	0	0.00%	2	33.3%	0	0.0%	1	100.0%
MI	0	0.00%	0	0.0%	0	0.0%	0	0.0%
MN	0	0.00%	0	0.0%	0	0.0%	0	0.0%
MO	0	0.00%	1	1.6%	0	0.0%	10	5.8%
MS	1	20.00%	4	14.3%	12	85.7%	4	0.0%
MT	1	100.00%	3	5.8%	2	4.0%	3	5.1%
NC	0	0.00%	1	1.0%	0	0.0%	0	0.0%
ND	0	0.00%	0	0.0%	0	0.0%	0	0.0%
NE	0	0.00%	0	0.0%	2	33.3%	0	0.0%
NH	0	0.00%	0	0.0%	0	0.0%	0	0.0%
NJ	1	7.14%	3	6.0%	1	4.2%	11	36.7%
NM	0	0.00%	0	0.0%	0	0.0%	0	0.0%
NV	0	0.00%	0	0.0%	0	0.0%	0	0.0%
NY	13	6.53%	31	10.4%	21	11.9%	36	12.5%
OH	0	0.00%	0	0.0%	0	0.0%	0	0.0%
OK	0	0.00%	0	0.0%	0	0.0%	0	0.0%
OR	6	75.00%	4	12.1%	6	28.6%	3	21.4%
PA	0	0.00%	0	0.0%	3	2.7%	0	0.0%
PR	0	0.00%	0	0.0%	7	100.0%	0	0.0%
RI	0	0.00%	0	0.0%	0	0.0%	0	0.0%
SC	0	0.00%	0	0.0%	0	0.0%	0	0.0%
SD	0	0.00%	0	0.0%	0	0.0%	0	0.0%
TN	0	0.00%	0	0.0%	0	0.0%	0	0.0%
TX	1	100.00%	8	4.4%	19	44.2%	0	0.0%
UT	6	24.00%	6	15.0%	0	0.0%	0	0.0%
VA	0	0.00%	17	32.1%	4	14.3%	0	0.0%
VT	0	0.00%	3	13.6%	0	0.0%	4	21.1%
WA	0	0.00%	7	38.9%	3	27.3%	1	33.3%
WI	0	0.00%	0	0.0%	0	0.0%	0	0.0%
WV	0	0.00%	0	0.0%	0	0.0%	0	0.0%
WY	0	0.00%	0	0.0%	0	0.0%	0	0.0%

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Table 10. Focal Points and Senior Centers: FY 1996
(See SPR Specifications for Definition of Key Terms)

State	Focal Points			Senior Centers		
	Total	Senior Centers	% Focal Points Which are Senior Centers	Total	Number Receiving Title III Funds	% Receiving Title III Funds
Total US	6,596	6,356	73.9%	10,969	6,431	58.6%
AK	41	25	61.0%	25	22	88.0%
AL	347	263	75.8%	264	264	100.0%
AR	138	136	98.6%	191	191	100.0%
AZ	104	102	98.1%	190	190	100.0%
CA	345	256	74.2%	756	284	37.6%
CO	220	155	70.5%	156	22	14.1%
CT	88	74	84.1%	170	15	8.8%
DC	6	3	50.0%	15	15	100.0%
DE	0	0	0.0%	50	0	0.0%
FL	233	125	53.6%	169	68	40.2%
GA	54	45	83.3%	206	200	97.1%
HI	55	19	34.5%	36	15	41.67%
IA	179	117	65.4%	168	168	100.00%
ID	93	93	100.0%	96	0	0.00%
IL	156	118	75.6%	188	123	65.43%
IN	206	142	68.9%	189	131	69.31%
KS	203	203	100.0%	261	0	0.00%
KY	165	156	94.5%	191	191	100.00%
LA	251	152	60.6%	167	134	80.24%
MA	328	256	78.0%	304	120	39.47%
MD	298	111	37.2%	111	111	100.00%
ME	16	9	56.3%	26	14	53.85%
MI	376	321	85.4%	456	249	54.61%
MN	220	166	75.5%	506	5	0.99%
MO	230	230	100.0%	302	302	100.00%
MS	81	31	38.3%	8	7	87.50%
MT	105	85	81.0%	148	116	78.38%
NC	198	112	56.6%	132	44	33.33%
ND	8	0	0.0%	295	5	1.69%
NE	292	186	63.7%	185	181	97.84%
NH	16	11	68.8%	63	0	0.00%
NJ	185	78	42.2%	246	136	55.28%
NM	126	122	96.8%	143	135	94.41%
NV	39	39	100.0%	61	39	63.93%
NY	593	439	74.0%	709	534	75.32%
OH	231	167	72.3%	274	181	66.06%
OK	272	197	72.4%	379	138	36.41%
OR	133	87	65.4%	106	68	64.15%
PA	433	377	87.1%	574	574	100.00%
PR	146	146	100.0%	146	88	60.27%
RI	10	10	100.0%	47	12	25.53%
SC	96	89	92.7%	124	11	8.87%
SD	0	0	0.0%	241	71	29.46%
TN	130	122	93.8%	141	110	78.01%
TX	439	385	87.7%	735	653	88.84%
UT	74	72	97.3%	97	93	95.88%
VA	232	137	59.1%	186	156	83.87%
VT	28	18	64.3%	53	21	39.62%
WA	46	20	43.5%	250	67	26.80%
WI	82	0	0.0%	284	8	2.82%
WV	212	112	52.8%	112	112	100.00%
WY	37	37	100.0%	37	37	100.00%

Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

9/30/98

Table 11a. State Agency on Aging Staffing: FY 1996

(See SPR Specifications for Definition of Key Terms)

State	Total Staff	Total Paid Staff	Total Minority Staff	Total Staff Paid with Title III	Total Professional Paid Staff	Total Manage-ment Staff	Total Clerical Staff	Total Access Staff	Total Service Delivery Staff
Total US	4,277.7	3,944.2	948.2	1,443.7	1,574.6	279.3	601.3	726.3	906.9
AK	578.0	578.0	124.0	18.0	28.0	12.0	24.0	20.8	493.0
AL	19.5	19.5	6.0	18.5	10.8	2.0	4.8	0.0	2.0
AR	75.0	75.0	13.0	12.0	16.0	5.0	10.0	32.0	12.0
AZ	144.0	144.0	41.5	31.0	25.0	5.0	12.0	0.0	102.0
CA	131.6	131.6	30.0	108.7	88.4	9.0	34.3	0.0	0.0
CO	28.6	28.6	2.0	7.0	17.8	4.8	5.0	1.0	0.0
CT	53.2	43.2	16.0	14.0	20.0	3.0	13.0	0.2	7.0
DC	26.0	20.0	22.0	9.0	8.0	2.0	2.0	3.0	5.0
DE	92.4	92.4	11.0	18.5	17.0	5.0	6.0	48.0	16.4
FL	317.0	274.5	66.0	43.8	106.0	21.5	37.0	152.0	0.0
GA	61.0	60.0	22.0	38.0	48.0	3.0	7.0	2.0	0.0
HI	11.5	11.5	8.5	4.3	6.7	1.1	2.0	0.3	1.4
IA	29.5	27.0	3.0	23.7	15.5	3.0	6.0	1.5	1.0
ID	14.3	14.1	3.0	14.1	4.2	1.0	3.6	2.0	2.5
IL	105.0	105.0	9.0	37.0	67.0	9.0	29.0	0.0	0.0
IN	39.0	39.0	8.0	18.0	25.0	8.0	5.0	0.0	1.0
KS	44.0	44.0	3.0	28.0	30.0	3.0	6.5	0.0	4.5
KY	30.0	30.0	1.5	26.5	13.5	4.0	6.0	1.5	5.0
LA	51.0	50.0	17.0	15.4	20.0	8.0	10.0	1.0	11.0
MA	58.0	58.0	17.0	23.0	44.0	6.0	6.0	2.0	0.0
MD	46.5	46.5	18.0	11.0	25.0	8.0	12.0	1.0	0.5
ME	17.5	17.5	0.0	10.1	13.5	1.0	3.0	0.0	0.0
MI	489.0	376.0	101.0	220.0	117.6	33.8	43.4	118.0	62.7
MN	44.8	38.8	3.0	19.8	19.0	5.0	3.0	0.0	11.8
MO	419.0	419.0	45.0	16.2	68.0	6.0	61.2	284.0	0.0
MS	12.0	12.0	8.0	11.0	10.0	1.0	1.0	0.0	0.0
MT	9.0	8.0	0.0	8.0	5.3	1.0	0.0	1.8	0.0
NC	34.0	34.0	4.0	25.2	24.0	5.0	4.0	0.0	1.0
ND	24.0	24.0	0.0	12.0	14.5	2.0	4.0	0.0	3.5
NE	22.6	22.6	1.0	22.6	13.5	1.5	4.8	1.5	1.3
NH	116.0	108.0	1.0	21.0	15.5	5.0	17.5	6.0	64.0
NJ	100.0	100.0	25.0	44.0	31.0	10.0	17.0	4.0	38.0
NM	85.0	35.0	50.5	26.5	18.5	3.0	4.5	0.0	8.0
NV	26.0	26.0	2.0	14.5	13.0	2.2	2.6	0.0	8.2
NY	164.0	164.0	17.8	87.4	98.0	11.0	37.9	2.0	15.2
OH	0.0	0.0	106.0	29.0	90.0	3.0	13.0	0.0	0.0
OK	71.0	44.0	14.0	21.0	28.0	2.0	12.0	2.0	0.0
OR	105.0	105.0	4.0	5.6	55.4	4.8	30.8	5.0	8.0
PA	102.0	102.0	10.0	22.4	69.0	16.0	17.0	0.0	0.0
PR	65.0	65.0	65.0	45.0	23.0	9.0	25.0	8.0	0.0
RI	66.0	66.0	4.0	66.0	37.0	5.0	10.0	13.0	0.0
SC	36.0	35.0	11.0	13.5	23.0	1.0	7.0	1.0	3.0
SD	24.0	24.0	0.0	8.0	16.0	1.0	7.0	0.0	0.0
TN	107.0	67.7	12.4	60.3	39.4	7.8	8.5	3.7	8.0
TX	36.5	36.5	8.0	36.5	24.0	5.0	7.5	0.0	0.0
UT	20.5	20.5	0.0	5.8	12.0	3.0	4.0	0.0	1.5
VA	42.0	19.0	10.0	7.0	11.0	5.0	2.0	1.0	0.0
VT	34.2	34.2	0.0	26.2	23.2	2.0	5.0	4.0	0.0
WA	9.0	9.0	2.0	9.0	1.0	0.0	1.0	0.0	7.0
WI	17.0	17.0	1.0	14.0	15.0	1.0	1.0	0.0	0.0
WV	16.5	16.5	1.0	10.6	8.4	2.0	4.5	1.1	0.5
WY	8.0	6.0	0.0	6.0	2.0	1.0	1.0	2.0	0.0

1) Total Staff includes volunteers

Table compiled by the U.S. Administration on Aging.

Source: FY 1996 State Performance Reports for Title III of the Older Americans Act

Note: Total US figures include the 50 states, DC, and Puerto Rico.

9/29/98

Table 11b. Area Agency on Aging Staffing: FY1996
(See SPR Specifications for Definition of Key Terms)

State	Total Staff	Total Paid Staff	Total Minority Staff	Total Staff Paid with Title III	Total Professional Paid Staff	Total Manage-ment Staff	Total Clerical Staff	Total Access Staff	Total Service Delivery Staff
Total US	**39,203.1**	**19,011.9**	**6,341.8**	**8,545.0**	**17,738.3**	**1,273.6**	**2,586.9**	**4,127.0**	**7,162.1**
AK	Single PSA								
AL	104.8	103.8	27.6	78.7	87.6	16.3	23.5	15.2	22.0
AR	2,860.0	2,764.0	886.0	172.0	2,721.0	43.0	189.0	89.0	2,006.0
AZ	843.3	443.3	566.2	73.7	426.4	16.9	37.7	21.4	267.2
CA	1,552.4	889.0	375.7	506.4	824.9	64.2	152.0	231.2	154.3
CO	799.2	128.0	60.8	84.2	108.9	19.1	11.4	16.7	59.1
CT	108.3	98.3	29.5	41.8	85.6	12.8	20.8	22.3	8.0
DC	Single PSA								
DE	Single PSA								
FL	355.4	334.0	75.1	307.0	278.0	56.0	44.2	28.0	15.0
GA	135.8	131.3	36.9	116.6	114.9	16.4	14.8	29.2	14.5
GU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
HI	49.8	47.4	40.3	19.0	43.2	4.2	10.4	11.6	2.5
IA	1,220.9	232.9	37.8	232.9	219.9	13.0	31.5	131.0	3.0
ID	66.0	59.0	0.0	37.7	53.3	5.8	4.0	10.5	23.0
IL	842.7	399.0	428.0	297.0	349.7	49.3	88.6	34.3	136.5
IN	2,685.1	992.2	243.0	724.6	902.2	90.0	133.8	202.8	382.4
KS	71.5	71.5	33.0	21.4	67.5	4.0	21.5	9.0	22.0
KY	150.0	146.4	7.9	43.7	130.6	15.8	13.6	48.2	31.5
LA	822.6	525.6	308.7	441.5	466.6	59.0	72.3	60.9	237.1
MA	770.9	565.9	52.8	296.2	531.4	35.5	62.6	153.0	188.0
MD	2,260.8	835.9	461.5	291.3	793.9	42.0	165.5	125.9	341.8
ME	743.1	265.1	4.5	99.3	241.7	23.4	44.6	93.3	70.3
MI	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MN	52.4	52.4	5.0	42.3	38.4	14.0	6.9	3.5	2.7
MO	529.7	529.7	45.0	502.9	503.4	26.3	32.1	32.1	328.8
MS	163.0	163.0	81.0	126.0	153.0	10.0	5.0	60.0	63.0
MT	693.8	88.8	15.5	64.4	77.3	11.5	5.3	12.1	41.4
NC	101.9	99.2	8.5	65.5	78.5	20.6	7.7	1.9	33.7
ND	Single PSA								
NE	337.6	257.6	18.0	185.8	243.6	14.0	45.8	36.3	137.3
NH	Single PSA								
NJ	1,797.8	323.8	123.0	247.5	297.8	26.0	58.1	53.5	118.1
NM	58.0	16.0	29.0	15.5	13.0	3.0	2.0	1.0	2.3
NV	Single PSA								
NY	3,008.6	1,893.5	409.2	1,079.6	1,775.2	118.3	368.4	223.0	813.4
OH	1,113.3	1,051.9	159.6	142.7	955.3	96.6	134.6	633.9	38.9
OK	628.5	84.5	65.0	83.5	73.5	11.0	10.0	7.0	14.0
OR	2,043.0	582.9	117.3	172.2	549.3	33.6	78.1	226.9	147.7
PA	5,940.7	2,553.1	351.0	440.8	2,435.8	117.3	417.0	988.2	610.7
PR	69.0	61.0	69.0	47.0	54.0	7.0	8.0	28.0	0.0
RI	Single PSA								
SC	54.6	54.6	18.9	34.5	46.0	8.6	4.5	0.1	0.4
SD	Single PSA								
TN	107.5	68.3	10.5	58.6	60.5	7.8	8.5	3.7	8.0
TX	459.2	212.3	151.0	182.5	190.3	22.1	31.4	65.3	28.9
UT	497.4	278.3	45.3	143.1	258.3	20.0	31.3	36.8	134.5
VA	3,904.1	967.1	812.3	670.0	885.2	81.8	87.2	142.0	529.5
VT	659.7	121.4	1.0	87.2	116.9	4.5	9.2	45.1	46.8
WA	350.0	350.0	88.0	219.0	330.0	20.0	74.0	107.0	56.0
WI	157.3	155.5	43.0	39.0	148.5	7.0	17.0	66.3	2.0
WV	13.5	13.5	0.0	10.5	7.5	6.0	3.0	0.0	0.0
WY	Single PSA								

1) Total Staff includes volunteers
Table compiled by the U.S. Administration on Aging.
Source: FY 1996 State Performance Reports for Title III of the Older Americans Act
Note: Total US figures include the 50 states, DC, and Puerto Rico.

Profile of Individual State OAA Programs

1996 State program Report
For Titles III and VII of the
Older Americans Act

Profile of State OAA Programs: FY 1996 - United States

Part A. Population Data:	Value	Rank
Resident Population-All Ages	265,283,783	
Persons 60+ 1996	43,859,973	
As % of All Ages	16.5%	
Persons 60-64	9,999,091	
Persons 65-74	18,669,337	
Persons 75-84	11,429,984	
Persons 85+	3,761,561	
# Women/100 Men Age 60+	135.9	
Persons 60+ 1990	43,422,861	
Minority Persons 60+	6,370,332	
Minority Persons 60+ as % of All Persons 60+	14.7%	
Black Non-Hispanic Persons 60+ as % of All Persons 60+	8.0%	
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	2.6%	
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.4%	
Hispanic Persons 60+ as % of All Persons 60+	3.7%	
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	1,845,514	
As % of All Persons 60+ (Civilian Non-institutionalized)	16.0%	
Persons 60+ Below Poverty	5,457,394	
As a % of All Persons 60+	12.6%	
Min. Persons 60+ Below Pov.	1,883,742	
As a % of All Minority Persons 60+	29.6%	
Females 60+ Below Poverty Level	3,417,578	
As % of All Females 60+	13.9%	
Persons 60+ Living in Rural Areas	7,805,345	
As a % of All Persons 60+	18.0%	
Persons 60+ Living in NHs, Bd & Care, Other Institutions	1,845,514	
As a % of All Persons 60+	4.3%	

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	570
# of Paid Staff FTEs (state/local)	847.39
# of Certified Volunteers (state/local)	6,622
Number of Cases Closed	116,242
Number of Complaints (for cases closed)	179,111
Total Program Funding	$41,519,334

Part C. Title VI Grants In State:	
No of Title VI Grantees:	229
Total Allotments:	$16,256,999

Part D. Title III Clients:	Value	Rank
Total Clients	7,045,360	
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	1,336,603	
As a % of all Minority Clients	19.0%	
African American Non-Hispanic Clients as a % of Total Clients	10.0%	
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.7%	
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	1.0%	
Hispanic Clients as a % of Total Clients	6.3%	
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	2,671,772	
As a % of Total Clients	37.9%	
Minority Clients Below Poverty	850,369	
As a % of All Minority Clients	63.6%	
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	2,351,224	
As a % of Total Clients	33.4%	

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	8,596
Focal Points Which Are Senior Centers	6,356
Total Senior Centers	10,969
Total Senior Centers Receiving OAA $	6,431

Comments:
Part A. Population Data does not include Puerto Rico.

Profile of State OAA Programs: FY 1996 - United States

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 208,931,331	$ 797,656,966					
Personal Care	86,093	7,681,590	$ 12,578,913	$ 123,459,754	10.19%	1,667	191	77	$4,731,368
Homemaker	160,315	7,199,144	$ 24,902,232	$ 77,235,294	32.24%	2,362	206	96	$6,058,509
Chore	53,569	991,269	$ 4,852,385	$ 11,739,585	41.33%	745	133	38	$684,030
Home Del Meals	875,093	119,110,318	$ 140,473,756	$ 453,201,358	31.00%	3,672	391	215	$85,673,157
Adult Day Care/Hlth	26,587	5,529,614	$ 8,796,889	$ 37,814,331	23.26%	813	47	36	$5,664,360
Case Mgt	400,575	3,426,542	$ 17,327,156	$ 94,206,545	18.39%	864	162	272	$936,918
Cluster 1 As % of Total			31.3%	42.6%					
Cluster 2:			$ 244,639,032	$ 553,579,096					
Congreg Meals	2,147,756	118,632,573	$ 239,878,594	$ 537,312,210	44.64%	3,599	392	230	$112,744,402
Nutr Counseling	35,521	128,116	$ 1,086,778	$ 1,949,696	55.74%	672	128	87	$21,098
Assisted Transport	72,805	2,635,347	$ 3,673,659	$ 14,317,191	25.66%	1,286	239	51	$603,997
Cluster 2 As % of Total			36.7%	29.6%					
Cluster 3:			$ 127,635,497	$ 296,609,443					
Transportation		36,902,111	$ 59,190,127	$ 156,824,552	37.74%	3,124	329	144	$12,097,236
Legal Assistance		1,043,398	$ 20,621,374	$ 37,022,099	55.70%	1,178	93	109	$1,948,972
Nutr Education		661,708	$ 2,675,325	$ 4,516,230	59.24%	1,882	295	151	$222,351
Info and Assist		13,739,633	$ 31,757,450	$ 74,051,121	42.89%	2,666	324	412	$913,606
Outreach		2,536,285	$ 13,391,221	$ 24,395,442	54.89%	2,137	254	225	$476,166
Cluster 3 As % of Total			19.1%	15.9%					
Other Services			$ 85,510,150	$ 223,522,113	38.26%				$10,047,143
Oth Svcs As % of Total			12.8%	11.9%					
Total Services			$ 666,716,010	$ 1,871,567,618		NA 1996	NA 1996		$242,825,313

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	279.35	48.05	152.47
Other Pd Professionals By Functional Responsibility:			
Planning	327.88	44.35	185.59
Development	291.36	59.41	167.76
Administration	772.53	144.09	396.05
Service Delivery	906.92	206.79	107.92
Access/Care Coordination	726.32	112.40	88.84
Other Professional Staff	182.85	44.15	92.81
Clerical/Support	601.30	154.75	254.05
Volunteers	333.50	61.30	
Total State Unit Staff (Incl. Volunteers)	4,422.01	875.29	1,445.49

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	1,273.57	161.85	819.31
Development	480.60	78.49	299.68
Serv Del/Access/Care Coord	11,289.09	2,615.98	4,476.60
Planning/Admin/Other	3,381.71	773.74	1,783.61
Clerical	2,586.91	632.84	1,165.81
Volunteers	20,191.19	2,078.89	
Total AAA Staffing	39,203.07	6,341.79	8,545.01
Number of AAAs	655		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$3,633,068
Chapter 3: Elder Abuse	$3,147,475
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$277,180

Part I. Transfers Between Titie III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$297,960,057	$361,670,783	$104,577,080
Transfer From:			
Part B:		$0	$956,435
Part C1:	$22,598,251		$39,193,615
Part C2:	$1,401,675	$0	
Net Transfer $	$23,999,926	$0	$40,150,050
% Increase	8.05%	0.00%	38.39%
Final Allotment After Transfers	$321,003,548	$299,878,917	$143,325,455

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$206,175,514
As a % of Title III Exp.	30.92%
Program Income by Part	
Part B: Supp Svcs	$32,959,609
Part C1: Cong Nutr	$99,372,215
Part C2: Home Del Nutr	$72,490,528
Part D: In-Home Svcs	$1,277,720
Part F: Dis Prv/Hlth Prm	$75,442

Comments:

Profile of State OAA Programs: Alabama

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	4,273,084	23
Persons 60+ 1996	736,122	22
As % of All Ages	17.2%	22
Persons 60-64	178,005	19
Persons 65-74	311,636	21
Persons 75-84	185,200	22
Persons 85+	60,281	21
# Women/100 Men Age 60+	143	6
Persons 60+ 1990	706,275	21
Minority Persons 60+	147,059	15
Minority Persons 60+ as % of All Persons 60+	20.8%	12
Black Non-Hispanic Persons 60+ as % of All Persons 60+	20.2%	5
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	45
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	29
Hispanic Persons 60+ as % of All Persons 60+	0.2%	48
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	155,483	15
As % of All Persons 60+ (Civilian Non-institutionalized)	22.0%	3
Persons 60+ Below Poverty	148,471	13
As a % of All Persons 60+	21.0%	4
Min. Persons 60+ Below Pov.	57,284	11
As a % of All Minority Persons 60+	39.0%	6
Females 60+ Below Poverty Level	105,387	13
As % of All Females 60+	25.2%	4
Persons 60+ Living in Rural Areas	197,484	17
As a % of All Persons 60+	28.0%	18
Persons 60+ Living in NHs, Bd & Care, Other Institutions	24,617	27
As a % of All Persons 60+	3.5%	42

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	13
# of Paid Staff FTEs (state/local)	11.75
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	840
Number of Complaints (for cases closed)	1,196
Total Program Funding	$352,425

Part C. Title VI Grants In State:	
No of Title VI Grantees:	1
Total Allotments:	$67,000

Part D. Title III Clients:	Value	Rank
Total Clients	47,570	38
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	12,484	28
As a % of All Clients	26.2%	15
African American Non-Hispanic Clients as a % of Total Clients	25.8%	8
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	46
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.3%	26
Hispanic Clients as a % of Total Clients	0.1%	48
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	21,761	33
As a % of Total Clients	45.7%	16
Minority Clients Below Poverty	8,186	27
As a % of All Minority Clients	65.6%	20
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	25,566	33
As a % of Total Clients	53.7%	21

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	347
Focal Points Which Are Senior Centers	263
Total Senior Centers	264
Total Senior Centers Receiving OAA $	264

Comments:

Profile of State OAA Programs: Alabama

Part F. Service Profile:									
	Persons	Service	Expenditures			Providers			Earned
Service	Served	Units	Title III	Total Service	%TIII $	Total	Minority	AAA	Pgm.Income
Cluster 1:			$ 2,843,235	$ 5,094,590					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	5,517	310,498	$ 505,027	$ 744,219	67.86%	383	20	-	$6,066
Chore	1,216	23,986	$ 19,746	$ 164,550	12.00%	108	4	-	$0
Home Del Meals	10,087	1,234,536	$ 2,284,571	$ 4,145,475	55.11%	444	10	-	$625,119
Adult Day Care/Hlth	1,500	10,000	$ 33,891	$ 40,346	84.00%	79	1	-	$0
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			23.7%	23.4%					
Cluster 2:			$ 5,571,291	$ 9,899,190					
Congreg Meals	28,209	2,417,376	$ 5,264,014	$ 9,235,112	57.00%	400	12	-	$1,118,952
Nutr Counseling	3,800	16,000	$ 213,708	$ 251,421	85.00%	148	-	-	$9,833
Assisted Transport	2,223	102,117	$ 93,569	$ 212,657	44.00%	437	27	-	$0
Cluster 2 As % of Total			46.5%	44.5%					
Cluster 3:			$ 2,788,788	$ 5,619,504					
Transportation		1,226,033	$ 1,616,144	$ 3,405,276	47.46%	555	37	-	$285,460
Legal Assistance		25,906	$ 426,391	$ 676,811	63.00%	97	8	-	$0
Nutr Education		65,345	$ 172,355	$ 202,771	85.00%	385	18	-	$0
Info and Assist		533,025	$ 488,119	$ 1,135,160	43.00%	561	23	-	$0
Outreach		93,670	$ 85,779	$ 199,486	43.00%	413	20	-	$0
Cluster 3 As % of Total			23.3%	25.8%					
Other Services			$ 787,279	$ 1,381,191	57.00%				$0
Oth Svcs As % of Total			6.6%	6.3%					
Total			$ 11,990,593	$ 21,794,476		1,948	55		$2,043,430

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	2.00	-	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	3.75	1.00	3.75
Development	2.00	-	2.00
Administration	5.00	1.00	5.00
Service Delivery	2.00	1.00	1.00
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	4.75	3.00	4.75
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	19.50	6.00	18.50

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	16.25	2.00	15.25
Development	3.70	-	4.20
Serv Del/Access/Care Coord	37.15	13.75	23.15
Planning/Admin/Other	23.25	4.70	18.15
Clerical	23.45	7.35	17.95
Volunteers	1.00	-	
Total AAA Staffing	104.80	27.80	78.70
Number of AAAs in State	12		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$72,360
Chapter 3: Elder Abuse	$74,664
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$27,994

Part I. Transfers Between Title III, Parts B and C:			
Pre-Transfer Allotment:	To Part B	To Part C1	To Part C2
	$4,853,124	$5,884,803	$1,703,117
Transfer From:			
Part B:		$0	$0
Part C1:	$39,176		$326,088
Part C2:	$0	$0	
Net Transfer $	$39,176	$0	$326,088
% Increase	0.81%	0.00%	19.15%
Final Allotment After Transfers	$4,892,300	$5,519,539	$2,029,205

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$2,217,534
As a % of Title III Exp.	18.49%
Program Income Exp. by Part	
Part B: Supp Svcs	$614,948
Part C1: Cong Nutr	$961,058
Part C2: Home Del Nutr	$578,005
Part D: In-Home Svcs	$63,523
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Alaska

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	607,007	49
Persons 60+ 1996	48,190	52
As % of All Ages	7.9%	53
Persons 60-64	16,921	52
Persons 65-74	20,786	52
Persons 75-84	8,525	52
Persons 85+	1,958	52
# Women/100 Men Age 60+	101	51
Persons 60+ 1990	34,886	52
Minority Persons 60+	8,667	42
Minority Persons 60+ as % of All Persons 60+	24.8%	7
Black Non-Hispanic Persons 60+ as % of All Persons 60+	2.7%	30
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	3.8%	5
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	17.1%	1
Hispanic Persons 60+ as % of All Persons 60+	1.2%	20
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	4,260	52
As % of All Persons 60+ (Civilian Non-institutionalized)	12.2%	45
Persons 60+ Below Poverty	2,705	52
As a % of All Persons 60+	7.8%	50
Min. Persons 60+ Below Pov.	1,299	45
As a % of All Minority Persons 60+	15.0%	48
Females 60+ Below Poverty Level	1,486	52
As % of All Females 60+	8.3%	51
Persons 60+ Living in Rural Areas	7,281	51
As a % of All Persons 60+	20.9%	31
Persons 60+ Living in NHs, Bd & Care, Other Institutions	1,336	51
As a % of All Persons 60+	3.8%	38

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	1
# of Paid Staff FTEs (state/local)	2.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	136
Number of Complaints (for cases closed)	786
Total Program Funding	$156,487

Part C. Title VI Grants In State:	
No of Title VI Grantees:	31
Total Allotments:	$1,902,900

Part D. Title III Clients:	Value	Rank
Total Clients	17,338	52
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	4,500	38
As a % of All Clients	26.0%	16
African American Non-Hispanic Clients as a % of Total Clients	1.7%	36
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	3.5%	5
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	19.9%	2
Hispanic Clients as a % of Total Clients	0.9%	26
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	5,400	50
As a % of Total Clients	31.1%	33
Minority Clients Below Poverty	2,250	39
As a % of All Minority Clients	50.0%	40
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	6,450	47
As a % of Total Clients	37.2%	33

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	41
Focal Points Which Are Senior Centers	25
Total Senior Centers	25
Total Senior Centers Receiving OAA $	22

Comments:

Profile of State OAA Programs: Alaska

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 476,368	$ 2,776,119					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	407	7,758	$ 13,888	$ 277,760	5.00%	5	2	-	$256
Chore	186	4,184	$ 3,701	$ 83,733	4.42%	5	2	-	$68
Home Del Meals	2,180	213,215	$ 458,779	$ 2,414,626	19.00%	20	3	-	$179,630
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			16.0%	23.7%					
Cluster 2:			$ 1,669,335	$ 5,454,550					
Congreg Meals	9,900	321,038	$ 1,316,918	$ 4,389,727	30.00%	33	7	-	$451,786
Nutr Counseling	346	173	$ 3,016	$ 6,032	50.00%	2	-	-	$0
Assisted Transport	1,300	99,270	$ 349,401	$ 1,058,791	33.00%	13	1	-	$62,248
Cluster 2 As % of Total			56.0%	46.6%					
Cluster 3:			$ 677,894	$ 2,638,610					
Transportation		135,331	$ 334,909	$ 1,240,404	27.00%	14	1	-	$84,861
Legal Assistance		2,952	$ 130,169	$ 224,429	58.00%	1	-	-	$624
Nutr Education		77	$ 767	$ 1,534	50.00%	5	-	-	$0
Info and Assist		34,955	$ 192,189	$ 1,067,717	18.00%	13	3	-	$24,785
Outreach		4,939	$ 19,860	$ 104,526	19.00%	16	4	-	$0
Cluster 3 As % of Total			22.7%	22.5%					
Other Services			$ 158,158	$ 832,411	19.00%				$112,011
Oth Svcs As % of Total			5.3%	7.1%					
Total			$ 2,981,755	$ 11,701,689		39	10		$916,269

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	12.00	-	4.00
Other Pd Professionals By Functional Responsibility:			
Planning	12.00	-	5.00
Development	-	-	-
Administration	11.00	-	4.00
Service Delivery	493.00	124.00	-
Access/Care Coordination	20.80	-	-
Other Professional Staff	5.00	-	2.00
Clerical/Support	24.00	-	3.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	578.00	124.00	18.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	*		

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$1,501,529	$1,822,300	$526,695
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$0
Part C2:	$0	$0	
Net Transfer $	$0	$0	$0
% Increase	0.00%	0.00%	0.00%
Final Allotment After Transfers	$1,501,529	$1,822,300	$526,695

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$1,288,828
As a % of Title III Exp.	43.22%
Program Income Exp. by Part	
Part B: Supp Svcs	$224,316
Part C1: Cong Nutr	$737,681
Part C2: Home Del Nutr	$317,804
Part D: In-Home Svcs	$1,257
Part F: Dis Prv/Hlth Prm	$7,770

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$22,245
Chapter 3: Elder Abuse	$23,660
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: Arizona

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	4,428,068	21
Persons 60+ 1996	757,119	19
As % of All Ages	17.1%	25
Persons 60-64	171,292	21
Persons 65-74	331,656	19
Persons 75-84	198,560	20
Persons 85+	55,611	24
# Women/100 Men Age 60+	125	43
Persons 60+ 1990	681,733	22
Minority Persons 60+	97,687	21
Minority Persons 60+ as % of All Persons 60+	14.3%	17
Black Non-Hispanic Persons 60+ as % of All Persons 60+	1.5%	37
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	3.2%	7
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	2.3%	5
Hispanic Persons 60+ as % of All Persons 60+	7.4%	5
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	89,466	30
As % of All Persons 60+ (Civilian Non-institutionalized)	13.1%	41
Persons 60+ Below Poverty	78,051	25
As a % of All Persons 60+	11.4%	23
Min. Persons 60+ Below Pov.	28,475	19
As a % of All Minority Persons 60+	29.1%	14
Females 60+ Below Poverty Level	44,171	29
As % of All Females 60+	12.5%	30
Persons 60+ Living in Rural Areas	52,439	39
As a % of All Persons 60+	7.7%	49
Persons 60+ Living in NHs, Bd & Care, Other Institutions	16,994	33
As a % of All Persons 60+	2.5%	48

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	8
# of Paid Staff FTEs (state/local)	6.50
# of Certified Volunteers (state/local)	100.00
Number of Cases Closed	1,622
Number of Complaints (for cases closed)	2,900
Total Program Funding	$330,819

Part C. Title VI Grants In State:	
No of Title VI Grantees:	16
Total Allotments:	$938,450

Part D. Title III Clients:	Value	Rank
Total Clients	134,013	19
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	52,464	9
As a % of All Clients	39.1%	6
African American Non-Hispanic Clients as a % of Total Clients	3.0%	33
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.9%	15
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	25.1%	1
Hispanic Clients as a % of Total Clients	10.1%	6
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	57,899	19
As a % of Total Clients	43.2%	19
Minority Clients Below Poverty	31,512	9
As a % of All Minority Clients	60.1%	27
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	59,013	16
As a % of Total Clients	44.0%	25

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	104
Focal Points Which Are Senior Centers	102
Total Senior Centers	190
Total Senior Centers Receiving OAA $	190

Comments:

Profile of State OAA Programs: Arizona

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,255,624	$ 22,485,388					
Personal Care	5,817	166,467	$ 175,554	$ 3,511,080	5.00%	73	-	-	$59,543
Homemaker	6,914	218,264	$ 84,296	$ 4,214,800	2.00%	31	-	-	$47,344
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	13,090	1,407,793	$ 1,496,504	$ 7,482,520	20.00%	85	19	1	$658,946
Adult Day Care/Hlth	534	150,912	$ 250,603	$ 3,132,536	8.00%	13	-	-	$210,749
Case Mgt	11,574	93,084	$ 248,667	$ 4,144,450	6.00%	21	-	4	$12,273
Cluster 1 As % of Total			24.8%	52.6%					
Cluster 2:			$ 2,651,557	$ 8,035,021					
Congreg Meals	50,359	1,451,511	$ 2,651,557	$ 8,035,021	33.00%	20	19	1	$1,241,156
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			29.2%	18.8%					
Cluster 3:			$ 1,208,444	$ 5,518,742					
Transportation		953,786	$ 863,259	$ 4,795,883	18.00%	41	-	-	$233,952
Legal Assistance		11,207	$ 309,098	$ 532,928	58.00%	7	-	3	$7,646
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		-	$ -	$ -	0.00%	-	-	-	$0
Outreach		148,494	$ 36,087	$ 189,932	19.00%	6	-	6	$0
Cluster 3 As % of Total			13.3%	12.9%					
Other Services			$ 2,967,854	$ 6,745,123	44.00%				$216,496
Oth Svcs As % of Total			32.7%	15.8%					
Total			$ 9,083,479	$ 42,784,274		98	19		$2,688,085

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	2.00	5.00
Other Pd Professionals By Functional Responsibility:			
Planning	5.00	3.00	2.00
Development	9.00	1.00	8.00
Administration	11.00	2.00	10.00
Service Delivery	102.00	30.50	6.00
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	12.00	3.00	-
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	144.00	41.50	31.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	16.90	6.00	8.79
Development	10.39	2.00	6.70
Serv Del/Access/Care Coord	308.57	280.89	19.71
Planning/Admin/Other	69.75	40.10	19.23
Clerical	37.71	17.25	19.27
Volunteers	400.00	220.00	
Total AAA Staffing	843.32	566.24	73.70
Number of AAAs in State	8		

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$3,824,052	$4,590,231	$1,329,906
Transfer From:			
Part B:		$0	$0
Part C1:	$750,000		$0
Part C2:	$0	$0	
Net Transfer $	$750,000	$0	$0
% Increase	19.61%	0.00%	0.00%
Final Allotment After Transfers	$4,574,052	$3,840,231	$1,329,906

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$2,802,346
As a % of Title III Exp.	30.85%
Program Income Exp. by Part	
Part B: Supp Svcs	$2,802,346
Part C1: Cong Nutr	$0
Part C2: Home Del Nutr	$0
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$68,254
Chapter 3: Elder Abuse	$59,987
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$28,129

Comments:

Profile of State OAA Programs: Arkansas

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	2,509,793	34
Persons 60+ 1996	470,619	32
As % of All Ages	18.8%	7
Persons 60-64	108,305	32
Persons 65-74	194,871	32
Persons 75-84	125,473	30
Persons 85+	41,970	30
# Women/100 Men Age 60+	136	24
Persons 60+ 1990	459,147	32
Minority Persons 60+	57,232	28
Minority Persons 60+ as % of All Persons 60+	12.5%	22
Black Non-Hispanic Persons 60+ as % of All Persons 60+	11.6%	11
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	43
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	21
Hispanic Persons 60+ as % of All Persons 60+	0.3%	43
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	92,037	28
As % of All Persons 60+ (Civilian Non-institutionalized)	20.0%	8
Persons 60+ Below Poverty	93,212	21
As a % of All Persons 60+	20.3%	5
Min. Persons 60+ Below Pov.	24,910	22
As a % of All Minority Persons 60+	43.5%	3
Females 60+ Below Poverty Level	63,992	23
As % of All Females 60+	24.0%	5
Persons 60+ Living in Rural Areas	157,221	22
As a % of All Persons 60+	34.2%	8
Persons 60+ Living in NHs, Bd & Care, Other Institutions	21,170	28
As a % of All Persons 60+	4.6%	23

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	8
# of Paid Staff FTEs (state/local)	11.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	408
Number of Complaints (for cases closed)	648
Total Program Funding	$508,692

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	70,289	30
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	17,771	23
As a % of All Clients	25.3%	17
African American Non-Hispanic Clients as a % of Total Clients	25.0%	9
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	47
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	40
Hispanic Clients as a % of Total Clients	0.1%	41
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	40,545	23
As a % of Total Clients	57.7%	7
Minority Clients Below Poverty	14,617	19
As a % of All Minority Clients	82.3%	7
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	39,859	24
As a % of Total Clients	56.7%	17

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	138
Focal Points Which Are Senior Centers	136
Total Senior Centers	191
Total Senior Centers Receiving OAA $	191

Comments:

Profile of State OAA Programs: Arkansas

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,511,899	$ 6,709,822					
Personal Care	-	-	$ -	$ -	0.00%	-	-	1	$0
Homemaker	627	39,883	$ 141,360	$ 204,870	69.00%	11	-	1	$22,854
Chore	342	37,427	$ 41,211	$ 374,645	11.00%	4	-	3	$1,849
Home Del Meals	11,419	2,401,332	$ 2,101,981	$ 5,838,836	36.00%	39	4	2	$1,209,411
Adult Day Care/Hlth	142	119,254	$ 227,347	$ 291,471	78.00%	6	1	-	$244,014
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			26.9%	31.2%					
Cluster 2:			$ 3,521,467	$ 5,679,785					
Congreg Meals	16,901	2,073,932	$ 3,521,467	$ 5,679,785	62.00%	40	4	2	$1,343,743
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			37.7%	26.4%					
Cluster 3:			$ 1,690,907	$ 4,155,784					
Transportation		692,965	$ 1,453,793	$ 3,825,771	38.00%	41	5	4	$589,562
Legal Assistance		7,699	$ 73,273	$ 77,950	94.00%	12	1	3	$0
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		70,064	$ 163,841	$ 252,063	65.00%	18	-	4	$4,157
Outreach		-	$ -	$ -	0.00%	-	-	-	$0
Cluster 3 As % of Total			18.1%	19.3%					
Other Services			$ 1,613,466	$ 4,972,160	32.45%				$279,724
Oth Svcs As % of Total			17.3%	23.1%					
Total			$ 9,337,739	$ 21,517,552		44	5		$3,695,304

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	-	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	3.00	-	-
Development	5.00	3.00	4.00
Administration	8.00	-	3.00
Service Delivery	12.00	3.00	1.00
Access/Care Coordination	32.00	3.00	-
Other Professional Staff	-	-	-
Clerical/Support	10.00	4.00	3.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	75.00	13.00	12.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	43.00	3.00	20.00
Development	13.00	1.00	3.00
Serv Del/Access/Care Coord	2,095.00	670.00	110.00
Planning/Admin/Other	424.00	187.00	24.00
Clerical	189.00	19.00	15.00
Volunteers	96.00	6.00	
Total AAA Staffing	2,860.00	886.00	172.00
Number of AAAs in State	8		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$251,747
Chapter 3: Elder Abuse	$18,698
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$3,329,447	$4,048,662	$1,151,818
Transfer From:			
Part B:		$0	$0
Part C1:	$230,259		$531,473
Part C2:	$0	$0	
Net Transfer $	$230,259	$0	$531,473
% Increase	6.92%	0.00%	46.14%
Final Allotment After Transfers	$3,559,706	$3,286,930	$1,683,291

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,619,644
As a % of Title III Exp.	28.06%
Program Income Exp. by Part	
Part B: Supp Svcs	$711,297
Part C1: Cong Nutr	$1,045,309
Part C2: Home Del Nutr	$767,215
Part D: In-Home Svcs	$95,823
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: California

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	31,878,234	1
Persons 60+ 1996	4,514,142	1
As % of All Ages	14.2%	47
Persons 60-64	997,739	1
Persons 65-74	1,961,229	1
Persons 75-84	1,179,842	1
Persons 85+	375,332	1
# Women/100 Men Age 60+	131	36
Persons 60+ 1990	4,667,602	1
Minority Persons 60+	1,153,192	1
Minority Persons 60+ as % of All Persons 60+	24.7%	9
Black Non-Hispanic Persons 60+ as % of All Persons 60+	4.8%	24
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	9.9%	2
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.5%	15
Hispanic Persons 60+ as % of All Persons 60+	9.5%	4
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	670,972	1
As % of All Persons 60+ (Civilian Non-institutionalized)	14.4%	31
Persons 60+ Below Poverty	369,045	3
As a % of All Persons 60+	7.9%	49
Min. Persons 60+ Below Pov.	152,002	4
As a % of All Minority Persons 60+	13.2%	50
Females 60+ Below Poverty Level	208,866	4
As % of All Females 60+	8.6%	49
Persons 60+ Living in Rural Areas	264,055	8
As a % of All Persons 60+	5.7%	51
Persons 60+ Living in NHs, Bd & Care, Other Institutions	160,474	1
As a % of All Persons 60+	3.4%	43

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	35
# of Paid Staff FTEs (state/local)	96.00
# of Certified Volunteers (state/local)	1,276.00
Number of Cases Closed	21,378
Number of Complaints (for cases closed)	26,098
Total Program Funding	$6,396,783

Part C. Title VI Grants in State:	
No of Title VI Grantees:	28
Total Allotments:	$1,431,725

Part D. Title III Clients:	Value	Rank
Total Clients	520,976	2
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	144,224	2
As a % of All Clients	27.7%	13
African American Non-Hispanic Clients as a % of Total Clients	6.1%	27
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	9.9%	3
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.7%	14
Hispanic Clients as a % of Total Clients	11.0%	5
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	188,695	2
As a % of Total Clients	36.2%	27
Minority Clients Below Poverty	96,380	1
As a % of All Minority Clients	66.8%	19
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	51,271	19
As a % of Total Clients	9.8%	48

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	345
Focal Points Which Are Senior Centers	256
Total Senior Centers	756
Total Senior Centers Receiving OAA $	284

Comments:

Profile of State OAA Programs: California

Part F. Service Profile:									
	Persons	Service	Expenditures			Providers			Earned
Service	Served	Units	Title III	Total Service	%TIII $	Total	Minority	AAA	Pgm.Income
Cluster 1:			$ 22,552,486	$ 61,720,031					
Personal Care	4,150	111,559	$ 1,189,158	$ 2,426,853	49.00%	57	6	3	$353,769
Homemaker	21,420	510,080	$ 2,745,609	$ 4,992,016	55.00%	82	15	3	$603,620
Chore	3,039	33,028	$ 289,484	$ 643,298	45.00%	40	4	1	$48,308
Home Del Meals	53,576	9,232,166	$ 13,993,811	$ 42,405,488	33.00%	164	26	7	$6,509,612
Adult Day Care/Hlth	2,913	845,222	$ 1,039,715	$ 5,472,164	19.00%	55	5	1	$1,111,468
Case Mgt	27,850	161,941	$ 3,294,709	$ 5,780,191	57.00%	80	17	9	$216,540
Cluster 1 As % of Total			37.4%	37.2%					
Cluster 2:			$ 22,685,328	$ 68,139,166					
Congreg Meals	153,779	10,865,994	$ 22,071,519	$ 64,916,232	34.00%	217	51	6	$13,864,446
Nutr Counseling	6,503	10,631	$ 249,885	$ 423,534	59.00%	57	9	5	$114
Assisted Transport	10,945	334,205	$ 363,922	$ 2,799,400	13.00%	48	12	2	$30,169
Cluster 2 As % of Total			37.7%	41.1%					
Cluster 3:			$ 10,132,529	$ 19,082,306					
Transportation		1,096,321	$ 2,031,264	$ 3,906,277	52.00%	103	18	2	$513,474
Legal Assistance		193,902	$ 3,061,573	$ 6,958,120	44.00%	39	6	2	$221,802
Nutr Education		43,942	$ 260,030	$ 382,397	68.00%	149	28	9	$4,722
Info and Assist		1,344,923	$ 4,779,662	$ 7,835,511	61.00%	137	21	28	$159,489
Outreach		231,637	$ -	$ -	0.00%	141	19	9	$0
Cluster 3 As % of Total			16.8%	11.5%					
Other Services			$ 4,877,432	$ 16,818,731	29.00%				$642,606
Oth Svcs As % of Total			8.1%	10.1%					
Total			$ 60,247,773	$ 165,760,234		404	67		$24,280,129

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	9.00	2.00	9.00
Other Pd Professionals By Functional Responsibility:			
Planning	6.80	1.00	8.80
Development	2.00	1.00	2.00
Administration	77.60	19.00	58.80
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	34.25	7.00	30.25
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	131.65	30.00	108.85

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	64.16	13.20	49.95
Development	28.90	9.10	23.30
Serv Del/Access/Care Coord	385.49	120.80	166.34
Planning/Admin/Other	258.42	94.73	176.05
Clerical	152.05	56.65	70.80
Volunteers	663.40	81.25	
Total AAA Staffing	1,552.42	375.73	506.44
Number of AAAs in State	33		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$310,093
Chapter 3: Elder Abuse	$302,743
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$35,516

Part I. Transfers Between Title III, Parts B and C:			
Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$27,679,826	$33,743,274	$9,876,656
Transfer From:			
Part B:		$0	$0
Part C1:	$1,110,561		$6,085,842
Part C2:	$0	$0	
Net Transfer $	$1,110,561	$0	$6,085,842
% Increase	3.98%	0.00%	61.61%
Final Allotment After Transfers	$28,990,387	$26,546,871	$15,964,498

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$26,110,341
As a % of Title III Exp.	43.34%
Program Income Exp. by Part	
Part B: Supp Svcs	$3,217,922
Part C1: Cong Nutr	$13,714,962
Part C2: Home Del Nutr	$8,926,862
Part D: In-Home Svcs	$250,595
Part F: Dis Prv/Hlth Prm	$0

Comments:

Service Units for outreach are shown but Expenditures are not because the expenditures are captured in Title III B services in the other catagories.

Profile of State OAA Programs: Colorado

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	3,822,676	25
Persons 60+ 1996	526,661	30
As % of All Ages	13.8%	48
Persons 60-64	142,090	26
Persons 65-74	217,898	30
Persons 75-84	124,926	31
Persons 85+	41,747	31
# Women/100 Men Age 60+	129	38
Persons 60+ 1990	482,881	30
Minority Persons 60+	60,994	27
Minority Persons 60+ as % of All Persons 60+	12.6%	21
Black Non-Hispanic Persons 60+ as % of All Persons 60+	2.2%	32
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	3.1%	8
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.4%	18
Hispanic Persons 60+ as % of All Persons 60+	6.9%	7
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	61,885	35
As % of All Persons 60+ (Civilian Non-institutionalized)	12.8%	43
Persons 60+ Below Poverty	51,770	32
As a % of All Persons 60+	10.7%	26
Min. Persons 60+ Below Pov.	13,191	27
As a % of All Minority Persons 60+	21.7%	33
Females 60+ Below Poverty Level	31,938	34
As % of All Females 60+	12.4%	31
Persons 60+ Living in Rural Areas	58,223	36
As a % of All Persons 60+	12.1%	40
Persons 60+ Living in NHs, Bd & Care, Other Institutions	18,885	31
As a % of All Persons 60+	3.9%	35

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	16
# of Paid Staff FTEs (state/local)	14.03
# of Certified Volunteers (state/local)	65.00
Number of Cases Closed	3,210
Number of Complaints (for cases closed)	7,604
Total Program Funding	$513,859

Part C. Title VI Grants in State:	
No of Title VI Grantees:	2
Total Allotments:	$111,000

Part D. Title III Clients:	Value	Rank
Total Clients	127,138	22
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	20,809	19
As a % of All Clients	16.4%	25
African American Non-Hispanic Clients as a % of Total Clients	2.7%	34
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.1%	10
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.5%	17
Hispanic Clients as a % of Total Clients	12.1%	4
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	32,062	26
As a % of Total Clients	25.2%	43
Minority Clients Below Poverty	14,965	18
As a % of All Minority Clients	71.9%	15
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	45,348	21
As a % of Total Clients	35.7%	35

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	220
Focal Points Which Are Senior Centers	155
Total Senior Centers	156
Total Senior Centers Receiving OAA $	22

Comments:

Profile of State OAA Programs: Colorado

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,924,200	$ 4,335,276					
Personal Care	775	30,836	$ 225,472	$ 563,680	40.00%	21	3	1	$13,763
Homemaker	1,208	45,233	$ 325,825	$ 525,524	62.00%	30	2	1	$61,178
Chore	630	5,245	$ 31,272	$ 52,120	60.00%	5	2	3	$14,267
Home Del Meals	11,362	1,093,848	$ 1,326,176	$ 3,157,562	42.00%	11	-	6	$935,901
Adult Day Care/Hlth	109	18,047	$ 10,960	$ 27,400	40.00%	7	-	-	$106,175
Case Mgt	61	705	$ 4,495	$ 8,990	50.00%	3	-	2	$4
Cluster 1 As % of Total			31.7%	33.6%					
Cluster 2:			$ 2,051,500	$ 4,556,450					
Congreg Meals	34,140	1,218,655	$ 2,043,347	$ 4,540,771	45.00%	14	1	5	$1,533,273
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	593	1,448	$ 8,153	$ 15,679	52.00%	3	2	1	$271
Cluster 2 As % of Total			33.8%	35.4%					
Cluster 3:			$ 1,538,532	$ 2,991,869					
Transportation		474,706	$ 992,386	$ 2,111,460	47.00%	34	1	3	$250,109
Legal Assistance		7,883	$ 180,388	$ 316,470	57.00%	18	-	2	$12,503
Nutr Education		2,400	$ 11,068	$ 13,835	80.00%	15	-	7	$2,453
Info and Assist		380,382	$ 260,308	$ 325,385	80.00%	51	7	16	$15,991
Outreach		80,707	$ 94,382	$ 224,719	42.00%	18	5	10	$1,554
Cluster 3 As % of Total			25.4%	23.2%					
Other Services			$ 550,146	$ 1,000,265	55.00%				$59,675
Oth Svcs As % of Total			9.1%	7.8%					
Total			$ 6,064,378	$ 12,883,860		230	23		$3,006,117

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	4.75	1.00	1.25
Other Pd Professionals By Functional Responsibility:			
Planning	3.00	-	0.50
Development	4.00	-	-
Administration	10.80	-	4.00
Service Delivery	-	-	-
Access/Care Coordination	1.00	-	0.25
Other Professional Staff	-	-	-
Clerical/Support	5.00	1.00	1.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	28.60	2.00	7.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	19.08	-	14.46
Development	3.90	0.50	3.40
Serv Del/Access/Care Coord	75.84	7.30	46.66
Planning/Admin/Other	17.79	1.75	10.89
Clerical	11.35	1.00	8.77
Volunteers	671.25	50.25	
Total AAA Staffing	799.21	60.80	84.18
Number of AAAs in State	14		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$19,298
Chapter 3: Elder Abuse	$22,966
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$2,966,554	$3,577,366	$1,069,403
Transfer From:			
Part B:		$0	$0
Part C1:	$494,002		$469,053
Part C2:	$0	$0	
Net Transfer $	$494,002	$0	$469,053
% Increase	16.65%	0.00%	43.86%
Final Allotment After Transfers	$3,460,556	$2,614,311	$1,538,456

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,932,718
As a % of Title III Exp.	48.36%
Program Income Exp. by Part	
Part B: Supp Svcs	$363,528
Part C1: Cong Nutr	$1,553,469
Part C2: Home Del Nutr	$943,554
Part D: In-Home Svcs	$72,167
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Connecticut

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	3,274,238	29
Persons 60+ 1996	593,033	26
As % of All Ages	18.1%	10
Persons 60-64	123,245	29
Persons 65-74	246,177	26
Persons 75-84	166,316	23
Persons 85+	57,295	23
# Women/100 Men Age 60+	139	19
Persons 60+ 1990	605,250	25
Minority Persons 60+	42,282	31
Minority Persons 60+ as % of All Persons 60+	7.0%	31
Black Non-Hispanic Persons 60+ as % of All Persons 60+	4.1%	26
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.0%	22
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	37
Hispanic Persons 60+ as % of All Persons 60+	1.7%	16
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	89,533	29
As % of All Persons 60+ (Civilian Non-institutionalized)	14.8%	28
Persons 60+ Below Poverty	39,104	36
As a % of All Persons 60+	6.5%	52
Min. Persons 60+ Below Pov.	8,453	32
As a % of All Minority Persons 60+	20.0%	41
Females 60+ Below Poverty Level	27,871	35
As % of All Females 60+	8.0%	52
Persons 60+ Living in Rural Areas	74,002	35
As a % of All Persons 60+	12.2%	39
Persons 60+ Living in NHs, Bd & Care, Other Institutions	30,943	22
As a % of All Persons 60+	5.1%	17

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	5
# of Paid Staff FTEs (state/local)	13.00
# of Certified Volunteers (state/local)	86.00
Number of Cases Closed	143
Number of Complaints (for cases closed)	304
Total Program Funding	$691,065

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	44,749	39
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	6,761	33
As a % of All Clients	15.1%	27
African American Non-Hispanic Clients as a % of Total Clients	9.5%	20
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.4%	26
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	31
Hispanic Clients as a % of Total Clients	5.1%	10
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	14,294	40
As a % of Total Clients	31.9%	32
Minority Clients Below Poverty	4,284	32
As a % of All Minority Clients	63.4%	21
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	3,385	50
As a % of Total Clients	7.6%	50

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	88
Focal Points Which Are Senior Centers	74
Total Senior Centers	170
Total Senior Centers Receiving OAA $	15

Comments:

Profile of State OAA Programs: Connecticut

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 3,177,575	$ 11,952,942					
Personal Care	499	43,370	$ 120,635	$ 863,107	14.00%	11	1	-	$52,650
Homemaker	965	60,971	$ 292,351	$ 679,886	43.00%	14	3	-	$101,591
Chore	1,093	28,887	$ 226,085	$ 461,398	49.00%	10	2	-	$74,509
Home Del Meals	9,486	1,662,353	$ 2,015,260	$ 6,297,688	32.00%	14	2	-	$1,813,014
Adult Day Care/Hlth	728	221,767	$ 506,484	$ 3,617,743	14.00%	35	2	-	$586,794
Case Mgt	42	526	$ 16,560	$ 33,120	50.00%	2	-	-	$225
Cluster 1 As % of Total			35.6%	41.9%					
Cluster 2:			$ 3,281,131	$ 7,806,589					
Congreg Meals	16,766	1,159,410	$ 3,271,131	$ 7,788,407	42.00%	17	1	-	$1,715,900
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	39	882	$ 10,000	$ 18,182	55.00%	2	-	-	$3,978
Cluster 2 As % of Total			36.7%	27.4%					
Cluster 3:			$ 1,140,913	$ 4,853,689					
Transportation		243,507	$ 538,088	$ 3,587,260	15.00%	29	6	-	$152,174
Legal Assistance		8,423	$ 273,781	$ 547,562	50.00%	8	-	-	$150
Nutr Education		7,002	$ 37,319	$ 54,086	69.00%	12	1	-	$5,116
Info and Assist		48,352	$ 111,849	$ 215,094	52.00%	8	2	5	$430
Outreach		29,056	$ 179,875	$ 449,688	40.00%	20	2	-	$3,561
Cluster 3 As % of Total			12.8%	17.0%					
Other Services			$ 1,334,763	$ 3,925,774	34.00%				$409,358
Oth Svcs As % of Total			14.9%	13.6%					
Total			$ 8,934,382	$ 28,538,993		182	22		$4,719,360

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	3.00	-	-
Other Pd Professionals By Functional Responsibility:			
Planning	7.33	1.33	4.00
Development	7.33	0.33	2.00
Administration	5.33	1.33	3.00
Service Delivery	7.00	2.00	1.00
Access/Care Coordination	0.20	-	-
Other Professional Staff	-	-	-
Clerical/Support	13.00	9.00	4.00
Volunteers	10.00	2.00	
Total State Unit Staff (Incl. Volunteers)	53.20	16.00	14.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	12.77	2.00	6.77
Development	9.93	1.83	4.10
Serv Del/Access/Care Coord	30.34	6.00	4.24
Planning/Admin/Other	24.47	6.16	17.81
Clerical	20.84	11.59	8.84
Volunteers	10.00	2.00	
Total AAA Staffing	108.35	29.49	41.76
Number of AAAs in State	5		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$58,616
Chapter 3: Elder Abuse	$62,344
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment	$4,197,543	$5,102,844	$1,454,664
Transfer From:			
Part B:		$0	$0
Part C1:	$22,143		$614,362
Part C2:	$0	$0	
Net Transfer $	$22,143	$0	$614,362
% increase	0.53%	0.00%	42.23%
Final Allotment After Transfers	$4,219,686	$4,466,339	$2,069,026

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$3,024,066
As a % of Title III Exp.	33.65%
Program Income Exp. by Part	
Part B: Supp Svcs	$1,664,338
Part C1: Cong Nutr	$990,762
Part C2: Home Del Nutr	$368,966
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Delaware

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	724,842	47
Persons 60+ 1996	120,455	47
As % of All Ages	16.6%	29
Persons 60-64	27,941	47
Persons 65-74	53,726	47
Persons 75-84	30,028	48
Persons 85+	8,760	50
# Women/100 Men Age 60+	131	35
Persons 60+ 1990	111,361	48
Minority Persons 60+	13,873	38
Minority Persons 60+ as % of All Persons 60+	12.5%	23
Black Non-Hispanic Persons 60+ as % of All Persons 60+	10.9%	12
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.5%	28
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	20
Hispanic Persons 60+ as % of All Persons 60+	0.7%	31
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	16,779	46
As % of All Persons 60+ (Civilian Non-institutionalized)	15.1%	27
Persons 60+ Below Poverty	10,059	49
As a % of All Persons 60+	9.0%	42
Min. Persons 60+ Below Pov.	3,400	36
As a % of All Minority Persons 60+	24.5%	23
Females 60+ Below Poverty Level	7,268	49
As % of All Females 60+	11.4%	41
Persons 60+ Living in Rural Areas	24,624	45
As a % of All Persons 60+	22.1%	29
Persons 60+ Living in NHs, Bd & Care, Other Institutions	4,555	47
As a % of All Persons 60+	4.1%	30

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	1
# of Paid Staff FTEs (state/local)	5.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	2,335
Number of Complaints (for cases closed)	2,506
Total Program Funding	$295,398

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	20,560	49
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	4,563	37
As a % of All Clients	22.2%	18
African American Non-Hispanic Clients as a % of Total Clients	19.9%	10
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.5%	23
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	1.0%	11
Hispanic Clients as a % of Total Clients	0.9%	27
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	6,788	47
As a % of Total Clients	33.0%	30
Minority Clients Below Poverty	2,433	37
As a % of All Minority Clients	53.3%	37
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	8,610	46
As a % of Total Clients	41.9%	27

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	0
Focal Points Which Are Senior Centers	0
Total Senior Centers	50
Total Senior Centers Receiving OAA $	0

Comments:

Profile of State OAA Programs: Delaware

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 2,171,653	$ 4,688,888					
Personal Care	368	56,783	$ 376,056	$ 835,680	45.00%	5	-	-	$36,647
Homemaker	187	17,646	$ 158,114	$ 405,421	39.00%	3	-	-	$28,307
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	3,380	496,898	$ 754,596	$ 2,039,449	37.00%	5	-	-	$365,801
Adult Day Care/Hlth	249	23,508	$ 429,915	$ 955,367	45.00%	5	-	-	$74,012
Case Mgt	4,102	34,867	$ 452,972	$ 452,972	100.00%	1	-	-	$0
Cluster 1 As % of Total			66.5%	65.7%					
Cluster 2:			$ 887,638	$ 2,094,643					
Congreg Meals	11,282	458,706	$ 874,038	$ 2,081,043	42.00%	4	-	-	$583,666
Nutr Counseling	1,360	1,360	$ 13,600	$ 13,600	100.00%	5	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			27.2%	29.3%					
Cluster 3:			$ 128,565	$ 282,097					
Transportation		8,503	$ 18,586	$ 68,837	27.00%	2	-	-	$5,861
Legal Assistance		2,649	$ 71,758	$ 152,677	47.00%	1	-	-	$535
Nutr Education		215	$ 2,150	$ 2,150	100.00%	5	-	-	$0
Info and Assist		2,862	$ 13,709	$ 13,709	100.00%	1	-	-	$0
Outreach		1,387	$ 22,362	$ 44,724	50.00%	1	-	-	$0
Cluster 3 As % of Total			3.9%	3.9%					
Other Services			$ 76,144	$ 76,144	100.00%				$0
Oth Svcs As % of Total			2.3%	1.1%					
Total			$ 3,264,000	$ 7,141,771		14	-		$1,094,829

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	-	-
Other Pd Professionals By Functional Responsibility:			
Planning	3.00	-	-
Development	2.00	-	-
Administration	12.00	2.00	3.50
Service Delivery	16.40	2.00	4.20
Access/Care Coordination	48.00	7.00	9.00
Other Professional Staff	-	-	-
Clerical/Support	6.00	-	1.75
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	92.40	11.00	18.50

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	*		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$22,245
Chapter 3: Elder Abuse	$21,866
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$1,501,529	$1,857,639	$526,695
Transfer From:			
Part B:		$0	$0
Part C1:	$252,120		$148,828
Part C2:	$0	$0	
Net Transfer $	$252,120	$0	$148,828
% Increase	16.79%	0.00%	28.26%
Final Allotment After Transfers	$1,753,649	$1,456,891	$675,523

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$1,122,171
As a % of Title III Exp.	34.38%
Program Income Exp. by Part	
Part B: Supp Svcs	$163,824
Part C1: Cong Nutr	$583,666
Part C2: Home Del Nutr	$365,799
Part D: In-Home Svcs	$8,883
Part F: Dis Prv/Hlth Prm	$0

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: District of Columbia

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	543,213	51
Persons 60+ 1996	96,585	49
As % of All Ages	17.8%	14
Persons 60-64	21,134	50
Persons 65-74	41,434	49
Persons 75-84	25,221	49
Persons 85+	8,796	49
# Women/100 Men Age 60+	157	1
Persons 60+ 1990	105,468	49
Minority Persons 60+	75,250	24
Minority Persons 60+ as % of All Persons 60+	71.3%	3
Black Non-Hispanic Persons 60+ as % of All Persons 60+	67.1%	1
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.8%	14
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	25
Hispanic Persons 60+ as % of All Persons 60+	2.1%	14
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	20,036	44
As % of All Persons 60+ (Civilian Non-institutionalized)	19.0%	12
Persons 60+ Below Poverty	16,721	44
As a % of All Persons 60+	15.9%	13
Min. Persons 60+ Below Pov.	15,105	25
As a % of All Minority Persons 60+	20.1%	40
Females 60+ Below Poverty Level	11,414	41
As % of All Females 60+	18.6%	14
Persons 60+ Living in Rural Areas	0	52
As a % of All Persons 60+	0.0%	52
Persons 60+ Living in NHs, Bd & Care, Other Institutions	7,071	42
As a % of All Persons 60+	6.7%	3

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	2
# of Paid Staff FTEs (state/local)	5.00
# of Certified Volunteers (state/local)	25.00
Number of Cases Closed	499
Number of Complaints (for cases closed)	3,792
Total Program Funding	$290,924

Part C. Title VI Grants In State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	39,150	41
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	21,550	16
As a % of All Clients	55.0%	3
African American Non-Hispanic Clients as a % of Total Clients	46.2%	1
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	3.7%	4
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.6%	16
Hispanic Clients as a % of Total Clients	4.6%	11
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	30,576	27
As a % of Total Clients	78.1%	2
Minority Clients Below Poverty	21,000	12
As a % of All Minority Clients	97.4%	1
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	0	52
As a % of Total Clients	0.0%	52

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	6
Focal Points Which Are Senior Centers	3
Total Senior Centers	15
Total Senior Centers Receiving OAA $	15

Comments:

Profile of State OAA Programs: District of Columbia

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,578,200	$ 4,737,155					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	235	58,278	$ 369,576	$ 1,806,852	23.00%	1	-	-	$79,310
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	2,813	538,632	$ 473,758	$ 1,895,032	25.00%	6	4	-	$33,500
Adult Day Care/Hlth	376	138,322	$ 296,715	$ 618,156	48.00%	6	5	-	$22,600
Case Mgt	1,083	25,805	$ 438,151	$ 617,114	71.00%	5	3	-	$19,760
Cluster 1 As % of Total			38.9%	36.6%					
Cluster 2:			$ 1,680,302	$ 5,434,939					
Congreg Meals	5,939	722,589	$ 1,691,250	$ 3,598,404	47.00%	6	4	-	$86,129
Nutr Counseling	813	3,947	$ 7,140	$ 17,415	41.00%	6	4	-	$0
Assisted Transport	2,036	142,741	$ 181,912	$ 1,819,120	10.00%	1	1	-	$7,650
Cluster 2 As % of Total			46.4%	42.0%					
Cluster 3:			$ 360,580	$ 2,377,567					
Transportation		328,609	$ 316,960	$ 1,864,471	17.00%	15	13	-	$0
Legal Assistance		12,909	$ 22,200	$ 444,000	5.00%	2	1	-	$0
Nutr Education		11,970	$ 21,420	$ 69,097	31.00%	6	4	-	$0
Info and Assist		-	$ -	$ -	0.00%	1	1	-	$0
Outreach		-	$ -	$ -	0.00%	1	1	-	$0
Cluster 3 As % of Total			8.9%	18.4%					
Other Services			$ 237,024	$ 376,229	63.00%				$3,780
Oth Svcs As % of Total			5.8%	2.9%					
Total			$ 4,056,106	$ 12,925,689		24	18		$252,729

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	2.00	2.00	-
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	1.00	1.00
Development	1.00	1.00	1.00
Administration	3.00	2.00	1.00
Service Delivery	5.00	4.00	1.00
Access/Care Coordination	3.00	2.00	1.00
Other Professional Staff	2.00	2.00	2.00
Clerical/Support	2.00	2.00	2.00
Volunteers	6.00	6.00	
Total State Unit Staff (Incl. Volunteers)	26.00	22.00	9.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	*		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$22,245
Chapter 3: Elder Abuse	$23,600
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$9,952

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,501,529	$1,855,674	$526,695
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$0
Part C2:	$0	$0	
Net Transfer $	$0	$0	$0
% Increase	0.00%	0.00%	0.00%
Final Allotment After Transfers	$1,501,529	$1,855,674	$526,695

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$735,169
As a % of Title III Exp.	18.12%
Program Income Exp. by Part	
Part B: Supp Svcs	$99,730
Part C1: Cong Nutr	$591,684
Part C2: Home Del Nutr	$43,755
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: Florida

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	14,399,985	4
Persons 60+ 1996	3,290,082	2
As % of All Ages	22.8%	2
Persons 60-64	632,827	4
Persons 65-74	1,451,548	2
Persons 75-84	924,979	2
Persons 85+	280,728	3
# Women/100 Men Age 60+	129	37
Persons 60+ 1990	3,290,214	3
Minority Persons 60+	453,839	5
Minority Persons 60+ as % of All Persons 60+	13.8%	19
Black Non-Hispanic Persons 60+ as % of All Persons 60+	5.5%	23
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.9%	23
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	42
Hispanic Persons 60+ as % of All Persons 60+	7.3%	6
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	478,653	3
As % of All Persons 60+ (Civilian Non-institutionalized)	14.5%	30
Persons 60+ Below Poverty	365,584	4
As a % of All Persons 60+	11.1%	24
Min. Persons 60+ Below Pov.	119,522	5
As a % of All Minority Persons 60+	26.3%	18
Females 60+ Below Poverty Level	218,644	3
As % of All Females 60+	12.6%	28
Persons 60+ Living in Rural Areas	327,774	5
As a % of All Persons 60+	10.0%	43
Persons 60+ Living in NHs, Bd & Care, Other Institutions	92,208	7
As a % of All Persons 60+	2.8%	47

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	12
# of Paid Staff FTEs (state/local)	16.00
# of Certified Volunteers (state/local)	177.00
Number of Cases Closed	2,353
Number of Complaints (for cases closed)	5,455
Total Program Funding	$704,323

Part C. Title VI Grants in State:	
No of Title VI Grantees:	1
Total Allotments:	$52,000

Part D. Title III Clients:	Value	Rank
Total Clients	200,723	10
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	30,246	13
As a % of All Clients	15.1%	28
African American Non-Hispanic Clients as a % of Total Clients	9.2%	21
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	42
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	37
Hispanic Clients as a % of Total Clients	5.7%	7
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	39,143	24
As a % of Total Clients	19.5%	46
Minority Clients Below Poverty	16,728	16
As a % of All Minority Clients	55.3%	36
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	25,785	32
As a % of Total Clients	12.8%	47

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	233
Focal Points Which Are Senior Centers	125
Total Senior Centers	169
Total Senior Centers Receiving OAA $	68

Comments:

Profile of State OAA Programs: Florida

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm Income
Cluster 1:			$ 16,092,200	$ 19,134,372					
Personal Care	36	994	$ 8,899	$ 9,367	95.00%	5	-	-	$500
Homemaker	6,074	271,747	$ 3,344,366	$ 3,483,715	96.00%	54	1	-	$145,068
Chore	3,315	58,425	$ 574,267	$ 610,922	94.00%	40	3	-	$33,451
Home Del Meals	28,233	4,022,615	$ 10,454,059	$ 12,906,246	81.00%	65	5	-	$2,311,522
Adult Day Care/Hlth	1,210	407,448	$ 1,394,570	$ 1,787,910	78.00%	22	-	-	$330,507
Case Mgt	2,968	12,083	$ 316,039	$ 336,212	94.00%	26	-	-	$19,795
Cluster 1 As % of Total			35.8%	37.2%					
Cluster 2:			$ 13,617,475	$ 15,295,383					
Congreg Meals	42,183	4,129,424	$ 13,526,204	$ 15,197,982	89.00%	70	7	-	$1,623,571
Nutr Counseling	297	757	$ 6,895	$ 11,303	61.00%	21	-	-	$4,389
Assisted Transport	500	31,565	$ 84,376	$ 86,098	98.00%	14	1	-	$2,020
Cluster 2 As % of Total			30.3%	29.8%					
Cluster 3:			$ 10,108,325	$ 11,044,360					
Transportation		2,116,520	$ 5,736,685	$ 6,374,094	90.00%	76	5	-	$602,570
Legal Assistance		36,986	$ 1,242,395	$ 1,307,784	95.00%	32	-	-	$62,934
Nutr Education		6,408	$ 599,143	$ 637,386	94.00%	70	5	-	$38,054
Info and Assist		794,521	$ 1,259,102	$ 1,430,798	88.00%	76	-	-	$177,192
Outreach		59,639	$ 1,271,000	$ 1,294,297	98.20%	71	6	-	$23,031
Cluster 3 As % of Total			22.5%	21.5%					
Other Services			$ 5,139,505	$ 5,907,477	87.00%				$784,453
Oth Svcs As % of Total			11.4%	11.5%					
Total			$ 44,957,505	$ 51,381,592		90	8		$6,159,057

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	21.50	2.00	8.75
Other Pd Professionals By Functional Responsibility:			
Planning	3.00	-	2.00
Development	13.50	1.00	7.50
Administration	47.00	10.00	5.00
Service Delivery	-	-	-
Access/Care Coordination	152.00	32.00	-
Other Professional Staff	42.50	5.00	17.50
Clerical/Support	37.00	16.00	3.00
Volunteers	42.50	5.00	
Total State Unit Staff (Incl. Volunteers)	317.00	66.00	43.80

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	56.00	6.00	56.00
Development	11.00	2.00	7.00
Serv Del/Access/Care Coord	43.00	16.00	34.00
Planning/Admin/Other	179.80	40.00	163.80
Clerical	44.20	10.00	46.20
Volunteers	21.36	1.14	
Total AAA Staffing	355.36	75.14	307.00
Number of AAAs in State	11		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$221,096
Chapter 3: Elder Abuse	$0
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$18,789,218	$22,646,666	$6,793,968
Transfer From:			
Part B:		$0	$0
Part C1:	$3,726,607		$3,533,896
Part C2:	$0	$0	
Net Transfer $	$3,726,607	$0	$3,533,896
% Increase	19.83%	0.00%	52.02%
Final Allotment After Transfers	$22,515,825	$15,386,163	$10,327,864

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,372,111
As a % of Title III Exp.	5.28%
Program Income Exp. by Part	
Part B: Supp Svcs	$482,526
Part C1: Cong Nutr	$779,851
Part C2: Home Del Nutr	$1,072,330
Part D: In-Home Svcs	$37,404
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Georgia

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	7,353,225	10
Persons 60+ 1996	982,554	13
As % of All Ages	13.4%	51
Persons 60-64	252,809	11
Persons 65-74	414,489	13
Persons 75-84	239,887	15
Persons 85+	75,369	17
# Women/100 Men Age 60+	144	5
Persons 60+ 1990	895,254	15
Minority Persons 60+	188,854	9
Minority Persons 60+ as % of All Persons 60+	21.1%	11
Black Non-Hispanic Persons 60+ as % of All Persons 60+	20.0%	6
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.4%	33
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	44
Hispanic Persons 60+ as % of All Persons 60+	0.5%	32
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	181,899	11
As % of All Persons 60+ (Civilian Non-institutionalized)	20.3%	6
Persons 60+ Below Poverty	158,740	10
As a % of All Persons 60+	17.7%	11
Min. Persons 60+ Below Pov.	66,637	7
As a % of All Minority Persons 60+	35.3%	8
Females 60+ Below Poverty Level	113,508	10
As % of All Females 60+	21.3%	9
Persons 60+ Living in Rural Areas	245,838	9
As a % of All Persons 60+	27.5%	19
Persons 60+ Living in NHs, Bd & Care, Other Institutions	35,622	18
As a % of All Persons 60+	4.0%	33

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	18
# of Paid Staff FTEs (state/local)	35.00
# of Certified Volunteers (state/local)	19.00
Number of Cases Closed	2,453
Number of Complaints (for cases closed)	3,673
Total Program Funding	$1,241,148

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	39,231	40
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	14,474	26
As a % of All Clients	36.9%	8
African American Non-Hispanic Clients as a % of Total Clients	36.3%	3
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.3%	29
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	47
Hispanic Clients as a % of Total Clients	0.3%	35
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	12,726	43
As a % of Total Clients	32.4%	31
Minority Clients Below Poverty	6,869	28
As a % of All Minority Clients	47.5%	42
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	16,200	41
As a % of Total Clients	41.3%	28

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	54
Focal Points Which Are Senior Centers	45
Total Senior Centers	206
Total Senior Centers Receiving OAA $	200

Comments:

Profile of State OAA Programs: Georgia

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 6,038,781	$ 11,363,759					
Personal Care	2,699	81,354	$ 912,216	$ 1,341,494	68.00%	34	2	-	$9,350
Homemaker	4,049	122,030	$ 1,368,323	$ 2,012,240	68.00%	34	2	-	$41,402
Chore	52	316	$ 11,740	$ 13,812	85.00%	4	-	-	$0
Home Del Meals	26,915	2,459,320	$ 3,000,788	$ 6,523,452	46.00%	84	2	3	$419,882
Adult Day Care/Hlth	668	48,448	$ 262,528	$ 625,067	42.00%	5	-	-	$0
Case Mgt	5,651	15,863	$ 483,186	$ 847,695	57.00%	14	1	-	$0
Cluster 1 As % of Total			35.4%	41.8%					
Cluster 2:			$ 5,592,067	$ 8,706,414					
Congreg Meals	20,964	1,779,038	$ 5,536,617	$ 8,650,964	64.00%	102	4	3	$600,847
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	722	83,249	$ 55,450	$ 55,450	100.00%	23	-	-	$268
Cluster 2 As % of Total			32.7%	32.0%					
Cluster 3:			$ 3,407,695	$ 5,067,006					
Transportation		1,028,743	$ 2,435,945	$ 3,635,739	67.00%	108	2	1	$136,590
Legal Assistance		34,848	$ 342,771	$ 544,081	63.00%	24	-	-	$0
Nutr Education		3,621	$ 25,373	$ 30,206	84.00%	54	2	-	$187
Info and Assist		56,185	$ 470,174	$ 681,412	69.00%	63	1	5	$4,677
Outreach		12,636	$ 133,432	$ 175,568	76.00%	67	3	-	$7,590
Cluster 3 As % of Total			20.0%	18.6%					
Other Services			$ 2,036,844	$ 2,036,844	100.00%				$3,048
Oth Svcs As % of Total			11.9%	7.5%					
Total			$ 17,075,387	$ 27,174,023		257	4		$1,463,831

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	3.00	-	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	-	2.00
Development	5.00	2.00	5.00
Administration	41.00	11.00	24.00
Service Delivery	-	-	-
Access/Care Coordination	2.00	2.00	-
Other Professional Staff	-	-	-
Clerical/Support	7.00	6.00	5.00
Volunteers	1.00	1.00	
Total State Unit Staff (Incl. Volunteers)	61.00	22.00	38.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	16.45	3.00	14.45
Development	16.72	3.83	15.64
Serv Del/Access/Care Coord	43.73	11.73	38.23
Planning/Admin/Other	39.65	8.96	36.15
Clerical	14.75	6.10	12.08
Volunteers	4.50	3.25	
Total AAA Staffing	135.80	36.87	116.55
Number of AAAs in State	18		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$56,084
Chapter 3: Elder Abuse	$75,388
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$5,944,070	$7,186,761	$2,116,623
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$0
Part C2:	$0	$0	
Net Transfer $	$0	$0	$0
% Increase	0.00%	0.00%	0.00%
Final Allotment After Transfers	$5,944,070	$7,186,761	$2,116,623

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$1,060,571
As a % of Title III Exp.	6.21%
Program Income Exp. by Part	
Part B: Supp Svcs	$168,462
Part C1: Cong Nutr	$563,051
Part C2: Home Del Nutr	$266,222
Part D: In-Home Svcs	$836
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Hawaii

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,183,723	42
Persons 60+ 1996	196,901	41
As % of All Ages	16.6%	28
Persons 60-64	44,378	42
Persons 65-74	89,177	41
Persons 75-84	49,181	42
Persons 85+	14,165	44
# Women/100 Men Age 60+	117	49
Persons 60+ 1990	179,384	42
Minority Persons 60+	132,531	17
Minority Persons 60+ as % of All Persons 60+	73.9%	2
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.4%	44
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	70.1%	1
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	30
Hispanic Persons 60+ as % of All Persons 60+	3.3%	11
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	25,126	42
As % of All Persons 60+ (Civilian Non-institutionalized)	14.0%	33
Persons 60+ Below Poverty	13,122	48
As a % of All Persons 60+	7.3%	51
Min. Persons 60+ Below Pov.	9,541	30
As a % of All Minority Persons 60+	7.2%	52
Females 60+ Below Poverty Level	7,849	48
As % of All Females 60+	8.6%	50
Persons 60+ Living in Rural Areas	14,527	49
As a % of All Persons 60+	8.1%	46
Persons 60+ Living in NHs, Bd & Care, Other Institutions	4,456	48
As a % of All Persons 60+	2.5%	49

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	0
# of Paid Staff FTEs (state/local)	1.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	69
Number of Complaints (for cases closed)	100
Total Program Funding	$83,764

Part C. Title VI Grants in State:	
No of Title VI Grantees:	1
Total Allotments:	$1,557,199

Part D. Title III Clients:	Value	Rank
Total Clients	55,970	34
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	21,056	17
As a % of All Clients	37.6%	7
African American Non-Hispanic Clients as a % of Total Clients	0.1%	46
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	36.5%	2
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	48
Hispanic Clients as a % of Total Clients	1.0%	25
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	15,216	39
As a % of Total Clients	27.2%	41
Minority Clients Below Poverty	11,649	22
As a % of All Minority Clients	55.3%	35
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	22,085	35
As a % of Total Clients	39.5%	31

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	55
Focal Points Which Are Senior Centers	19
Total Senior Centers	36
Total Senior Centers Receiving OAA $	15

Comments:

Profile of State OAA Programs: Hawaii

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Prgm Income
Cluster 1:			$ 816,592	$ 4,882,044					
Personal Care	1,218	48,980	$ 117,309	$ 1,294,801	9.06%	11	7	6	$58,459
Homemaker	792	13,816	$ 17,731	$ 220,809	8.03%	6	6	1	$1,649
Chore	341	6,062	$ 5,461	$ 65,012	8.40%	4	3	-	$1,001
Home Del Meals	3,144	412,295	$ 618,333	$ 2,430,554	25.44%	5	3	-	$412,068
Adult Day Care/Hlth	234	47,864	$ 1,536	$ 239,308	0.65%	4	4	-	$37,854
Case Mgt	1,082	16,037	$ 56,222	$ 634,560	8.86%	5	3	-	$2,153
Cluster 1 As % of Total			31.5%	36.9%					
Cluster 2:			$ 769,922	$ 3,256,353					
Congreg Meals	5,393	436,057	$ 696,804	$ 2,555,204	27.27%	4	4	-	$337,010
Nutr Counseling	24	23	$ 2,094	$ 2,094	100.00%	2	1	-	$0
Assisted Transport	1,464	43,606	$ 71,024	$ 699,055	10.16%	5	3	1	$14,596
Cluster 2 As % of Total			29.7%	24.6%					
Cluster 3:			$ 651,469	$ 2,482,429					
Transportation		268,482	$ 142,984	$ 1,127,834	12.68%	7	4	-	$23,670
Legal Assistance		6,413	$ 117,541	$ 229,527	51.21%	4	1	-	$9,844
Nutr Education		923	$ 52,446	$ 52,446	100.00%	4	2	-	$0
Info and Assist		47,287	$ 135,280	$ 578,614	23.38%	7	4	3	$3,448
Outreach		20,359	$ 203,218	$ 494,207	41.12%	6	3	3	$1,229
Cluster 3 As % of Total			25.2%	18.8%					
Other Services			$ 352,147	$ 2,595,041	13.57%				$155,316
Oth Svcs As % of Total			13.6%	19.6%					
Total			$ 2,590,130	$ 13,215,867		35	23		$1,058,299

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.10	0.05	-
Other Pd Professionals By Functional Responsibility:			
Planning	2.55	1.75	1.15
Development	1.52	1.12	0.60
Administration	2.41	2.31	1.01
Service Delivery	1.37	0.82	0.47
Access/Care Coordination	0.30	0.20	0.15
Other Professional Staff	0.25	0.15	0.13
Clerical/Support	2.00	2.00	0.75
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	11.50	8.50	4.26

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	4.20	3.70	1.00
Development	2.70	2.45	0.25
Serv Del/Access/Care Coord	14.00	11.00	6.75
Planning/Admin/Other	16.10	13.35	6.00
Clerical	10.40	8.40	5.00
Volunteers	2.40	1.40	
Total AAA Staffing	49.80	40.30	19.00
Number of AAAs in State	4		

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$1,545,779	$1,892,073	$532,144
Transfer From:			
Part B:		$0	$22,009
Part C1:	$0		$107,001
Part C2:	$0	$0	
Net Transfer $	$0	$0	$129,010
% Increase	0.00%	0.00%	24.24%
Final Allotment After Transfers	$1,523,770	$1,785,072	$661,154

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$753,873
As a % of Title III Exp.	29.11%
Program Income Exp. by Part	
Part B: Supp Svcs	$125,072
Part C1: Cong Nutr	$294,898
Part C2: Home Del Nutr	$332,265
Part D: In-Home Svcs	$1,636
Part F: Dis Prv/Hlth Prm	$0

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$22,407
Chapter 3: Elder Abuse	$23,832
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$9,952

Comments:

Profile of State OAA Programs: Idaho

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,189,251	41
Persons 60+ 1996	179,672	43
As % of All Ages	15.1%	42
Persons 60-64	44,657	41
Persons 65-74	72,428	44
Persons 75-84	47,269	43
Persons 85+	15,318	42
# Women/100 Men Age 60+	121	47
Persons 60+ 1990	161,905	44
Minority Persons 60+	5,227	45
Minority Persons 60+ as % of All Persons 60+	3.2%	43
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	45
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.1%	21
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.7%	12
Hispanic Persons 60+ as % of All Persons 60+	1.3%	18
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	19,419	45
As % of All Persons 60+ (Civilian Non-Institutionalized)	12.0%	47
Persons 60+ Below Poverty	17,201	42
As a % of All Persons 60+	10.6%	27
Min. Persons 60+ Below Pov.	1,211	47
As a % of All Minority Persons 60+	23.2%	28
Females 60+ Below Poverty Level	11,402	43
As % of All Females 60+	12.9%	25
Persons 60+ Living in Rural Areas	51,094	41
As a % of All Persons 60+	31.6%	14
Persons 60+ Living in NHs, Bd & Care, Other Institutions	6,513	44
As a % of All Persons 60+	4.0%	32

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	7
# of Paid Staff FTEs (state/local)	11.00
# of Certified Volunteers (state/local)	2.00
Number of Cases Closed	1,362
Number of Complaints (for cases closed)	1,592
Total Program Funding	$141,581

Part C. Title VI Grants in State:	
No of Title VI Grantees:	3
Total Allotments:	$218,000

Part D. Title III Clients:	Value	Rank
Total Clients	115,000	25
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	2,700	41
As a % of All Clients	2.3%	48
African American Non-Hispanic Clients as a % of Total Clients	0.1%	45
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.3%	31
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.3%	22
Hispanic Clients as a % of Total Clients	1.6%	21
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	13,000	42
As a % of Total Clients	11.3%	51
Minority Clients Below Poverty	2,150	40
As a % of All Minority Clients	79.6%	10
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	35,000	27
As a % of Total Clients	30.4%	37

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	93
Focal Points Which Are Senior Centers	93
Total Senior Centers	96
Total Senior Centers Receiving OAA $	0

Comments:

Profile of State OAA Programs: Idaho

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 717,281	$ 4,360,892					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	3,057	125,038	$ 15,006	$ 1,500,600	1.00%	6	-	-	$35,900
Chore	1,012	9,211	$ 74	$ 7,400	1.00%	-	-	-	$7,095
Home Del Meals	7,093	512,407	$ 630,028	$ 2,520,112	25.00%	8	2	-	$612,195
Adult Day Care/Hlth	687	21,430	$ 27,105	$ 159,441	17.00%	1	-	-	$3,318
Case Mgt	1,311	10,113	$ 45,068	$ 173,338	26.00%	4	-	4	$0
Cluster 1 As % of Total			28.4%	40.3%					
Cluster 2:			$ 1,139,234	$ 4,760,441					
Congreg Meals	39,003	823,735	$ 1,126,801	$ 4,695,004	24.00%	7	1	-	$1,378,064
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	675	7,500	$ 12,433	$ 65,437	19.00%	48	-	-	$19,414
Cluster 2 As % of Total			45.2%	44.0%					
Cluster 3:			$ 592,248	$ 1,312,808					
Transportation		227,524	$ 221,354	$ 651,041	34.00%	30	5	-	$90,144
Legal Assistance		2,281	$ 59,653	$ 62,139	96.00%	6	1	-	$0
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		25,593	$ 208,501	$ 336,292	62.00%	9	4	-	$0
Outreach		21,140	$ 102,740	$ 263,436	39.00%	30	4	-	$0
Cluster 3 As % of Total			23.5%	12.1%					
Other Services			$ 74,103	$ 390,016	19.00%				$19,414
Oth Svcs As % of Total			2.9%	3.6%					
Total			$ 2,522,866	$ 10,824,256		50	9		$2,165,574

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	1.00	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	1.00	1.00	1.00
Development	-	-	-
Administration	1.00	-	1.00
Service Delivery	2.50	1.00	3.50
Access/Care Coordination	2.00	-	2.00
Other Professional Staff	2.20	-	2.00
Clerical/Support	3.60	-	3.60
Volunteers	0.20	-	
Total State Unit Staff (incl. Volunteers)	14.30	3.00	14.10

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	5.75	-	5.60
Development	0.25	-	0.25
Serv Del/Access/Care Coord	33.50	-	18.50
Planning/Admin/Other	15.50	-	9.85
Clerical	4.00	-	3.50
Volunteers	7.00	-	
Total AAA Staffing	66.00	-	37.70
Number of AAAs in State	6		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$3,750
Chapter 3: Elder Abuse	$5,569
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$2,452

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,538,151	$1,688,370	$527,477
Transfer From:			
Part B:		$0	$0
Part C1:	$219,234		$177,834
Part C2:	$0	$0	
Net Transfer $	$219,234	$0	$177,834
% Increase	14.25%	0.00%	33.71%
Final Allotment After Transfers	$1,757,385	$1,491,302	$705,311

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$1,457,501
As a % of Title III Exp.	57.77%
Program Income Exp. by Part	
Part B: Supp Svcs	$52,584
Part C1: Cong Nutr	$975,543
Part C2: Home Del Nutr	$426,706
Part D: In-Home Svcs	$2,668
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Illinois

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	11,846,544	6
Persons 60+ 1996	1,923,953	7
As % of All Ages	16.2%	32
Persons 60-64	438,411	7
Persons 65-74	603,128	7
Persons 75-84	510,053	6
Persons 85+	172,361	6
# Women/100 Men Age 60+	140	13
Persons 60+ 1990	1,965,426	6
Minority Persons 60+	276,213	6
Minority Persons 60+ as % of All Persons 60+	14.1%	18
Black Non-Hispanic Persons 60+ as % of All Persons 60+	9.8%	14
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	2.0%	13
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	49
Hispanic Persons 60+ as % of All Persons 60+	2.1%	15
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	318,129	6
As % of All Persons 60+ (Civilian Non-institutionalized)	16.2%	21
Persons 60+ Below Poverty	193,255	7
As a % of All Persons 60+	9.8%	34
Min. Persons 60+ Below Pov.	62,481	9
As a % of All Minority Persons 60+	22.6%	30
Females 60+ Below Poverty Level	134,217	8
As % of All Females 60+	11.8%	38
Persons 60+ Living in Rural Areas	235,704	11
As a % of All Persons 60+	12.0%	41
Persons 60+ Living in NHs, Bd & Care, Other Institutions	93,523	5
As a % of All Persons 60+	4.8%	21

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	17
# of Paid Staff FTEs (state/local)	31.10
# of Certified Volunteers (state/local)	197.00
Number of Cases Closed	2,014
Number of Complaints (for cases closed)	4,380
Total Program Funding	$1,755,017

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	489,819	3
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	94,708	4
As a % of All Clients	19.3%	20
African American Non-Hispanic Clients as a % of Total Clients	16.4%	13
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.8%	17
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	44
Hispanic Clients as a % of Total Clients	2.1%	19
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	146,329	4
As a % of Total Clients	29.9%	36
Minority Clients Below Poverty	59,387	5
As a % of All Minority Clients	62.7%	23
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	126,810	3
As a % of Total Clients	25.9%	40

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	156
Focal Points Which Are Senior Centers	118
Total Senior Centers	188
Total Senior Centers Receiving OAA $	123

Comments:

Profile of State OAA Programs: Illinois

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 9,737,920	$ 26,353,744					
Personal Care	1,087	27,868	$ 265,049	$ 384,129	69.00%	12	-	-	$23,242
Homemaker	238	10,241	$ 45,532	$ 89,278	51.00%	10	-	-	$18,254
Chore	3,776	206,592	$ 1,035,403	$ 2,070,806	50.00%	32	3	-	$120,771
Home Del Meals	35,681	5,458,684	$ 6,315,920	$ 18,045,486	35.00%	64	3	-	$4,727,394
Adult Day Care/Hlth	25	45	$ 1,500	$ 1,500	100.00%	4	-	-	$0
Case Mgt	89,478	334,270	$ 2,074,516	$ 5,762,544	36.00%	50	-	-	$16,904
Cluster 1 As % of Total			36.1%	42.6%					
Cluster 2:			$ 9,960,521	$ 21,167,329					
Congreg Meals	92,498	3,818,552	$ 9,917,634	$ 21,101,349	47.00%	70	9	1	$5,164,574
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	302	4,905	$ 42,887	$ 65,980	65.00%	7	-	-	$3,529
Cluster 2 As % of Total			37.0%	34.2%					
Cluster 3:			$ 5,462,104	$ 11,246,251					
Transportation		984,968	$ 1,503,701	$ 4,176,947	36.00%	86	2	-	$484,332
Legal Assistance		52,846	$ 770,055	$ 1,674,033	46.00%	16	-	-	$14,554
Nutr Education		7,638	$ 66,632	$ 85,426	78.00%	26	2	-	$9,926
Info and Assist		476,444	$ 2,238,707	$ 3,670,011	61.00%	91	2	6	$18,800
Outreach		93,019	$ 903,009	$ 1,641,835	55.00%	63	2	-	$17,415
Cluster 3 As % of Total			20.3%	18.2%					
Other Services			$ 1,770,370	$ 3,161,375	56.00%				$45,998
Oth Svcs As % of Total			6.6%	5.1%					
Total			$ 26,950,915	$ 61,930,699		216	14		$10,666,693

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	9.00	1.00	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	25.00	4.00	15.00
Development	13.00	1.00	3.00
Administration	29.00	-	8.00
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	29.00	3.00	9.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	105.00	9.00	37.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	49.25	9.25	33.02
Development	14.93	1.25	13.36
Serv Del/Access/Care Coord	170.80	107.25	124.05
Planning/Admin/Other	75.40	20.25	65.00
Clerical	88.60	52.00	61.60
Volunteers	443.76	238.00	
Total AAA Staffing	842.74	428.00	297.03
Number of AAAs in State	13		

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$13,827,649	$16,819,275	$4,778,300
Transfer From:			
Part B:		$0	$0
Part C1:	$951,710		$2,350,879
Part C2:	$0	$0	
Net Transfer $	$951,710	$0	$2,350,879
% Increase	6.88%	0.00%	49.20%
Final Allotment After Transfers	$14,779,359	$13,516,686	$7,129,179

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$10,872,160
As a % of Title III Exp.	40.34%
Program Income Exp. by Part	
Part B: Supp Svcs	$773,791
Part C1: Cong Nutr	$5,244,793
Part C2: Home Del Nutr	$4,849,331
Part D: In-Home Svcs	$4,245
Part F: Dis Prv/Hlth Prm	$0

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$0
Chapter 3: Elder Abuse	$0
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Profile of State OAA Programs: Indiana

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	5,840,528	14
Persons 60+ 1996	961,365	14
As % of All Ages	16.5%	31
Persons 60-64	226,551	13
Persons 65-74	406,475	14
Persons 75-84	246,158	13
Persons 85+	82,181	14
# Women/100 Men Age 60+	139	17
Persons 60+ 1990	945,593	13
Minority Persons 60+	65,355	25
Minority Persons 60+ as % of All Persons 60+	6.9%	32
Black Non-Hispanic Persons 60+ as % of All Persons 60+	5.6%	22
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.4%	34
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	34
Hispanic Persons 60+ as % of All Persons 60+	0.7%	29
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	150,075	17
As % of All Persons 60+ (Civilian Non-Institutionalized)	15.9%	22
Persons 60+ Below Poverty	90,602	23
As a % of All Persons 60+	9.6%	39
Min. Persons 60+ Below Pov.	13,694	26
As a % of All Minority Persons 60+	21.0%	35
Females 60+ Below Poverty Level	66,552	22
As % of All Females 60+	12.0%	35
Persons 60+ Living in Rural Areas	223,717	14
As a % of All Persons 60+	23.7%	26
Persons 60+ Living in NHs, Bd & Care, Other Institutions	49,281	13
As a % of All Persons 60+	5.2%	15

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	17
# of Paid Staff FTEs (state/local)	13.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	1,505
Number of Complaints (for cases closed)	1,922
Total Program Funding	$452,191

Part C. Title VI Grants In State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	221,146	8
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	20,913	18
As a % of All Clients	9.5%	33
African American Non-Hispanic Clients as a % of Total Clients	8.5%	23
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	37
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	36
Hispanic Clients as a % of Total Clients	0.7%	28
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	61,353	16
As a % of Total Clients	27.7%	40
Minority Clients Below Poverty	10,019	24
As a % of All Minority Clients	47.9%	41
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	65,415	12
As a % of Total Clients	29.6%	38

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	206
Focal Points Which Are Senior Centers	142
Total Senior Centers	189
Total Senior Centers Receiving OAA $	131

Comments:

Profile of State OAA Programs: Indiana

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 4,152,859	$ 18,989,925					
Personal Care	384	138,382	$ 278,982	$ 1,468,326	19.00%	57	2	1	$243,230
Homemaker	1,619	232,474	$ 852,980	$ 3,877,182	22.00%	97	-	2	$327,290
Chore	190	27,891	$ 101,655	$ 924,136	11.00%	6	-	-	$11,230
Home Del Meals	10,215	1,330,766	$ 2,425,532	$ 9,702,128	25.00%	26	-	6	$1,954,319
Adult Day Care/Hlth	136	99,379	$ 183,694	$ 1,080,553	17.00%	12	-	2	$15,028
Case Mgt	3,426	49,005	$ 310,016	$ 1,937,600	16.00%	14	1	10	$0
Cluster 1 As % of Total			37.3%	46.4%					
Cluster 2:			$ 4,219,334	$ 12,866,801					
Congreg Meals	20,724	1,701,652	$ 4,018,822	$ 10,861,681	37.00%	24	-	6	$1,076,568
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	1,333	49,664	$ 200,512	$ 2,005,120	10.00%	9	1	2	$43,360
Cluster 2 As % of Total			37.9%	31.4%					
Cluster 3:			$ 2,229,279	$ 7,266,150					
Transportation		650,380	$ 1,566,014	$ 4,121,089	38.00%	66	-	7	$826,307
Legal Assistance		21,266	$ 186,752	$ 450,681	37.00%	16	-	4	$94,832
Nutr Education		61,870	$ 18,696	$ 155,800	12.00%	7	-	2	$429
Info and Assist		316,862	$ 454,050	$ 1,746,346	26.00%	36	-	7	$60,185
Outreach		26,152	$ 23,767	$ 792,233	3.00%	11	-	2	$14,022
Cluster 3 As % of Total			20.0%	17.7%					
Other Services			$ 545,835	$ 1,819,450	30.00%				$173,117
Oth Svcs As % of Total			4.9%	4.4%					
Total			$ 11,147,307	$ 40,942,327		191	3		$4,839,917

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	8.00	2.00	5.00
Other Pd Professionals By Functional Responsibility:			
Planning	24.00	3.00	9.00
Development	-	-	-
Administration	1.00	-	1.00
Service Delivery	1.00	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	5.00	3.00	3.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	39.00	8.00	18.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	90.00	10.00	77.26
Development	18.00	1.00	11.00
Serv Del/Access/Care Coord	585.15	71.50	400.35
Planning/Admin/Other	165.25	23.00	136.80
Clerical	133.75	11.50	99.16
Volunteers	1,692.90	126.00	
Total AAA Staffing	2,685.05	243.00	724.57
Number of AAAs in State	16		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$81,824
Chapter 3: Elder Abuse	$101,076
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$37,056

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$6,492,228	$7,876,800	$2,272,199
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$1,576,889
Part C2:	$0	$0	
Net Transfer $	$0	$0	$1,576,889
% Increase	0.00%	0.00%	69.40%
Final Allotment After Transfers	$6,492,228	$6,299,911	$3,849,088

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$3,166,493
As a % of Title III Exp.	28.41%
Program Income Exp. by Part	
Part B: Supp Svcs	$822,936
Part C1: Cong Nutr	$789,435
Part C2: Home Del Nutr	$1,553,649
Part D: In-Home Svcs	$473
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Iowa

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	2,851,792	31
Persons 60+ 1996	552,191	28
As % of All Ages	19.4%	5
Persons 60-64	119,572	31
Persons 65-74	218,748	29
Persons 75-84	152,701	26
Persons 85+	61,170	20
# Women/100 Men Age 60+	138	21
Persons 60+ 1990	555,781	27
Minority Persons 60+	8,629	43
Minority Persons 60+ as % of All Persons 60+	1.6%	49
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.8%	39
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.3%	38
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	50
Hispanic Persons 60+ as % of All Persons 60+	0.3%	39
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	77,225	31
As % of All Persons 60+ (Civilian Non-institutionalized)	13.9%	34
Persons 60+ Below Poverty	54,245	31
As a % of All Persons 60+	9.8%	35
Min. Persons 60+ Below Pov.	1,806	43
As a % of All Minority Persons 60+	20.9%	36
Females 60+ Below Poverty Level	38,912	31
As % of All Females 60+	12.0%	37
Persons 60+ Living in Rural Areas	176,816	19
As a % of All Persons 60+	31.8%	13
Persons 60+ Living in NHs, Bd & Care, Other Institutions	37,731	17
As a % of All Persons 60+	6.8%	2

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	0
# of Paid Staff FTEs (state/local)	2.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	44
Number of Complaints (for cases closed)	143
Total Program Funding	$267,618

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	108,221	27
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	2,105	45
As a % of All Clients	1.9%	49
African American Non-Hispanic Clients as a % of Total Clients	1.2%	39
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.2%	36
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	34
Hispanic Clients as a % of Total Clients	0.5%	31
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	23,035	32
As a % of Total Clients	21.3%	45
Minority Clients Below Poverty	1,265	43
As a % of All Minority Clients	60.1%	26
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	65,586	11
As a % of Total Clients	60.6%	13

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	179
Focal Points Which Are Senior Centers	117
Total Senior Centers	168
Total Senior Centers Receiving OAA $	168

Comments:

Profile of State OAA Programs: Iowa

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,054,569	$ 9,969,581					
Personal Care	-	-	$ -	$ -	49.00%	-	-	1	$31,005
Homemaker	915	37,791	$ 349,210	$ 591,881	59.00%	60	-	-	$62,583
Chore	2,512	61,688	$ 86,840	$ 510,824	17.00%	25	-	2	$9,255
Home Del Meals	20,194	1,710,335	$ 1,255,622	$ 5,979,152	21.00%	117	-	6	$2,636,531
Adult Day Care/Hlth	1,099	325,867	$ 150,085	$ 1,250,708	12.00%	28	-	-	$90,695
Case Mgt	3,925	45,710	$ 212,812	$ 1,637,015	13.00%	15	-	5	$0
Cluster 1 As % of Total			23.9%	36.1%					
Cluster 2:			$ 4,135,020	$ 11,152,721					
Congreg Meals	59,648	2,604,299	$ 4,114,313	$ 11,119,765	37.00%	110	-	7	$4,114,219
Nutr Counseling	117	176	$ 2,603	$ 5,104	51.00%	2	-	-	$0
Assisted Transport	279	4,780	$ 18,104	$ 27,852	65.00%	2	-	-	$1,647
Cluster 2 As % of Total			48.1%	40.4%					
Cluster 3:			$ 1,617,376	$ 2,898,931					
Transportation		768,897	$ 707,985	$ 1,685,679	42.00%	22	-	1	$244,793
Legal Assistance		7,101	$ 173,214	$ 288,690	60.00%	13	-	-	$4,285
Nutr Education		3,450	$ 14,136	$ 15,365	92.00%	-	-	4	$713
Info and Assist		548,271	$ 302,001	$ 377,501	80.00%	14	-	6	$23,272
Outreach		73,628	$ 420,040	$ 531,696	79.00%	17	2	8	$2,979
Cluster 3 As % of Total			18.8%	10.5%					
Other Services			$ 785,745	$ 3,571,568	22.00%				$140,854
Oth Svcs As % of Total			9.1%	12.9%					
Total			$ 8,592,710	$ 27,592,802		200	2		$7,362,831

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	3.00	-	3.00
Other Pd Professionals By Functional Responsibility:			
Planning	5.32	0.50	2.50
Development	7.33	1.00	7.33
Administration	2.83	-	2.83
Service Delivery	1.00	0.50	1.00
Access/Care Coordination	1.52	-	1.00
Other Professional Staff	-	-	-
Clerical/Support	6.00	1.00	6.00
Volunteers	2.50	-	
Total State Unit Staff (Incl. Volunteers)	29.50	3.00	23.70

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	13.00	-	13.00
Development	11.22	0.66	11.22
Serv Del/Access/Care Coord	134.00	1.50	134.00
Planning/Admin/Other	43.21	1.65	43.21
Clerical	31.50	1.00	31.50
Volunteers	988.00	33.00	
Total AAA Staffing	1,220.93	37.81	232.93
Number of AAAs in State	16		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$54,838
Chapter 3: Elder Abuse	$76,398
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$4,067,231	$4,951,515	$1,396,744
Transfer From:			
Part B:		$0	$0
Part C1:	$137,256		$58,985
Part C2:	$0	$0	
Net Transfer $	$137,256	$0	$58,985
% Increase	3.37%	0.00%	4.22%
Final Allotment After Transfers	$4,204,487	$4,755,274	$1,457,729

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$7,335,058
As a % of Title III Exp.	85.36%
Program Income Exp. by Part	
Part B: Supp Svcs	$622,276
Part C1: Cong Nutr	$4,104,027
Part C2: Home Del Nutr	$2,603,374
Part D: In-Home Svcs	$5,381
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Kansas

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	2,572,150	33
Persons 60+ 1996	449,151	33
As % of All Ages	17.5%	18
Persons 60-64	97,316	34
Persons 65-74	181,965	34
Persons 75-84	121,900	33
Persons 85+	47,970	29
# Women/100 Men Age 60+	136	25
Persons 60+ 1990	453,528	33
Minority Persons 60+	27,208	33
Minority Persons 60+ as % of All Persons 60+	6.0%	35
Black Non-Hispanic Persons 60+ as % of All Persons 60+	3.5%	27
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.8%	24
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.5%	16
Hispanic Persons 60+ as % of All Persons 60+	1.2%	19
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	62,477	34
As % of All Persons 60+ (Civilian Non-institutionalized)	13.8%	35
Persons 60+ Below Poverty	47,910	35
As a % of All Persons 60+	10.6%	28
Min. Persons 60+ Below Pov.	6,095	33
As a % of All Minority Persons 60+	22.4%	31
Females 60+ Below Poverty Level	33,969	33
As % of All Females 60+	13.0%	24
Persons 60+ Living in Rural Areas	120,762	28
As a % of All Persons 60+	26.6%	20
Persons 60+ Living in NHs, Bd & Care, Other Institutions	26,154	26
As a % of All Persons 60+	5.8%	8

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	4
# of Paid Staff FTEs (state/local)	4.50
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	1,187
Number of Complaints (for cases closed)	2,911
Total Program Funding	$211,930

Part C. Title VI Grants in State:	
No of Title VI Grantees:	3
Total Allotments:	$156,000

Part D. Title III Clients:	Value	Rank
Total Clients	131,969	20
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	12,855	27
As a % of All Clients	9.7%	32
African American Non-Hispanic Clients as a % of Total Clients	7.4%	26
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.3%	28
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.3%	24
Hispanic Clients as a % of Total Clients	1.8%	20
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	40,836	22
As a % of Total Clients	30.9%	35
Minority Clients Below Poverty	5,484	30
As a % of All Minority Clients	42.7%	46
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	84,789	7
As a % of Total Clients	64.2%	10

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	203
Focal Points Which Are Senior Centers	203
Total Senior Centers	261
Total Senior Centers Receiving OAA $	0

Comments:

Profile of State OAA Programs: Kansas

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,058,276	$ 7,368,152					
Personal Care	2,515	18,964	$ 196,635	$ 248,905	79.00%	13	-	-	$0
Homemaker	796	30,216	$ 230,481	$ 281,074	82.00%	13	-	-	$0
Chore	340	3,407	$ 27,855	$ 35,712	78.00%	8	-	-	$0
Home Del Meals	16,007	1,985,996	$ 1,461,484	$ 6,643,109	22.00%	22	-	4	$1,864,361
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	2,716	4,046	$ 141,823	$ 159,352	89.00%	10	-	10	$0
Cluster 1 As % of Total			31.0%	43.2%					
Cluster 2:			$ 2,747,540	$ 7,044,673					
Congreg Meals	35,363	1,996,480	$ 2,747,331	$ 7,044,438	39.00%	18	-	4	$2,742,730
Nutr Counseling	15	15	$ 209	$ 235	89.00%	2	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			41.3%	41.3%					
Cluster 3:			$ 1,196,398	$ 1,802,519					
Transportation		215,534	$ 240,344	$ 686,697	35.00%	5	-	-	$52,945
Legal Assistance		9,692	$ 264,420	$ 352,560	75.00%	11	-	-	$10,921
Nutr Education		23,360	$ 54,344	$ 66,273	82.00%	11	-	4	$8,249
Info and Assist		168,410	$ 580,559	$ 624,257	93.00%	11	-	10	$345
Outreach		2,673	$ 56,731	$ 72,732	78.00%	6	-	4	$4,362
Cluster 3 As % of Total			18.0%	10.6%					
Other Services			$ 646,546	$ 850,718	76.00%				$0
Oth Svcs As % of Total			9.7%	5.0%					
Total			$ 6,648,762	$ 17,066,063		121	-		$4,683,913

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	3.00	2.00	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	1.00	-	-
Development	-	-	-
Administration	23.00	1.00	16.00
Service Delivery	4.50	-	4.50
Access/Care Coordination	-	-	-
Other Professional Staff	6.00	-	4.00
Clerical/Support	6.50	-	2.50
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	44.00	3.00	28.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	4.00	1.00	2.70
Development	3.00	1.00	1.80
Serv Del/Access/Care Coord	31.00	16.00	6.30
Planning/Admin/Other	12.00	2.00	6.60
Clerical	21.50	13.00	4.00
Volunteers	-	-	
Total AAA Staffing	71.50	33.00	21.40
Number of AAAs in State	11		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$43,935
Chapter 3: Elder Abuse	$46,730
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$3,272,742	$3,982,480	$1,128,111
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$459,837
Part C2:	$0	$0	
Net Transfer $	$0	$0	$459,837
% Increase	0.00%	0.00%	40.76%
Final Allotment After Transfers	$3,272,742	$3,522,643	$1,587,948

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$4,325,704
As a % of Title III Exp.	65.06%
Program Income Exp. by Part	
Part B: Supp Svcs	$155,720
Part C1: Cong Nutr	$2,418,623
Part C2: Home Del Nutr	$1,745,478
Part D: In-Home Svcs	$5,883
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Kentucky

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	3,883,723	24
Persons 60+ 1996	649,297	24
As % of All Ages	16.7%	26
Persons 60-64	160,090	24
Persons 65-74	274,287	24
Persons 75-84	161,005	25
Persons 85+	53,915	25
# Women/100 Men Age 60+	139	15
Persons 60+ 1990	628,917	24
Minority Persons 60+	38,833	32
Minority Persons 60+ as % of All Persons 60+	6.2%	34
Black Non-Hispanic Persons 60+ as % of All Persons 60+	5.7%	21
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.1%	48
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	45
Hispanic Persons 60+ as % of All Persons 60+	0.2%	50
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	130,675	20
As % of All Persons 60+ (Civilian Non-Institutionalized)	20.8%	5
Persons 60+ Below Poverty	117,860	16
As a % of All Persons 60+	18.7%	6
Min. Persons 60+ Below Pov.	11,872	28
As a % of All Minority Persons 60+	30.6%	12
Females 60+ Below Poverty Level	80,022	16
As % of All Females 60+	21.8%	7
Persons 60+ Living in Rural Areas	207,759	16
As a % of All Persons 60+	33.0%	10
Persons 60+ Living in NHs, Bd & Care, Other Institutions	27,245	25
As a % of All Persons 60+	4.3%	24

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	15
# of Paid Staff FTEs (state/local)	31.00
# of Certified Volunteers (state/local)	106.00
Number of Cases Closed	3,680
Number of Complaints (for cases closed)	6,151
Total Program Funding	$928,539

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	122,111	23
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	11,311	29
As a % of All Clients	9.3%	34
African American Non-Hispanic Clients as a % of Total Clients	9.2%	22
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.0%	49
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	51
Hispanic Clients as a % of Total Clients	0.0%	50
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	60,256	18
As a % of Total Clients	49.3%	13
Minority Clients Below Poverty	8,984	26
As a % of All Minority Clients	79.4%	11
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	63,013	13
As a % of Total Clients	51.6%	22

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	165
Focal Points Which Are Senior Centers	156
Total Senior Centers	191
Total Senior Centers Receiving OAA $	191

Comments:

Profile of State OAA Programs: Kentucky

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 3,007,778	$ 8,906,082					
Personal Care	176	4,949	$ 64,388	$ 83,621	77.00%	28	-	1	$2,172
Homemaker	2,678	74,051	$ 613,154	$ 796,304	77.00%	66	2	1	$37,942
Chore	1,072	9,616	$ 48,777	$ 72,801	67.00%	44	1	1	$5,989
Home Del Meals	13,819	2,040,892	$ 2,183,001	$ 7,796,432	28.00%	60	2	-	$765,059
Adult Day Care/Hlth	11	2,900	$ 13,854	$ 18,229	76.00%	2	-	-	$1,076
Case Mgt	2,063	17,947	$ 84,604	$ 138,695	61.00%	5	-	5	$41,747
Cluster 1 As % of Total			28.7%	43.2%					
Cluster 2:			$ 4,027,041	$ 6,198,522					
Congreg Meals	27,418	1,485,280	$ 3,964,097	$ 6,098,611	65.00%	60	4	-	$738,509
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	1,476	17,426	$ 62,944	$ 99,911	63.00%	44	2	-	$8,945
Cluster 2 As % of Total			38.4%	30.1%					
Cluster 3:			$ 2,400,525	$ 4,089,791					
Transportation		1,008,414	$ 1,609,676	$ 2,638,816	61.00%	62	2	-	$163,479
Legal Assistance		9,209	$ 154,096	$ 226,612	68.00%	15	1	-	$12,724
Nutr Education		-	$ -	$ -	0.00%	4	2	-	$0
Info and Assist		200,711	$ 294,504	$ 525,900	56.00%	71	2	-	$23,155
Outreach		63,440	$ 342,247	$ 698,463	49.00%	80	3	-	$15,356
Cluster 3 As % of Total			22.9%	19.8%					
Other Services			$ 1,039,977	$ 1,424,626	73.00%				$0
Oth Svcs As % of Total			9.9%	6.9%					
Total			$ 10,475,321	$ 20,619,022		117	14		$1,816,155

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	4.00	-	4.00
Other Pd Professionals By Functional Responsibility:			
Planning	5.00	0.50	4.50
Development	2.00	-	2.00
Administration	6.50	0.50	6.00
Service Delivery	5.00	-	5.00
Access/Care Coordination	1.50	-	1.00
Other Professional Staff	-	-	-
Clerical/Support	6.00	0.50	4.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	30.00	1.50	26.50

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	15.80	1.00	9.45
Development	4.73	1.00	2.63
Serv Del/Access/Care Coord	79.74	3.00	10.94
Planning/Admin/Other	32.51	1.00	14.01
Clerical	13.59	1.92	6.69
Volunteers	3.60	-	
Total AAA Staffing	149.97	7.92	43.72
Number of AAAs in State	15		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$59,984
Chapter 3: Elder Abuse	$68,746
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$27,990

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$4,456,367	$5,411,977	$1,551,975
Transfer From:			
Part B:		$0	$0
Part C1:	$242,960		$654,739
Part C2:	$0	$0	
Net Transfer $	$242,960	$0	$654,739
% Increase	5.45%	0.00%	42.19%
Final Allotment After Transfers	$4,699,327	$4,514,278	$2,206,714

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$1,104,386
As a % of Title III Exp.	10.54%
Program Income Exp. by Part	
Part B: Supp Svcs	$159,914
Part C1: Cong Nutr	$552,674
Part C2: Home Del Nutr	$385,871
Part D: In-Home Svcs	$5,927
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Louisiana

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	4,350,579	22
Persons 60+ 1996	663,559	23
As % of All Ages	15.3%	40
Persons 60-64	166,953	22
Persons 65-74	282,981	23
Persons 75-84	161,369	24
Persons 85+	52,256	27
# Women/100 Men Age 60+	140	12
Persons 60+ 1990	648,941	23
Minority Persons 60+	165,744	13
Minority Persons 60+ as % of All Persons 60+	25.5%	6
Black Non-Hispanic Persons 60+ as % of All Persons 60+	23.2%	3
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.5%	29
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	26
Hispanic Persons 60+ as % of All Persons 60+	1.6%	17
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	131,684	19
As % of All Persons 60+ (Civilian Non-institutionalized)	20.3%	7
Persons 60+ Below Poverty	140,808	14
As a % of All Persons 60+	21.7%	3
Min. Persons 60+ Below Pov.	67,175	6
As a % of All Minority Persons 60+	40.5%	5
Females 60+ Below Poverty Level	95,718	14
As % of All Females 60+	25.4%	3
Persons 60+ Living in Rural Areas	140,395	25
As a % of All Persons 60+	21.6%	30
Persons 60+ Living in NHs, Bd & Care, Other Institutions	31,169	21
As a % of All Persons 60+	4.8%	20

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	26
# of Paid Staff FTEs (state/local)	19.30
# of Certified Volunteers (state/local)	45.00
Number of Cases Closed	1,884
Number of Complaints (for cases closed)	2,146
Total Program Funding	$832,524

Part C. Title VI Grants in State:	
No of Title VI Grantees:	1
Total Allotments:	$52,000

Part D. Title III Clients:	Value	Rank
Total Clients	66,064	31
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	22,439	15
As a % of All Clients	34.0%	11
African American Non-Hispanic Clients as a % of Total Clients	33.1%	4
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.2%	35
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.4%	20
Hispanic Clients as a % of Total Clients	0.3%	36
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	16,424	38
As a % of Total Clients	24.9%	44
Minority Clients Below Poverty	12,914	21
As a % of All Minority Clients	57.6%	31
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	32,009	28
As a % of Total Clients	48.5%	24

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	251
Focal Points Which Are Senior Centers	152
Total Senior Centers	167
Total Senior Centers Receiving OAA $	134

Comments:

Profile of State OAA Programs: Louisiana

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,701,583	$ 14,245,808					
Personal Care	479	44,473	$ 143,034	$ 366,754	39.00%	21	1	2	$0
Homemaker	6,280	195,288	$ 700,062	$ 1,750,155	40.00%	53	-	14	$8,780
Chore	895	9,580	$ 56,749	$ 157,636	36.00%	11	-	5	$0
Home Del Meals	19,889	2,978,982	$ 1,587,944	$ 11,342,457	14.00%	73	-	22	$1,050,555
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	16,722	16,038	$ 213,794	$ 628,806	34.00%	58	-	23	$0
Cluster 1 As % of Total			29.3%	47.5%					
Cluster 2:			$ 3,406,050	$ 6,819,096					
Congreg Meals	24,040	1,917,104	$ 3,376,316	$ 6,752,632	50.00%	73	-	23	$791,916
Nutr Counseling	663	694	$ 23,312	$ 47,576	49.00%	18	-	7	$0
Assisted Transport	286	7,424	$ 6,422	$ 18,888	34.00%	6	-	3	$0
Cluster 2 As % of Total			36.9%	22.7%					
Cluster 3:			$ 2,490,492	$ 7,260,657					
Transportation		930,461	$ 1,854,229	$ 5,453,616	34.00%	67	-	22	$410,432
Legal Assistance		10,323	$ 96,361	$ 283,415	34.00%	43	-	12	$0
Nutr Education		61,232	$ 56,339	$ 128,043	44.00%	59	-	21	$0
Info and Assist		118,984	$ 317,246	$ 906,417	35.00%	68	-	27	$0
Outreach		15,143	$ 166,317	$ 489,168	34.00%	63	-	24	$0
Cluster 3 As % of Total			27.0%	24.2%					
Other Services			$ 629,524	$ 1,656,642	38.00%				$0
Oth Svcs As % of Total			6.8%	5.5%					
Total			$ 9,227,649	$ 29,982,203		146	1		$2,261,683

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	8.00	2.00	2.50
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	-	0.60
Development	5.00	1.00	1.50
Administration	12.00	4.00	3.70
Service Delivery	11.00	5.00	3.40
Access/Care Coordination	1.00	-	0.30
Other Professional Staff	1.00	1.00	0.30
Clerical/Support	10.00	4.00	3.10
Volunteers	1.00	-	
Total State Unit Staff (Incl. Volunteers)	51.00	17.00	15.40

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	59.00	12.00	55.50
Development	13.50	4.50	10.75
Serv Del/Access/Care Coord	298.00	147.85	242.95
Planning/Admin/Other	82.73	16.63	70.48
Clerical	72.33	33.75	61.83
Volunteers	297.00	94.00	
Total AAA Staffing	822.56	308.73	441.51
Number of AAAs in State	34		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$65,033
Chapter 3: Elder Abuse	$69,189
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$4,514,844	$5,481,387	$1,574,615
Transfer From:			
Part B:		$0	$0
Part C1:	$667,658		$205,513
Part C2:	$0	$0	
Net Transfer $	$667,658	$0	$205,513
% Increase	14.79%	0.00%	13.05%
Final Allotment After Transfers	$5,182,502	$4,608,216	$1,780,128

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,457,238
As a % of Title III Exp.	26.63%
Program Income Exp. by Part	
Part B: Supp Svcs	$410,432
Part C1: Cong Nutr	$837,745
Part C2: Home Del Nutr	$1,194,504
Part D: In-Home Svcs	$14,557
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Maine

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,243,316	40
Persons 60+ 1996	222,661	40
As % of All Ages	17.9%	11
Persons 60-64	49,242	40
Persons 65-74	94,024	40
Persons 75-84	58,481	39
Persons 85+	20,914	37
# Women/100 Men Age 60+	136	26
Persons 60+ 1990	218,011	38
Minority Persons 60+	1,188	51
Minority Persons 60+ as % of All Persons 60+	0.5%	52
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	48
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.1%	49
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	32
Hispanic Persons 60+ as % of All Persons 60+	0.1%	51
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	32,089	38
As % of All Persons 60+ (Civilian Non-institutionalized)	14.7%	29
Persons 60+ Below Poverty	26,959	38
As a % of All Persons 60+	12.4%	19
Min. Persons 60+ Below Pov.	149	51
As a % of All Minority Persons 60+	12.5%	51
Females 60+ Below Poverty Level	19,351	38
As % of All Females 60+	15.3%	18
Persons 60+ Living in Rural Areas	81,718	34
As a % of All Persons 60+	37.5%	6
Persons 60+ Living in NHs, Bd & Care, Other Institutions	11,354	36
As a % of All Persons 60+	5.2%	16

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	0
# of Paid Staff FTEs (state/local)	7.50
# of Certified Volunteers (state/local)	17.00
Number of Cases Closed	380
Number of Complaints (for cases closed)	487
Total Program Funding	$193,258

Part C. Title VI Grants in State:	
No of Title VI Grantees:	2
Total Allotments:	$118,000

Part D. Title III Clients:	Value	Rank
Total Clients	33,868	43
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	169	51
As a % of All Clients	0.5%	51
African American Non-Hispanic Clients as a % of Total Clients	0.1%	47
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.2%	34
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.2%	28
Hispanic Clients as a % of Total Clients	0.0%	53
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	5,262	51
As a % of Total Clients	15.5%	49
Minority Clients Below Poverty	46	48
As a % of All Minority Clients	27.2%	48
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	21,837	36
As a % of Total Clients	64.5%	9

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	16
Focal Points Which Are Senior Centers	9
Total Senior Centers	26
Total Senior Centers Receiving OAA $	14

Comments:

Profile of State OAA Programs: Maine

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,213,770	$ 3,494,254					
Personal Care	178	508	$ 4,574	$ 4,574	100.00%	1	-	-	$0
Homemaker	-	-	$ -	$ -	0.00%	-	-	-	$0
Chore	37	2,943	$ 16,674	$ 16,674	100.00%	5	-	5	$0
Home Del Meals	4,203	707,879	$ 1,185,302	$ 3,292,506	36.00%	84	-	8	$1,362,457
Adult Day Care/Hlth	869	26,885	$ 7,220	$ 180,500	4.00%	1	-	1	$39,010
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			33.7%	42.7%					
Cluster 2:			$ 760,077	$ 2,029,243					
Congreg Meals	5,450	333,594	$ 709,669	$ 1,971,303	36.00%	115	-	20	$624,635
Nutr Counseling	-	-	$ -	$ -	0.00%	1	-	1	$0
Assisted Transport	75	1,624	$ 50,408	$ 57,940	87.00%	1	-	-	$58,200
Cluster 2 As % of Total			21.1%	24.8%					
Cluster 3:			$ 1,485,023	$ 2,490,630					
Transportation		4,797	$ 77,059	$ 87,567	88.00%	6	-	2	$0
Legal Assistance		7,903	$ 159,230	$ 169,394	94.00%	2	-	-	$1,468
Nutr Education		-	$ -	$ -	0.00%	1	-	1	$0
Info and Assist		46,666	$ 285,896	$ 680,705	42.00%	29	-	3	$0
Outreach		38,378	$ 962,838	$ 1,552,965	62.00%	35	-	9	$2,017
Cluster 3 As % of Total			41.2%	30.4%					
Other Services			$ 147,562	$ 177,786	83.00%				$129,987
Oth Svcs As % of Total			4.1%	2.2%					
Total			$ 3,606,432	$ 8,191,912		247	-		$2,217,774

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	-	-
Other Pd Professionals By Functional Responsibility:			
Planning	6.20	-	4.65
Development	-	-	-
Administration	7.30	-	5.48
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	3.00	-	-
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	17.50	-	10.10

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	23.39	-	9.09
Development	4.87	-	1.45
Serv Del/Access/Care Coord	163.69	3.00	62.63
Planning/Admin/Other	28.53	-	13.08
Clerical	44.60	1.50	13.05
Volunteers	478.00	-	
Total AAA Staffing	743.08	4.50	99.30
Number of AAAs in State	5		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$22,245
Chapter 3: Elder Abuse	$23,660
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$962

Comments:

Part I. Transfers Between Title III, Parts B and C:			
Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,597,534	$1,943,324	$552,367
Transfer From:			
Part B:		$0	$182,101
Part C1:	$0		$386,681
Part C2:	$0	$0	
Net Transfer $	$0	$0	$568,782
% Increase	0.00%	0.00%	102.97%
Final Allotment After Transfers	$1,415,433	$1,556,643	$1,121,149

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$559,522
As a % of Title III Exp.	15.51%
Program Income Exp. by Part	
Part B: Supp Svcs	$76,104
Part C1: Cong Nutr	$197,218
Part C2: Home Del Nutr	$286,200
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Maryland

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	5,071,604	19
Persons 60+ 1996	754,149	20
As % of All Ages	14.9%	44
Persons 60-64	176,357	20
Persons 65-74	329,172	20
Persons 75-84	189,720	21
Persons 85+	58,900	22
# Women/100 Men Age 60+	137	23
Persons 60+ 1990	717,692	20
Minority Persons 60+	133,896	16
Minority Persons 60+ as % of All Persons 60+	18.7%	14
Black Non-Hispanic Persons 60+ as % of All Persons 60+	16.0%	8
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.6%	15
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	40
Hispanic Persons 60+ as % of All Persons 60+	1.0%	24
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	116,551	21
As % of All Persons 60+ (Civilian Non-Institutionalized)	16.2%	20
Persons 60+ Below Poverty	66,565	28
As a % of All Persons 60+	9.3%	41
Min. Persons 60+ Below Pov.	26,710	20
As a % of All Minority Persons 60+	19.9%	42
Females 60+ Below Poverty Level	47,462	27
As % of All Females 60+	11.4%	40
Persons 60+ Living in Rural Areas	98,128	31
As a % of All Persons 60+	13.7%	38
Persons 60+ Living in NHs, Bd & Care, Other Institutions	27,966	24
As a % of All Persons 60+	3.9%	36

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	19
# of Paid Staff FTEs (state/local)	14.58
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	843
Number of Complaints (for cases closed)	1,130
Total Program Funding	$631,638

Part C. Title VI Grants In State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	144,566	17
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	30,457	12
As a % of All Clients	21.1%	19
African American Non-Hispanic Clients as a % of Total Clients	18.6%	11
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.7%	7
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.2%	29
Hispanic Clients as a % of Total Clients	0.6%	29
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	25,179	30
As a % of Total Clients	17.4%	48
Minority Clients Below Poverty	17,584	14
As a % of All Minority Clients	57.8%	30
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	35,904	26
As a % of Total Clients	24.8%	41

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	298
Focal Points Which Are Senior Centers	111
Total Senior Centers	111
Total Senior Centers Receiving OAA $	111

Comments:

Profile of State OAA Programs: Maryland

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,282,529	$ 7,675,701					
Personal Care	1,055	102,186	$ 253,133	$ 2,301,209	11.00%	136	31	5	$6,458
Homemaker	865	33,103	$ 82,648	$ 317,877	26.00%	76	5	3	$6,660
Chore	185	7,935	$ 9,586	$ 50,453	19.00%	14	-	3	$1,126
Home Del Meals	6,091	1,031,323	$ 1,541,068	$ 3,350,148	46.00%	38	2	12	$536,186
Adult Day Care/Hlth	478	112,352	$ 38,431	$ 480,388	8.00%	19	1	3	$77,418
Case Mgt	5,296	145,588	$ 357,663	$ 1,375,627	26.00%	47	16	16	$82,552
Cluster 1 As % of Total			22.6%	26.8%					
Cluster 2:			$ 5,073,074	$ 9,862,958					
Congreg Meals	27,495	2,119,844	$ 4,993,282	$ 9,078,695	55.00%	45	5	12	$1,475,454
Nutr Counseling	806	6,200	$ 19,251	$ 27,501	70.00%	11	-	8	$2,659
Assisted Transport	3,482	175,452	$ 60,541	$ 756,763	8.00%	41	16	12	$13,544
Cluster 2 As % of Total			50.1%	33.5%					
Cluster 3:			$ 1,570,614	$ 5,710,002					
Transportation		516,663	$ 161,868	$ 2,697,800	6.00%	29	4	11	$340,898
Legal Assistance		16,329	$ 355,995	$ 539,386	66.00%	26	3	3	$1,419
Nutr Education		69,074	$ 110,258	$ 148,997	74.00%	70	9	17	$3,333
Info and Assist		547,105	$ 825,803	$ 2,064,508	40.00%	24	1	19	$148,135
Outreach		49,984	$ 116,690	$ 259,311	45.00%	37	3	13	$2,726
Cluster 3 As % of Total			15.5%	19.4%					
Other Services			$ 1,193,646	$ 5,968,230	20.00%				$266,856
Oth Svcs As % of Total			11.8%	20.3%					
Total			$ 10,119,863	$ 29,416,892		335	65		$2,965,424

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	6.00	1.00	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	6.00	1.00	1.00
Development	3.00	1.50	1.00
Administration	16.00	7.50	2.00
Service Delivery	0.50	-	-
Access/Care Coordination	1.00	-	-
Other Professional Staff	-	-	-
Clerical/Support	12.00	7.00	5.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	46.50	18.00	11.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	42.00	5.00	19.75
Development	18.90	1.25	6.57
Serv Del/Access/Care Coord	467.71	115.90	160.64
Planning/Admin/Other	141.80	43.41	59.05
Clerical	165.54	51.33	45.30
Volunteers	1,444.83	244.66	
Total AAA Staffing	2,280.78	461.55	291.31
Number of AAAs in State	19		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$233,817
Chapter 3: Elder Abuse	$72,228
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$4,713,632	$5,704,438	$1,670,890
Transfer From:			
Part B:		$0	$0
Part C1:	$69,907		$0
Part C2:	$39,611	$0	
Net Transfer $	$109,518	$0	$0
% Increase	2.32%	0.00%	0.00%
Final Allotment After Transfers	$4,823,150	$5,634,531	$1,631,279

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$3,345,667
As a % of Title III Exp.	33.06%
Program Income Exp. by Part	
Part B: Supp Svcs	$1,307,961
Part C1: Cong Nutr	$1,674,433
Part C2: Home Del Nutr	$361,959
Part D: In-Home Svcs	$456
Part F: Dis Prv/Hlth Prm	$858

Comments:

Profile of State OAA Programs: Massachusetts

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	6,092,352	13
Persons 60+ 1996	1,082,318	11
As % of All Ages	17.8%	15
Persons 60-64	223,113	14
Persons 65-74	451,833	11
Persons 75-84	301,148	10
Persons 85+	106,224	10
# Women/100 Men Age 60+	145	3
Persons 60+ 1990	1,093,493	11
Minority Persons 60+	56,463	29
Minority Persons 60+ as % of All Persons 60+	5.2%	38
Black Non-Hispanic Persons 60+ as % of All Persons 60+	2.5%	31
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.4%	16
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	48
Hispanic Persons 60+ as % of All Persons 60+	1.1%	22
Persons 60+ (Non-instit.) with Mobility and/or Self Care Lim.	166,395	12
As % of All Persons 60+ (Civilian Non-institutionalized)	15.2%	26
Persons 60+ Below Poverty	92,600	22
As a % of All Persons 60+	8.5%	44
Min. Persons 60+ Below Pov.	11,211	29
As a % of All Minority Persons 60+	19.9%	43
Females 60+ Below Poverty Level	66,754	21
As % of All Females 60+	10.3%	45
Persons 60+ Living in Rural Areas	105,821	30
As a % of All Persons 60+	9.7%	45
Persons 60+ Living in NHs, Bd & Care, Other Institutions	60,237	8
As a % of All Persons 60+	5.5%	12

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	24
# of Paid Staff FTEs (state/local)	36.20
# of Certified Volunteers (state/local)	360.00
Number of Cases Closed	11,601
Number of Complaints (for cases closed)	11,601
Total Program Funding	$2,019,226

Part C. Title VI Grants In State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	212,634	9
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	17,451	24
As a % of All Clients	8.2%	36
African American Non-Hispanic Clients as a % of Total Clients	3.5%	31
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.7%	8
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	41
Hispanic Clients as a % of Total Clients	3.0%	15
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	72,274	14
As a % of Total Clients	34.0%	28
Minority Clients Below Poverty	16,924	15
As a % of All Minority Clients	97.0%	2
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	38,818	25
As a % of Total Clients	18.3%	46

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	328
Focal Points Which Are Senior Centers	256
Total Senior Centers	304
Total Senior Centers Receiving OAA $	120

Comments:

Profile of State OAA Programs: Massachusetts

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 7,284,759	$ 22,310,415					
Personal Care	390	63,129	$ 82,708	$ 100,863	82.00%	10	2	-	$18,688
Homemaker	84	2,166	$ 12,586	$ 20,633	61.00%	7	-	-	$8,000
Chore	163	793	$ 12,113	$ 20,884	58.00%	6	-	-	$6,824
Home Del Meals	35,467	5,297,568	$ 7,013,268	$ 21,916,463	32.00%	61	2	13	$1,637,927
Adult Day Care/Hlth	204	15,164	$ 41,489	$ 50,596	82.00%	10	1	-	$9,193
Case Mgt	4,641	8,990	$ 122,595	$ 200,975	61.00%	12	2	2	$77,173
Cluster 1 As % of Total			45.3%	54.3%					
Cluster 2:			$ 3,683,678	$ 10,859,512					
Congreg Meals	37,578	2,586,180	$ 3,451,985	$ 10,460,561	33.00%	58	4	13	$7,033,073
Nutr Counseling	917	1,378	$ 113,883	$ 214,874	53.00%	19	-	12	$0
Assisted Transport	1,485	38,185	$ 117,810	$ 184,078	64.00%	24	1	1	$66,098
Cluster 2 As % of Total			22.9%	26.4%					
Cluster 3:			$ 3,236,263	$ 4,928,473					
Transportation		297,749	$ 934,593	$ 1,699,260	55.00%	56	10	3	$776,793
Legal Assistance		27,683	$ 1,083,027	$ 1,406,529	77.00%	24	-	-	$324,168
Nutr Education		7,588	$ 118,275	$ 187,738	63.00%	21	1	14	$0
Info and Assist		95,067	$ 727,554	$ 1,102,355	66.00%	94	13	18	$0
Outreach		66,845	$ 372,814	$ 532,591	70.00%	119	19	7	$0
Cluster 3 As % of Total			20.1%	12.0%					
Other Services			$ 1,886,866	$ 2,995,025	63.00%				$1,627,596
Oth Svcs As % of Total			11.7%	7.3%					
Total			$ 16,091,566	$ 41,093,425		350	36		$11,587,533

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	6.00	4.00	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	16.00	3.00	12.00
Development	13.00	4.00	6.00
Administration	15.00	3.00	-
Service Delivery	-	-	-
Access/Care Coordination	2.00	-	2.00
Other Professional Staff	-	-	-
Clerical/Support	6.00	3.00	2.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	58.00	17.00	23.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	35.50	2.00	16.70
Development	19.30	0.50	7.68
Serv Del/Access/Care Coord	341.00	29.30	193.00
Planning/Admin/Other	108.53	11.67	53.71
Clerical	62.60	7.08	25.10
Volunteers	204.00	2.23	
Total AAA Staffing	770.93	52.76	296.19
Number of AAAs in State	23		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$106,344
Chapter 3: Elder Abuse	$0
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$7,624,031	$9,522,014	$2,696,104
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$2,191,143
Part C2:	$0	$0	
Net Transfer $	$0	$0	$2,191,143
% Increase	0.00%	0.00%	81.27%
Final Allotment After Transfers	$7,624,031	$7,330,871	$4,887,247

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$3,288,582
As a % of Title III Exp.	20.44%
Program Income Exp. by Part	
Part B: Supp Svcs	$34,328
Part C1: Cong Nutr	$1,073,904
Part C2: Home Del Nutr	$2,180,350
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Michigan

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	9,594,350	8
Persons 60+ 1996	1,546,980	8
As % of All Ages	16.1%	34
Persons 60-64	353,727	8
Persons 65-74	666,469	8
Persons 75-84	400,413	8
Persons 85+	126,371	8
# Women/100 Men Age 60+	135	29
Persons 60+ 1990	1,521,666	8
Minority Persons 60+	184,117	11
Minority Persons 60+ as % of All Persons 60+	12.1%	25
Black Non-Hispanic Persons 60+ as % of All Persons 60+	10.3%	13
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.6%	25
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	24
Hispanic Persons 60+ as % of All Persons 60+	0.6%	26
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	250,750	8
As % of All Persons 60+ (Civilian Non-institutionalized)	16.5%	18
Persons 60+ Below Poverty	151,073	12
As a % of All Persons 60+	9.9%	33
Min. Persons 60+ Below Pov.	40,510	14
As a % of All Minority Persons 60+	22.0%	32
Females 60+ Below Poverty Level	107,812	11
As % of All Females 60+	12.4%	32
Persons 60+ Living in Rural Areas	310,189	7
As a % of All Persons 60+	20.4%	32
Persons 60+ Living in NHs, Bd & Care, Other Institutions	60,137	9
As a % of All Persons 60+	4.0%	34

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	8
# of Paid Staff FTEs (state/local)	22.50
# of Certified Volunteers (state/local)	31.00
Number of Cases Closed	2,061
Number of Complaints (for cases closed)	4,696
Total Program Funding	$999,203

Part C. Title VI Grants in State:	
No of Title VI Grantees:	4
Total Allotments:	$284,225

Part D. Title III Clients:	Value	Rank
Total Clients	260,483	6
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	40,871	11
As a % of All Clients	15.7%	26
African American Non-Hispanic Clients as a % of Total Clients	12.2%	17
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.5%	22
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.7%	15
Hispanic Clients as a % of Total Clients	2.3%	16
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	101,228	8
As a % of Total Clients	38.9%	24
Minority Clients Below Poverty	29,233	10
As a % of All Minority Clients	71.5%	18
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	59,770	15
As a % of Total Clients	22.9%	44

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	376
Focal Points Which Are Senior Centers	321
Total Senior Centers	456
Total Senior Centers Receiving OAA $	249

Comments:

Profile of State OAA Programs: Michigan

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 12,231,986	$ 33,035,173					
Personal Care	5,428	244,947	$ 1,212,781	$ 3,109,695	39.00%	82	4	1	$213,362
Homemaker	12,554	426,498	$ 1,671,792	$ 3,482,900	48.00%	97	6	1	$460,397
Chore	7,302	77,548	$ 699,959	$ 886,024	79.00%	35	4	-	$123,405
Home Del Meals	46,240	7,298,222	$ 6,992,570	$ 22,556,677	31.00%	68	2	2	$4,555,371
Adult Day Care/Hlth	2,687	406,059	$ 805,067	$ 1,750,146	46.00%	86	4	1	$204,243
Case Mgt	18,540	85,576	$ 849,817	$ 1,249,731	68.00%	38	2	1	$29,311
Cluster 1 As % of Total			50.4%	65.8%					
Cluster 2:			$ 7,754,584	$ 12,090,187					
Congreg Meals	77,507	3,780,317	$ 7,707,738	$ 12,043,341	64.00%	77	3	2	$3,910,955
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	2,920	52,635	$ 46,846	$ 46,846	100.00%	13	1	-	$75,248
Cluster 2 As % of Total			31.9%	24.1%					
Cluster 3:			$ 2,276,726	$ 2,780,485					
Transportation		252,637	$ 493,587	$ 536,508	92.00%	42	3	-	$164,891
Legal Assistance		40,798	$ 684,697	$ 769,322	89.00%	20	-	-	$34,507
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		166,837	$ 408,211	$ 716,160	57.00%	19	1	-	$1,477
Outreach		58,970	$ 690,231	$ 758,496	91.00%	37	13	-	$4,940
Cluster 3 As % of Total			9.4%	5.5%					
Other Services			$ 2,019,036	$ 2,268,580	89.00%				$135,493
Oth Svcs As % of Total			8.3%	4.5%					
Total			$ 24,282,332	$ 50,174,425		329	36		$9,913,400

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	33.80	4.00	28.90
Other Pd Professionals By Functional Responsibility:			
Planning	8.75	2.00	8.10
Development	16.80	-	18.10
Administration	49.30	6.50	39.40
Service Delivery	62.70	13.80	28.50
Access/Care Coordination	118.00	25.40	31.20
Other Professional Staff	42.80	23.50	34.30
Clerical/Support	43.40	12.50	31.40
Volunteers	113.00	13.40	
Total State Unit Staff (Incl. Volunteers)	489.00	101.00	220.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	14		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$64,093
Chapter 3: Elder Abuse	$60,547
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$14,200

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer Allotment:	To Part B: $10,337,250	To Part C1: $12,539,069	To Part C2: $3,622,123
Transfer From:	-		
Part B:		$0	$0
Part C1:	$179,000		$2,397,035
Part C2:	$0	$0	
Net Transfer $	$179,000	$0	$2,397,035
% Increase	1.73%	0.00%	66.18%
Final Allotment After Transfers	$10,516,250	$9,963,054	$6,019,158

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$10,166,580
As a % of Title III Exp.	41.87%
Program Income Exp. by Part	
Part B: Supp Svcs	$1,349,549
Part C1: Cong Nutr	$4,029,952
Part C2: Home Del Nutr	$4,748,046
Part D: In-Home Svcs	$39,033
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Minnesota

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	4,657,758	20
Persons 60+ 1996	742,760	21
As % of All Ages	15.9%	36
Persons 60-64	165,500	23
Persons 65-74	297,792	22
Persons 75-84	201,671	19
Persons 85+	77,797	15
# Women/100 Men Age 60+	133	32
Persons 60+ 1990	719,687	19
Minority Persons 60+	14,132	37
Minority Persons 60+ as % of All Persons 60+	2.0%	47
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.7%	41
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.5%	27
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.4%	17
Hispanic Persons 60+ as % of All Persons 60+	0.3%	42
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	93,828	27
As % of All Persons 60+ (Civilian Non-institutionalized)	13.0%	42
Persons 60+ Below Poverty	73,690	26
As a % of All Persons 60+	10.2%	30
Min. Persons 60+ Below Pov.	3,317	37
As a % of All Minority Persons 60+	23.5%	26
Females 60+ Below Poverty Level	52,223	25
As % of All Females 60+	12.6%	29
Persons 60+ Living in Rural Areas	188,475	18
As a % of All Persons 60+	26.2%	21
Persons 60+ Living in NHs, Bd & Care, Other Institutions	47,860	14
As a % of All Persons 60+	6.7%	5

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	10
# of Paid Staff FTEs (state/local)	18.40
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	2,058
Number of Complaints (for cases closed)	2,808
Total Program Funding	$1,042,255

Part C. Title VI Grants in State:	
No of Title VI Grantees:	9
Total Allotments:	$536,725

Part D. Title III Clients:	Value	Rank
Total Clients	193,309	12
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	8,645	31
As a % of All Clients	4.5%	43
African American Non-Hispanic Clients as a % of Total Clients	1.7%	37
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.1%	11
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	1.2%	10
Hispanic Clients as a % of Total Clients	0.5%	30
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	77,126	13
As a % of Total Clients	39.9%	23
Minority Clients Below Poverty	5,055	31
As a % of All Minority Clients	58.5%	29
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	112,250	4
As a % of Total Clients	58.1%	15

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	220
Focal Points Which Are Senior Centers	166
Total Senior Centers	506
Total Senior Centers Receiving OAA $	5

Comments:

Profile of State OAA Programs: Minnesota

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:									
Personal Care	963	41,527	$ 266,227	$ 638,636	42.00%	26	1	1	$118,837
Homemaker	1,250	74,110	$ 258,120	$ 956,000	27.00%	21	2	-	$81,392
Chore	6,674	81,722	$ 490,884	$ 1,067,139	46.00%	13	-	-	$89,029
Home Del Meals	17,412	1,686,430	$ 1,533,758	$ 7,303,610	21.00%	25	3	-	$3,251,037
Adult Day Care/Hlth	19	3,176	$ 3,510	$ 10,969	32.00%	2	-	-	$3,816
Case Mgt	885	6,479	$ 82,834	$ 172,571	48.00%	1	-	-	$5,429
Cluster 1 As % of Total			27.4%	32.1%					
Cluster 2:			$ 4,023,241	$ 15,474,004					
Congreg Meals	87,916	3,386,915	$ 4,023,241	$ 15,474,004	26.00%	18	3	-	$6,677,557
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			41.8%	48.8%					
Cluster 3:			$ 2,646,036	$ 5,362,623					
Transportation		436,451	$ 740,802	$ 2,001,627	37.00%	25	1	-	$287,550
Legal Assistance		25,475	$ 630,779	$ 1,106,630	57.00%	9	1	-	$9,806
Nutr Education		20,656	$ 50,802	$ 59,767	85.00%	30	4	-	$4,275
Info and Assist		57,149	$ 626,817	$ 1,182,674	53.00%	29	-	5	$6,201
Outreach		197,697	$ 597,036	$ 1,011,925	59.00%	17	7	-	$96,166
Cluster 3 As % of Total			27.5%	17.0%					
Other Services			$ 326,248	$ 627,400	52.00%				$27,703
Oth Svcs As % of Total			3.4%	2.0%					
Total			$ 9,632,858	$ 31,612,951		168	16		$10,658,600

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	-	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	-	2.00
Development	3.00	1.00	2.00
Administration	14.00	1.00	3.00
Service Delivery	11.80	-	9.80
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	3.00	1.00	1.00
Volunteers	6.00	-	
Total State Unit Staff (Incl. Volunteers)	44.80	3.00	19.80

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	14.00	2.00	14.00
Development	11.20	0.30	7.70
Serv Del/Access/Care Coord	6.20	-	2.00
Planning/Admin/Other	14.10	2.70	13.10
Clerical	6.90	-	5.50
Volunteers	-	-	
Total AAA Staffing	52.40	5.00	42.30
Number of AAAs in State	14		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$72,571
Chapter 3: Elder Abuse	$77,187
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer Allotment:	To Part B $5,115,648	To Part C1 $6,214,851	To Part C2 $1,778,403
Transfer From:			
Part B:		$0	$0
Part C1:	$1,694,3/3		$0
Part C2:	$30,097	$0	
Net Transfer $	$1,724,470	$0	$0
% Increase	33.71%	0.00%	0.00%
Final Allotment After Transfers	$6,840,118	$4,520,478	$1,748,306

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$10,757,340
As a % of Title III Exp.	111.67%
Program Income Exp. by Part	
Part B: Supp Svcs	$565,867
Part C1: Cong Nutr	$6,797,005
Part C2: Home Del Nutr	$3,337,714
Part D: In-Home Svcs	$56,754
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Mississippi

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	2,716,115	32
Persons 60+ 1996	439,530	34
As % of All Ages	16.2%	33
Persons 60-64	106,269	33
Persons 65-74	183,825	33
Persons 75-84	110,699	34
Persons 85+	38,737	33
# Women/100 Men Age 60+	144	4
Persons 60+ 1990	428,651	34
Minority Persons 60+	119,995	19
Minority Persons 60+ as % of All Persons 60+	28.0%	5
Black Non-Hispanic Persons 60+ as % of All Persons 60+	27.3%	2
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	42
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	33
Hispanic Persons 60+ as % of All Persons 60+	0.3%	40
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Llm.	100,116	25
As % of All Persons 60+ (Civilian Non-institutionalized)	23.4%	2
Persons 60+ Below Poverty	112,445	18
As a % of All Persons 60+	26.2%	2
Min. Persons 60+ Below Pov.	57,351	10
As a % of All Minority Persons 60+	47.8%	2
Females 60+ Below Poverty Level	76,808	19
As % of All Females 60+	30.3%	2
Persons 60+ Living in Rural Areas	163,566	21
As a % of All Persons 60+	38.2%	5
Persons 60+ Living in NHs, Bd & Care, Other Institutions	15,886	34
As a % of All Persons 60+	3.7%	39

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	14
# of Paid Staff FTEs (state/local)	30.00
# of Certified Volunteers (state/local)	15.00
Number of Cases Closed	382
Number of Complaints (for cases closed)	425
Total Program Funding	$533,288

Part C. Title VI Grants in State:	
No of Title VI Grantees:	1
Total Allotments:	$67,000

Part D. Title III Clients:	Value	Rank
Total Clients	33,820	44
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	9,317	30
As a % of All Clients	27.5%	14
African American Non-Hispanic Clients as a % of Total Clients	27.5%	7
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.0%	52
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	52
Hispanic Clients as a % of Total Clients	0.0%	52
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	17,453	37
As a % of Total Clients	51.6%	10
Minority Clients Below Poverty	0	51
As a % of All Minority Clients	0.0%	51
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	14,862	43
As a % of Total Clients	43.9%	26

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	81
Focal Points Which Are Senior Centers	31
Total Senior Centers	8
Total Senior Centers Receiving OAA $	7

Comments:

Profile of State OAA Programs: Mississippi

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,959,665	$ 5,227,542					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	5,657	258,620	$ 521,713	$ 555,014	94.00%	22	10	4	$2,661
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	12,708	2,164,748	$ 2,058,416	$ 3,548,993	58.00%	29	10	5	$88,504
Adult Day Care/Hlth	511	58,219	$ 236,318	$ 407,445	58.00%	9	5	1	$1,830
Case Mgt	1,613	65,301	$ 143,218	$ 716,090	20.00%	7	2	7	$0
Cluster 1 As % of Total			48.2%	55.9%					
Cluster 2:			$ 1,745,918	$ 2,219,039					
Congreg Meals	7,313	829,927	$ 1,326,358	$ 1,326,358	100.00%	29	10	5	$123,842
Nutr Counseling	-	-	$ -	$ -	0.00%	3	-	1	$0
Assisted Transport	191	6,214	$ 419,560	$ 892,681	47.00%	5	3	1	$12,805
Cluster 2 As % of Total			28.4%	23.7%					
Cluster 3:			$ 817,062	$ 1,290,183					
Transportation		474,870	$ 419,560	$ 892,681	47.00%	28	11	4	$12,805
Legal Assistance		1,848	$ 70,668	$ 70,668	100.00%	14	7	12	$0
Nutr Education		-	$ -	$ -	0.00%	-	3	4	$0
Info and Assist		27,493	$ 130,644	$ 130,644	100.00%	14	6	7	$0
Outreach		27,031	$ 196,190	$ 196,190	100.00%	-	-	-	$0
Cluster 3 As % of Total			13.3%	13.8%					
Other Services			$ 616,697	$ 616,697	100.00%				$24,894
Oth Svcs As % of Total			10.0%	6.6%					
Total			$ 6,139,342	$ 9,353,460		106	40		$267,441

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	1.00	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	1.00	-	1.00
Development	6.00	4.00	5.00
Adminstration	3.00	3.00	3.00
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	1.00	-	1.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	12.00	8.00	11.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	10.00	5.00	10.00
Development	9.00	4.00	9.00
Serv Del/Access/Care Coord	123.00	61.00	87.00
Planning/Admin/Other	16.00	11.00	16.00
Clerical	5.00	-	4.00
Volunteers	-	-	
Total AAA Staffing	163.00	81.00	126.00
Number of AAAs in State	10		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$38,517
Chapter 3: Elder Abuse	$4,515
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C: Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$3,109,904	$3,782,093	$1,075,185
Transfer From:			
Part B:		$0	$0
Part C1:	$834,825		$1,131,101
Part C2:	$0	$0	
Net Transfer $	$834,825	$0	$1,131,101
% Increase	26.84%	0.00%	105.20%
Final Allotment After Transfers	$3,944,729	$1,816,167	$2,206,286

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$117,177
As a % of Title III Exp.	1.91%
Program Income Exp. by Part	
Part B: Supp Svcs	$30,118
Part C1: Cong Nutr	$50,350
Part C2: Home Del Nutr	$36,337
Part D: In-Home Svcs	$372
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Missouri

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	5,358,692	16
Persons 60+ 1996	957,506	15
As % of All Ages	17.9%	12
Persons 60-64	215,526	16
Persons 65-74	397,606	15
Persons 75-84	251,026	12
Persons 85+	93,348	11
# Women/100 Men Age 60+	139	16
Persons 60+ 1990	953,091	12
Minority Persons 60+	79,487	23
Minority Persons 60+ as % of All Persons 60+	8.3%	29
Black Non-Hispanic Persons 60+ as % of All Persons 60+	7.3%	19
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.3%	37
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	27
Hispanic Persons 60+ as % of All Persons 60+	0.5%	34
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	161,655	14
As % of All Persons 60+ (Civilian Non-institutionalized)	17.0%	15
Persons 60+ Below Poverty	123,536	15
As a % of All Persons 60+	13.0%	17
Min. Persons 60+ Below Pov.	20,387	23
As a % of All Minority Persons 60+	25.6%	19
Females 60+ Below Poverty Level	88,459	15
As % of All Females 60+	15.8%	17
Persons 60+ Living in Rural Areas	228,586	13
As a % of All Persons 60+	24.0%	25
Persons 60+ Living in NHs, Bd & Care, Other Institutions	52,311	10
As a % of All Persons 60+	5.5%	13

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	11
# of Paid Staff FTEs (state/local)	19.75
# of Certified Volunteers (state/local)	341.00
Number of Cases Closed	6,815
Number of Complaints (for cases closed)	6,816
Total Program Funding	$818,940

Part C. Title VI Grants In State:	
No of Title VI Grantees:	1
Total Allotments:	$59,000

Part D. Title III Clients:	Value	Rank
Total Clients	270,802	5
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	22,802	14
As a % of All Clients	8.4%	35
African American Non-Hispanic Clients as a % of Total Clients	7.9%	24
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	41
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.2%	30
Hispanic Clients as a % of Total Clients	0.3%	38
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	110,970	7
As a % of Total Clients	41.0%	22
Minority Clients Below Poverty	18,578	13
As a % of All Minority Clients	81.5%	8
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	190,051	1
As a % of Total Clients	70.2%	6

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	230
Focal Points Which Are Senior Centers	230
Total Senior Centers	302
Total Senior Centers Receiving OAA $	302

Comments:

Profile of State OAA Programs: Missouri

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 4,256,137	$ 13,681,993					
Personal Care	402	25,267	$ 169,441	$ 217,232	78.00%	15	1	-	$5,526
Homemaker	1,771	139,452	$ 937,088	$ 1,216,997	77.00%	45	3	-	$53,306
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	30,889	3,477,722	$ 2,682,230	$ 11,661,870	23.00%	146	9	7	$3,169,133
Adult Day Care/Hlth	277	62,312	$ 186,533	$ 270,338	69.00%	12	-	-	$30,529
Case Mgt	4,228	23,686	$ 280,845	$ 315,556	89.00%	5	-	4	$0
Cluster 1 As % of Total			29.6%	39.2%					
Cluster 2:			$ 5,298,656	$ 12,322,456					
Congreg Meals	102,972	3,365,130	$ 5,298,656	$ 12,322,456	43.00%	149	9	7	$3,663,527
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			36.8%	35.3%					
Cluster 3:			$ 3,021,649	$ 6,591,363					
Transportation		1,380,904	$ 2,164,907	$ 5,551,044	39.00%	61	7	1	$600,909
Legal Assistance		6,619	$ 180,624	$ 215,029	84.00%	6	-	-	$2,781
Nutr Education		1,208	$ -	$ -	0.00%	171	9	10	$0
Info and Assist		1,087,140	$ 673,747	$ 821,643	82.00%	12	-	9	$5,313
Outreach		1,824	$ 2,371	$ 3,648	65.00%	28	1	4	$0
Cluster 3 As % of Total			21.0%	18.9%					
Other Services			$ 1,815,962	$ 2,328,156	78.00%			-	$39,804
Oth Svcs As % of Total			12.6%	6.7%					
Total			$ 14,392,404	$ 34,923,968		371	9		$7,570,830

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	6.00	-	0.91
Other Pd Professionals By Functional Responsibility:			
Planning	17.00	1.00	4.53
Development	6.00	2.00	1.59
Administration	44.00	6.00	2.13
Service Delivery	-	-	-
Access/Care Coordination	284.00	30.00	0.90
Other Professional Staff	1.00	-	1.00
Clerical/Support	61.20	6.00	5.18
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	419.00	45.00	16.20

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	26.30	4.90	22.28
Development	7.38	0.50	6.00
Serv Del/Access/Care Coord	360.91	28.49	348.77
Planning/Admin/Other	102.99	8.12	95.95
Clerical	32.14	3.03	29.88
Volunteers	-	-	
Total AAA Staffing	529.72	45.04	502.88
Number of AAAs in State	10		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$0
Chapter 3: Elder Abuse	$19,853
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$35,066

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$6,777,471	$8,238,613	$2,349,202
Transfer From:			
Part B:		$0	$0
Part C1:	$33,787		$1,103,070
Part C2:	$0	$0	
Net Transfer $	$33,787	$0	$1,103,070
% Increase	0.50%	0.00%	46.96%
Final Allotment After Transfers	$6,811,258	$7,101,756	$3,452,272

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$7,639,592
As a % of Title III Exp.	53.06%
Program Income Exp. by Part	
Part B: Supp Svcs	$706,175
Part C1: Cong Nutr	$3,675,827
Part C2: Home Del Nutr	$3,254,136
Part D: In-Home Svcs	$1,454
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Montana

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	879,372	45
Persons 60+ 1996	153,310	45
As % of All Ages	17.4%	19
Persons 60-64	37,360	44
Persons 65-74	61,494	45
Persons 75-84	40,882	43
Persons 85+	13,574	45
# Women/100 Men Age 60+	122	46
Persons 60+ 1990	141,041	45
Minority Persons 60+	4,440	46
Minority Persons 60+ as % of All Persons 60+	3.1%	45
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	47
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.3%	36
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	2.2%	6
Hispanic Persons 60+ as % of All Persons 60+	0.5%	35
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	16,708	47
As % of All Persons 60+ (Civilian Non-institutionalized)	11.8%	49
Persons 60+ Below Poverty	16,184	45
As a % of All Persons 60+	11.5%	22
Min. Persons 60+ Below Pov.	1,288	46
As a % of All Minority Persons 60+	29.0%	15
Females 60+ Below Poverty Level	10,660	45
As % of All Females 60+	13.7%	21
Persons 60+ Living in Rural Areas	47,142	42
As a % of All Persons 60+	33.4%	9
Persons 60+ Living in NHs, Bd & Care, Other Institutions	7,973	41
As a % of All Persons 60+	5.7%	10

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	12
# of Paid Staff FTEs (state/local)	1.00
# of Certified Volunteers (state/local)	39.00
Number of Cases Closed	375
Number of Complaints (for cases closed)	1,125
Total Program Funding	$72,760

Part C. Title VI Grants in State:	
No of Title VI Grantees:	7
Total Allotments:	$532,225

Part D. Title III Clients:	Value	Rank
Total Clients	33,383	46
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	1,454	48
As a % of All Clients	4.4%	44
African American Non-Hispanic Clients as a % of Total Clients	0.1%	52
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	43
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	4.0%	4
Hispanic Clients as a % of Total Clients	0.3%	39
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	4,997	52
As a % of Total Clients	15.0%	50
Minority Clients Below Poverty	0	52
As a % of All Minority Clients	0.0%	52
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	18,358	39
As a % of Total Clients	55.0%	19

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	105
Focal Points Which Are Senior Centers	85
Total Senior Centers	148
Total Senior Centers Receiving OAA $	116

Comments:

Profile of State OAA Programs: Montana

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm Income
Cluster 1:			$ 864,613	$ 2,798,451					
Personal Care	284	7,343	$ 13,116	$ 38,576	34.00%	9	-	1	$2,562
Homemaker	2,692	89,086	$ 240,411	$ 686,889	35.00%	75	11	1	$48,758
Chore	676	7,354	$ 32,049	$ 76,307	42.00%	38	1	2	$1,949
Home Del Meals	6,560	629,347	$ 579,037	$ 1,996,679	29.00%	76	13	4	$700,823
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			30.7%	31.7%					
Cluster 2:			$ 1,434,048	$ 3,770,905					
Congreg Meals	33,383	1,221,208	$ 1,431,124	$ 3,766,116	38.00%	105	12	9	$1,340,194
Nutr Counseling	221	350	$ 1,642	$ 2,415	68.00%	9	-	3	$0
Assisted Transport	47	908	$ 1,282	$ 2,374	54.00%	1	-	1	$34
Cluster 2 As % of Total			51.0%	42.7%					
Cluster 3:			$ 372,049	$ 848,849					
Transportation		237,085	$ 281,517	$ 670,279	42.00%	52	12	3	$73,225
Legal Assistance		1,606	$ 21,498	$ 25,901	83.00%	50	2	2	$0
Nutr Education		1,837	$ 7,991	$ 22,197	36.00%	59	11	3	$0
Info and Assist		2,473	$ 6,841	$ 22,068	31.00%	2	-	2	$0
Outreach		98,218	$ 54,202	$ 108,404	50.00%	29	2	3	$306
Cluster 3 As % of Total			13.2%	9.6%					
Other Services			$ 141,141	$ 1,411,410	10.00%				$32,261
Oth Svcs As % of Total			5.0%	16.0%					
Total			$ 2,811,851	$ 8,829,615		149	28		$2,200,112

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	-	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	1.75	-	1.75
Development	2.25	-	2.25
Administration	1.25	-	1.25
Service Delivery	-	-	-
Access/Care Coordination	1.75	-	1.75
Other Professional Staff	-	-	-
Clerical/Support	-	-	-
Volunteers	1.00	-	
Total State Unit Staff (Incl. Volunteers)	9.00	-	8.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	11.50	2.00	7.25
Development	5.70	1.00	4.10
Serv Del/Access/Care Coord	53.50	1.00	44.75
Planning/Admin/Other	12.80	2.50	6.80
Clerical	5.25	-	1.50
Volunteers	605.00	9.00	
Total AAA Staffing	693.75	15.50	64.40
Number of AAAs in State	11		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$29,233
Chapter 3: Elder Abuse	$0
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$6,316

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,521,116	$1,876,958	$526,695
Transfer From:			
Part B:		$0	$0
Part C1:	$839		$140,416
Part C2:	$0	$0	
Net Transfer $	$839	$0	$140,416
% Increase	0.06%	0.00%	26.66%
Final Allotment After Transfers	$1,521,955	$1,735,703	$667,111

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,356,056
As a % of Title III Exp.	83.79%
Program Income Exp. by Part	
Part B: Supp Svcs	$383,733
Part C1: Cong Nutr	$1,279,668
Part C2: Home Del Nutr	$691,641
Part D: In-Home Svcs	$1,016
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Nebraska

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,652,093	38
Persons 60+ 1996	293,760	36
As % of All Ages	17.8%	13
Persons 60-64	65,054	37
Persons 65-74	117,044	36
Persons 75-84	78,959	36
Persons 85+	32,703	35
# Women/100 Men Age 60+	135	28
Persons 60+ 1990	292,527	36
Minority Persons 60+	9,821	41
Minority Persons 60+ as % of All Persons 60+	3.4%	42
Black Non-Hispanic Persons 60+ as % of All Persons 60+	1.8%	34
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.5%	31
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	23
Hispanic Persons 60+ as % of All Persons 60+	0.7%	30
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	35,011	36
As % of All Persons 60+ (Civilian Non-institutionalized)	12.0%	48
Persons 60+ Below Poverty	30,408	37
As a % of All Persons 60+	10.4%	29
Min. Persons 60+ Below Pov.	2,126	41
As a % of All Minority Persons 60+	21.6%	34
Females 60+ Below Poverty Level	21,779	37
As % of All Females 60+	12.9%	26
Persons 60+ Living in Rural Areas	90,305	33
As a % of All Persons 60+	30.9%	15
Persons 60+ Living in NHs, Bd & Care, Other Institutions	19,246	29
As a % of All Persons 60+	6.6%	6

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	2
# of Paid Staff FTEs (state/local)	3.25
# of Certified Volunteers (state/local)	21.00
Number of Cases Closed	630
Number of Complaints (for cases closed)	1,712
Total Program Funding	$113,517

Part C. Title VI Grants In State:	
No of Title VI Grantees:	3
Total Allotments:	$170,000

Part D. Title III Clients:	Value	Rank
Total Clients	71,222	29
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	3,479	40
As a % of All Clients	4.9%	40
African American Non-Hispanic Clients as a % of Total Clients	4.0%	29
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	40
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.3%	23
Hispanic Clients as a % of Total Clients	0.4%	33
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	25,863	29
As a % of Total Clients	36.3%	26
Minority Clients Below Poverty	2,913	36
As a % of All Minority Clients	83.7%	6
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	42,979	22
As a % of Total Clients	60.3%	14

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	292
Focal Points Which Are Senior Centers	186
Total Senior Centers	185
Total Senior Centers Receiving OAA $	181

Comments:

Profile of State OAA Programs: Nebraska

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,307,657	$ 4,267,108					
Personal Care	868	169,694	$ 180,697	$ 410,675	44.00%	19	-	1	$0
Homemaker	2,128	94,689	$ 299,947	$ 599,894	50.00%	19	-	1	$0
Chore	2,693	35,913	$ 221,149	$ 502,611	44.00%	28	3	1	$0
Home Del Meals	9,120	974,985	$ 605,864	$ 2,753,927	22.00%	108	5	-	$1,336,034
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			32.1%	34.4%					
Cluster 2:			$ 2,174,186	$ 6,248,453					
Congreg Meals	32,340	1,522,103	$ 2,090,670	$ 6,149,029	34.00%	165	7	2	$3,197,952
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	462	18,356	$ 83,516	$ 99,424	84.00%	35	3	-	$0
Cluster 2 As % of Total			53.4%	50.4%					
Cluster 3:			$ 592,696	$ 1,871,108					
Transportation		237,673	$ 131,445	$ 938,893	14.00%	62	-	-	$0
Legal Assistance		8,792	$ 222,795	$ 464,156	48.00%	6	-	2	$3,545
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		95,345	$ 173,794	$ 310,346	56.00%	68	-	-	$0
Outreach		71,445	$ 64,662	$ 157,712	41.00%	57	-	-	$0
Cluster 3 As % of Total			14.5%	15.1%					
Other Services			$ -	$ -	0.00%				$0
Oth Svcs As % of Total			0.0%	0.0%					
Total			$ 4,074,539	$ 12,386,669		188	15		$4,537,531

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.50	-	1.50
Other Pd Professionals By Functional Responsibility:			
Planning	2.40	-	2.40
Development	3.50	-	3.50
Administration	7.60	1.00	7.60
Service Delivery	1.25	-	1.25
Access/Care Coordination	1.50	-	1.50
Other Professional Staff	-	-	-
Clerical/Support	4.80	-	4.80
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	22.60	1.00	22.60

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	14.00	-	6.00
Development	3.75	-	3.25
Serv Del/Access/Care Coord	173.60	8.00	133.30
Planning/Admin/Other	20.50	2.00	14.50
Clerical	45.80	6.00	28.75
Volunteers	80.00	2.00	
Total AAA Staffing	337.65	18.00	185.60
Number of AAAs in State	8		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$29,053
Chapter 3: Elder Abuse	$27,600
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$4,063

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$2,190,801	$2,668,873	$750,696
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$0
Part C2:	$0	$0	
Net Transfer $	$0	$0	$0
% Increase	0.00%	0.00%	0.00%
Final Allotment After Transfers	$2,190,801	$2,668,873	$750,696

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$4,596,077
As a % of Title III Exp.	112.80%
Program Income Exp. by Part	
Part B: Supp Svcs	$549,026
Part C1: Cong Nutr	$2,687,565
Part C2: Home Del Nutr	$1,350,711
Part D: In-Home Svcs	$8,785
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Nevada

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,603,163	39
Persons 60+ 1996	248,214	38
As % of All Ages	15.5%	38
Persons 60-64	64,773	38
Persons 65-74	115,320	37
Persons 75-84	55,532	40
Persons 85+	12,589	47
# Women/100 Men Age 60+	111	50
Persons 60+ 1990	187,908	41
Minority Persons 60+	20,155	35
Minority Persons 60+ as % of All Persons 60+	10.7%	27
Black Non-Hispanic Persons 60+ as % of All Persons 60+	3.1%	28
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	2.8%	10
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.9%	9
Hispanic Persons 60+ as % of All Persons 60+	3.9%	9
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	25,392	41
As % of All Persons 60+ (Civilian Non-institutionalized)	13.5%	37
Persons 60+ Below Poverty	17,434	41
As a % of All Persons 60+	9.3%	40
Min. Persons 60+ Below Pov.	3,200	38
As a % of All Minority Persons 60+	15.9%	47
Females 60+ Below Poverty Level	10,578	46
As % of All Females 60+	11.1%	43
Persons 60+ Living in Rural Areas	14,527	50
As a % of All Persons 60+	7.7%	48
Persons 60+ Living in NHs, Bd & Care, Other Institutions	4,456	49
As a % of All Persons 60+	2.4%	50

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	4
# of Paid Staff FTEs (state/local)	7.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	2,338
Number of Complainis (for cases closed)	7,572
Total Program Funding	$245,343

Part C. Title VI Grants In State:	
No of Title VI Grantees:	11
Total Allotments:	$607,000

Part D. Title III Clients:	Value	Rank
Total Clients	25,804	48
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	2,577	42
As a % of All Clients	10.0%	31
African American Non-Hispanic Clients as a % of Total Clients	3.5%	30
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.0%	14
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	1.7%	8
Hispanic Clients as a % of Total Clients	3.7%	12
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	7,600	46
As a % of Total Clients	29.5%	38
Minority Clients Below Poverty	1,440	42
As a % of All Minority Clients	55.9%	34
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	14,175	44
As a % of Total Clients	54.9%	20

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	39
Focal Points Which Are Senior Centers	39
Total Senior Centers	61
Total Senior Centers Receiving OAA $	39

Comments:

Profile of State OAA Programs: Nevada

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,555,147	$ 4,022,412					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	650	21,367	$ 296,341	$ 406,296	72.58%	7	-	-	$16,606
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	5,393	509,847	$ 985,077	$ 1,894,379	52.00%	24	-	-	$299,832
Adult Day Care/Hlth	562	288,037	$ 224,979	$ 1,597,862	14.08%	3	1	-	$159,338
Case Mgt	1,712	1,933	$ 48,750	$ 121,875	40.00%	1	-	-	$2,400
Cluster 1 As % of Total			38.8%	42.6%					
Cluster 2:			$ 1,286,370	$ 2,572,740					
Congreg Meals	15,858	646,972	$ 1,286,370	$ 2,572,740	50.00%	26	2	-	$695,476
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			32.1%	27.3%					
Cluster 3:			$ 627,118	$ 1,526,225					
Transportation		152,723	$ 289,430	$ 556,596	52.00%	24	1	-	$80,701
Legal Assistance		15,809	$ 149,000	$ 745,000	20.00%	2	-	-	$31,711
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		7,292	$ 188,688	$ 224,629	84.00%	6	-	-	$1,000
Outreach		-	$ -	$ -	0.00%	-	-	-	$0
Cluster 3 As % of Total			15.7%	16.2%					
Other Services			$ 536,482	$ 1,317,167	40.73%				$55,340
Oth Svcs As % of Total			13.4%	14.0%					
Total			$ 4,005,117	$ 9,438,543		42	3		$1,342,404

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	2.20	-	1.10
Other Pd Professionals By Functional Responsibility:			
Planning	3.80	-	3.30
Development	-	-	-
Administration	9.20	1.00	6.20
Service Delivery	8.20	1.00	3.00
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	2.60	-	0.90
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	26.00	2.00	14.50

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	*		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$17,942
Chapter 3: Elder Abuse	$22,414
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$9,952

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,560,066	$1,895,415	$542,494
Transfer From:			
Part B:		$0	$0
Part C1:	$150,000		$150,000
Part C2:	$0	$0	
Net Transfer $	$150,000	$0	$150,000
% Increase	9.61%	0.00%	27.65%
Final Allotment After Transfers	$1,710,066	$1,595,415	$692,494

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$773,074
As a % of Title III Exp.	19.30%
Program Income Exp. by Part	
Part B: Supp Svcs	$91,929
Part C1: Cong Nutr	$465,560
Part C2: Home Del Nutr	$203,207
Part D: In-Home Svcs	$12,378
Part F: Dis Prv/Hlth Prm	$0

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: New Hampshire

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,162,481	43
Persons 60+ 1996	178,195	44
As % of All Ages	15.3%	39
Persons 60-64	38,564	43
Persons 65-74	76,480	43
Persons 75-84	46,910	44
Persons 85+	16,241	41
# Women/100 Men Age 60+	133	31
Persons 60+ 1990	169,620	43
Minority Persons 60+	1,278	50
Minority Persons 60+ as % of All Persons 60+	0.8%	50
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	46
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	40
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	39
Hispanic Persons 60+ as % of All Persons 60+	0.3%	46
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	22,900	43
As % of All Persons 60+ (Civilian Non-institutionalized)	13.5%	38
Persons 60+ Below Poverty	14,953	46
As a % of All Persons 60+	8.8%	43
Min. Persons 60+ Below Pov.	236	50
As a % of All Minority Persons 60+	18.5%	46
Females 60+ Below Poverty Level	10,998	44
As % of All Females 60+	11.2%	42
Persons 60+ Living in Rural Areas	55,423	38
As a % of All Persons 60+	32.7%	11
Persons 60+ Living in NHs, Bd & Care, Other Institutions	8,893	39
As a % of All Persons 60+	5.2%	14

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	1
# of Paid Staff FTEs (state/local)	8.00
# of Certified Volunteers (state/local)	47.00
Number of Cases Closed	520
Number of Complaints (for cases closed)	816
Total Program Funding	$334,417

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	35,361	42
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	137	52
As a % of All Clients	0.4%	53
African American Non-Hispanic Clients as a % of Total Clients	0.1%	50
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	39
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	45
Hispanic Clients as a % of Total Clients	0.2%	40
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	18,176	38
As a % of Total Clients	51.4%	11
Minority Clients Below Poverty	0	53
As a % of All Minority Clients	0.0%	53
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	21,767	37
As a % of Total Clients	61.6%	12

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	16
Focal Points Which Are Senior Centers	11
Total Senior Centers	63
Total Senior Centers Receiving OAA $	0

Comments:

Profile of State OAA Programs: New Hampshire

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 1,336,046	$ 8,791,728					
Personal Care	335	49,731	$ 117,655	$ 619,237	19.00%	13	-	-	$497,701
Homemaker	841	221,680	$ 180,474	$ 2,255,925	8.00%	11	-	-	$2,266,169
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	5,232	979,226	$ 943,190	$ 5,239,944	18.00%	11	-	-	$3,243,606
Adult Day Care/Hlth	169	116,542	$ 94,727	$ 676,621	14.00%	5	-	-	$586,354
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			35.3%	65.5%					
Cluster 2:			$ 1,439,820	$ 2,285,429					
Congreg Meals	12,122	420,605	$ 1,439,820	$ 2,285,429	63.00%	10	-	-	$770,264
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			38.1%	17.0%					
Cluster 3:			$ 875,171	$ 2,208,672					
Transportation		321,495	$ 694,121	$ 1,692,978	41.00%	15	-	-	$819,454
Legal Assistance		4,865	$ 108,221	$ 245,957	44.00%	1	-	-	$128,752
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		-	$ -	$ -	0.00%	-	-	-	$0
Outreach		14,376	$ 72,829	$ 269,737	27.00%	4	-	-	$179,193
Cluster 3 As % of Total			23.1%	16.5%					
Other Services			$ 130,906	$ 130,906	100.00%				$467,467
Oth Svcs As % of Total			3.5%	1.0%					
Total			$ 3,781,943	$ 13,416,734		39	-		$8,958,982

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	-	3.00
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	-	1.00
Development	7.00	-	7.00
Administration	5.50	-	2.00
Service Delivery	64.00	1.00	-
Access/Care Coordination	6.00	-	6.00
Other Professional Staff	1.00	-	-
Clerical/Support	17.50	-	2.00
Volunteers	8.00	-	
Total State Unit Staff (incl. Volunteers)	116.00	1.00	21.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	*		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$13,458
Chapter 3: Elder Abuse	$13,458
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,542,916	$1,894,018	$528,931
Transfer From:			
Part B:		$0	$0
Part C1:	$473,505		$321,983
Part C2:	$0	$0	
Net Transfer $	$473,505	$0	$321,983
% Increase	30.69%	0.00%	60.87%
Final Allotment After Transfers	$2,016,421	$1,098,530	$850,914

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$4,059,060
As a % of Title III Exp.	107.33%
Program Income Exp. by Part	
Part B: Supp Svcs	$2,504,124
Part C1: Cong Nutr	$476,532
Part C2: Home Del Nutr	$1,076,404
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: New Jersey

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	7,987,933	9
Persons 60+ 1996	1,410,903	9
As % of All Ages	17.7%	17
Persons 60-64	311,307	9
Persons 65-74	604,492	9
Persons 75-84	376,468	9
Persons 85+	118,636	9
# Women/100 Men Age 60+	139	20
Persons 60+ 1990	1,443,759	9
Minority Persons 60+	194,827	8
Minority Persons 60+ as % of All Persons 60+	13.5%	20
Black Non-Hispanic Persons 60+ as % of All Persons 60+	7.8%	18
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	2.0%	11
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	46
Hispanic Persons 60+ as % of All Persons 60+	3.5%	10
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	227,494	9
As % of All Persons 60+ (Civilian Non-institutionalized)	15.8%	23
Persons 60+ Below Poverty	114,409	17
As a % of All Persons 60+	7.9%	48
Min. Persons 60+ Below Pov.	36,884	17
As a % of All Minority Persons 60+	18.9%	45
Females 60+ Below Poverty Level	77,561	18
As % of All Females 60+	9.5%	48
Persons 60+ Living in Rural Areas	90,551	32
As a % of All Persons 60+	6.3%	50
Persons 60+ Living in NHs, Bd & Care, Other Institutions	51,451	12
As a % of All Persons 60+	3.6%	41

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	4
# of Paid Staff FTEs (state/local)	21.00
# of Certified Volunteers (state/local)	81.00
Number of Cases Closed	1,842
Number of Complaints (for cases closed)	2,445
Total Program Funding	$988,000

Part C. Title VI Grants In State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	438,239	4
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	83,893	5
As a % of All Clients	19.1%	21
African American Non-Hispanic Clients as a % of Total Clients	12.8%	16
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.0%	12
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	39
Hispanic Clients as a % of Total Clients	5.2%	9
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	111,506	6
As a % of Total Clients	25.4%	42
Minority Clients Below Poverty	47,340	6
As a % of All Minority Clients	56.4%	32
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	0	53
As a % of Total Clients	0.0%	53

Data Based on Registered Clients Only
are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	185
Focal Points Which Are Senior Centers	78
Total Senior Centers	246
Total Senior Centers Receiving OAA $	136

Comments:

Profile of State OAA Programs: New Jersey

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 5,752,846	$ 14,814,810					
Personal Care	1,650	79,209	$ 877,361	$ 1,539,230	57.00%	27	1	-	$48,647
Homemaker	1,023	34,060	$ 348,655	$ 601,128	58.00%	19	1	1	$41,469
Chore	1,551	11,032	$ 116,976	$ 205,221	57.00%	13	3	1	$3,389
Home Del Meals	24,095	2,790,534	$ 3,824,292	$ 11,449,976	33.40%	44	3	10	$2,115,408
Adult Day Care/Hlth	296	47,008	$ 135,327	$ 229,368	59.00%	15	1	1	$22,736
Case Mgt	4,258	29,181	$ 450,235	$ 789,886	57.00%	25	4	3	$13,045
Cluster 1 As % of Total			24.3%	35.3%					
Cluster 2:			$ 8,885,220	$ 12,606,390					
Congreg Meals	36,649	2,420,562	$ 8,826,207	$ 12,431,277	71.00%	30	3	11	$2,300,507
Nutr Counseling	1,686	1,686	$ -	$ -	0.00%	26	-	11	$0
Assisted Transport	764	7,296	$ 59,013	$ 175,113	33.70%	14	2	1	$29,686
Cluster 2 As % of Total			37.6%	30.0%					
Cluster 3:			$ 5,023,575	$ 8,813,289					
Transportation		1,044,402	$ 2,219,606	$ 3,894,046	57.00%	50	3	3	$64,311
Legal Assistance		24,550	$ 851,860	$ 1,494,491	57.00%	24	3	1	$24,682
Nutr Education		2,856	$ -	$ -	0.00%	30	2	11	$0
Info and Assist		348,370	$ 1,894,093	$ 3,322,970	57.00%	67	15	19	$54,879
Outreach		33,908	$ 58,016	$ 101,782	57.00%	39	15	13	$1,681
Cluster 3 As % of Total			21.3%	21.0%					
Other Services			$ 3,976,662	$ 5,763,278	69.00%				$62,018
Oth Svcs As % of Total			16.8%	13.7%					
Total			$ 23,638,303	$ 41,997,768		423	57		$4,782,457

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	10.00	-	7.00
Other Pd Professionals By Functional Responsibility:			
Planning	5.00	1.00	4.00
Development	6.00	-	2.00
Administration	14.00	4.00	9.00
Service Delivery	38.00	8.00	6.00
Access/Care Coordination	4.00	1.00	2.00
Other Professional Staff	6.00	4.00	6.00
Clerical/Support	17.00	7.00	8.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	100.00	25.00	44.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	26.00	3.00	13.00
Development	8.50	4.00	5.50
Serv Del/Access/Care Coord	171.57	32.00	137.57
Planning/Admin/Other	59.60	11.50	46.60
Clerical	58.10	9.50	42.85
Volunteers	1,474.00	63.00	
Total AAA Staffing	1,797.77	123.00	247.52
Number of AAAs in State	21		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$136,381
Chapter 3: Elder Abuse	$147,183
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$9,754,011	$11,849,828	$3,391,916
Transfer From:			
Part B:		$0	$70,358
Part C1:	$0		$570,886
Part C2:	$0	$0	
Net Transfer $	$0	$0	$641,244
% Increase	0.00%	0.00%	18.91%
Final Allotment After Transfers	$9,683,653	$11,278,942	$4,033,160

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$4,621,283
As a % of Title III Exp.	19.55%
Program Income Exp. by Part	
Part B: Supp Svcs	$287,061
Part C1: Cong Nutr	$2,228,254
Part C2: Home Del Nutr	$2,063,817
Part D: In-Home Svcs	$37,764
Part F: Dis Prv/Hlth Prm	$4,387

Comments:

Title III expenditures for "nutrition counseling" and "nutrition education" incorporated in totals for "congregate meals."

Profile of State OAA Programs: New Mexico

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,713,407	37
Persons 60+ 1996	254,400	37
As % of All Ages	14.8%	45
Persons 60-64	65,276	36
Persons 65-74	108,887	38
Persons 75-84	61,339	37
Persons 85+	18,898	39
# Women/100 Men Age 60+	123	44
Persons 60+ 1990	281,387	37
Minority Persons 60+	87,779	22
Minority Persons 60+ as % of All Persons 60+	31.2%	4
Black Non-Hispanic Persons 60+ as % of All Persons 60+	1.0%	38
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	5.6%	3
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	3.6%	3
Hispanic Persons 60+ as % of All Persons 60+	21.0%	2
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	34,450	37
As % of All Persons 60+ (Civilian Non-institutionalized)	12.2%	44
Persons 60+ Below Poverty	50,319	33
As a % of All Persons 60+	17.9%	10
Min. Persons 60+ Below Pov.	26,198	21
As a % of All Minority Persons 60+	29.8%	13
Females 60+ Below Poverty Level	22,638	36
As % of All Females 60+	18.4%	15
Persons 60+ Living in Rural Areas	38,994	44
As a % of All Persons 60+	13.9%	37
Persons 60+ Living in NHs, Bd & Care, Other Institutions	6,538	43
As a % of All Persons 60+	2.3%	51

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	5
# of Paid Staff FTEs (state/local)	7.50
# of Certified Volunteers (state/local)	91.00
Number of Cases Closed	1,735
Number of Complaints (for cases closed)	6,811
Total Program Funding	$332,477

Part C. Title VI Grants In State:	
No of Title VI Grantees:	16
Total Allotments:	$1,063,450

Part D. Title III Clients:	Value	Rank
Total Clients	130,498	21
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	52,930	8
As a % of All Clients	40.6%	5
African American Non-Hispanic Clients as a % of Total Clients	2.3%	35
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.4%	25
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	1.3%	9
Hispanic Clients as a % of Total Clients	36.6%	2
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	79,935	12
As a % of Total Clients	61.3%	4
Minority Clients Below Poverty	37,921	7
As a % of All Minority Clients	71.6%	17
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	46,554	20
As a % of Total Clients	35.7%	34

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	126
Focal Points Which Are Senior Centers	122
Total Senior Centers	143
Total Senior Centers Receiving OAA $	135

Comments:

Profile of State OAA Programs: New Mexico

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 474,382	$ 5,946,205					
Personal Care	152	6,108	$ 4,668	$ 27,459	17.00%	7	-	-	$0
Homemaker	1,952	78,217	$ 56,374	$ 1,127,480	5.00%	23	2	-	$0
Chore	705	10,911	$ 7,013	$ 58,442	12.00%	5	-	-	$1,716
Home Del Meals	10,487	1,086,203	$ 391,635	$ 3,263,625	12.00%	38	5	-	$493,298
Adult Day Care/Hlth	957	123,251	$ 7,535	$ 753,500	1.00%	5	-	-	$79,781
Case Mgt	4,700	30,201	$ 7,157	$ 715,700	1.00%	14	-	-	$0
Cluster 1 As % of Total	-	-	12.9%	32.2%					
Cluster 2:			$ 1,919,758	$ 6,442,963					
Congreg Meals	39,755	1,474,707	$ 1,906,627	$ 6,355,423	30.00%	38	5	-	$1,404,035
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	2,106	40,328	$ 13,131	$ 87,540	15.00%	15	2	-	$0
Cluster 2 As % of Total			52.4%	34.9%					
Cluster 3:			$ 859,269	$ 3,677,150					
Transportation		589,051	$ 373,836	$ 1,967,556	19.00%	53	6	-	$55,450
Legal Assistance		15,061	$ 97,670	$ 390,680	25.00%	4	-	-	$0
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		565,685	$ 336,344	$ 1,121,147	30.00%	57	6	1	$0
Outreach		20,248	$ 51,419	$ 197,765	26.00%	39	4	1	$0
Cluster 3 As % of Total			23.4%	19.9%					
Other Services			$ 411,284	$ 2,419,318	17.00%				$16,989
Oth Svcs As % of Total			11.2%	13.1%					
Total			$ 3,664,693	$ 18,485,636		67	6		$2,051,269

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	3.00	3.00	3.00
Other Pd Professionals By Functional Responsibility			
Planning	7.50	5.50	3.50
Development	1.00	1.00	1.00
Administration	10.00	10.00	10.00
Service Delivery	9.00	3.00	5.00
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	4.50	3.00	4.00
Volunteers	50.00	25.00	
Total State Unit Staff (Incl. Volunteers)	85.00	50.50	26.50

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	3.00	1.00	3.00
Development	0.45	-	0.45
Serv Del/Access/Care Coord	3.25	-	3.25
Planning/Admin/Other	7.30	5.50	7.30
Clerical	2.00	1.50	1.50
Volunteers	42.00	21.00	
Total AAA Staffing	58.00	29.00	15.50
Number of AAAs in State	6		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$23,612
Chapter 3: Elder Abuse	$18,474
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$1,535,749	$1,859,127	$608,591
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$0
Part C2:	$0	$0	
Net Transfer $	$0	$0	$0
% Increase	0.00%	0.00%	0.00%
Final Allotment After Transfers	$1,535,749	$1,859,127	$608,591

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$1,941,565
As a % of Title III Exp.	52.98%
Program Income Exp. by Part	
Part B: Supp Svcs	$100,430
Part C1: Cong Nutr	$1,389,533
Part C2: Home Del Nutr	$451,602
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: New York

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	18,184,774	3
Persons 60+ 1996	3,149,351	3
As % of All Ages	17.3%	21
Persons 60-64	714,958	2
Persons 65-74	1,335,434	3
Persons 75-84	815,031	3
Persons 85+	283,928	2
# Women/100 Men Age 60+	142	7
Persons 60+ 1990	3,371,499	2
Minority Persons 60+	632,989	3
Minority Persons 60+ as % of All Persons 60+	18.8%	13
Black Non-Hispanic Persons 60+ as % of All Persons 60+	9.8%	15
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	3.5%	6
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	31
Hispanic Persons 60+ as % of All Persons 60+	5.3%	8
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	554,224	2
As % of All Persons 60+ (Civilian Non-institutionalized)	16.4%	19
Persons 60+ Below Poverty	392,575	2
As a % of All Persons 60+	11.6%	21
Min. Persons 60+ Below Pov.	157,503	3
As a % of All Minority Persons 60+	24.9%	21
Females 60+ Below Poverty Level	251,126	2
As % of All Females 60+	13.2%	23
Persons 60+ Living in Rural Areas	331,573	4
As a % of All Persons 60+	9.8%	44
Persons 60+ Living in NHs, Bd & Care, Other Institutions	144,141	2
As a % of All Persons 60+	4.3%	26

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	49
# of Paid Staff FTEs (state/local)	44.50
# of Certified Volunteers (state/local)	550.00
Number of Cases Closed	5,900
Number of Complaints (for cases closed)	6,284
Total Program Funding	$3,196,202

Part C. Title VI Grants in State:	
No of Title VI Grantees:	3
Total Allotments:	$276,950

Part D. Title III Clients:	Value	Rank
Total Clients	613,733	1
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	103,421	3
As a % of All Clients	16.9%	24
African American Non-Hispanic Clients as a % of Total Clients	9.7%	19
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.5%	9
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.4%	19
Hispanic Clients as a % of Total Clients	5.3%	8
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	252,226	1
As a % of Total Clients	41.1%	21
Minority Clients Below Poverty	63,607	4
As a % of All Minority Clients	61.5%	25
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	130,405	2
As a % of Total Clients	21.2%	45

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	593
Focal Points Which Are Senior Centers	439
Total Senior Centers	709
Total Senior Centers Receiving OAA $	534

Comments:

Profile of State OAA Programs: New York

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 10,218,290	$ 104,550,694					
Personal Care	8,490	1,809,870	$ 568,712	$ 22,390,236	2.54%	214	12	9	$1,329,843
Homemaker	9,035	621,743	$ 149,930	$ 7,610,660	1.97%	209	6	9	$437,346
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	53,148	10,908,709	$ 9,026,583	$ 51,171,105	17.64%	605	87	31	$7,724,672
Adult Day Care/Hlth	1,935	654,831	$ 406,166	$ 3,702,516	10.97%	178	3	7	$395,875
Case Mgt	37,384	546,024	$ 66,899	$ 19,676,176	0.34%	77	11	49	$0
Cluster 1 As % of Total			17.9%	38.1%					
Cluster 2:			$ 26,213,057	$ 77,485,892					
Congreg Meals	168,140	13,459,788	$ 25,604,404	$ 76,045,156	33.67%	148	4	31	$6,351,342
Nutr Counseling	10,562	18,225	$ 351,745	$ 829,196	42.42%	113	12	31	$0
Assisted Transport	7,017	166,090	$ 256,908	$ 611,540	42.01%	199	56	13	$0
Cluster 2 As % of Total			45.9%	28.3%					
Cluster 3:			$ 12,709,138	$ 42,291,547					
Transportation		2,588,111	$ 4,715,344	$ 13,996,272	33.69%	297	24	31	$837,137
Legal Assistance		80,074	$ 1,988,256	$ 3,109,565	63.94%	177	33	21	$266,550
Nutr Education		14,823	$ 294,758	$ 723,865	40.72%	289	88	36	$0
Info and Assist		2,280,421	$ 4,643,246	$ 22,047,702	21.06%	292	92	59	$0
Outreach		142,982	$ 1,067,534	$ 2,414,143	44.22%	60	4	53	$0
Cluster 3 As % of Total			22.2%	15.4%					
Other Services			$ 8,026,016	$ 49,851,031	16.10%				$145,898
Oth Svcs As % of Total			14.0%	18.2%					
Total			$ 57,166,501	$ 274,179,164		1,671	127		$17,498,663

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	11.00	1.00	5.00
Other Pd Professionals By Functional Responsibility:			
Planning	38.60	3.80	19.80
Development	7.95	1.00	6.90
Administration	43.90	4.00	26.10
Service Delivery	15.20	2.00	6.20
Access/Care Coordination	2.00	1.00	1.00
Other Professional Staff	7.55	-	5.00
Clerical/Support	37.90	5.00	17.40
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	164.00	17.80	87.40

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	118.28	6.00	80.61
Development	48.32	7.50	34.18
Serv Del/Access/Care Coord	1,036.43	194.57	612.86
Planning/Admin/Other	322.00	43.18	145.48
Clerical	368.44	99.46	206.42
Volunteers	1,115.13	58.50	
Total AAA Staffing	3,008.60	409.21	1,079.55
Number of AAAs in State	59		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$262,882
Chapter 3: Elder Abuse	$314,811
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$23,166,064	$28,213,884	$7,953,281
Transfer From:			
Part B:		$0	$651,384
Part C1:	$0		$123,442
Part C2:	$0	$0	
Net Transfer $	$0	$0	$774,826
% Increase	0.00%	0.00%	9.74%
Final Allotment After Transfers	$22,514,700	$28,090,442	$8,728,107

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$10,792,947
As a % of Title III Exp.	16.88%
Program Income Exp. by Part	
Part B: Supp Svcs	$998,600
Part C1: Cong Nutr	$6,094,015
Part C2: Home Del Nutr	$3,663,852
Part D: In-Home Svcs	$24,136
Part F: Dis Prv/Hlth Prm	$12,344

Comments:

Profile of State OAA Programs: North Carolina

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	7,322,870	11
Persons 60+ 1996	1,212,020	10
As % of All Ages	16.6%	30
Persons 60-64	294,948	10
Persons 65-74	526,715	10
Persons 75-84	298,098	11
Persons 85+	92,259	12
# Women/100 Men Age 60+	142	8
Persons 60+ 1990	1,095,541	10
Minority Persons 60+	198,293	7
Minority Persons 60+ as % of All Persons 60+	18.1%	15
Black Non-Hispanic Persons 60+ as % of All Persons 60+	16.9%	7
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	41
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.7%	11
Hispanic Persons 60+ as % of All Persons 60+	0.3%	45
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	209,420	10
As % of All Persons 60+ (Civilian Non-institutionalized)	19.1%	11
Persons 60+ Below Poverty	184,402	9
As a % of All Persons 60+	16.8%	12
Min. Persons 60+ Below Pov.	66,106	8
As a % of All Minority Persons 60+	33.3%	11
Females 60+ Below Poverty Level	131,620	9
As % of All Females 60+	20.3%	10
Persons 60+ Living in Rural Areas	400,779	3
As a % of All Persons 60+	36.6%	7
Persons 60+ Living in NHs, Bd & Care, Other Institutions	44,671	15
As a % of All Persons 60+	4.1%	31

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	18
# of Paid Staff FTEs (state/local)	24.05
# of Certified Volunteers (state/local)	1,100.00
Number of Cases Closed	836
Number of Complaints (for cases closed)	2,965
Total Program Funding	$1,099,294

Part C. Title VI Grants In State:	
No of Title VI Grantees:	1
Total Allotments:	$96,725

Part D. Title III Clients:	Value	Rank
Total Clients	60,932	32
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	20,703	20
As a % of All Clients	34.0%	10
African American Non-Hispanic Clients as a % of Total Clients	33.1%	5
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.7%	21
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	38
Hispanic Clients as a % of Total Clients	0.1%	45
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	36,040	25
As a % of Total Clients	59.1%	6
Minority Clients Below Poverty	15,629	17
As a % of All Minority Clients	75.5%	12
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	25,049	34
As a % of Total Clients	41.1%	29

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	198
Focal Points Which Are Senior Centers	112
Total Senior Centers	132
Total Senior Centers Receiving OAA $	44

Comments:

Profile of State OAA Programs: North Carolina

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 5,600,984	$ 16,772,544					
Personal Care	4,122	629,719	$ 1,398,327	$ 6,356,032	22.00%	103	-	1	$171,573
Homemaker	4,060	425,531	$ 956,877	$ 4,556,557	21.00%	110	-	-	$117,559
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	15,730	2,521,797	$ 3,073,164	$ 5,037,974	61.00%	85	-	3	$476,571
Adult Day Care/Hlth	786	76,205	$ 172,616	$ 821,981	21.00%	43	2	-	$22,241
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			38.9%	52.1%					
Cluster 2:			$ 4,883,118	$ 7,512,489					
Congreg Meals	31,997	2,730,000	$ 4,883,118	$ 7,512,489	65.00%	80	1	3	$955,609
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			33.9%	23.3%					
Cluster 3:			$ 2,601,577	$ 5,957,574					
Transportation		1,466,697	$ 2,503,582	$ 5,563,516	45.00%	103	4	1	$155,704
Legal Assistance		10,133	$ 243,716	$ 324,955	75.00%	37	-	-	$4,460
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		3,300	$ 5,017	$ 11,149	45.00%	23	2	-	$312
Outreach		27,141	$ 49,262	$ 57,955	85.00%	5	2	-	$0
Cluster 3 As % of Total			18.5%	18.5%					
Other Services			$ 1,102,782	$ 1,969,254	56.00%				$6,354
Oth Svcs As % of Total			7.7%	6.1%					
Total			$ 14,388,461	$ 32,211,661		276	13		$1,910,383

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	-	3.86
Other Pd Professionals By Functional Responsibility:			
Planning	5.40	0.30	4.09
Development	5.10	0.30	3.33
Administration	12.50	2.40	9.34
Service Delivery	1.00	-	0.85
Access/Care Coordination	-	-	-
Other Professional Staff	1.00	-	0.75
Clerical/Support	4.00	1.00	3.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	34.00	4.00	25.20

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	20.64	-	14.16
Development	4.97	-	3.04
Serv Del/Access/Care Coord	35.60	5.95	22.47
Planning/Admin/Other	30.29	1.63	20.66
Clerical	7.66	0.89	5.20
Volunteers	2.70	-	
Total AAA Staffing	101.86	8.47	65.53
Number of AAAs in State	18		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$115,366
Chapter 3: Elder Abuse	$122,704
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$7,067,841	$6,531,844	$2,536,513
Transfer From:			
Part B:		$0	$0
Part C1:	$1,184,052		$855,864
Part C2:	$0	$0	
Net Transfer $	$1,184,052	$0	$855,864
% Increase	16.75%	0.00%	33.74%
Final Allotment After Transfers	$8,251,893	$6,491,928	$3,392,377

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$914,618
As a % of Title III Exp.	6.36%
Program Income Exp. by Part	
Part B: Supp Svcs	$237,643
Part C1: Cong Nutr	$449,839
Part C2: Home Del Nutr	$227,136
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: North Dakota

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	643,539	48
Persons 60+ 1996	119,615	48
As % of All Ages	18.6%	8
Persons 60-64	26,261	48
Persons 65-74	46,294	48
Persons 75-84	33,571	47
Persons 85+	13,489	46
# Women/100 Men Age 60+	128	41
Persons 60+ 1990	118,310	47
Minority Persons 60+	1,852	49
Minority Persons 60+ as % of All Persons 60+	1.6%	48
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.0%	51
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.1%	51
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	1.3%	7
Hispanic Persons 60+ as % of All Persons 60+	0.1%	52
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	12,620	49
As % of All Persons 60+ (Civilian Non-institutionalized)	10.7%	52
Persons 60+ Below Poverty	14,875	47
As a % of All Persons 60+	12.6%	18
Min. Persons 60+ Below Pov.	535	49
As a % of All Minority Persons 60+	28.9%	16
Females 60+ Below Poverty Level	9,875	47
As % of All Females 60+	14.9%	19
Persons 60+ Living in Rural Areas	51,630	40
As a % of All Persons 60+	43.6%	2
Persons 60+ Living in NHs, Bd & Care, Other Institutions	8,393	40
As a % of All Persons 60+	7.1%	1

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	4
# of Paid Staff FTEs (state/local)	5.00
# of Certified Volunteers (state/local)	60.00
Number of Cases Closed	554
Number of Complaints (for cases closed)	661
Total Program Funding	$103,719

Part C. Title VI Grants In State:	
No of Title VI Grantees:	5
Total Allotments:	$394,950

Part D. Title III Clients:	Value	Rank
Total Clients	54,614	36
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	1,338	49
As a % of All Clients	2.4%	47
African American Non-Hispanic Clients as a % of Total Clients	0.1%	48
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	45
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	2.2%	6
Hispanic Clients as a % of Total Clients	0.1%	44
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	18,418	35
As a % of Total Clients	33.7%	29
Minority Clients Below Poverty	1,231	44
As a % of All Minority Clients	92.0%	3
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	31,421	29
As a % of Total Clients	57.5%	16

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	8
Focal Points Which Are Senior Centers	0
Total Senior Centers	295
Total Senior Centers Receiving OAA $	5

Comments:

Profile of State OAA Programs: North Dakota

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 718,623	$ 1,927,336					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	-	-	$ -	$ -	0.00%	-	-	-	$0
Chore	914	8,647	$ 72,610	$ 81,584	89.00%	7	1	-	$27,634
Home Del Meals	7,930	563,570	$ 646,013	$ 1,845,751	35.00%	29	2	-	$830,590
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			20.0%	25.1%					
Cluster 2:			$ 1,150,134	$ 3,375,011					
Congreg Meals	23,473	953,331	$ 1,145,917	$ 3,370,344	34.00%	29	2	-	$1,586,695
Nutr Counseling	159	159	$ 2,887	$ 3,173	91.00%	29	2	-	$0
Assisted Transport	49	5,571	$ 1,330	$ 1,494	89.00%	1	1	-	$0
Cluster 2 As % of Total			32.0%	43.9%					
Cluster 3:			$ 1,280,941	$ 1,696,033					
Transportation		214,063	$ 281,099	$ 493,156	57.00%	11	3	-	$104,748
Legal Assistance		3,500	$ 125,000	$ 142,045	88.00%	1	-	-	$0
Nutr Education		1,570	$ 8,573	$ 9,421	91.00%	29	2	-	$0
Info and Assist		1,231	$ 41,582	$ 45,695	91.00%	1	-	-	$0
Outreach	185,960	$ 824,687	$ 1,005,716	82.00%	30	3	-	$17,550
Cluster 3 As % of Total			35.6%	22.1%					
Other Services			$ 446,342	$ 686,680	65.00%				$76,200
Oth Svcs As % of Total			12.4%	8.9%					
Total			$ 3,596,040	$ 7,685,060		48	5		$2,643,417

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	2.00	-	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	2.33	-	1.33
Development	6.08	-	1.33
Administration	6.08	-	1.33
Service Delivery	3.50	-	3.00
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	4.00	-	3.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	24.00	-	12.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	*		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$1,616
Chapter 3: Elder Abuse	$14,783
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$2,273

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,501,529	$1,863,498	$526,695
Transfer From:			
Part B:		$0	$0
Part C1:	$37,043		$82,248
Part C2:	$0	$0	
Net Transfer $	$37,043	$0	$82,248
% Increase	2.47%	0.00%	15.62%
Final Allotment After Transfers	$1,538,572	$1,744,207	$608,943

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,968,514
As a % of Title III Exp.	82.55%
Program Income Exp. by Part	
Part B: Supp Svcs	$285,568
Part C1: Cong Nutr	$1,652,399
Part C2: Home Del Nutr	$1,050,547
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: Ohio

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	11,172,782	7
Persons 60+ 1996	1,938,179	6
As % of All Ages	17.3%	20
Persons 60-64	441,245	6
Persons 65-74	833,761	6
Persons 75-84	501,875	7
Persons 85+	161,298	7
# Women/100 Men Age 60+	139	18
Persons 60+ 1990	1,911,145	7
Minority Persons 60+	170,666	12
Minority Persons 60+ as % of All Persons 60+	8.9%	28
Black Non-Hispanic Persons 60+ as % of All Persons 60+	7.9%	17
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.4%	35
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	41
Hispanic Persons 60+ as % of All Persons 60+	0.5%	36
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	316,825	7
As % of All Persons 60+ (Civilian Non-institutionalized)	16.6%	16
Persons 60+ Below Poverty	185,094	8
As a % of All Persons 60+	9.7%	37
Min. Persons 60+ Below Pov.	39,641	16
As a % of All Minority Persons 60+	23.2%	27
Females 60+ Below Poverty Level	134,641	7
As % of All Females 60+	12.1%	34
Persons 60+ Living in Rural Areas	319,827	6
As a % of All Persons 60+	16.7%	35
Persons 60+ Living in NHs, Bd & Care, Other Institutions	93,350	6
As a % of All Persons 60+	4.9%	19

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	12
# of Paid Staff FTEs (state/local)	54.00
# of Certified Volunteers (state/local)	216.00
Number of Cases Closed	3,091
Number of Complaints (for cases closed)	4,467
Total Program Funding	$3,101,079

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	185,109	14
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	20,451	21
As a % of All Clients	11.0%	30
African American Non-Hispanic Clients as a % of Total Clients	10.3%	18
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.2%	32
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	46
Hispanic Clients as a % of Total Clients	0.4%	32
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	68,025	15
As a % of Total Clients	36.7%	25
Minority Clients Below Poverty	10,784	23
As a % of All Minority Clients	52.7%	38
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	58,719	17
As a % of Total Clients	31.7%	36

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	231
Focal Points Which Are Senior Centers	167
Total Senior Centers	274
Total Senior Centers Receiving OAA $	181

Comments:

Profile of State OAA Programs: Ohio

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 9,017,674	$ 31,711,476					
Personal Care	3,140	112,697	$ 556,984	$ 2,142,246	26.00%	53	2	-	$148,094
Homemaker	7,424	287,797	$ 1,647,784	$ 4,336,274	38.00%	87	2	-	$128,844
Chore	3,221	35,349	$ 192,215	$ 686,482	28.00%	31	4	-	$27,108
Home Del Meals	39,108	4,955,137	$ 5,976,907	$ 22,988,104	26.00%	128	9	-	$3,637,479
Adult Day Care/Hlth	1,495	46,202	$ 616,828	$ 1,504,459	41.00%	34	3	-	$144,394
Case Mgt	335	1,901	$ 26,956	$ 53,912	50.00%	2	-	-	$0
Cluster 1 As % of Total			34.5%	43.6%					
Cluster 2:			$ 8,324,371	$ 17,951,208					
Congreg Meals	65,553	3,336,235	$ 7,995,672	$ 17,012,068	47.00%	142	15	-	$2,703,956
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	5,286	522,223	$ 328,699	$ 939,140	35.00%	52	7	-	$55,065
Cluster 2 As % of Total			31.9%	24.6%					
Cluster 3:			$ 4,476,642	$ 13,057,182					
Transportation		2,114,724	$ 3,408,523	$ 10,025,068	34.00%	145	10	-	$377,144
Legal Assistance		45,434	$ 589,769	$ 2,033,686	29.00%	43	-	-	$32,550
Nutr Education		2,718	$ 66,417	$ 83,021	80.00%	49	-	-	$0
Info and Assist		-	$ -	$ -	0.00%	7	-	-	$0
Outreach		39,038	$ 411,933	$ 915,407	45.00%	72	2	-	$3,024
Cluster 3 As % of Total			17.1%	18.0%					
Other Services			$ 4,290,753	$ 9,751,711	44.00%				$231,796
Oth Svcs As % of Total			16.4%	13.5%					
Total			$ 26,109,440	$ 72,471,576		443	38		$7,489,454

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	3.00	-	0.70
Other Pd Professionals By Functional Responsibility:			
Planning	8.00	1.00	2.30
Development	10.00	3.00	2.80
Administration	65.00	20.00	15.10
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	7.00	2.00	5.80
Clerical/Support	13.00	3.00	3.90
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	-	106.00	29.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	96.64	12.00	37.55
Development	21.40	1.50	9.92
Serv Del/Access/Care Coord	672.80	87.20	22.13
Planning/Admin/Other	126.44	17.60	44.39
Clerical	134.64	39.33	28.68
Volunteers	61.40	2.00	
Total AAA Staffing	1,113.32	159.63	142.67
Number of AAAs in State	12		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$75,466
Chapter 3: Elder Abuse	$203,664
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$13,133,312	$15,936,545	$4,593,498
Transfer From:			
Part B:		$0	$0
Part C1:	$898,408		$2,225,187
Part C2:	$0	$0	
Net Transfer $	$898,408	$0	$2,225,187
% Increase	6.84%	0.00%	48.44%
Final Allotment After Transfers	$14,031,720	$12,812,950	$6,818,685

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$7,781,687
As a % of Title III Exp.	29.80%
Program Income Exp. by Part	
Part B: Supp Svcs	$1,516,839
Part C1: Cong Nutr	$2,725,778
Part C2: Home Del Nutr	$3,539,070
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Oklahoma

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	3,300,902	28
Persons 60+ 1996	586,013	27
As % of All Ages	17.8%	16
Persons 60-64	140,565	27
Persons 65-74	242,204	27
Persons 75-84	149,387	28
Persons 85+	53,857	26
# Women/100 Men Age 60+	135	27
Persons 60+ 1990	565,287	26
Minority Persons 60+	62,329	26
Minority Persons 60+ as % of All Persons 60+	11.0%	26
Black Non-Hispanic Persons 60+ as % of All Persons 60+	4.7%	25
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.6%	26
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	5.0%	2
Hispanic Persons 60+ as % of All Persons 60+	0.7%	28
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	99,359	26
As % of All Persons 60+ (Civilian Non-institutionalized)	17.6%	13
Persons 60+ Below Poverty	89,075	24
As a % of All Persons 60+	15.8%	14
Min. Persons 60+ Below Pov.	17,494	24
As a % of All Minority Persons 60+	28.1%	17
Females 60+ Below Poverty Level	62,305	24
As % of All Females 60+	19.1%	12
Persons 60+ Living in Rural Areas	140,768	24
As a % of All Persons 60+	24.9%	24
Persons 60+ Living in NHs, Bd & Care, Other Institutions	28,859	23
As a % of All Persons 60+	5.1%	18

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	11
# of Paid Staff FTEs (state/local)	16.00
# of Certified Volunteers (state/local)	238.00
Number of Cases Closed	891
Number of Complaints (for cases closed)	2,353
Total Program Funding	$722,273

Part C. Title VI Grants in State:	
No of Title VI Grantees:	29
Total Allotments:	$2,546,300

Part D. Title III Clients:	Value	Rank
Total Clients	94,540	28
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	17,783	22
As a % of All Clients	18.8%	23
African American Non-Hispanic Clients as a % of Total Clients	7.9%	25
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.8%	19
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	9.2%	3
Hispanic Clients as a % of Total Clients	1.0%	23
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	60,825	17
As a % of Total Clients	64.3%	3
Minority Clients Below Poverty	14,262	20
As a % of All Minority Clients	80.2%	9
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	69,959	10
As a % of Total Clients	74.0%	5

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	272
Focal Points Which Are Senior Centers	197
Total Senior Centers	379
Total Senior Centers Receiving OAA $	138

Comments:

Profile of State OAA Programs: Oklahoma

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 3,515,530	$ 5,590,675					
Personal Care	20	2,029	$ 25,264	$ 31,190	81.00%	3	-	-	$2,410
Homemaker	2,331	70,892	$ 465,293	$ 646,240	72.00%	10	-	-	$120,277
Chore	354	3,691	$ 24,978	$ 29,736	84.00%	10	-	-	$5,287
Home Del Meals	9,260	1,624,151	$ 2,902,986	$ 4,398,464	66.00%	25	-	-	$673,996
Adult Day Care/Hlth	1,250	217,302	$ 97,009	$ 485,045	20.00%	1	-	-	$77,297
Case Mgt	-	-	$ -	$ -	0.00%	-	-	3	$0
Cluster 1 As % of Total			31.9%	26.1%					
Cluster 2:			$ 4,367,954	$ 9,970,715					
Congreg Meals	22,787	2,743,822	$ 4,218,792	$ 9,811,144	43.00%	25	-	-	$1,702,352
Nutr Counseling	571	660	$ 11,998	$ 15,187	79.00%	6	-	-	$1,054
Assisted Transport	1,343	23,313	$ 137,164	$ 144,383	95.00%	4	1	-	$2,112
Cluster 2 As % of Total			39.6%	46.6%					
Cluster 3:			$ 2,691,214	$ 5,154,792					
Transportation		1,017,559	$ 1,164,761	$ 2,426,585	48.00%	30	-	-	$113,789
Legal Assistance		15,704	$ 219,116	$ 273,895	80.00%	13	-	-	$10,289
Nutr Education		6,250	$ 91,948	$ 574,675	16.00%	25	-	-	$73,589
Info and Assist		125,291	$ 289,728	$ 362,160	80.00%	13	-	11	$12,418
Outreach		90,184	$ 925,661	$ 1,517,477	61.00%	29	1	-	$41,733
Cluster 3 As % of Total			24.4%	24.1%					
Other Services			$ 443,125	$ 692,383	64.00%				$24,466
Oth Svcs As % of Total			4.0%	3.2%					
Total			$ 11,017,623	$ 21,408,565		68	2		$2,661,069

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	2.00	-	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	5.00	2.00	3.00
Development	5.00	1.00	1.00
Administration	16.00	2.00	8.00
Service Delivery	-	-	-
Access/Care Coordination	2.00	-	2.00
Other Professional Staff	-	-	-
Clerical/Support	12.00	4.00	5.00
Volunteers	27.00	5.00	
Total State Unit Staff (Incl. Volunteers)	71.00	14.00	21.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	11.00	2.00	11.00
Development	8.00	-	8.00
Serv Del/Access/Care Coord	21.00	2.00	21.00
Planning/Admin/Other	34.50	6.00	33.50
Clerical	10.00	2.00	10.00
Volunteers	544.00	53.00	
Total AAA Staffing	628.50	65.00	83.50
Number of AAAs in State	11		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$57,196
Chapter 3: Elder Abuse	$60,834
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$4,061,422	$4,935,623	$1,409,506
Transfer From:			
Part B:		$0	$0
Part C1:	$0		$0
Part C2:	$0	$0	
Net Transfer $	$0	$0	$0
% Increase	0.00%	0.00%	0.00%
Final Allotment After Transfers	$4,061,422	$4,935,623	$1,409,506

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$3,148,228
As a % of Title III Exp.	26.57%
Program Income Exp. by Part	
Part B: Supp Svcs	$154,627
Part C1: Cong Nutr	$2,000,339
Part C2: Home Del Nutr	$979,000
Part D: In-Home Svcs	$14,262
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Oregon

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	3,203,735	30
Persons 60+ 1996	550,495	29
As % of All Ages	17.2%	23
Persons 60-64	120,959	30
Persons 65-74	228,113	28
Persons 75-84	151,921	27
Persons 85+	49,502	28
# Women/100 Men Age 60+	129	39
Persons 60+ 1990	515,782	29
Minority Persons 60+	19,119	36
Minority Persons 60+ as % of All Persons 60+	3.7%	40
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.8%	40
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.3%	18
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.6%	13
Hispanic Persons 60+ as % of All Persons 60+	0.9%	25
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	72,326	33
As % of All Persons 60+ (Civilian Non-institutionalized)	14.0%	32
Persons 60+ Below Poverty	49,544	34
As a % of All Persons 60+	9.6%	38
Min. Persons 60+ Below Pov.	3,899	35
As a % of All Minority Persons 60+	20.4%	39
Females 60+ Below Poverty Level	34,014	32
As % of All Females 60+	11.7%	39
Persons 60+ Living in Rural Areas	117,165	29
As a % of All Persons 60+	22.7%	28
Persons 60+ Living in NHs, Bd & Care, Other Institutions	18,945	30
As a % of All Persons 60+	3.7%	40

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	0
# of Paid Staff FTEs (state/local)	8.00
# of Certified Volunteers (state/local)	176.00
Number of Cases Closed	2,944
Number of Complaints (for cases closed)	4,781
Total Program Funding	$524,580

Part C. Title VI Grants in State:	
No of Title VI Grantees:	5
Total Allotments:	$320,500

Part D. Title III Clients:	Value	Rank
Total Clients	138,959	18
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	6,291	35
As a % of All Clients	4.5%	42
African American Non-Hispanic Clients as a % of Total Clients	0.8%	40
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.7%	20
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.9%	12
Hispanic Clients as a % of Total Clients	2.1%	18
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	41,310	21
As a % of Total Clients	29.7%	37
Minority Clients Below Poverty	3,304	34
As a % of All Minority Clients	52.5%	39
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	92,356	6
As a % of Total Clients	66.5%	8

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	133
Focal Points Which Are Senior Centers	87
Total Senior Centers	106
Total Senior Centers Receiving OAA $	68

Comments:

Profile of State OAA Programs: Oregon

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 2,834,022	$ 12,663,405					
Personal Care	1,265	66,362	$ 24,484	$ 816,133	3.00%	21	-	7	$76,105
Homemaker	3,292	235,538	$ 145,518	$ 2,425,300	6.00%	123	1	9	$207,645
Chore	223	1,360	$ 5,846	$ 11,692	50.00%	14	-	8	$395
Home Del Meals	15,494	1,493,820	$ 1,880,339	$ 6,964,219	27.00%	38	-	11	$1,442,742
Adult Day Care/Hlth	245	9,152	$ 11,012	$ 122,356	9.00%	6	-	1	$3,868
Case Mgt	8,526	79,655	$ 766,823	$ 2,323,706	33.00%	23	-	13	$21,377
Cluster 1 As % of Total			37.6%	48.0%					
Cluster 2:			$ 2,633,588	$ 6,996,769					
Congreg Meals	39,969	1,320,027	$ 2,602,478	$ 6,846,626	38.00%	48	3	12	$1,608,621
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	1,166	39,343	$ 31,110	$ 148,143	21.00%	8	2	6	$22,176
Cluster 2 As % of Total			35.0%	26.5%					
Cluster 3:			$ 1,395,740	$ 5,159,414					
Transportation		246,875	$ 225,095	$ 2,501,056	9.00%	33	-	4	$123,395
Legal Assistance		12,093	$ 236,213	$ 814,528	29.00%	21	-	6	$6,880
Nutr Education		255	$ 3,063	$ 8,278	37.00%	14	-	3	$208
Info and Assist		272,213	$ 586,329	$ 1,196,590	49.00%	51	1	13	$327
Outreach		28,900	$ 345,040	$ 638,963	54.00%	37	-	8	$176
Cluster 3 As % of Total			18.5%	19.6%					
Other Services			$ 664,737	$ 1,545,900	43.00%				$58,015
Oth Svcs As % of Total			8.8%	5.9%					
Total			$ 7,528,087	$ 26,365,489		217	4		$3,571,930

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	4.75	-	0.60
Other Pd Professionals By Functional Responsibility:			
Planning	3.75	-	0.50
Development	23.30	1.50	0.30
Administration	5.58	-	2.28
Service Delivery	8.00	-	0.70
Access/Care Coordination	5.00	-	-
Other Professional Staff	22.80	1.50	1.00
Clerical/Support	30.80	-	0.25
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	105.00	4.00	5.63

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	33.63	1.65	16.46
Development	10.61	0.65	6.82
Serv Del/Access/Care Coord	374.54	26.81	108.05
Planning/Admin/Other	86.07	1.95	26.54
Clerical	78.05	4.50	14.32
Volunteers	1,460.09	81.51	
Total AAA Staffing	2,042.99	117.27	172.19
Number of AAAs in State	18		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$3,693
Chapter 3: Elder Abuse	$23,798
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$3,441,365	$4,164,876	$1,219,057
Transfer From:			
Part B:		$0	$0
Part C1:	$537,065		$889,678
Part C2:	$0	$0	
Net Transfer $	$537,065	$0	$889,678
% Increase	15.61%	0.00%	72.98%
Final Allotment After Transfers	$3,978,430	$2,738,133	$2,108,735

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$1,629,061
As a % of Title III Exp.	21.64%
Program Income Exp. by Part	
Part B: Supp Svcs	$174,503
Part C1: Cong Nutr	$1,202,513
Part C2: Home Del Nutr	$199,947
Part D: In-Home Svcs	$5,117
Part F: Dis Prv/Hlth Prm	$46,981

Comments:

Profile of State OAA Programs: Pennsylvania

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	12,056,112	5
Persons 60+ 1996	2,414,134	5
As % of All Ages	20.0%	3
Persons 60-64	501,914	5
Persons 65-74	1,037,150	5
Persons 75-84	666,957	4
Persons 85+	208,113	5
# Women/100 Men Age 60+	142	9
Persons 60+ 1990	2,450,729	5
Minority Persons 60+	186,878	10
Minority Persons 60+ as % of All Persons 60+	7.6%	30
Black Non-Hispanic Persons 60+ as % of All Persons 60+	6.5%	20
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.5%	30
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	51
Hispanic Persons 60+ as % of All Persons 60+	0.5%	33
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	404,683	5
As % of All Persons 60+ (Civilian Non-institutionalized)	16.5%	17
Persons 60+ Below Poverty	237,992	6
As a % of All Persons 60+	9.7%	36
Min. Persons 60+ Below Pov.	45,312	13
As a % of All Minority Persons 60+	24.2%	24
Females 60+ Below Poverty Level	174,416	5
As % of All Females 60+	12.1%	33
Persons 60+ Living in Rural Areas	488,571	1
As a % of All Persons 60+	19.9%	33
Persons 60+ Living in NHs, Bd & Care, Other Institutions	115,514	3
As a % of All Persons 60+	4.7%	22

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	52
# of Paid Staff FTEs (state/local)	47.44
# of Certified Volunteers (state/local)	24.00
Number of Cases Closed	2,895
Number of Complaints (for cases closed)	5,824
Total Program Funding	$2,412,652

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	258,176	7
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	49,049	10
As a % of All Clients	19.0%	22
African American Non-Hispanic Clients as a % of Total Clients	17.5%	12
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.4%	24
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	32
Hispanic Clients as a % of Total Clients	1.0%	24
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	129,237	5
As a % of Total Clients	50.1%	12
Minority Clients Below Poverty	21,235	11
As a % of All Minority Clients	43.3%	45
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	60,240	14
As a % of Total Clients	23.3%	43

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	433
Focal Points Which Are Senior Centers	377
Total Senior Centers	574
Total Senior Centers Receiving OAA $	574

Comments:

Profile of State OAA Programs: Pennsylvania

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 6,826,924	$ 111,978,265					
Personal Care	22,359	2,064,088	$ 509,261	$ 50,926,100	1.00%	220	11	8	$356,587
Homemaker	13,822	453,341	$ 4,035	$ 6,725,000	0.06%	55	-	13	$82,711
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	43,535	6,483,330	$ 5,386,385	$ 23,419,065	23.00%	175	10	4	$5,077,339
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	66,410	969,586	$ 927,243	$ 30,908,100	3.00%	82	2	48	$99,363
Cluster 1 As % of Total			17.2%	67.1%					
Cluster 2:			$ 14,211,688	$ 23,686,147					
Congreg Meals	143,160	5,677,779	$ 14,211,688	$ 23,686,147	60.00%	202	26	3	$2,268,846
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			35.8%	14.2%					
Cluster 3:			$ 3,906,027	$ 8,836,922					
Transportation		-	$ -	$ -	0.00%	-	-	-	$0
Legal Assistance		34,577	$ 1,126,898	$ 1,325,762	85.00%	111	9	3	$2,410
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		1,349,395	$ 2,779,129	$ 7,511,159	37.00%	91	2	52	$63,015
Outreach		-	$ -	$ -	0.00%	-	-	-	$0
Cluster 3 As % of Total			9.8%	5.3%					
Other Services			$ 14,802,471	$ 22,427,986	66.00%				$1,634,449
Oth Svcs As % of Total			37.2%	13.4%					
Total			$ 39,747,110	$ 166,929,320		560	43		$9,584,720

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	16.00	1.00	4.48
Other Pd Professionals By Functional Responsibility:			
Planning	20.00	1.00	3.84
Development	13.00	1.00	3.88
Administration	25.00	5.00	5.44
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	11.00	1.00	1.28
Clerical/Support	17.00	1.00	3.52
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	102.00	10.00	22.44

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	117.30	6.00	20.18
Development	53.38	7.18	9.31
Serv Del/Access/Care Coord	1,596.89	152.35	277.64
Planning/Admin/Other	366.46	32.87	61.74
Clerical	417.03	78.50	71.89
Volunteers	3,387.60	74.10	
Total AAA Staffing	5,940.65	351.00	440.76
Number of AAAs in State	52		

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$17,061,516	$20,730,978	$5,927,322
Transfer From:			
Part B:		$0	$0
Part C1:	$2,114,536		$0
Part C2:	$1,185,464	$0	
Net Transfer $	$3,300,000	$0	$0
% Increase	19.34%	0.00%	0.00%
Final Allotment After Transfers	$20,361,516	$18,616,442	$4,741,858

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$10,084,843
As a % of Title III Exp.	25.37%
Program Income Exp. by Part	
Part B: Supp Svcs	$3,470,053
Part C1: Cong Nutr	$2,499,859
Part C2: Home Del Nutr	$4,114,931
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$127,078
Chapter 3: Elder Abuse	$226,945
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$13,924

Comments:

Profile of State OAA Programs: Puerto Rico

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	3,733,326	26
Persons 60+ 1996	510,780	31
As % of All Ages	13.7%	50
Persons 60-64	134,685	28
Persons 65-74	217,199	31
Persons 75-84	123,062	32
Persons 85+	35,634	34
# Women/100 Men Age 60+	81	52
Persons 60+ 1990	465,736	31
Minority Persons 60+	465,736	4
Minority Persons 60+ as % of All Persons 60+	100.0%	1
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.0%	53
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.0%	53
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.0%	53
Hispanic Persons 60+ as % of All Persons 60+	100.0%	1
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	143,018	18
As % of All Persons 60+ (Civilian Non-Institutionalized)	30.7%	1
Persons 60+ Below Poverty	286,037	5
As a % of All Persons 60+	61.4%	1
Min. Persons 60+ Below Pov.	286,037	1
As a % of All Minority Persons 60+	61.4%	1
Females 60+ Below Poverty Level	158,443	6
As % of All Females 60+	56.0%	1
Persons 60+ Living in Rural Areas	137,911	26
As a % of All Persons 60+	29.6%	16
Persons 60+ Living in NHs, Bd & Care, Other Institutions	0	53
As a % of All Persons 60+	0.0%	53

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	7
# of Paid Staff FTEs (state/local)	9.00
# of Certified Volunteers (state/local)	13.00
Number of Cases Closed	935
Number of Complaints (for cases closed)	1,994
Total Program Funding	$171,784

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	149,702	16
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	149,702	1
As a % of All Clients	100.0%	1
African American Non-Hispanic Clients as a % of Total Clients	0.0%	53
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.0%	53
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	53
Hispanic Clients as a % of Total Clients	100.0%	1
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	83,833	10
As a % of Total Clients	56.0%	8
Minority Clients Below Poverty	83,833	2
As a % of All Minority Clients	56.0%	33
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	40,419	23
As a % of Total Clients	27.0%	39

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	146
Focal Points Which Are Senior Centers	146
Total Senior Centers	146
Total Senior Centers Receiving OAA $	86

Comments:

Profile of State OAA Programs: Puerto Rico

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,588,371	$ 1,761,384					
Personal Care	4,494	94,211	$ 93,122	$ 107,037	87.00%	88	88	-	$0
Homemaker	2,961	245,380	$ 474,462	$ 533,103	89.00%	88	88	-	$0
Chore	464	15,697	$ 26,933	$ 28,055	96.00%	88	88	-	$0
Home Del Meals	5,349	1,021,257	$ 910,194	$ 1,000,213	91.00%	88	88	-	$0
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	17,725	123,971	$ 83,660	$ 92,956	90.00%	88	88	7	$0
Cluster 1 As % of Total			30.8%	29.1%					
Cluster 2:			$ 2,356,845	$ 2,942,391					
Congreg Meals	9,673	2,282,581	$ 2,326,128	$ 2,907,660	80.00%	88	88	-	$286,262
Nutr Counseling	2,482	2,641	$ 1,282	$ 1,282	100.00%	88	88	7	$0
Assisted Transport	6,759	250,397	$ 29,435	$ 33,449	88.00%	88	88	-	$0
Cluster 2 As % of Total			45.7%	48.6%					
Cluster 3:		-	$ 715,668	$ 792,425					
Transportation		1,514,739	$ 356,175	$ 404,744	88.00%	88	88	-	$0
Legal Assistance		1,203	$ 51,578	$ 56,679	91.00%	7	7	7	$0
Nutr Education		1,608	$ 9,893	$ 9,893	100.00%	88	88	-	$0
Info and Assist		116,079	$ 242,020	$ 260,237	93.00%	88	88	7	$0
Outreach		3,414	$ 56,002	$ 60,872	92.00%	88	88	7	$0
Cluster 3 As % of Total			13.9%	13.1%					
Other Services			$ 491,128	$ 558,100	88.00%				$0
Oth Svcs As % of Total			9.5%	9.2%					
Total			$ 5,152,012	$ 6,054,280		88	88		$286,262

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	9.00	9.00	5.00
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	2.00	-
Development	18.00	18.00	15.00
Administration	3.00	3.00	2.00
Service Delivery	-	-	-
Access/Care Coordination	8.00	8.00	6.00
Other Professional Staff	-	-	-
Clerical/Support	25.00	25.00	17.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	65.00	65.00	45.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	7.00	7.00	7.00
Development	6.00	6.00	-
Serv Del/Access/Care Coord	28.00	28.00	25.00
Planning/Admin/Other	12.00	12.00	11.00
Clerical	8.00	8.00	4.00
Volunteers	8.00	8.00	
Total AAA Staffing	69.00	69.00	47.00
Number of AAAs in State	7		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$47,171
Chapter 3: Elder Abuse	$50,171
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$2,868,380	$3,461,255	$1,029,963
Transfer From:			
Part B:		$0	$0
Part C1:	$150,078		$27,853
Part C2:	$0	$0	
Net Transfer $	$150,078	$0	$27,853
% Increase	5.23%	0.00%	2.70%
Final Allotment After Transfers	$3,018,458	$3,283,324	$1,057,816

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$233,899
As a % of Title III Exp.	4.54%
Program Income Exp. by Part	
Part B: Supp Svcs	$0
Part C1: Cong Nutr	$233,899
Part C2: Home Del Nutr	$0
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Rhode Island

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	990,225	44
Persons 60+ 1996	191,590	42
As % of All Ages	19.3%	6
Persons 60-64	35,425	45
Persons 65-74	82,008	42
Persons 75-84	55,083	41
Persons 85+	19,074	38
# Women/100 Men Age 60+	148	2
Persons 60+ 1990	200,048	40
Minority Persons 60+	8,350	44
Minority Persons 60+ as % of All Persons 60+	4.2%	39
Black Non-Hispanic Persons 60+ as % of All Persons 60+	1.6%	35
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.1%	20
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.3%	22
Hispanic Persons 60+ as % of All Persons 60+	1.1%	21
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	31,455	39
As % of All Persons 60+ (Civilian Non-institutionalized)	15.7%	24
Persons 60+ Below Poverty	20,149	39
As a % of All Persons 60+	10.1%	31
Min. Persons 60+ Below Pov.	2,087	42
As a % of All Minority Persons 60+	25.0%	20
Females 60+ Below Poverty Level	15,260	39
As % of All Females 60+	12.9%	27
Persons 60+ Living in Rural Areas	16,145	47
As a % of All Persons 60+	8.1%	47
Persons 60+ Living in NHs, Bd & Care, Other Institutions	11,274	37
As a % of All Persons 60+	5.6%	11

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	0
# of Paid Staff FTEs (state/local)	3.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	484
Number of Complaints (for cases closed)	765
Total Program Funding	$146,489

Part C. Title VI Grants in State:	
No of Title VI Grantees:	1
Total Allotments:	$59,000

Part D. Title III Clients:	Value	Rank
Total Clients	54,903	35
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	4,347	39
As a % of All Clients	7.9%	37
African American Non-Hispanic Clients as a % of Total Clients	5.2%	28
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.3%	27
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.2%	27
Hispanic Clients as a % of Total Clients	2.2%	17
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	26,912	28
As a % of Total Clients	49.0%	14
Minority Clients Below Poverty	3,236	35
As a % of All Minority Clients	74.4%	13
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	4,610	49
As a % of Total Clients	8.4%	49

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	10
Focal Points Which Are Senior Centers	10
Total Senior Centers	47
Total Senior Centers Receiving OAA $	12

Comments:

Profile of State OAA Programs: Rhode Island

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 933,040	$ 2,726,601					
Personal Care	54	1,051	$ 14,710	$ 32,689	45.00%	3	-	-	$0
Homemaker	-	-	$ -	$ -	0.00%	-	-	-	$0
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	4,875	586,963	$ 505,047	$ 1,942,486	26.00%	6	-	-	$584,919
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	15,474	60,138	$ 413,283	$ 751,424	55.00%	5	-	-	$0
Cluster 1 As % of Total			28.3%	27.1%					
Cluster 2:			$ 1,361,190	$ 3,093,614					
Congreg Meals	19,091	695,549	$ 1,361,190	$ 3,093,614	44.00%	5	-	-	$667,719
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			41.3%	30.8%					
Cluster 3:			$ 955,569	$ 4,132,810					
Transportation		273,277	$ 4,320	$ 2,700,000	0.16%	5	1	-	$0
Legal Assistance		4,705	$ 105,146	$ 292,072	36.00%	2	-	-	$0
Nutr Education		19,015	$ 55,000	$ 55,000	100.00%	6	-	-	$0
Info and Assist		190,000	$ 757,777	$ 1,024,023	74.00%	20	2	-	$0
Outreach		17,726	$ 33,326	$ 61,715	54.00%	20	2	-	$0
Cluster 3 As % of Total			29.0%	41.1%					
Other Services			$ 46,315	$ 92,630	50.00%				$0
Oth Svcs As % of Total			1.4%	0.9%					
Total			$ 3,296,114	$ 10,045,655		20	2		$1,252,638

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	3.00	5.00
Other Pd Professionals By Functional Responsibility:			
Planning	9.00	-	9.00
Development	9.00	-	9.00
Administration	19.00	-	19.00
Service Delivery	-	-	-
Access/Care Coordination	13.00	-	13.00
Other Professional Staff	-	-	1.00
Clerical/Support	10.00	1.00	10.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	66.00	4.00	66.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	1		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$22,245
Chapter 3: Elder Abuse	$23,660
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,362,182	$1,911,051	$537,351
Transfer From:			
Part B:		$0	$0
Part C1:	$224,861		$0
Part C2:	$32,304	$0	
Net Transfer $	$257,165	$0	$0
% Increase	16.46%	0.00%	0.00%
Final Allotment After Transfers	$1,819,347	$1,686,190	$505,047

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$1,134,711
As a % of Title III Exp.	34.43%
Program Income Exp. by Part	
Part B: Supp Svcs	$1,134,711
Part C1: Cong Nutr	$0
Part C2: Home Del Nutr	$0
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: South Carolina

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	3,698,746	27
Persons 60+ 1996	593,940	25
As % of All Ages	16.1%	35
Persons 60-64	147,076	25
Persons 65-74	261,073	25
Persons 75-84	144,282	29
Persons 85+	41,509	32
# Women/100 Men Age 60+	140	11
Persons 60+ 1990	542,715	28
Minority Persons 60+	127,773	18
Minority Persons 60+ as % of All Persons 60+	23.5%	10
Black Non-Hispanic Persons 60+ as % of All Persons 60+	22.9%	4
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	39
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	43
Hispanic Persons 60+ as % of All Persons 60+	0.3%	41
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	106,313	23
As % of All Persons 60+ (Civilian Non-institutionalized)	19.6%	10
Persons 60+ Below Poverty	97,909	20
As a % of All Persons 60+	18.0%	9
Min. Persons 60+ Below Pov.	48,180	12
As a % of All Minority Persons 60+	37.7%	7
Females 60+ Below Poverty Level	69,502	20
As % of All Females 60+	21.6%	8
Persons 60+ Living in Rural Areas	174,256	20
As a % of All Persons 60+	32.1%	12
Persons 60+ Living in NHs, Bd & Care, Other Institutions	18,189	32
As a % of All Persons 60+	3.4%	44

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	8
# of Paid Staff FTEs (state/local)	10.50
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	2,322
Number of Complaints (for cases closed)	3,087
Total Program Funding	$251,608

Part C. Title VI Grants In State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	33,574	45
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	14,930	25
As a % of All Clients	44.5%	4
African American Non-Hispanic Clients as a % of Total Clients	44.3%	2
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	48
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	43
Hispanic Clients as a % of Total Clients	0.1%	49
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	18,712	34
As a % of Total Clients	55.7%	9
Minority Clients Below Poverty	9,357	25
As a % of All Minority Clients	62.7%	24
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	18,814	38
As a % of Total Clients	56.0%	18

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	96
Focal Points Which Are Senior Centers	89
Total Senior Centers	124
Total Senior Centers Receiving OAA $	11

Comments:

Profile of State OAA Programs: South Carolina

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 2,073,831	$ 9,377,286					
Personal Care	1,952	137,730	$ 415,421	$ 1,538,596	27.00%	27	4	-	$18,267
Homemaker	2,330	86,849	$ 495,375	$ 1,303,618	38.00%	27	2	-	$14,734
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	10,323	1,303,293	$ 1,121,121	$ 5,338,671	21.00%	47	6	-	$177,165
Adult Day Care/Hlth	251	139,856	$ 14,935	$ 746,750	2.00%	6	2	-	$65
Case Mgt	5,555	20,813	$ 26,979	$ 449,650	6.00%	10	2	-	$0
Cluster 1 As % of Total			28.3%	48.0%					
Cluster 2:			$ 2,929,276	$ 5,133,548					
Congreg Meals	13,543	1,131,369	$ 2,918,932	$ 5,120,933	57.00%	47	6	-	$415,688
Nutr Counseling	276	1,393	$ 10,344	$ 12,615	82.00%	8	2	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			39.9%	26.3%					
Cluster 3:			$ 2,203,952	$ 4,579,548					
Transportation		1,610,708	$ 2,028,184	$ 4,225,404	48.00%	47	6	-	$63,204
Legal Assistance		2,047	$ 54,414	$ 67,178	81.00%	13	1	-	$46
Nutr Education		26,361	$ 56,622	$ 85,791	66.00%	26	2	-	$453
Info and Assist		8,439	$ 19,576	$ 103,032	19.00%	28	2	5	$433
Outreach		20,647	$ 45,146	$ 98,143	46.00%	29	3	5	$0
Cluster 3 As % of Total			30.1%	23.5%					
Other Services			$ 126,029	$ 434,563	29.00%				$1,592
Oth Svcs As % of Total			1.7%	2.2%					
Total			$ 7,333,088	$ 19,524,965		56	8		$691,647

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	-	-
Other Pd Professionals By Functional Responsibility:			
Planning	8.00	1.00	2.25
Development	5.00	3.00	2.40
Administration	4.00	2.00	2.25
Service Delivery	3.00	1.00	1.13
Access/Care Coordination	1.00	-	0.30
Other Professional Staff	6.00	3.00	1.00
Clerical/Support	7.00	1.00	4.16
Volunteers	1.00	-	
Total State Unit Staff (Incl. Volunteers)	36.00	11.00	13.50

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	8.60	2.20	0.68
Development	4.39	1.03	3.49
Serv Del/Access/Care Coord	0.42	0.40	0.42
Planning/Admin/Other	36.67	11.29	26.96
Clerical	4.54	4.00	2.94
Volunteers	-	-	
Total AAA Staffing	54.62	18.92	34.49
Number of AAAs in State	10		

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$3,488,697	$4,210,937	$1,252,435
Transfer From:			
Part B:		$0	$0
Part C1:	$540,287		$193,562
Part C2:	$0	$0	
Net Transfer $	$540,287	$0	$193,562
% Increase	15.49%	0.00%	15.45%
Final Allotment After Transfers	$4,028,984	$3,477,066	$1,445,997

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$184,690
As a % of Title III Exp.	2.52%
Program Income Exp. by Part	
Part B: Supp Svcs	$21,364
Part C1: Cong Nutr	$114,839
Part C2: Home Del Nutr	$46,967
Part D: In-Home Svcs	$1,520
Part F: Dis Prv/Hlth Prm	$0

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$49,863
Chapter 3: Elder Abuse	$26,742
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Profile of State OAA Programs: South Dakota

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	732,405	46
Persons 60+ 1996	134,560	46
As % of All Ages	18.4%	9
Persons 60-64	29,120	46
Persons 65-74	53,962	46
Persons 75-84	36,700	46
Persons 85+	14,778	43
# Women/100 Men Age 60+	129	40
Persons 60+ 1990	133,719	46
Minority Persons 60+	4,231	47
Minority Persons 60+ as % of All Persons 60+	3.2%	44
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	50
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.1%	50
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	2.7%	4
Hispanic Persons 60+ as % of All Persons 60+	0.3%	44
Persons 60+ (Non-instit.) with Mobility and/or Self Care Lim.	14,485	48
As % of All Persons 60+ (Civilian Non-institutionalized)	10.8%	51
Persons 60+ Below Poverty	17,806	40
As a % of All Persons 60+	13.3%	16
Min. Persons 60+ Below Pov.	1,731	44
As a % of All Minority Persons 60+	40.9%	4
Females 60+ Below Poverty Level	12,330	40
As % of All Females 60+	16.4%	16
Persons 60+ Living in Rural Areas	55,729	37
As a % of All Persons 60+	41.7%	4
Persons 60+ Living in NHs, Bd & Care, Other Institutions	8,910	38
As a % of All Persons 60+	6.7%	4

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	7
# of Paid Staff FTEs (state/local)	1.00
# of Certified Volunteers (state/local)	2.00
Number of Cases Closed	326
Number of Complaints (for cases closed)	582
Total Program Funding	$119,817

Part C. Title VI Grants in State:	
No of Title VI Grantees:	7
Total Allotments:	$523,450

Part D. Title III Clients:	Value	Rank
Total Clients	19,483	50
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	758	50
As a % of All Clients	3.9%	45
African American Non-Hispanic Clients as a % of Total Clients	0.1%	51
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.0%	50
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	3.7%	5
Hispanic Clients as a % of Total Clients	0.1%	42
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	9,035	44
As a % of Total Clients	46.4%	15
Minority Clients Below Poverty	477	46
As a % of All Minority Clients	62.9%	22
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	16,796	40
As a % of Total Clients	86.2%	3

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	0
Focal Points Which Are Senior Centers	0
Total Senior Centers	241
Total Senior Centers Receiving OAA $	71

Comments:

Profile of State OAA Programs: South Dakota

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm Income
Cluster 1:			$ 1,550,884	$ 4,735,060					
Personal Care	-	-	$ -	$ -	0.00%	-	-	-	$0
Homemaker	461	8,300	$ 37,148	$ 52,321	71.00%	1	-	-	$0
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	2,412	458,613	$ 538,122	$ 1,537,491	35.00%	17	4	-	$675,392
Adult Day Care/Hlth	216	107,410	$ 234,863	$ 499,709	47.00%	13	-	-	$166,068
Case Mgt	4,673	47,850	$ 740,751	$ 2,645,539	28.00%	1	-	-	$0
Cluster 1 As % of Total			44.8%	50.4%					
Cluster 2:			$ 1,476,109	$ 3,989,484					
Congreg Meals	7,899	1,180,750	$ 1,476,109	$ 3,989,484	37.00%	17	4	-	$1,728,327
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			42.6%	42.4%					
Cluster 3:			$ 337,865	$ 539,008					
Transportation		472,285	$ 284,553	$ 482,293	59.00%	23	-	-	$52,334
Legal Assistance		2,928	$ 53,312	$ 56,715	94.00%	3	-	-	$0
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		-	$ -	$ -	0.00%	-	-	-	$0
Outreach		-	$ -	$ -	0.00%	-	-	-	$0
Cluster 3 As % of Total			9.7%	5.7%					
Other Services			$ 100,614	$ 135,965	74.00%				$194
Oth Svcs As % of Total			2.9%	1.4%					
Total			$ 3,465,472	$ 9,399,517		60	4		$2,622,316

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	-	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	-	-	-
Development	-	-	-
Administration	6.00	-	3.00
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	10.00	-	2.00
Clerical/Support	7.00	-	2.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	24.00	-	8.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	-		

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$1,512,974	$1,872,612	$526,695
Transfer From:			-
Part B:		$0	$0
Part C1:	$0		$0
Part C2:	$0	$0	
Net Transfer $	$0	$0	$0
% Increase	0.00%	0.00%	0.00%
Final Allotment After Transfers	$1,512,974	$1,872,612	$526,695

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$2,688,869
As a % of Title III Exp.	77.59%
Program Income Exp. by Part	
Part B: Supp Svcs	$271,316
Part C1: Cong Nutr	$1,785,324
Part C2: Home Del Nutr	$632,229
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$20,287
Chapter 3: Elder Abuse	$20,333
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$11,383

Comments:

This is a Single Planning and Service Area state.

Profile of State OAA Programs: Tennessee

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	5,319,654	17
Persons 60+ 1996	886,476	16
As % of All Ages	16.7%	27
Persons 60-64	219,047	15
Persons 65-74	374,554	16
Persons 75-84	220,099	18
Persons 85+	72,776	18
# Women/100 Men Age 60+	141	10
Persons 60+ 1990	834,682	17
Minority Persons 60+	102,316	20
Minority Persons 60+ as % of All Persons 60+	12.3%	24
Black Non-Hispanic Persons 60+ as % of All Persons 60+	11.7%	10
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	44
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	36
Hispanic Persons 60+ as % of All Persons 60+	0.2%	49
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	164,401	13
As % of All Persons 60+ (Civilian Non-institutionalized)	19.7%	9
Persons 60+ Below Poverty	153,455	11
As a % of All Persons 60+	18.4%	8
Min. Persons 60+ Below Pov.	34,839	18
As a % of All Minority Persons 60+	34.1%	10
Females 60+ Below Poverty Level	107,568	12
As % of All Females 60+	21.9%	6
Persons 60+ Living in Rural Areas	235,158	12
As a % of All Persons 60+	28.2%	17
Persons 60+ Living in NHs, Bd & Care, Other Institutions	35,502	19
As a % of All Persons 60+	4.3%	28

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	9
# of Paid Staff FTEs (state/local)	13.00
# of Certified Volunteers (state/local)	181.00
Number of Cases Closed	1,299
Number of Complaints (for cases closed)	1,536
Total Program Funding	$519,616

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	57,773	33
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	8,345	32
As a % of All Clients	14.4%	29
African American Non-Hispanic Clients as a % of Total Clients	14.2%	15
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	38
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	49
Hispanic Clients as a % of Total Clients	0.1%	46
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	24,140	31
As a % of Total Clients	41.8%	20
Minority Clients Below Poverty	5,994	29
As a % of All Minority Clients	71.8%	16
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	13,950	45
As a % of Total Clients	24.1%	42

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	130
Focal Points Which Are Senior Centers	122
Total Senior Centers	141
Total Senior Centers Receiving OAA $	110

Comments:

Profile of State OAA Programs: Tennessee

Part F. Service Profile:									
	Persons	Service	Expenditures			Providers			Earned
Service	Served	Units	Title III	Total Service	%TIII $	Total	Minority	AAA	Pgm.Income
Cluster 1:			$ 4,933,853	$ 10,252,947					
Personal Care	155	59,480	$ 169,951	$ 209,816	81.00%	8	2	-	$0
Homemaker	2,344	74,454	$ 965,844	$ 2,682,900	36.00%	19	3	-	$28,702
Chore	-	-	$ -	$ -	0.00%	1	* -	-	$0
Home Del Meals	11,958	1,698,926	$ 3,466,240	$ 6,835,765	51.00%	14	-	-	$655,334
Adult Day Care/Hlth	47	3,933	$ 11,673	$ 32,425	36.00%	5	-	-	$0
Case Mgt	3,417	21,634	$ 300,145	$ 492,041	61.00%	5	-	-	$50,357
Cluster 1 As % of Total			44.5%	38.4%					
Cluster 2:			$ 3,614,196	$ 5,640,105					
Congreg Meals	15,670	1,162,449	$ 3,554,570	$ 5,554,016	64.00%	14	-	-	$744,283
Nutr Counseling	14	1,413	$ 21,900	$ 33,692	65.00%	2	-	-	$0
Assisted Transport	75	5,709	$ 37,726	$ 52,397	72.00%	1	1	-	$1,933
Cluster 2 As % of Total			32.6%	21.1%					
Cluster 3:			$ 2,429,996	$ 5,307,315					
Transportation		356,660	$ 1,520,743	$ 4,110,116	37.00%	32	-	-	$39,216
Legal Assistance		8,413	$ 341,548	$ 426,935	80.00%	9	1	-	$4,925
Nutr Education		6,682	$ 109,586	$ 132,031	83.00%	23	2	-	$0
Info and Assist		88,435	$ 276,581	$ 389,551	71.00%	120	3	-	$5,277
Outreach		38,672	$ 181,538	$ 248,682	73.00%	110	3	-	$5,027
Cluster 3 As % of Total			21.9%	19.9%					
Other Services			$ 110,162	$ 5,508,100	2.00%				$40,576
Oth Svcs As % of Total			1.0%	20.6%					
Total			$ 11,088,207	$ 26,708,467		136	8		$1,576,630

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	7.75	1.00	7.75
Other Pd Professionals By Functional Responsibility:			
Planning	11.10	1.25	11.10
Development	10.50	1.25	10.50
Administration	13.00	1.50	13.00
Service Delivery	8.00	2.00	2.75
Access/Care Coordination	3.65	0.75	3.65
Other Professional Staff	4.75	1.00	3.75
Clerical/Support	8.50	2.75	7.75
Volunteers	39.30	0.90	
Total State Unit Staff (Incl. Volunteers)	107.00	12.40	60.30

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	7.75	1.00	7.75
Development	10.50	1.25	10.25
Serv Del/Access/Care Coord	11.65	2.75	7.29
Planning/Admin/Other	29.85	3.75	27.85
Clerical	8.50	1.75	5.50
Volunteers	39.25	-	
Total AAA Staffing	107.50	10.50	58.64
Number of AAAs in State	9		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$42,725
Chapter 3: Elder Abuse	$27,058
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C:			
Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$5,719,764	$6,931,233	$2,013,965
Transfer From:			
Part B:		$0	$0
Part C1:	$750,000		$1,350,000
Part C2:	$0	$0	
Net Transfer $	$750,000	$0	$1,350,000
% Increase	13.11%	0.00%	67.03%
Final Allotment After Transfers	$6,469,764	$4,831,233	$3,363,965

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$1,634,792
As a % of Title III Exp.	14.74%
Program Income Exp. by Part	
Part B: Supp Svcs	$140,023
Part C1: Cong Nutr	$508,819
Part C2: Home Del Nutr	$493,761
Part D: In-Home Svcs	$492,189
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Texas

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	19,128,261	2
Persons 60+ 1996	2,624,786	4
As % of All Ages	13.7%	49
Persons 60-64	674,104	3
Persons 65-74	1,111,809	4
Persons 75-84	627,246	5
Persons 85+	211,627	4
# Women/100 Men Age 60+	134	30
Persons 60+ 1990	2,658,376	4
Minority Persons 60+	659,771	2
Minority Persons 60+ as % of All Persons 60+	24.8%	8
Black Non-Hispanic Persons 60+ as % of All Persons 60+	8.1%	16
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	4.4%	4
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	28
Hispanic Persons 60+ as % of All Persons 60+	12.1%	3
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	412,225	4
As % of All Persons 60+ (Civilian Non-institutionalized)	15.5%	25
Persons 60+ Below Poverty	493,049	1
As a % of All Persons 60+	18.5%	7
Min. Persons 60+ Below Pov.	225,788	2
As a % of All Minority Persons 60+	34.2%	9
Females 60+ Below Poverty Level	263,037	1
As % of All Females 60+	19.4%	11
Persons 60+ Living in Rural Areas	418,649	2
As a % of All Persons 60+	15.7%	36
Persons 60+ Living in NHs, Bd & Care, Other Institutions	103,515	4
As a % of All Persons 60+	3.9%	37

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	28
# of Paid Staff FTEs (state/local)	30.60
# of Certified Volunteers (state/local)	696.00
Number of Cases Closed	7,307
Number of Complaints (for cases closed)	8,836
Total Program Funding	$1,471,242

Part C. Title VI Grants in State:	
No of Title VI Grantees:	2
Total Allotments:	$104,000

Part D. Title III Clients:	Value	Rank
Total Clients	195,542	11
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	70,489	6
As a % of All Clients	36.0%	9
African American Non-Hispanic Clients as a % of Total Clients	14.5%	14
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.8%	16
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.4%	21
Hispanic Clients as a % of Total Clients	20.4%	3
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	158,608	3
As a % of Total Clients	81.1%	1
Minority Clients Below Poverty	64,652	3
As a % of All Minority Clients	91.7%	4
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	76,698	8
As a % of Total Clients	39.2%	32

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	439
Focal Points Which Are Senior Centers	385
Total Senior Centers	735
Total Senior Centers Receiving OAA $	653

Comments:

Profile of State OAA Programs: Texas

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 12,081,510	$ 36,239,405					
Personal Care	960	92,421	$ 551,618	$ 619,796	89.00%	15	1	10	$98,311
Homemaker	4,458	287,690	$ 1,348,535	$ 2,391,020	56.40%	73	5	16	$162,791
Chore	88	1,613	$ 12,478	$ 14,343	87.00%	3	1	-	$1,172
Home Del Meals	54,944	6,592,218	$ 8,581,997	$ 30,649,989	28.00%	220	20	7	$3,410,959
Adult Day Care/Hlth	91	7,770	$ 85,583	$ 103,112	83.00%	6	1	4	$10,222
Case Mgt	8,262	47,140	$ 1,501,299	$ 2,461,146	61.00%	36	3	19	$43,702
Cluster 1 As % of Total			31.0%	34.7%					
Cluster 2:			$ 11,493,638	$ 31,061,681					
Congreg Meals	101,116	7,129,061	$ 11,491,947	$ 31,059,316	37.00%	245	20	2	$5,080,767
Nutr Counseling	1,137	20,658	$ 1,260	$ 1,260	100.00%	2	-	-	$0
Assisted Transport	14	51	$ 431	$ 1,105	39.00%	1	-	1	$0
Cluster 2 As % of Total			29.5%	29.7%					
Cluster 3:			$ 6,121,165	$ 15,606,696					
Transportation		2,380,877	$ 4,316,583	$ 12,808,852	33.70%	181	20	8	$10,570
Legal Assistance		34,230	$ 829,782	$ 1,406,410	59.00%	43	4	19	$10,570
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		155,782	$ 918,280	$ 1,311,829	70.00%	43	2	19	$6,881
Outreach		3,655	$ 56,520	$ 79,606	71.00%	5	1	2	$0
Cluster 3 As % of Total			15.7%	14.9%					
Other Services			$ 9,256,569	$ 21,526,905	43.00%				$385,131
Oth Svcs As % of Total			23.8%	20.6%					
Total			$ 38,952,882	$ 104,434,687		312	30		$9,223,076

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	1.00	5.00
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	-	2.00
Development	6.00	-	6.00
Administration	16.00	3.00	16.00
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	7.50	4.00	7.50
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	36.50	8.00	36.50

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	22.05	9.95	17.80
Development	9.00	4.51	6.57
Serv Del/Access/Care Coord	94.19	40.65	84.86
Planning/Admin/Other	55.69	21.49	46.39
Clerical	31.41	18.80	24.87
Volunteers	246.87	55.60	
Total AAA Staffing	459.21	151.00	182.49
Number of AAAs in State	28		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$247,963
Chapter 3: Elder Abuse	$263,735
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C: Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$15,631,409	$18,895,240	$5,571,359
Transfer From:			
Part B:		$0	$0
Part C1:	$653,000		$4,009,000
Part C2:	$0	$0	
Net Transfer $	$653,000	$0	$4,009,000
% Increase	4.18%	0.00%	71.96%
Final Allotment After Transfers	$16,284,409	$14,233,240	$9,580,359

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$9,739,786
As a % of Title III Exp.	25.00%
Program Income Exp. by Part	
Part B: Supp Svcs	$1,248,060
Part C1: Cong Nutr	$5,080,767
Part C2: Home Del Nutr	$3,410,959
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Utah

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	2,000,494	35
Persons 60+ 1996	233,582	39
As % of All Ages	11.7%	52
Persons 60-64	58,282	39
Persons 65-74	97,010	39
Persons 75-84	59,638	38
Persons 85+	18,652	40
# Women/100 Men Age 60+	122	45
Persons 60+ 1990	206,686	39
Minority Persons 60+	11,039	40
Minority Persons 60+ as % of All Persons 60+	5.3%	37
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.5%	42
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	2.0%	12
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.6%	14
Hispanic Persons 60+ as % of All Persons 60+	2.3%	13
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	28,228	40
As % of All Persons 60+ (Civilian Non-institutionalized)	13.7%	36
Persons 60+ Below Poverty	16,985	43
As a % of All Persons 60+	8.2%	46
Min. Persons 60+ Below Pov.	2,281	40
As a % of All Minority Persons 60+	20.7%	37
Females 60+ Below Poverty Level	11,410	42
As % of All Females 60+	10.1%	46
Persons 60+ Living in Rural Areas	21,608	46
As a % of All Persons 60+	10.5%	42
Persons 60+ Living in NHs, Bd & Care, Other Institutions	6,306	45
As a % of All Persons 60+	3.1%	46

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	12
# of Paid Staff FTEs (state/local)	7.00
# of Certified Volunteers (state/local)	17.00
Number of Cases Closed	1,199
Number of Complaints (for cases closed)	2,014
Total Program Funding	$223,910

Part C. Title VI Grants in State:	
No of Title VI Grantees:	1
Total Allotments:	$59,000

Part D. Title III Clients:	Value	Rank
Total Clients	112,317	26
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	5,263	36
As a % of All Clients	4.7%	41
African American Non-Hispanic Clients as a % of Total Clients	0.3%	43
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	1.0%	13
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	35
Hispanic Clients as a % of Total Clients	3.2%	13
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	48,654	20
As a % of Total Clients	43.3%	18
Minority Clients Below Poverty	3,915	33
As a % of All Minority Clients	74.4%	14
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	56,796	18
As a % of Total Clients	50.6%	23

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	74
Focal Points Which Are Senior Centers	72
Total Senior Centers	97
Total Senior Centers Receiving OAA $	93

Comments:

Profile of State OAA Programs: Utah

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 878,214	$ 4,436,097					
Personal Care	114	9,970	$ 69,218	$ 256,363	27.00%	38	-	2	$868
Homemaker	108	3,231	$ 41,468	$ 49,367	84.00%	39	-	2	$1,341
Chore	1,049	10,371	$ 42,893	$ 104,617	41.00%	13	-	2	$4,814
Home Del Meals	9,780	920,556	$ 724,635	$ 4,025,750	18.00%	32	2	8	$1,259,743
Adult Day Care/Hlth	-	-	$ -	$ -	0.00%	-	-	-	$0
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			24.2%	36.3%					
Cluster 2:			$ 1,424,870	$ 3,390,460					
Congreg Meals	29,193	918,005	$ 1,412,085	$ 3,283,919	43.00%	27	2	8	$1,112,863
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	1,503	33,931	$ 12,785	$ 106,542	12.00%	25	-	6	$0
Cluster 2 As % of Total			39.3%	27.8%					
Cluster 3:			$ 640,964	$ 1,954,785					
Transportation		288,992	$ 409,700	$ 1,321,613	31.00%	40	-	6	$81,581
Legal Assistance		5,662	$ 33,250	$ 67,857	49.00%	13	1	-	$1,229
Nutr Education		-	$ -	$ -	0.00%	-	-	-	$0
Info and Assist		169,327	$ 126,139	$ 394,184	32.00%	52	-	9	$6,337
Outreach		13,165	$ 71,875	$ 171,131	42.00%	52	-	9	$2,212
Cluster 3 As % of Total			17.7%	16.0%					
Other Services			$ 680,504	$ 2,430,371	28.00%				$122,708
Oth Svcs As % of Total			16.8%	19.9%					
Total			$ 3,624,552	$ 12,211,714		131	3		$2,593,716

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	3.00	-	0.50
Other Pd Professionals By Functional Responsibility:			
Planning	-	-	-
Development	9.00	-	2.50
Administration	3.00	-	1.25
Service Delivery	1.50	-	0.25
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	4.00	-	1.80
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	20.50	-	5.80

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	20.05	1.00	12.82
Development	3.45	-	2.45
Serv Del/Access/Care Coord	171.25	21.75	87.25
Planning/Admin/Other	52.25	3.50	21.75
Clerical	31.30	4.00	18.80
Volunteers	219.10	15.00	
Total AAA Staffing	497.40	45.25	143.07
Number of AAAs in State	12		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$23,204
Chapter 3: Elder Abuse	$16,105
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,561,172	$1,897,427	$556,598
Transfer From:			
Part B:		$0	$0
Part C1:	$82,348		$224,427
Part C2:	$0	$0	
Net Transfer $	$82,348	$0	$224,427
% Increase	5.27%	0.00%	40.32%
Final Allotment After Transfers	$1,643,520	$1,590,652	$781,025

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,613,240
As a % of Title III Exp.	72.10%
Program Income Exp. by Part	
Part B: Supp Svcs	$192,121
Part C1: Cong Nutr	$994,008
Part C2: Home Del Nutr	$1,426,732
Part D: In-Home Svcs	$379
Part F: Dis Prv/Hlth Prm	$0

Profile of State OAA Programs: Vermont

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	588,654	50
Persons 60+ 1996	92,553	50
As % of All Ages	15.7%	37
Persons 60-64	21,250	49
Persons 65-74	38,756	50
Persons 75-84	23,681	50
Persons 85+	8,886	48
# Women/100 Men Age 60+	133	33
Persons 60+ 1990	88,961	50
Minority Persons 60+	657	52
Minority Persons 60+ as % of All Persons 60+	0.7%	51
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	49
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.2%	46
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	38
Hispanic Persons 60+ as % of All Persons 60+	0.4%	38
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	10,704	50
As % of All Persons 60+ (Civilian Non-Institutionalized)	12.0%	46
Persons 60+ Below Poverty	9,606	50
As a % of All Persons 60+	10.8%	25
Min. Persons 60+ Below Pov.	98	52
As a % of All Minority Persons 60+	14.9%	49
Females 60+ Below Poverty Level	6,859	50
As % of All Females 60+	13.5%	22
Persons 60+ Living in Rural Areas	42,100	43
As a % of All Persons 60+	47.3%	1
Persons 60+ Living in NHs, Bd & Care, Other Institutions	5,070	46
As a % of All Persons 60+	5.7%	9

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	1
# of Paid Staff FTEs (state/local)	5.40
# of Certified Volunteers (state/local)	23.00
Number of Cases Closed	443
Number of Complaints (for cases closed)	557
Total Program Funding	$273,500

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	19,454	51
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	94	53
As a % of All Clients	0.5%	52
African American Non-Hispanic Clients as a % of Total Clients	0.1%	49
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.1%	44
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.3%	25
Hispanic Clients as a % of Total Clients	0.0%	51
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	6,045	48
As a % of Total Clients	31.1%	34
Minority Clients Below Poverty	44	49
As a % of All Minority Clients	46.8%	43
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	16,080	42
As a % of Total Clients	82.7%	4

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	28
Focal Points Which Are Senior Centers	18
Total Senior Centers	53
Total Senior Centers Receiving OAA $	21

Comments:

Profile of State OAA Programs: Vermont

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,516,604	$ 3,516,570					
Personal Care	13	395	$ 2,853	$ 9,838	29.00%	-	-	-	$0
Homemaker	14	194	$ 9,932	$ 10,032	99.00%	5	-	-	$0
Chore	20	159	$ 3,216	$ 3,421	94.00%	8	-	-	$100
Home Del Meals	3,684	439,650	$ 837,917	$ 1,995,040	42.00%	59	-	4	$445,361
Adult Day Care/Hlth	30	2,369	$ 7,260	$ 103,714	7.00%	5	-	2	$7,532
Case Mgt	4,478	29,061	$ 655,426	$ 1,394,523	47.00%	5	-	5	$1,435
Cluster 1 As % of Total			46.7%	47.2%					
Cluster 2:			$ 582,847	$ 1,533,808					
Congreg Meals	10,199	366,588	$ 582,847	$ 1,533,808	38.00%	82	-	4	$438,817
Nutr Counseling	371	107	$ -	$ -	100.00%	2	-	1	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			17.9%	20.6%					
Cluster 3:			$ 479,928	$ 1,194,438					
Transportation		108,030	$ 52,090	$ 347,267	15.00%	22	-	3	$11,840
Legal Assistance		6,234	$ 225,314	$ 232,282	97.00%	2	-	-	$0
Nutr Education		402	$ 5,100	$ 5,100	100.00%	19	-	4	$0
Info and Assist		14,561	$ 137,019	$ 441,997	31.00%	5	-	5	$1,483
Outreach		1,751	$ 60,405	$ 167,792	36.00%	5	-	3	$0
Cluster 3 As % of Total			14.8%	16.0%					
Other Services			$ 670,788	$ 1,197,836	56.00%				$11,171
Oth Svcs As % of Total			20.6%	16.1%					
Total			$ 3,250,167	$ 7,442,651		169	-		$917,739

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	2.00	-	2.00
Other Pd Professionals By Functional Responsibility:			
Planning	5.00	-	5.00
Development	-	-	-
Administration	15.20	-	12.20
Service Delivery	-	-	-
Access/Care Coordination	4.00	-	-
Other Professional Staff	3.00	-	2.00
Clerical/Support	5.00	-	5.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	34.20	-	26.20

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	4.50	-	3.45
Development	4.35	-	4.18
Serv Del/Access/Care Coord	91.90	1.00	63.83
Planning/Admin/Other	11.45	-	9.68
Clerical	9.22	-	6.07
Volunteers	538.30	-	
Total AAA Staffing	659.72	1.00	87.21
Number of AAAs in State	5		

Part I. Transfers Between Title III, Parts B and C:	To Part B	To Part C1	To Part C2
Pre-Transfer Allotment:	$1,501,529	$1,845,441	$526,695
Transfer From:			
Part B:		$0	$0
Part C1:	$213,916		$292,496
Part C2:	$0	$0	
Net Transfer $	$213,916	$0	$292,496
% Increase	14.25%	0.00%	55.53%
Final Allotment After Transfers	$1,715,445	$1,339,029	$819,191

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$915,557
As a % of Title III Exp.	28.17%
Program Income Exp. by Part	
Part B: Supp Svcs	$23,847
Part C1: Cong Nutr	$438,817
Part C2: Home Del Nutr	$445,361
Part D: In-Home Svcs	$7,532
Part F: Dis Prv/Hlth Prm	$0

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$18,819
Chapter 3: Elder Abuse	$23,660
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Profile of State OAA Programs: Virginia

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	6,675,451	12
Persons 60+ 1996	986,731	12
As % of All Ages	14.8%	46
Persons 60-64	239,574	12
Persons 65-74	428,108	12
Persons 75-84	243,331	14
Persons 85+	75,718	16
# Women/100 Men Age 60+	136	22
Persons 60+ 1990	914,442	14
Minority Persons 60+	164,972	14
Minority Persons 60+ as % of All Persons 60+	16.0%	16
Black Non-Hispanic Persons 60+ as % of All Persons 60+	16.0%	9
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.2%	19
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.2%	35
Hispanic Persons 60+ as % of All Persons 60+	0.8%	27
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	155,326	16
As % of All Persons 60+ (Civilian Non-institutionalized)	17.0%	14
Persons 60+ Below Poverty	111,962	19
As a % of All Persons 60+	12.2%	20
Min. Persons 60+ Below Pov.	40,445	15
As a % of All Minority Persons 60+	24.5%	22
Females 60+ Below Poverty Level	79,050	17
As % of All Females 60+	14.9%	20
Persons 60+ Living in Rural Areas	236,512	10
As a % of All Persons 60+	25.9%	22
Persons 60+ Living in NHs, Bd & Care, Other Institutions	38,694	16
As a % of All Persons 60+	4.2%	29

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	9
# of Paid Staff FTEs (state/local)	10.00
# of Certified Volunteers (state/local)	1.00
Number of Cases Closed	344
Number of Complaints (for cases closed)	655
Total Program Funding	$537,523

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	185,174	13
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	59,012	7
As a % of All Clients	31.9%	12
African American Non-Hispanic Clients as a % of Total Clients	30.7%	6
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.8%	18
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.0%	50
Hispanic Clients as a % of Total Clients	0.4%	34
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	82,589	11
As a % of Total Clients	44.6%	17
Minority Clients Below Poverty	35,435	8
As a % of All Minority Clients	60.0%	28
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	74,784	9
As a % of Total Clients	40.4%	30

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	232
Focal Points Which Are Senior Centers	137
Total Senior Centers	186
Total Senior Centers Receiving OAA $	156

Comments:

Profile of State OAA Programs: Virginia

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm Income
Cluster 1:			$ 4,261,941	$ 18,194,218					
Personal Care	2,213	565,538	$ 469,638	$ 6,709,114	7.00%	91	4	6	$128,620
Homemaker	2,376	198,148	$ 391,910	$ 1,959,550	20.00%	43	2	12	$25,076
Chore	714	7,691	$ 27,934	$ 87,294	32.00%	7	2	1	$10,275
Home Del Meals	12,333	2,145,489	$ 2,948,097	$ 7,019,279	42.00%	70	6	17	$420,566
Adult Day Care/Hlth	356	172,254	$ 61,608	$ 770,100	8.00%	13	-	3	$58,049
Case Mgt	3,511	61,631	$ 362,754	$ 1,648,882	22.00%	19	1	15	$173,972
Cluster 1 As % of Total			31.4%	49.2%					
Cluster 2:			$ 3,962,132	$ 7,619,485					
Congreg Meals	16,189	1,133,811	$ 3,962,132	$ 7,619,485	52.00%	54	7	16	$555,365
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			29.2%	20.6%					
Cluster 3:			$ 4,003,703	$ 8,258,916					
Transportation	983,805	$ 1,545,876	$ 4,986,697	31.00%	53	6	17	$126,930	
Legal Assistance	6,889	$ 171,270	$ 267,609	64.00%	28	1	4	$60	
Nutr Education	-	$ -	$ -	0.00%	-	-	-	$0	
Info and Assist	225,736	$ 924,035	$ 1,301,458	71.00%	31	2	24	$9,482	
Outreach	52,934	$ 1,362,522	$ 1,703,153	80.00%	25	-	22	$40	
Cluster 3 As % of Total			29.5%	22.3%					
Other Services			$ 1,332,647	$ 2,897,059	46.00%				$47,010
Oth Svcs As % of Total			9.8%	7.8%					
Total			$ 13,560,423	$ 36,969,678		324	31		$1,555,465

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	5.00	2.00	1.50
Other Pd Professionals By Functional Responsibility:			
Planning	2.00	-	2.00
Development	5.00	1.00	-
Administration	4.00	2.00	2.00
Service Delivery	-	-	-
Access/Care Coordination	1.00	-	-
Other Professional Staff	-	-	-
Clerical/Support	2.00	2.00	1.50
Volunteers	23.00	3.00	
Total State Unit Staff (Incl. Volunteers)	42.00	10.00	7.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	81.83	12.00	58.58
Development	24.81	-	18.67
Serv Del/Access/Care Coord	671.43	224.29	470.97
Planning/Admin/Other	101.81	18.80	68.30
Clerical	87.17	24.25	53.50
Volunteers	2,937.00	533.00	
Total AAA Staffing	3,904.05	812.34	670.02
Number of AAAs in State	25		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$137,220
Chapter 3: Elder Abuse	$65,593
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$5,959,687	$7,202,166	$2,127,291
Transfer From:			
Part B:		$0	$0
Part C1:	$1,865,891		$1,152,347
Part C2:	$0	$0	
Net Transfer $	$1,865,891	$0	$1,152,347
% Increase	31.31%	0.00%	54.17%
Final Allotment After Transfers	$7,825,578	$4,183,928	$3,279,638

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$1,325,611
As a % of Title III Exp.	9.78%
Program Income Exp. by Part	
Part B: Supp Svcs	$360,679
Part C1: Cong Nutr	$547,432
Part C2: Home Del Nutr	$417,506
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Washington

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	5,532,939	15
Persons 60+ 1996	831,534	18
As % of All Ages	15.0%	43
Persons 60-64	190,422	18
Persons 65-74	346,106	18
Persons 75-84	223,419	17
Persons 85+	71,587	19
# Women/100 Men Age 60+	127	42
Persons 60+ 1990	774,057	18
Minority Persons 60+	49,153	30
Minority Persons 60+ as % of All Persons 60+	6.4%	33
Black Non-Hispanic Persons 60+ as % of All Persons 60+	1.5%	36
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	2.9%	9
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.8%	10
Hispanic Persons 60+ as % of All Persons 60+	1.1%	23
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	104,455	24
As % of All Persons 60+ (Civilian Non-institutionalized)	13.5%	39
Persons 60+ Below Poverty	65,417	29
As a % of All Persons 60+	8.5%	45
Min. Persons 60+ Below Pov.	9,310	31
As a % of All Minority Persons 60+	18.9%	44
Females 60+ Below Poverty Level	45,040	28
As % of All Females 60+	10.4%	44
Persons 60+ Living in Rural Areas	136,454	27
As a % of All Persons 60+	17.6%	34
Persons 60+ Living in NHs, Bd & Care, Other Institutions	33,262	20
As a % of All Persons 60+	4.3%	25

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	14
# of Paid Staff FTEs (state/local)	11.75
# of Certified Volunteers (state/local)	171.00
Number of Cases Closed	2,566
Number of Complaints (for cases closed)	3,196
Total Program Funding	$935,649

Part C. Title VI Grants in State:	
No of Title VI Grantees:	22
Total Allotments:	$1,175,725

Part D. Title III Clients:	Value	Rank
Total Clients	119,090	24
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	6,723	34
As a % of All Clients	5.6%	39
African American Non-Hispanic Clients as a % of Total Clients	1.3%	38
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	2.3%	6
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.9%	13
Hispanic Clients as a % of Total Clients	1.2%	22
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	8,768	45
As a % of Total Clients	7.4%	52
Minority Clients Below Poverty	1,804	41
As a % of All Minority Clients	26.8%	49
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	5,390	48
As a % of Total Clients	4.5%	51

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	46
Focal Points Which Are Senior Centers	20
Total Senior Centers	250
Total Senior Centers Receiving OAA $	67

Comments:

Profile of State OAA Programs: Washington

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 3,042,340	$ 17,212,962					
Personal Care	2,139	387,207	$ 168,028	$ 6,401,400	2.00%	29	2	9	$574,036
Homemaker	-	-	$ -	$ -	0.00%	-	-	-	$0
Chore	-	-	$ -	$ -	0.00%	-	-	-	$0
Home Del Meals	27,344	1,526,184	$ 2,188,768	$ 5,915,427	37.00%	35	7	11	$2,509,197
Adult Day Care/Hlth	478	53,213	$ 24,664	$ 617,100	4.00%	13	1	9	$606,222
Case Mgt	3,503	166,803	$ 660,920	$ 2,279,034	29.00%	22	4	8	$0
Cluster 1 As % of Total			31.4%	44.3%					
Cluster 2:			$ 3,774,482	$ 8,205,396					
Congreg Meals	87,827	1,721,549	$ 3,774,482	$ 8,205,396	46.00%	41	12	12	$4,760,680
Nutr Counseling	-	-	$ -	$ -	0.00%	-	-	-	$0
Assisted Transport	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 2 As % of Total			39.0%	21.1%					
Cluster 3:			$ 2,096,404	$ 4,996,020					
Transportation		379,348	$ 778,922	$ 2,049,795	38.00%	18	2	7	$1,137,508
Legal Assistance		9,624	$ 529,118	$ 529,118	100.00%	11	-	3	$529,118
Nutr Education		2,785	$ 32,298	$ 33,998	95.00%	3	-	1	$33,985
Info and Assist		226,164	$ 664,567	$ 2,291,610	29.00%	24	7	8	$0
Outreach		2,816	$ 91,499	$ 91,499	100.00%	6	3	-	$0
Cluster 3 As % of Total			21.7%	12.9%					
Other Services			$ 763,470	$ 8,464,191	9.02%				$1,104,981
Oth Svcs As % of Total			7.9%	21.8%					
Total			$ 9,676,696	$ 38,878,568		110	18		$11,295,727

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	-	-	-
Other Pd Professionals By Functional Responsibility:			
Planning	-	-	-
Development	-	-	-
Administration	1.00	-	1.00
Service Delivery	7.00	1.00	7.00
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	1.00	1.00	1.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	9.00	2.00	9.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	20.00	4.00	15.00
Development	6.00	-	5.00
Serv Del/Access/Care Coord	163.00	39.00	91.00
Planning/Admin/Other	87.00	33.00	76.00
Clerical	74.00	12.00	32.00
Volunteers	-	-	
Total AAA Staffing	350.00	88.00	219.00
Number of AAAs in State	13		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$56,507
Chapter 3: Elder Abuse	$36,101
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Comments:

Part I. Transfers Between Title III, Parts B and C:			
Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$4,991,973	$6,033,402	$1,780,235
Transfer From:			
Part B:		$0	$0
Part C1:	$467,671		$897,208
Part C2:	$0	$0	
Net Transfer $	$467,671	$0	$897,208
% Increase	9.37%	0.00%	50.40%
Final Allotment After Transfers	$5,459,644	$4,668,523	$2,677,443

Part J. Program Income Expended (from SF269):	
Total Program Income Exp.	$3,554,670
As a % of Title III Exp.	36.73%
Program Income Exp. by Part	
Part B: Supp Svcs	$98,765
Part C1: Cong Nutr	$2,090,009
Part C2: Home Del Nutr	$1,362,778
Part D: In-Home Svcs	$16
Part F: Dis Prv/Hlth Prm	$3,102

Profile of State OAA Programs: West Virginia

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	1,825,754	36
Persons 60+ 1996	362,916	35
As % of All Ages	19.9%	4
Persons 60-64	85,270	35
Persons 65-74	155,676	35
Persons 75-84	92,501	35
Persons 85+	29,469	36
# Women/100 Men Age 60+	139	14
Persons 60+ 1990	361,323	35
Minority Persons 60+	13,060	39
Minority Persons 60+ as % of All Persons 60+	3.6%	41
Black Non-Hispanic Persons 60+ as % of All Persons 60+	3.1%	29
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.1%	47
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.1%	47
Hispanic Persons 60+ as % of All Persons 60+	0.2%	47
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	77,120	32
As % of All Persons 60+ (Civilian Non-institutionalized)	21.3%	4
Persons 60+ Below Poverty	56,537	30
As a % of All Persons 60+	15.6%	15
Min. Persons 60+ Below Pov.		39
As a % of All Minority Persons 60+	23.9%	25
Females 60+ Below Poverty Level	39,685	30
As % of All Females 60+	18.8%	13
Persons 60+ Living in Rural Areas	150,681	23
As a % of All Persons 60+	41.7%	3
Persons 60+ Living in NHs, Bd & Care, Other Institutions	11,851	35
As a % of All Persons 60+	3.3%	45

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	1
# of Paid Staff FTEs (state/local)	9.29
# of Certified Volunteers (state/local)	12.00
Number of Cases Closed	897
Number of Complaints (for cases closed)	1,428
Total Program Funding	$459,305

Part C. Title VI Grants in State:	
No of Title VI Grantees:	0
Total Allotments:	$0

Part D. Title III Clients:	Value	Rank
Total Clients	48,794	37
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	1,607	47
As a % of All Clients	3.3%	46
African American Non-Hispanic Clients as a % of Total Clients	3.1%	32
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.0%	51
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.1%	42
Hispanic Clients as a % of Total Clients	0.1%	47
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	14,281	41
As a % of Total Clients	29.3%	39
Minority Clients Below Poverty	723	45
As a % of All Minority Clients	45.0%	44
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	30,292	30
As a % of Total Clients	62.1%	11

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	212
Focal Points Which Are Senior Centers	112
Total Senior Centers	112
Total Senior Centers Receiving OAA $	112

Comments:

Profile of State OAA Programs: West Virginia

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures: Title III	Expenditures: Total Service	%TIII $	Providers: Total	Providers: Minority	Providers: AAA	Earned Pgm.Income
Cluster 1:			$ 2,208,308	$ 5,302,156					
Personal Care	225	6,254	$ 29,573	$ 53,769	55.00%	20	-	-	$3,711
Homemaker	1,938	43,055	$ 180,193	$ 409,530	44.00%	40	-	-	$20,031
Chore	562	8,364	$ 48,097	$ 84,381	57.00%	20	-	-	$4,198
Home Del Meals	9,005	1,206,237	$ 1,866,840	$ 4,444,857	42.00%	48	-	-	$739,192
Adult Day Care/Hlth	161	51,651	$ 79,487	$ 283,882	28.00%	8	-	-	$94,116
Case Mgt	123	988	$ 4,118	$ 25,738	16.00%	4	-	-	$2,680
Cluster 1 As % of Total			37.4%	37.3%					
Cluster 2:			$ 1,902,171	$ 4,733,455					
Congreg Meals	23,109	1,221,069	$ 1,776,338	$ 4,440,845	40.00%	49	-	-	$1,133,218
Nutr Counseling	1	1	$ 19	$ 19	100.00%	1	-	-	$0
Assisted Transport	2,174	35,520	$ 125,814	$ 292,591	43.00%	43	-	-	$15,351
Cluster 2 As % of Total			32.2%	33.3%					
Cluster 3:			$ 1,257,191	$ 3,128,966					
Transportation		571,191	$ 996,437	$ 2,622,203	38.00%	52	-	-	$190,545
Legal Assistance		1,895	$ 73,541	$ 104,313	70.50%	10	-	-	$2,918
Nutr Education		4,008	$ 11,750	$ 14,329	82.00%	12	-	-	$1,046
Info and Assist		20,237	$ 100,713	$ 214,283	47.00%	39	-	-	$6,506
Outreach		11,311	$ 74,750	$ 173,837	43.00%	38	-	-	$8,315
Cluster 3 As % of Total			21.3%	22.0%					
Other Services			$ 543,209	$ 1,065,116	51.00%				$32,574
Oth Svcs As % of Total			9.2%	7.5%					
Total			$ 5,910,879	$ 14,229,692		83	-		$2,254,402

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	2.00	-	0.17
Other Pd Professionals By Functional Responsibility:			
Planning	1.80	0.42	1.60
Development	2.70	0.41	1.95
Administration	3.90	0.05	2.31
Service Delivery	0.50	0.07	0.42
Access/Care Coordination	1.10	0.05	0.84
Other Professional Staff	-	-	-
Clerical/Support	4.50	-	3.29
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	16.50	1.00	10.60

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	6.00	-	5.00
Development	2.00	-	1.00
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	2.50	-	2.50
Clerical	3.00	-	2.00
Volunteers	-	-	
Total AAA Staffing	13.50	-	10.50
Number of AAAs in State	4		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$36,000
Chapter 3: Elder Abuse	$38,143
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$2,572,146	$3,220,662	$911,702
Transfer From:			
Part B:		$0	$30,583
Part C1:	$0		$1,042,017
Part C2:	$0	$0	
Net Transfer $	$0	$0	$1,072,600
% Increase	0.00%	0.00%	117.65%
Final Allotment After Transfers	$2,541,563	$2,178,645	$1,684,302

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$1,796,909
As a % of Title III Exp.	30.40%
Program Income Exp. by Part	
Part B: Supp Svcs	$278,268
Part C1: Cong Nutr	$960,520
Part C2: Home Del Nutr	$558,101
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Wisconsin

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	5,159,795	18
Persons 60+ 1996	882,363	17
As % of All Ages	17.1%	24
Persons 60-64	196,592	17
Persons 65-74	360,858	17
Persons 75-84	237,940	16
Persons 85+	86,973	13
# Women/100 Men Age 60+	133	34
Persons 60+ 1990	864,641	16
Minority Persons 60+	27,199	34
Minority Persons 60+ as % of All Persons 60+	3.1%	46
Black Non-Hispanic Persons 60+ as % of All Persons 60+	1.9%	33
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	0.5%	32
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.4%	19
Hispanic Persons 60+ as % of All Persons 60+	0.4%	37
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	113,816	22
As % of All Persons 60+ (Civilian Non-institutionalized)	13.2%	40
Persons 60+ Below Poverty	69,164	27
As a % of All Persons 60+	8.0%	47
Min. Persons 60+ Below Pov.	5,618	34
As a % of All Minority Persons 60+	20.7%	38
Females 60+ Below Poverty Level	49,075	26
As % of All Females 60+	9.9%	47
Persons 60+ Living in Rural Areas	221,269	15
As a % of All Persons 60+	25.6%	23
Persons 60+ Living in NHs, Bd & Care, Other Institutions	51,961	11
As a % of All Persons 60+	6.0%	7

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	7
# of Paid Staff FTEs (state/local)	11.00
# of Certified Volunteers (state/local)	0.00
Number of Cases Closed	1,371
Number of Complaints (for cases closed)	3,339
Total Program Funding	$673,400

Part C. Title VI Grants in State:	
No of Title VI Grantees:	10
Total Allotments:	$650,500

Part D. Title III Clients:	Value	Rank
Total Clients	158,765	15
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	2,536	43
As a % of All Clients	1.6%	50
African American Non-Hispanic Clients as a % of Total Clients	0.7%	41
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.2%	33
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	0.4%	18
Hispanic Clients as a % of Total Clients	0.3%	37
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	94,779	9
As a % of Total Clients	59.7%	5
Minority Clients Below Poverty	2,275	38
As a % of All Minority Clients	89.7%	5
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	107,610	5
As a % of Total Clients	67.8%	7

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	82
Focal Points Which Are Senior Centers	0
Total Senior Centers	284
Total Senior Centers Receiving OAA $	8

Comments:

Profile of State OAA Programs: Wisconsin

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 3,010,439	$ 9,929,932					
Personal Care	1,575	50,163	$ 184,997	$ 385,410	48.00%	18	3	-	$17,316
Homemaker	5,790	185,000	$ 293,097	$ 661,621	43.00%	25	4	1	$25,694
Chore	5,338	115,238	$ 186,327	$ 1,433,285	13.00%	24	2	-	$39,164
Home Del Meals	21,283	2,424,564	$ 2,037,160	$ 5,223,487	39.00%	82	10	-	$2,644,634
Adult Day Care/Hlth	1,431	210,853	$ 308,858	$ 2,206,129	14.00%	19	4	-	$22,783
Case Mgt	-	-	$ -	$ -	0.00%	-	-	-	$0
Cluster 1 As % of Total			19.4%	24.2%					
Cluster 2:			$ 7,065,714	$ 12,290,966					
Congreg Meals	84,524	3,116,560	$ 7,003,666	$ 12,075,286	58.00%	72	10	-	$3,259,124
Nutr Counseling	383	28,531	$ 8,794	$ 10,857	81.00%	82	10	-	$0
Assisted Transport	9,336	141,003	$ 53,264	$ 204,823	26.00%	43	5	-	$14,867
Cluster 2 As % of Total			45.5%	30.0%					
Cluster 3:			$ 2,740,710	$ 12,153,255					
Transportation		529,859	$ 957,672	$ 6,384,480	15.00%	51	5	-	$169,252
Legal Assistance		95,066	$ 1,031,680	$ 2,456,381	42.00%	72	1	-	$54,579
Nutr Education		41,051	$ 31,320	$ 80,308	39.00%	82	10	-	$966
Info and Assist		85,444	$ 363,911	$ 1,137,222	32.00%	53	8	-	$12,541
Outreach		148,832	$ 356,127	$ 2,094,865	17.00%	29	2	-	$7,767
Cluster 3 As % of Total			17.7%	29.7%					
Other Services			$ 2,709,020	$ 6,607,366	41.00%				$190,288
Oth Svcs As % of Total			17.4%	16.1%					
Total			$ 15,525,883	$ 40,981,519		193	10		$6,458,975

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	-	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	5.00	-	5.00
Development	6.00	1.00	5.00
Administration	2.00	-	2.00
Service Delivery	-	-	-
Access/Care Coordination	-	-	-
Other Professional Staff	-	-	-
Clerical/Support	1.00	-	1.00
Volunteers	-	-	
Total State Unit Staff (Incl. Volunteers)	17.00	1.00	14.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	7.00	-	7.00
Development	8.50	5.00	4.50
Serv Del/Access/Care Coord	88.25	26.00	2.75
Planning/Admin/Other	34.75	7.00	14.75
Clerical	17.00	5.00	10.00
Volunteers	1.75	-	
Total AAA Staffing	157.25	43.00	39.00
Number of AAAs in State	6		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$0
Chapter 3: Elder Abuse	$0
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$8,072,005	$7,373,946	$2,114,622
Transfer From:			
Part B:		$0	$0
Part C1:	$258,673		$0
Part C2:	$114,199	$0	
Net Transfer $	$372,872	$0	$0
% Increase	6.14%	0.00%	0.00%
Final Allotment After Transfers	$8,444,877	$7,115,273	$2,000,623

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$8,713,499
As a % of Title III Exp.	56.12%
Program Income Exp. by Part	
Part B: Supp Svcs	$442,402
Part C1: Cong Nutr	$5,744,828
Part C2: Home Del Nutr	$2,522,971
Part D: In-Home Svcs	$3,297
Part F: Dis Prv/Hlth Prm	$0

Comments:

Profile of State OAA Programs: Wyoming

Part A. Population Data:	Value	Rank
Total Resident Pop 1996	481,400	52
Persons 60+ 1996	72,798	51
As % of All Ages	15.1%	41
Persons 60-64	18,775	51
Persons 65-74	30,669	51
Persons 75-84	17,383	51
Persons 85+	5,971	51
# Women/100 Men Age 60+	119	48
Persons 60+ 1990	66,839	51
Minority Persons 60+	3,738	48
Minority Persons 60+ as % of All Persons 60+	5.6%	36
Black Non-Hispanic Persons 60+ as % of All Persons 60+	0.4%	43
Asian & Pacific Islander Non-Hispanic Persons 60+ as a % of All Persons 60 +	1.4%	17
American Indian, Eskimo and Non-Hispanic Persons 60+ as % of All Persons 60+	0.9%	8
Hispanic Persons 60+ as % of All Persons 60+	2.9%	12
Persons 60+ (Non-Instit.) with Mobility and/or Self Care Lim.	7,887	51
As % of All Persons 60+ (Civilian Non-institutionalized)	11.6%	50
Persons 60+ Below Poverty	6,721	51
As a % of All Persons 60+	10.1%	32
Min. Persons 60+ Below Pov.		48
As a % of All Minority Persons 60+	22.8%	29
Females 60+ Below Poverty Level	4,298	51
As % of All Females 60+	12.0%	36
Persons 60+ Living in Rural Areas	15,420	48
As a % of All Persons 60+	23.1%	27
Persons 60+ Living in NHs, Bd & Care, Other Institutions	2,852	50
As a % of All Persons 60+	4.3%	27

Part B. Long Term Care Ombudsman Program:	
# of Designated Local Ombudsman Entities	2
# of Paid Staff FTEs (state/local)	2.00
# of Certified Volunteers (state/local)	1.00
Number of Cases Closed	916
Number of Complaints (for cases closed)	1,034
Total Program Funding	$96,283

Part C. Title VI Grants In State:	
No of Title VI Grantees:	2
Total Allotments:	$126,000

Part D. Title III Clients:	Value	Rank
Total Clients	28,700	47
Total Registered Svcs Clients	*NA 1996*	
Age of Registered Clients:		
Age 64 and Under	*NA 1996*	
Age 65-74	*NA 1996*	
Age 75-84	*NA 1996*	
Age 85 and Over	*NA 1996*	
# Women/100 Men Age 60+	*NA 1996*	
Total Minority Clients	1,646	46
As a % of All Clients	5.7%	38
African American Non-Hispanic Clients as a % of Total Clients	0.4%	42
Asian & Pacific Islander Non-Hispanic Clients as a % of Total Clients	0.3%	30
American Indian, Eskimo, Non-Hispanic Clients as a % of Total Clients	2.1%	7
Hispanic Clients as a % of Total Clients	3.0%	14
Total Clients With 3 or More ADL Limitations	*NA 1996*	
As a % of Total Clients	*NA 1996*	
Clients Below Poverty Level	5,428	49
As a % of Total Clients	18.9%	47
Minority Clients Below Poverty	452	47
As a % of All Minority Clients	27.5%	47
Female Clients Below Poverty	*NA 1996*	
As a % of All Female Clients	*NA 1996*	
Rural Clients	27,307	31
As a % of Total Clients	95.1%	2

Data Based on Registered Clients Only are Shown in Italics

Part E. Focal Points/Senior Centers:	
Total Focal Points:	37
Focal Points Which Are Senior Centers	37
Total Senior Centers	37
Total Senior Centers Receiving OAA $	37

Comments:

Profile of State OAA Programs: Wyoming

Part F. Service Profile:

Service	Persons Served	Service Units	Expenditures Title III	Expenditures Total Service	%TIII $	Providers Total	Providers Minority	Providers AAA	Earned Pgm.Income
Cluster 1:			$ 1,093,998	$ 2,288,691					
Personal Care	895	25,777	$ 68,804	$ 68,804	100.00%	23	-	-	$9,594
Homemaker	2,126	115,650	$ 215,791	$ 378,581	57.00%	27	-	-	$30,926
Chore	615	19,393	$ 42,135	$ 42,135	100.00%	16	-	-	$6,552
Home Del Meals	5,118	406,775	$ 661,447	$ 1,653,618	40.00%	25	1	-	$612,868
Adult Day Care/Hlth	165	37,195	$ 52,669	$ 92,402	57.00%	12	-	-	$7,085
Case Mgt	1,072	14,372	$ 53,152	$ 53,152	100.00%	22	-	-	$6,721
Cluster 1 As % of Total			27.8%	27.5%					
Cluster 2:			$ 1,619,271	$ 4,014,126					
Congreg Meals	23,777	863,354	$ 1,354,172	$ 3,563,611	38.00%	30	1	-	$1,451,188
Nutr Counseling	1,997	10,938	$ 19,312	$ 19,312	100.00%	7	-	-	$3,049
Assisted Transport	2,358	140,418	$ 245,787	$ 431,205	57.00%	8	-	-	$38,804
Cluster 2 As % of Total			41.1%	48.2%					
Cluster 3:			$ 1,144,789	$ 1,919,573					
Transportation		276,036	$ 474,018	$ 831,611	57.00%	27	1	-	$74,837
Legal Assistance		1,114	$ 40,500	$ 40,500	100.00%	9	-	-	$6,394
Nutr Education		131,506	$ 219,453	$ 385,005	57.00%	23	-	-	$34,647
Info and Assist		193,125	$ 333,568	$ 585,207	57.00%	28	1	-	$52,663
Outreach		50,504	$ 77,250	$ 77,250	100.00%	26	1	-	$12,195
Cluster 3 As % of Total			29.1%	23.0%					
Other Services			$ 78,115	$ 113,210	69.00%				$1,500
Oth Svcs As % of Total			2.0%	1.4%					
Total			$ 3,936,173	$ 8,335,602		36	1		$2,349,123

Part G. State Unit Staffing:	Total	Minority	Title III
Executive/Mgt Staff	1.00	-	1.00
Other Pd Professionals By Functional Responsibility:			
Planning	0.75	-	0.75
Development	0.50	-	0.50
Administration	0.75	-	0.75
Service Delivery	-	-	-
Access/Care Coordination	2.00	-	2.00
Other Professional Staff	-	-	-
Clerical/Support	1.00	-	1.00
Volunteers	2.00	-	
Total State Unit Staff (incl. Volunteers)	8.00	-	6.00

Part H. AAA Staff (Tot State):	Total	Minority	Title III
Total Exec/Mgt Staff	-	-	-
Development	-	-	-
Serv Del/Access/Care Coord	-	-	-
Planning/Admin/Other	-	-	-
Clerical	-	-	-
Volunteers	-	-	
Total AAA Staffing	-	-	-
Number of AAAs in State	*		

Part K. Title VII Expenditures:	
Chapter 2: Ombudsman Program	$22,245
Chapter 3: Elder Abuse	$23,660
Chapter 4: Legal Assistance	
Chapter 5: Benefits Assistance	$0

Part I. Transfers Between Title III, Parts B and C:

Pre-Transfer	To Part B	To Part C1	To Part C2
Allotment:	$1,501,529	$1,829,424	$526,695
Transfer From:			
Part B:		$0	$0
Part C1:	$340,500		$134,752
Part C2:	$0	$0	
Net Transfer $	$340,500	$0	$134,752
% Increase	22.68%	0.00%	25.58%
Final Allotment After Transfers	$1,842,029	$1,354,172	$661,447

Part J. Program Income Expended (from SF269):

Total Program Income Exp.	$2,339,894
As a % of Title III Exp.	59.45%
Program Income Exp. by Part	
Part B: Supp Svcs	$275,839
Part C1: Cong Nutr	$1,451,189
Part C2: Home Del Nutr	$612,866
Part D: In-Home Svcs	$0
Part F: Dis Prv/Hlth Prm	$0

Comments:

This is a Single Planning and Service Area state.

ADMINISTRATION FOR CHILDREN AND FAMILIES

TITLE XX—SOCIAL SERVICE BLOCK GRANT PROGRAM

The major source of Federal funding for social services programs in the States is Title XX of the Social Security Act, the Social Services Block Grant (SSBG) program. The Omnibus Budget Reconciliation Act of 1981 (Public Law 97–35) amended Title XX to establish the SSBG program under which formula grants are made directly to the 50 States, the District of Columbia, and the eligible jurisdictions (Puerto Rico, Guam, the Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands) for use in funding a variety of social services best suited to the needs of individuals and families residing within the State. Public Law 97–35 also permits States to transfer up to ten (10) percent of their block grant funds to other block grant programs for support of health services, health promotions and disease prevention activities, and low-income home energy assistance.

Under the SSBG, Federal funds are available without a matching requirement. In fiscal year 1997, a total of $2.5 billion was allotted to States. $2.299 billion was appropriated for these activities in fiscal year 1998. Within the specific limitations in the law, each State has the flexibility to determine what services will be provided, who is eligible to receive services, and how funds are distributed among the various services within the State. State and/or local Title XX agencies (i.e., county, city, regional offices) may provide these services directly or purchase them from qualified agencies and individuals.

A variety of social services directed at assisting aged persons to obtain or maintain a maximum level of self-care and independence may be provided under the SSBG. Such services include, but are not limited to adult day care, adult foster care, protective services, health-related services, homemaker services, housing and home maintenance services, transportation, preparation and delivery of meals, senior centers, and other services that assist elderly persons to remain in their own homes or in community living situations. Services may also be offered which facilitate admission for institutional care when other forms of care are not appropriate. Under the SSBG, States are not required to submit data that indicate the number of elderly recipients or the amount of expenditures provided to support specific services for the elderly. States are required, prior to the expenditures of funds under the SSBG, to prepare a report on the intended use of the funds including information on the type of activities to be supported and the categories or characteristics of individuals to be served. States also are required to report annually on activities carried out under the SSBG. Beginning with fiscal year 1989, the annual report must include specific information on the numbers of children and adults receiving services, the amount spent in providing each service, the method by which services were provided, i.e., public or private agencies, and the criteria used in determining eligibility for each service.

Based on an analysis of post-expenditure reports submitted by the States for fiscal year 1997, the list below indicates the number of States providing certain types of services to the aged under the SSBG.

Services:

	Number of States[1]
Home-Based Services[2]	33
Adult Protective Services	27
Transportation Services	16
Adult Day Care	22
Health Related Services	13
Information and Referral	14
Home Delivered/Congregate Meals	13
Adult Foster Care	13
Housing	7

[1] Includes 50 States, the District of Columbia, and the five eligible territories and insular areas.

[2] Includes homemaker, chore, home health, companionship, and home maintenance services.

In enabling the elderly to maintain independent living, most States provide Home-Based Services which frequently includes homemaker services, companion and/or chore services. Homemaker services may include assisting with food shopping, light housekeeping, and personal laundry. Companion services can be personal aid to, and/or supervision of aged persons who are unable to care for themselves without assistance. Chore services frequently involve performing home maintenance tasks and heavy housecleaning for the aged person who cannot perform these tasks. Based on the FY 97 data, 27 States provided Adult Protective Services to persons generally sixty years of age and over. These services may consist of the identification, receipt, and investigation of complaints and reports of adult abuse. In addition, this service may involve providing counseling and assistance to stabilize a living arrangement. If appropriate, Adult Protective Services also may include the provision of, or arranging for, home based care, day care, meal service, legal assistance, and other activities to protect the elderly.

LOW INCOME HOME ENERGY ASSISTANCE PROGRAM

The Low Income Home Energy Assistance Program (LIHEAP) is one of six block grant programs administered within the Department of Health and Human Services (HHS). LIHEAP is administered by the Office of Community Services (OCS) in the Administration for Children and Families.

LIHEAP helps low income households meet the cost of home energy. The program is authorized by the Omnibus Budget Reconciliation Act of 198 1, as amended most recently by the Community Opportunities, Accountability, and Training and Educational Services Act of 1998, the NIH Revitalization Act of 1993 (P.L. 103–43), and the Human Services Amendments of 1994 (P.L. 103–252). In fiscal year 1997, all 50 states, the District of Columbia, five territories, and 124 tribes and tribal organizations received grants amounting to approximately $1.215 billion, including $215 million in emergency contingency funds.

In FY 1998, $1.0 billion is available. In addition, $300 million in emergency contingency funds are available, if the President decides to release some or all of the funds because of weather, supply shortages, or other energy emergencies. Federally-recognized and state-recognized Indian tribes, including Alaska native villages, may apply for direct LIHEAP funding. The amount to be reserved from a state's allotment for a direct grant to a tribe will be based

on the ratio of eligible tribal households to total eligible households in the state, or a larger allotment amount agreed on by the tribe and state. Of the $ 1.0 billion appropriated for FY 1998, $25 million is earmarked for leveraging incentive awards, to reward grantees that add non-Federal resources to help low income households meet their home heating and cooling needs. Up to 25% of the leveraging incentive awards, or $6,250,000, will be used to fund grants to LIHEAP grantees under the Residential Energy Assistance Challenge Option Program (REACH) to develop innovative programs to reduce the energy vulnerability of LIHEAP-eligible households.

For FY 1994, Congress appropriated $1,437,408,000, of which $141,950,240 could be used by grantees to reimburse themselves for FY 1993 expenses. In addition, Congress rescinded some funds and appropriated energy emergency contingency funds of $300,000,000, which were released when the President declared an emergency and requested the funds from Congress, thus providing a total of $1,737,392,360 for FY 1994. The FY 1994 appropriations act provided advance FY 1995 funds of $1.475 billion. The FY 1995 HHS appropriations act rescinded part of the advance FY 1995 appropriations included in the FY 1994 appropriations law, leaving funding of $1,319,202,479 for FY 1995. In addition, Congress appropriated energy emergency contingency funds of $300,000,000, of which $100 million were released when the President declared an emergency and requested the funds from Congress, thus providing a total of $1,419,202,479 for FY 1995. The FY 1995 HHS appropriations law also provided for advance FY 1996 funding of $1,319,204,000. Congress rescinded part of the advance funding for FY 1996 in the FY 1995 supplemental appropriations law and in the FY 1996 appropriations law, leaving funding of $899,997,500. In addition, Congress appropriated energy emergency contingency funds of $300,000,000, of which $180 million were released when the President declared an emergency and requested the funds from Congress, thus providing a total of $1,079,997,500 for FY 1996. Congress did not appropriate in advance for FY 1997.

Block grants are made to States, territories, and eligible applicant Indian Tribes. Grantees may provide heating assistance, cooling assistance, energy crisis interventions, and low-cost residential weatherization or other energy-related home repair to eligible households. Grantees can make payments to households with incomes not exceeding the greater of 150 percent of the poverty level or 60 percent of the State's median income.[3] Most households in which one or more persons are receiving benefits from the Temporary Assistance to Needy Families (TANF) block grant, Supplemental Security Income, Food Stamps or need-tested veterans' benefits, may be regarded as categorically eligible for LIHEAP.

Low-income elderly households are a major target group for energy assistance. They spend, on average, a greater portion of their income for heating costs than other low-income households. Grantees are required to target outreach activities to elderly or handicapped households eligible for energy assistance. In their crisis

[3] Beginning with fiscal year 1986, States are prohibited from setting income eligibility levels lower than 110 percent of the poverty level.

intervention programs, grantees must provide physically infirm individuals the means to apply for assistance without leaving their homes, or the means to travel to sites where applications are accepted.

In fiscal year 1998, about 34 percent of households receiving assistance with heating costs included at least one person age 60 or over, as estimated by the March 1998 Current Population Survey.

OCS is a member of the National Energy and Aging Consortium, which focuses on helping older Americans cope with the impact of high energy costs and related energy concerns.

The 1998 reauthorization retains legislation from the 1994 reauthorization that specifically allows grantees to target funds to vulnerable populations, mentioning by name "frail older individuals" and "individual with disabilities". No new initiatives commenced in 1997 or 1998 that impacted on the status of older Americans.

THE COMMUNITY SERVICES BLOCK GRANT (CSBG) AND THE ELDERLY

I. Community Service Block Grant—The Community Service Block Grant Act (Title VI, Subtitle B, Public Law 97–35 as amended; and the Coats Human Services Reauthorization Act of 1998 105–285) is authorized through fiscal year 2003. The Act authorizes the Secretary, through the Office of Community Services (OCS), an office within the Administration for Children and Families in the Department of Health and Human Services, to make grants to States and Indian tribes or tribal organizations. States and tribes have the authority and the flexibility to make decisions about the kinds of local projects to be supported by the State or tribe, using CSBG funds. The purposes of the CSBG program are:

(A) to provide a range of services and activities having a measurable and potentially major impact on causes of poverty in the community or those areas of the community where poverty is a particularly acute problem.

(B) to provide activities designed to assist low-income participants including the elderly poor—

(i) to secure and retain meaningful employment,

(ii) to attain an adequate education;

(iii) to make better use of available income;

(iv) to obtain and maintain adequate housing and a suitable living environment;

(v) to obtain emergency assistance through loans or grants to meet immediate and urgent individual and family needs, including the need for health services, nutritious food, housing, and employment-related assistance;

(vi) to remove obstacles and solve problems which block the achievement of self-sufficiency;

(vii) to achieve greater participation in the affairs of the community; and

(viii) to make more effective use of other programs related to the purposes of the subtitle,

(C) to provide on an emergency basis for the provision of such supplies and services, nutritious foodstuffs and related services, as may be necessary to counteract conditions of starvation and malnutrition among the poor;

(D) to coordinate and establish linkages between governmental and other social services programs to assure the effective delivery of such services to low income individuals; and

(E) to encourage the use of entities in the private sector of the community in efforts to ameliorate poverty in the community; (Reference Section 675(c)(1) of Public Law 97–35, as amended).

It should be noted that although there is a specific reference to "elderly poor" in (B) above, there is no requirement that the States or tribes place emphasis on the elderly or set aside funds to be specifically targeted on the elderly. Neither the statute nor implementing regulations include a requirement that grant recipients report on the kinds of activities paid for from CSBG funds or the types of indigent clients served. Hence, it is not possible for OCS to provide complete information on the amount of CSBG funds spent on the elderly, or the number elderly, or the numbers of elderly persons served.

II. Major Activities or Research Projects Related to Older Citizens in 1997 and 1998—The Human Services Reauthorization Act of 1986 contained the following language: "each such evaluation shall include identifying the impact that assistance . . . has on . . . the elderly poor." The reauthorization act of 1998 requires that states assure a portion of the grant funds will be used to support activities for elderly low-income individuals as part of their State Application and Plan submitted to OCS. Following the 1994 reauthorization, local community action agencies began to include a description of how linkages will be developed to fill identified gaps in services through information, referral, case management, and followup consultations as well as a description of outcome measures to be used to monitor success in promoting self sufficiency, family stability and community revitalization. As a result, the CSBG Task Force on Monitoring and Assessment, a representative body of eligible entities, established a goal which states, "Low income people, especially vulnerable populations, achieve their potential by strengthening family and other support systems". This goal assists local, state and federal agencies to focus jointly on vulnerable populations, particularly the frail elderly.

III. Funding Levels—Funding levels under the CSBG program for States and Indian Tribes or tribal organizations amounted to $480.8 million in fiscal year 1997. For fiscal year 1998, $485.3 million was appropriated.

AGING AND DEVELOPMENTAL DISABILITIES PROGRAM

CRITICAL AUDIENCES PROJECT

Grantee: Institute for the Study of Developmental Disabilities, Indiana University

Project Director: Barbara Hawkins, Ph.D., (812) 855–6506; Fax (812) 855–9630

Project Period: 7/97–6/30/2002; FY '97—$82,680

The project provides training in a late-life functional-developmental model for audiences that are critical to effective planning and care of older persons. Activities include developing training

modules and instructional videos for interdisciplinary university credit courses, and illustrating the model by demonstration projects in community retirement settings.

CENTER ON AGING AND DEVELOPMENTAL DISABILITIES/CADD

Grantee: University of Miami/CADD, Miami, FL
Project Director: John Stokesberry, Ph.D., (305) 325–1043
Project Period: 7/97–6/30/2002; FY '9—$82,680
CADD is providing education and training to service providers, parents and families; advocacy and outreach for consumers, information to the public on aging and developmental disabilities; networking, policy direction and community-based research. Materials will include a manual for parents/caregivers, a resource guide and a handbook on developing a peer companion project.

INTERDISCIPLINARY TRAINING CENTER

Grantee: UAP—Institute for Human Development, University of Missouri-Kansas City
Project Director: Gerald J. Cohen, J.D., M.P.A., (816) 235–1770; Fax (816) 235–1762
Project Period: 7/97–6/30/2002; FY '97—$82,680
The Center addresses personnel preparation needs with a focus on administration, interdisciplinary training, exemplary services, information/technical assistance/research; and evaluation. Materials include training guide for aging, infusion models, inservice fellowship curriculum, resource bibliography, guide for training volunteers, and course syllabus.

CONSORTIUM OF EDUCATIONAL RESOURCES

Grantee: UAP—University of Rochester Medical Center, Rochester, NY
Project Director: Jenny C. Overeynder, ACSW, (716) 275–2986; Fax (716) 256–2009
Project Period: 7/97–6/30/2002; FY '97—$82,680
An inter-university interdisciplinary consortium of educational resources in gerontology and developmental disabilities is being established in western New York, to be linked to local and state networks. The project will develop and implement preservice and inservice education curriculum for direct care and nursing home staff

COMMUNITY MEMBERSHIP THROUGH PERSON—CENTERED PLANNING

Grantee: Eunice Kennedy Shriver Center, Inc. Shriver, Center UAP
Project Director: Karen E. Gould, Ph.D., (617) 642–0238
Project Period: 7/92–6/30/1999; FY '97—$82,680
The Center has two primary goals which are: 1) to implement a service delivery model that creates a new vision for individuals who are labeled "old" and "developmentally disabled" in Massachusetts, one in which entry into valued adult roles is expected and capacities and interests form the basis for structuring support; and 2) to provide training to persons with developmental disabilities, family members and friends, graduate students, professionals and community members so that they can develop the skills necessary to sup-

port community entry and inclusion in valued roles and relationships for older adults with developmental disabilities, and learn to use these skills in other settings.

NORTH DAKOTA PROJECT FOR OLDER PERSONS WITH DEVELOPMENTAL DISABILITIES

Grantee: North Dakota Center for Disabilities, Minot State University

Project Director: Dr. Rita Curl and Dr. Demetrios Vassiliou, (701) 857–3580

Project Period: 7/97–6/30/2002; FY '97—$82,680

The project seeks to upgrade the training opportunities available to North Dakotans; 1) project staff works with pre-service geriatric programs to develop strong DD components; 2) project staff expands on an existing inservice training program to provide information on aging DD service provision; and 3) the project supports the development of training opportunities for secondary consumers and advocates.

INTERDISCIPLINARY TRAINING INITIATIVE ON AGING AND DEVELOPMENTAL DISABILITIES

Grantee: Graduate School of Public Health, University of Puerto Rico—Medical Sciences

Project Director: Dr. Margarita Miranda, (809) 758–2525, ext. 1453, (809) 754–4377

Project Period: 7/97–6/30/2002; FY '97—$82,680

The project provides pre-service training including practical experience on best practices in serving the older population with developmental disabilities to three (3) graduate and to three (3) undergraduate students from different disciplines per year (from the second funding year on); provides culturally adapted in-service training to the Catano Family Health Center's interdisciplinary team and to at least 40 professionals in the aging service per year through the Graduate School and implementation of five regional Seminars on Aging and Developmental Disabilities throughout Puerto Rico.

CREATIVE CHOICES FOR HEALTHY LIVING

Grantee: University-Affiliated Program Department of Pediatrics, Univ. of Arkansas for Medical Sciences

Project Director: Judith Holt, Ph.D (501) 682–9900

Project Period: 7/97–6/30/2002, FY '97—$82,680

The UAP of Arkansas' Training Initiative Project, Creative Choices for Healthy Living, will focus on persons who are aging with developmental disabilities, their access to appropriate services and supports within the community. Specifically, it will enhance the health and well-being of older persons with developmental disabilities and other members of the aging community; enhance the skill and competencies of community trainers to provide the training identified by the community action plan; expand the project into new communities; develop and disseminate preserve training modules for undergraduate and graduate courses; disseminate

project training modules for use in other settings state- and nationwide; and evaluate the project's effects.

MEETING THE NEEDS OF A CULTURALLY-DIVERSE POPULATION

Grantee: Department of Pediatrics, Children's Hospital Los Angeles

Project Director: Irma Castaneda, Ph.D (213) 669–2300–9900

Project Period: 7/1/97–6/30/2002, FY '97—$82,680

Develop and implement an interdisciplinary training program with a special emphasis on the multicultural aspects of aging and developmental disabilities which is integrated into Department's curriculum for a minimum of one primary or secondary consumer, and two graduate students per year. Will integrate material on multicultural aging and developmental disabilities into existing gerontology certificate programs. Provide training and consultation on the integration of content related to multicultural aging and developmental disabilities to four university departments. Provide training to a total of 100 health care providers, community support personnel, and family members on the changing health and social needs of aging individuals with developmental disabilities from ethnic minority groups.

OFFICE OF THE ASSISTANT SECRETARY FOR PLANNING AND EVALUATION

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) serves as the principal advisor to the Secretary on policy and management decisions for all groups served by the Department, including the elderly. ASPE oversees the Department's legislative development, planning, policy analysis, and research and evaluation activities and provides information used by senior staff to develop new policies and modify existing programs.

ASPE is involved in a broad range of activities related to aging policies and programs. It manages grants and contracts which focus on the elderly and coordinates other activities which integrate aging concerns with those of other population groups. For example, the elderly are included in studies of health care delivery, poverty, State-Federal relations and public and private social service programs.

ASPE also maintains a national clearinghouse which includes aging research and evaluation materials. The ASPE Policy Information Center (PIC) provides a centralized source of information about evaluative research on the Department's programs and policies by tracking, compiling, and retrieving data about ongoing and completed HHS evaluations. In addition, the PIC data base includes reports on ASPE policy research studies, the Inspector General's program inspections and investigations done by the General Accounting Office and the Congressional Budget Office. Copies of final reports of the studies described in this report are available from PIC.

During 1997 and 1998, ASPE undertook or participated in the following analytic and research activities which had a major focus on the elderly.

1. POLICY DEVELOPMENT—AGING

Federal Interagency Forum on Aging-Related Statistic

ASPE is a member of the Federal Interagency Forum on Aging-Related Statistics. The Forum was established to encourage the development, collection, analysis, and dissemination of data on the older population. The Forum seeks to extend the use of limited resources among the agencies through joint problem-solving, identification of data gaps, and improvement of the statistical information bases on the older population. The primary goals of the Federal Forum were to provide federal agencies a venue for discussing aging-related data issues and concerns that cut across agency boundaries, facilitate the improvement of existing aging data bases and the development of new sources of information, improve the dissemination of information on aging-related research and data, and encourage cross-national research and data collection on population aging. The Federal Forum was instrumental in gathering support for several important surveys of the aging U.S. population (e.g., the Health and Retirement Survey, the survey of Assets and Health Dynamics Among the Oldest-Old, and the Second Longitudinal Study of Aging) and produced several stand-alone reports including Trends in the Health of Older Americans and 65+ in the United States.

Long-Term Care Microsimulation Model

During 1997 and 1998, ASPE continued to use extensively the Long-Term Care Financing Model developed by ICF and the Brookings Institution. The model simulates the use and financing of nursing home and home care services by a nationally representative sample of elderly persons. It gives the Department the capacity to simulate the effects of various financing and organizational reform options on public and private expenditures for long-term care services. An updated version of the model, which will include projections of both long-term care and acute care expenditures, will be completed in 1999.

2. RESEARCH AND DEMONSTRATION PROJECTS

Panel Study of Income Dynamics

University of Michigan, Institute for Social Research

Principal Investigators: James N. Morgan, Greg J. Duncan, Martha S. Hill

Through an interagency consortium coordinated by the National Science Foundation, ASPE assists in the funding of the Panel Study of Income Dynamics (PSID). This is an ongoing nationally representative longitudinal survey that began in 1968 under the auspices of the Office of Economic Opportunity (OEO). The PSID has gathered information on family composition, employment, sources of income, housing, mobility, health and functioning, and other subjects. The current sample size is over 7,000 persons, and an increasing number of them are elderly. The data files have been disseminated widely and are used by hundreds of researchers in this and other countries to get an accurate picture of changes in

the well-being of different demographic groups, including the elderly.

Funding: ASPE and HHS precursors: FY67 through FY79—$10,559,498; FY80—$698,952; FY81—$600,000; FY82—$200,000; FY83—$251,000; FY84—$550,000; FY85—$300,000; FY86—$225,000; FY87—$250,000; FY88—$250,000; FY89—$250,000; FY90—$300,000; FY93—$300,000; FY94—$800,000; FY95—$150,000; FY96—$205,000; FY97—$100,000; FY98:—$200,000

End Date: Ongoing

Welfare Reform, the Economic and Health Status of Immigrants and the Organizations That Serve Them

The Urban Institute

Principal Investigators: Michael Fox and Leighton Ku

The main objectives of this study are to profile immigrants with regard to health, employment, economic hardship and participation in government programs—with special attention to distinguishing different categories of immigrants and to drawing comparisons with the native population; and to explore the impacts of welfare reform on immigrants and the organizations that serve them—with special attention to both individual and institutional adaptations. To accomplish these objectives this project will supplement an examination of existing secondary data with intensive data collection in two cities that together account for one-fourth of the immigrant population in the United States—Los Angeles and New York. Investigators will conduct a survey of 1625 immigrant households in each city, intensive interviews with public and private community organizations that serve immigrants, and in-depth, in person interviews with immigrants affected by the new laws. Secondary data will be used to present national profiles of the immigrant population and to compare them with natives. Local administrative data will be used to capture relevant trends in program participation and, where possible, to develop neighborhood indicators of health and other trends. The study is structured to gather sufficient data on elderly immigrants to make estimates of impacts on this population. We will also conduct a survey of community organizations that serve immigrants, and in-depth interviews with (1) immigrants affected by the new laws; (2) community organizations that serve immigrants; and (3) government agencies. Immigrants of all ages will be included in the study.

Funding: (The study is funded under a cooperative agreement and is supported by HHS (ASPE, ACF, HCFA), Agriculture (ERS/FNS), and INS.) ASPE funding: FY97—$500,000; FY 98—$650,000

End Date: October 2000

A Primer for States and Consumers on Medicaid Home and Community Based Services

George Washington University Medical Center

Principal Investigator: Sara Rosenbaum, Lea Nolan

An important priority of the White House, the Secretary and the Department of Health and Human Services is a reduction in the over-reliance on unnecessary institutional long-term care and an expansion of consumer responsive home and community-based long-term care options in the Medicaid program. As a step toward

addressing this priority, ASPE proposes to develop a "primer" on existing long-term care options in Medicaid that promote choices in long-term care for consumers. The primer will be an important and useful development tool for State Medicaid and aging policy and program staff, consumers and their representatives, and providers interested in the expansion of choices in long-term care, including the promotion of home and community-based options.

Funding: FY98—$150,000

End Date: July 1999

Hebrew Rehabilitation Center for the Aged, Boston and University of Michigan

Principal Investigators: John Morris, Boston Brant Fries, Michigan

Characteristics of Nursing Home Residents

Reducing institutionalization is a major long-term care policy objective. It is important to identify nursing home residents who could be discharged to the community if appropriate home and community-based services were available. This project will analyze data from a new source—the Minimum Data Set (MDS). The MDS consists of assessments which have been conducted on all nursing home residents in selected States as part of a HCFA demonstration (and starting the summer of 1998, the data will be collected in all 50 States). We will learn much more about the medical conditions, functional needs, and specific services used by nursing home residents than was possible with previous data sets. We will also be able to study important subpopulations, especially the nonelderly. The policy implications of the findings will be assessed.

Funding: FY98—$150,000

End Date: September 1999

Comparative International Data on Aging: Health and Disability Indicators

Organization for Economic Cooperation and Development, Paris, France

Principal Investigator: Peter Hicks

This project builds on the G8 Summit Aging Experts Meeting held in May 1997 and seeks to encourage international comparative data collection. A two-day conference is planned for Fall 1999 to bring researchers in disability and aging measurement, policy experts, and survey administrators together to discuss disability/health status measurement and survey and data development.

Funding: FY98—$50,000

End Date: December 1999

Synthesis and Analysis of Medicare Post-Acute Care Benefits

The Urban Institute

Principal Investigators: Korbin Liu, Barbara Gage

This project will produce a synthesis of what is known about: (a) current coverage and payment policies for post-acute care (PAQ; (b) predictors of PAC use and nonuse and of the type, amount, and duration of PAC use; (c) PAC utilization including characteristics of PAC patients, patterns of PAC utilization, and geographic distribution of providers; (d) Medicare expenditures during the course of

PAC episodes; (e) outcomes of patients in and across PAC settings; and (f) State policies designed to maximize Medicare PAC coverage. Medicare PAC services refer to a broad array of services provided in a variety of settings ranging from PPS-exempt hospitals to the home. "PAC providers" include SNFs, HHAs, and LTC and rehabilitation hospitals. In 1994, Medicare PAC expenditures were approximately $24 billion—up from only $3 billion in 1986. Such rapid cost increases have caused policy makers to focus considerable attention on these benefits and question the underlying reasons for these increases. The review and synthesis of the literature will discuss any historical issues, the extent to which these issues remain, and any new issues that have emerged.

Funding: FY98—$65,000
End Date: March 1999

A National Study of Assisted Living-for-the Frail Elderly

Research Triangle Institute
Principal Investigator: Catherine Hawes

The major purpose of this project is to analyze the role of assisted living within the current long-term care system from the perspective of consumers, owners/operators, workers, regulators, investors and other stakeholders, and to issue a report on its current status and future directions. "Assisted living" refers to residential settings for people with disabilities which combine both housing and personal assistance services within a homelike or noninstitutional environment. Currently, the number of assisted facilities nationally is not known; estimates range from 8,000 to 30,000. Similarly, estimates for the number of frail elderly and other persons residing in such facilities range from 350,000 to 1,000,000. This study will, among other things, generate a more reliable estimate of the number of these facilities and their residents. As assisted living options multiply, a challenge facing the Federal and State governments is how (or whether) to regulate such arrangements, balancing consumer protection concerns (especially if public funds reimburse costs) with resident rights for self-direction, taking risks and maintaining accustomed lifestyles. The study will address several broad policy-relevant issues, including supply and demand trends; barriers; how closely practice parallels philosophy; the impact of key features on outcomes; and quality and accountability.

Funding: FY94—$200,000; FY 96—$200,000; FY98—$350,000
End Date: December 1999

Personal Assistance Services "Cash and Counseling": Demonstration/Evaluation

University of Maryland
Robert Wood Johnson Foundation
Principal Investigator: Kevin Mahoney

This project, undertaken in collaboration with the Robert Wood Johnson Foundation, employs a classical experimental research design (i.e., random assignment of participants to treatment and control groups) to test the effects of "cashing out" Medicaid-funded personal assistance services for the disabled. The demonstration will include elderly as well as younger disabled consumers. Two States are expected to participate in the demonstration. In these States,

control group members will receive "traditional" benefits—i.e., case managed home and community-based services, where payments for services are made to vendors—while treatment group members receive a monthly cash payment in an amount roughly equal to the cash value of the services they would have received under the traditional program. It is hypothesized that cash payments will foster greater client autonomy and that, as a result, consumer satisfaction will be greater. Consumers are expected to purchase a somewhat different mix of disability-related services and/or assistive technologies when they make the decisions and payments themselves than when case managers contract with vendors on their behalf. It is also hypothesized that States will save Medicaid monies (mostly in administrative expenses) from cashing out benefits. The analysis will consider the effects of the demonstration according to the varying characteristics of the consumers including age, disability, gender, family support, and other factors.

Funding: FY97—$350,000; FY98—$111,389

End date: January 2001

Evaluation of Practice in Care (EPIC)

University of Colorado Center for Health Policy Research

Principal Investigator: Peter Shaughnessy

PURPOSE: From 1989 to 1992, there was a 210% increase in Medicare expenditures for home health services. This increase in utilization has generated widespread policy interest in appropriate measures to control expenditures without compromising quality. Medicare home health has been the subject of considerable research, but the actual practice of home health care has not been extensively examined. This study will analyze "episodes" of care under the Medicare home health benefit, assess the actual practice of care, the extent to which there is variation in practice between acute and long-term patients, and the factors that account for that variation. This study will also examine decision-making processes between patients, providers and physicians. What takes place during a visit and between visits as "actual practice" has never been measured. Furthermore, the function of decision-making by various parties has not been observed in "actual practice." This effort to understand issues surrounding regional and practice variations of home health care delivery will aid the Department and the industry in combating fraud and abuse, as well as contribute valuable data to a future prospective payment system.

Funding: FY97—$200,000, FY98—$0

End Date: March 2001

Imputation of Annual Family Income on the 1990–96 National Health Interview Survey

National Center for Health Statistics

Principal Investigator: Diane Makuc

The National Health Interview Survey (NHIS) is the primary data source for measuring the health of the noninstitutionalized population of the United States. The survey is conducted by the National Center for Health Statistics (NCHS) in the Centers for Disease Control and Prevention using a nationally representative, multistage probability design. Approximately 50,000 households

containing roughly 115,000 persons are interviewed annually. In addition to health information, the survey also collects demographic and socioeconomic data (e.g., race and ethnicity, family composition, employment status of household members, family income and asset information, home and business ownership, etc.). The strong relationship between socioeconomic status and health, access to health care, and health care utilization, has been widely documented. Annual family income is a key measure of socioeconomic status and is used extensively in research that measures differences in health status by racial and economic subpopulations. These groups are frequently the focus of federal government health initiatives and programs. Although questions are asked on the NHIS about family income, a sizable percentage of respondents do not have valid information. This project supports an effort being undertaken by NCHS to impute missing total annual family income data for the 1990–1996 NHIS. The public use files produced from the project will provide public policy analysts and researchers with consistent and validated data necessary for comprehensive analyses of the NHIS.

Funding: FY98—$25,000
End Date: December 1999

Informal Caregivers Supplement to the 1999 National Long-Term Care Survey

Duke University
Principal Investigator: Kenneth Manton

The Office of the Assistant Secretary for Planning and Evaluation (ASPE) has been involved in the past in designing a modest respite benefit for Medicare beneficiaries with Alzheimer's disease for inclusion in the President's budget. In 1998, there is renewed interest in having proposals for respite services and other caregiver supports, on a broader scale, incorporated into the President's long-term care budget initiative. We are currently working with White House, OMB, and Treasury staff to explore the use of tax incentives to help informal caregivers be able to afford paid home care services as a supplement to their own informal efforts. To respond to these kinds of policy analysis requests, it is important for ASPE to look ahead and anticipate future data needs. In this case, the need is to have data collection mechanisms in place to track, over time, changes in the characteristics of informal caregivers of the disabled elderly, as we follow changes in the population of disabled elders themselves. ASPE supported the first and second Informal Caregiver's Supplement to the National Long-Term Care Survey in 1982 and 1989 respectively. A third round of data collection on informal caregivers is now needed in order to remain up-to-date.

Family members typically initiate the process of nursing home placement for disabled elders when they feel that the disabled elder needs more help than can be provided in a home setting. Often families come to such a decision when one or more family caregivers have been providing upwards of 60 hours per week of unpaid assistance. This project will enable in-depth analysis of the conflicts informal caregivers experience between employment and eldercare as well as provide information about the health status of caregivers and measures of caregiver stress and burden. These

data can then be used in crafting policy initiatives to support caregivers and prevent "caregiver burnout" which could result in premature institutionalization. It will help determine whether and to what extent caregivers' age, marital status, relationship to the care recipient, household income, employment, health status, and various measures of caregiver stress and burden are associated with greater or lesser use of supplemental formal care. We will also be able to measure the extent to which caregivers as well as the disabled elders themselves experience out-of-pocket spending for supplemental home care.

Funding: FY98—$300,000
End Date: March 2000

National Home and Hospice Care Survey (NHHCS)

National Center for Health Statistics
Principal Investigator: Thomas McLemore

Because of the difference in views as to whether or not the homebound coverage requirement is being applied appropriately, it would be extremely useful to have measures of the homebound status of a nationally representative sample of Medicare beneficiaries currently receiving services. This information could then be used to estimate the extent to which home health patients meet various indicators of "homebound" status.

The NHHCS is the only nationally representative survey that samples and collects descriptive data on all current users of home health services (including nonelderly as well as home health users aged 65 and older) during the period when they are actually in a home health episode. Because over 70% of home health services are Medicare-financed, the sample of current patients is predominantly comprised of Medicare beneficiaries. The NHHCS Current Patient Survey includes descriptive information on users of home health services, including a number of potential indicators of "homebound" status. Additional information on indicators of homebound status may be obtained from the Outcome and Assessment Informal Set (OASIS) instruments where these were completed and are present in patients' files. Because HCFA has announced its intention to mandate the use of the OASIS instrument to assess home health patients' care needs upon admission and health status outcomes at discharge (or every 60 days when their continued need for home health services is recertified), many home health agencies have already begun using the OASIS instrument on a routine basis. It is therefore estimated that a high percentage of patients selected for the NHHCS Current Patient Survey will have completed OASIS instruments available. NCHS has agreed to include in the data collection for these patients a limited set of items from the OASIS.

Funding: FY98—$40,000
End Date: January 2001

Impact of Medicare HMO Enrollment on Health Care Costs in California

RAND
Principal Investigator: Glenn Melnick

This work is an ongoing project and an extension of previous ASPE-funded work. The contractor performs three major activities

including: (1) updating the earlier analysis of competition and selective contracting in California to the most recent year available; (2) analyzing the effects of Medicare managed care penetration on hospital Medicare Costs and Utilization at the county level; and (3) analyzing the effects on beneficiary utilization and costs of joining managed care plans. In addition, the feasibility of conducting a fourth analysis will be assessed; namely to replicate analysis number three for beneficiaries who have withdrawn from Medicare managed care plans in the recent past to try to see if such beneficiaries are different from those who remain in managed care. The contractor will put out a public use file with documentation of the materials gathered since 1980 with ASPE support beginning in 1987.

The project compares pre-managed care enrollment characteristics, service utilization, and costs among demographically-matched individuals in standard Medicare and Medicare HMOs. In addition, the project includes comparisons with a third group of persons who disenrolled from Medicare HMOs. This data will then be used to build prediction models for subsequent years.

Funding: FY94—$531,000; FY 97—$160,000; FY98—$200,000; FY99—$173,000

End date: Fall 2000

CENTERS FOR DISEASE CONTROL AND PREVENTION

NATIONAL CENTER FOR CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION

CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) is involved in a wide array of activities on behalf of older Americans. Research and programmatic efforts of the Aging Studies Branch of the Division of Adult and Community Health focus on musculoskeletal diseases (osteoarthritis, osteoporosis), Alzheimer's disease, urinary incontinence, long-term care needs among minorities, and surveillance. Other efforts of NCCDPHP focus on disability, diabetes, cancer, and health information (and various other programmatic and research areas.)

MUSCULOSKELETAL DISEASES

Musculoskeletal diseases are prevalent and disabling chronic diseases, affecting approximately 38 million persons in the United States. Data indicate that 49.4 percent of persons 65 years and older have symptomatic musculoskeletal diseases and 11.6 percent of persons in this age group have arthritis as a major or contributing cause of activity limitation. Data are needed to describe the natural history of disease as well as to direct development of effective intervention efforts. To address the burden of osteoporosis and arthritis, NCCDPHP:

- developed the National Arthritis Action Plan—A Public Health Strategy. This plan was released in November of 1998 and was developed under the leadership of CDC, the Arthritis Foundation, and the Association of State and Territorial Health Officials. The plan proposes action in three major areas: surveillance, epidemiology, and prevention research; communication and education; and programs, policies, and sys-

tems. It is designed to encourage public health organizations, arthritis organizations, and other interested organizations to work together at the national, state, and local levels.

- analyzed the Arthritis Self-Help Course. This analysis showed the course to be a cost-saving intervention from both the societal and health care system perspectives.
- is studying the cost-effectiveness of different interventions designed to prevent osteoporosis in women who are perimenopausal or postmenopausal.
- determined the prevalence of hip and knee osteoarthritis among whites and blacks in Johnston County, NC, a rural, southern county. The Johnston County Osteoarthritis Project is beginning follow-up of 3200 Caucasian and African-American residents of a rural North Carolina county to determine factors associated with the development and progression of hip and knee osteoarthritis—the leading causes of arthritis disability.

ALZHEIMER'S DISEASE

Chronic neurological diseases, conditions common among elderly, causes high levels of morbidity, disability, family stress, and economic burden. For example, the costs due to dementias were estimated at $24–$48 billion in 1985, and will increase as the population ages. However, the epidemiology of these conditions is poorly understood. NCCDPHP is studying the epidemiology of Alzheimer's Disease to determine disease rates, risk factors, and prevention factors.

LONG-TERM CARE NEEDS

NCCDPHP conducted an assessment of long-term care needs among older adults in the Indian Health Service Santa Fe Service Unit, New Mexico. The objectives of the project were (1) to provide estimates of the population of functionally dependent adults age 55 and over within the Santa Fe Service Unit (SFSU) and distinguish clinically relevant subgroups; (2) to document the extent of informal care provided by family members to elders with chronic care needs; (3) to analyze the strengths and weaknesses of the current formal long-term care service system within the SFSU to accommodate the needs of the target population.

NCCDPHP has initiated the EnPOWER project to improve prevention services in older women in HMO's. The project aims to enhance and promote preventive health services for older women in a managed care setting.

SURVEILLANCE

NCCDPHP conducts surveillance of the health status of the elderly. Studies include:

- planning a surveillance summary of the health status and health services use among Americans age 65 and older;
- monitoring the impact of managed care organizations' growth on the public health of the elderly;
- assessing the prevalence of electroconvulsive therapy on older adults by age, gender, and ethnicity;

- ensuring availability of complete, timely, and accurate cancer surveillance data at state, regional, and national levels;
- generating national and state estimates of the prevalence and incidence of diabetes, the processes and outcomes of care, and the costs of care in the Medicare population;
- using several health-related quality-of-life measures in the state-based Behavioral Risk Factor Surveillance System (BRFSS) to track quality of life in the States;
- determining the feasibility of a Medicare claims-based surveillance system for possible adverse effects of folic acid food fortification among persons with vitamin B_{12} deficiency; and
- conducting a survey of the knowledge, attitudes, and practices of postmenopausal women regarding hormone replacement therapy (HRT) to determine factors associated with having heard of HRT and initiating use of HRT.

DISABILITY

NCCDPHP funds the Center for Health Promotion in Older Adults at the University of Washington at Seattle, School of Public Health to promote health among men and women aged 65 years or older. The Center evaluates the presence of social networks and the influence of healthy eating and physical activity on elderly residents of public housing units. The Center also focuses on reducing disability and falls in older adults through interventions to improve physical activity, nutrition, and home safety.

DIABETES

The burden of diabetes is heavier among elderly Americans. More than 18% of adults over age 65 have diabetes. NCCDPHP funds diabetes control programs (DCP) in all 50 states, the District of Columbia, and eight U.S. affiliated island jurisdictions to effect changes and improvements in systems that care for and support people with diabetes. The primary goal of the DCPs is to improve access to affordable, high-quality diabetes care and services. Priority is on reaching high-risk and disproportionately burdened populations which include the aged. NCCDPHP provides resources and technical assistance to state-based diabetes control programs to:

- determine the size and nature of diabetes-related problems and why they exist,
- develop and evaluate new strategies for diabetes prevention,
- establish partnerships to prevent diabetes problems,
- increase awareness of diabetes prevention and control opportunities among the public, the health care and business communities, and people with diabetes, and
- improve access to quality care to prevent, detect, and treat diabetes complications.

NCCDPHP also supports programs that try to change the way diabetes is treated in the United States by raising awareness among affected individuals, age 45 and older, of the importance of lowering their blood sugar can make a huge difference in their lives.

CANCER

More than 30% of deaths from breast cancer in women over age 50 are preventable through widespread use of mammography screening for early detection. The National Breast and Cervical Cancer Early Detection Program targets underserved women, including older women with low income, and women of racial and ethnic minority groups. NCCDPHP currently funds the 50 states, 4 U.S. territories, the District of Columbia, and 15 American Indian/Alaska Native organizations through this program.

The WISEWOMAN (Well-Integrated Screening and Evaluation for Women in Massachusetts, Arizona, and North Carolina) program is funded by NCCDPHP to determine whether adding other preventive services such as cardiovascular disease risk factor screening and intervention to the National Breast and Cervical Cancer Early Detection Program is effective in improving the health status of uninsured women age 50 and older.

NCCDPHP supports a project to generate information about attitudes towards prostate cancer screening and treatment, and how quality of life related to early detection and treatment; to determine whether screening for prostate cancer actually reduces mortality; and to develop appropriate health messages for men and their families about prostate cancer screening and early detection.

NCCDPHP sponsors a program promoting the early detection of colorectal cancer. The objectives of the project are to promote awareness and use of colorectal cancer screening among health care providers and the public, especially the older population; to support research that promotes the inclusion of colorectal cancer screening in quality measures applied to managed care organizations; and to support the development of standards for screening sigmoidoscopy.

HEALTH INFORMATION

The Health Promotion and Education Database and Cancer Prevention and Control Database contain health information that pertains to aging. The databases include literature and programmatic information about disease prevention, health promotion, and health education information on nutrition, smoking cessation, cholesterol, high blood pressure, injury prevention, exercise, weight management, stress management, diabetes mellitus, and breast and cervical cancer screening. The databases are a valuable resource for health providers working with the elderly. They are available through CDC's CDP (Chronic Disease Prevention) File CD–ROM, the Public Health Service's Combined Health Information Database (CHID) and CDC's WONDER system. CDP File is available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402, 202–512–1800 (Stock No. 717–145–00000–3). CHID can be accessed through most library and information services. CHID may be accessed via the Internet at http://chid.nih.gov. For more information about WONDER, contact CDC WONDER Customer Support at 404–332–4569.

Other NCCDPHP projects are examining:

- co-morbidities among older adults hospitalized with depression

- cost of excess mortality associated with fractures in persons on Medicare
- the experience of 84 Chickasaw Indian Family care givers and their views of community-based services and institutional care for elders
- the individual and population-level distribution of costs and resource utilization associated with 11 types of incident fractures among beneficiaries aged 65 and over during the 1 year period following fracture and the excess costs of these fractures to the Medicare program and to the health system.

NATIONAL CENTER FOR ENVIRONMENTAL HEALTH

CDC's National Center for Environmental Health (NCEH) addresses the prevention of secondary conditions and promotion of health among the 54 million Americans with disabilities. NCEH is currently involved in two activities related to aging. The Center is analyzing NHIS and NHIS-Supplement on Aging data to identify the correlates of aging related to sensory impairments and to characterize disability in the above 55 age groups by race/ethnicity, gender, region, and activity limitation. These analyses will be included in the disability chapter of the upcoming MMWR Supplement on Aging. NCEH is also collaborating with NCCDPHP in the Osteoarthritis of the Hip and Knee in Johnston County, NC Project.

NATIONAL CENTER FOR HEALTH STATISTICS

CDC's National Center for Health Statistics (NCHS) is the Federal Government's principal health statistics agency. The NCHS data systems address the full spectrum of concerns in the health field from birth to death, including overall health status, morbidity and disability, risk factors, and health care utilization.

The Center maintains over a dozen surveys and vital statistics data files that collect health information through personal interviews, physical examination and laboratory testing, administrative records, and other means. These data systems, and the analyses that result are designed to provide information useful to a variety of policy makers and researchers. NCHS frequently responds to requests for special analyses of data that have already been collected and solicits broad input from the health community in the design and development of its surveys.

A broad range of data on the aging of the population and the resulting impact on health status and the use of health care are produced from these systems. For example, NCHS data have documented the continuing rise in life expectancy and trends in mortality that are essential to making population projections. Data are collected on the extent and nature of disability and impairment, limitations on functional ability, and the use of special aids. Surveys currently examine the use of hospitals, nursing homes, physicians' offices, home health care and hospice, and are being expanded to cover hospital emergency rooms and surgi-centers.

In addition to NCHS surveys of the overall population that produce information about the health of older Americans, a number

of activities provide special emphasis on the aging. They are described below.

SECOND SUPPLEMENT ON AGING

In 1994, the National Center for Health Statistics began conducting the Second Supplement on Aging (SOA 11) as part of the National Health Interview Survey. Interviews were conducted with a nationally representative sample of 9,447 civilian noninstitutionalized Americans 70 years of age and over. The study, released in 1998, provides important data on the elderly that can be compared with similar data from the 1984 SOA. In addition, SOA 11 serves as a baseline for the Second Longitudinal Study of Aging (LSOA 11), which will follow the baseline cohort through one or more re-interview waves. The first re-interview wave was conducted in 1998.

Information for the SOA II comes from several sources: the 1994 NHIS core questionnaire, Phase I of the National Health Interview Survey on Disability (NHIS–D), and Phase 2 of the NHIS–D, conducted approximately one year after Phase 1. The survey questions and methodology are similar to the first LSOA, but improvements reflect a number of methodological and conceptual developments that have occurred in the decade between the LSOA and LSOA II, as well as suggestions made by users of the LSOA and others in the research community.

A primary objective of the SOA 11 is to examine changes which may have occurred in the physical functioning and health status of the elderly over the past decade. To this end, questions concerning physical functioning and health status and their correlates are repeated in the SOA 11. These include questions on activities of daily living, instrumental activities of daily living, and work-related activities, as well as medical conditions and impairments, family structure and relationships, and social and community support. In addition to these repeated items, the SOA 11 questionnaire has been expanded to include information on risk factors (including tobacco and alcohol use), additional detail on both informal and formal support services, and questions concerning the use of prescription medications.

These data, when used in conjunction with data from the LSOA, enable users to identify changes in functional status, health care needs, living arrangements, social support, and other important aspects of life across two cohorts with different life course perspectives. This will provide researchers and policy planners with an opportunity to examine trends and determinants of "healthy aging."

TRENDS IN HEALTH AND AGING

Objective and Description: The NCHS has launched a new data dissemination project, Trends in Health and Aging. Funded in part by the National Institute on Aging and located within NCHS's Office of Analysis, Epidemiology, and Health Promotion (OAEHP), Trends in Health and Aging draws upon the statistical resources of NCHS and other Federal statistical agencies to provide current, policy-relevant information on the health and well-being of the elderly population in the United States. Work began on the database in 1997. It will serve as an important electronic resource for those

seeking relevant national data on a host of issues related to future access to affordable health care and the enhancement of quality of life.

Project description

At the heart of Trends in Health and Aging will be the routine compilation of trend data on the elderly population in the United States organized under four general topic areas, demography or population composition, health and well-being, health care utilization, and health care expenditures. A set of key indicator tables and graphics, drawn from such data systems as Vital Statistics and the National Health Interview Survey (NHIS) will be placed on the NCHS website and updated annually. Summary analyses will accompany these tables as will documentation on those administrative systems and surveys from which data are drawn. In addition NCHS plans to provide links to important micro-level data such as annual Cause of Death mortality files and the Supplements on Aging for analysts who wish to do their own analysis. Products under development include the 1999 Health US: Chartbook on Health and Aging.

FEDERAL FORUM ON AGING-RELATED STATISTICS

The Forum was initially established in 1986, with the goal of bringing together Federal agencies with a common interest in database development and statistical compilation on issues in aging. The Forum has played a key role in improving aging-related data by critically evaluating existing data resources and limitations, stimulating new database development, encouraging cooperation and data sharing among Federal agencies, and preparing collaborative statistical reports.

During 1998, an organizing committee was established to coordinate the activities and goals of the Forum for 1999 and beyond. In addition to the Bureau of the Census, the National Center for Health Statistics, and the National Institute on Aging—the original core agencies—the members now include representatives from the Administration on Aging, the Bureau of Labor Statistics, the Health Care Financing Administration, the Office of Management and Budget, the Office of the Assistant Secretary for Planning and Evaluation, and the Social Security Administration.

NHANES I EPIDEMIOLOGIC FOLLOW-UP STUDY

The first National Health and Nutrition Examination Survey (NHANES I) was conducted during the period 1971–75. The NHANES I Epidemiologic Follow-up Study (NHEFS) tracks and reinterviews the 14,407 participants who were 25–74 years of age when first examined in NHANES I. NHEFS was designed to investigate the relationships between clinical, nutritional, and behavioral factors assessed at baseline (NHANES 1) and subsequent morbidity, mortality, and hospital utilization, as well as changes in risk factors, functional limitation, and institutionalization.

The NHEFS cohort includes the 14,407 persons 25–74 years of age who completed a medical examination at NHANES I. A series of four follow-up studies have been conducted to date. The first wave of data collection was conducted from 1982 through 1984 for

all members of the NHEFS cohort. Interviews were conducted in person and included blood pressure and weight measurements. Continued follow-ups of the NHEFS population were conducted by telephone in 1986 (limited to persons age 55 and over at baseline), 1987, and 1992.

Participant tracing and data collection rates in the NHEFS have been very high. Ninety-six percent of the study population has been successfully traced at some point through the 1992 follow-up. While persons examined in NHANES I were all under age 75 at baseline, by 1992 more than 4,000 of the NHEFS subjects had reached age 75, providing a valuable group for examining the aging process. Public use data tapes are available from the National Technical Information Service for all four waves of follow-up. The 1992 NHEFS public use data is also available via the Internet. NHEFS data tapes contain information on vital and tracing status, subject and proxy interviews, health care facility stays in hospitals and nursing homes, and mortality data from death certificates. All NHEFS Public Use Data can be linked to the NHANES I Public Use Data.

NHANES IV PLANNING

The Fourth National Health and Nutrition Examination Survey is in its final planning stages in preparation for the beginning of data collection planned for January, 1999. Although a wide range of the conditions assessed in NHANES IV are most common among the elderly, several components are particularly relevant to aging research:

- Muscle Strength, Impairment, and Disability: All persons age 50+ will have measurement of isokinetic muscle strength of knee extensors and flexors and all persons age 60+ will have an assessment of ability and time to get up from an armless chair five times and time to perform a twenty foot walk at the usual speed. Both sets of measures will provide important data on physical impairment and function in the elderly and will be correlated to other disability related self reported items and other objective measurements obtained in the survey.
- Lower Extremity Disease: For the first time, the survey will include an evaluation of lower extremity disease in persons age 40+, including Ankle-Brachial Pressure Index measurement and assessment of peripheral neuropathy. These data are especially important for assessing the complications of diabetes and the prevalence of peripheral vascular disease.
- Visual and Hearing Impairment: Vision (age 12+) and hearing (age 20+) will be assessed including assessment of visual acuity, near vision (age 50+), pure tone audiometry thresholds, and typanometry. Sensory impairment is an important component of functional impairment in the elderly.
- Bone Mineral Status: Bone mineral status will be assessed including total bone mineral content and bone mineral density by dual X-ray absorptiometry. Osteoporosis is an important risk factor for hip fractures in the elderly.
- Cognitive Function: Cognitive function will be assessed in persons age 60+ with the Digit Symbol Substitution Test.
- Balance and Vestibular Function: The standard Romberg test of postural sway will be assessed in all persons age 20+.

Balance impairment is related to the incidence of many fractures caused by falling, especially hip fractures in the elderly.

ANALYSIS OF NHANES III DATA

NCHS is engaged in a range of projects analyzing data from NHANES III related to aging. These projects include:

- Prevalence of Disability and Risk Factors Associated with Disability. NHANES III data will be analyzed to assess the prevalence of physical and functional limitation. It includes self reported data obtained in the household interview and performance-based data obtained in the mobile examination center. The risk factors associated with disability will be assessed to provide a better understanding of the etiology and treatment of disability in the elderly.
- Region of Birth and Cardiovascular Risk Factors. NHANES III data will be used to assess early-life influences such as region of birth on the pattern of risk factors for cardiovascular disease in later life.
- Nutritional Intake among the Elderly. The patterns of nutrient intake among adults age 60+ in NHANES III will be analyzed.

VITAL STATISTICS ON AGING

Information on mortality from the national vital statistics system plays an important role in describing and monitoring the health of both the institutionalized and non-institutionalized elderly population. The data include measures of life expectancy, causes of death, and age-specific death rate trends. The basis of the data is information from death certificates, completed by physicians, medical examiners, coroners, and funeral directors, used in combination with population information from the U.S. Bureau of the Census.

During 1997 and 1998, efforts were made to both assess and improve mortality data for the elderly. NCHS is looking into the possibility of increasing the level of age detail shown in tabulations of mortality for the elderly, focusing on the age group 85 years and over, often treated as an aggregated category. Current efforts involve assessing both the availability and quality of mortality and population data for more detailed age groups among the elderly.

NCHS is expanding outreach to certifying physicians on proper completion of the cause-of-death section of the death certificate by designing material appropriate for diverse settings including professional meetings and electronic death certificates.

NATIONAL MORTALITY FOLLOWBACK SURVEY: 1986 AND 1993

The 1986 National Mortality Followback Survey (NMFS) was the first such survey in 18 years. Over 100 papers and publications have used data from the survey. The followback survey supplements mortality information from the vital statistics systems through inquiries of the next of kin of a sample of decedents. Because two-thirds of all deaths in the Nation occur at age 65 or older, the 1986 survey focused on the study of health and social care provided to older decedents in the last year of life. This is a period of great concern for the individual, the family and commu-

nity agencies. It is also a period of heavy care use. Agency program planning and national policy development on such issues as hospice care and home care can be informed by the data from the survey. A public use data tape from the next-of-kin questionnaire was released in 1988. A second tape, combining data from the next-of-kin and hospitals and other health care facilities, was available in 1990.

The 1993 National Mortality Followback Survey is comprised of a nationally representative sample of approximately 23,000 decedents 15 years of age or older who died in 1993, with over-sampling of black decedents, females, and centenarians. The data were released in 1998. The survey design parallels the earlier follow-back survey conducted in 1986, with additional emphasis on deaths due to external causes, as well as disability in the last year of life. Hospital records are not included in the 1993 survey, but medical examiner/coroner records are included.

NATIONAL HEALTH INTERVIEW (NHIS): SPECIAL TOPICS

The NHIS continues to collect data on a wide range of special health topics for the civilian, non-institutionalized population, including the older population. A recent special health topic on disabilities was conducted in two phases. The first phase questionnaire identified persons with disabilities. It included questions on sensory, communication and mobility problems; selected chronic conditions; activities and instrumental activities of daily living (ADL/IADL); mental health; services and benefits; self-perceived disability, and conditions. The second phase collected detailed information about persons identified as having a disability. It included questions on housing and long-term care services; transportation; social activity; work history/employment; vocational rehabilitation; assistance with key activities; other services; and self-direction. The first year of the Phase 1 Disability file was released in 1996. The remainder of the Disability files were released in 1998.

THE NATIONAL HEALTH CARE SURVEY

The National Health Care Survey (NHCS) is an integrated family of surveys conducted by the NCHS to provide annual national data describing the Nation's use of health care services in ambulatory, hospital and long-term care settings. Currently, the NHCS includes six national probability sample surveys and one inventory. These seven data collection activities include:

- the National Hospital Discharge Survey which examines discharges from non-Federal, short-stay and general hospitals;
- the National Survey of Ambulatory Surgery which examines visits to hospital-based and freestanding ambulatory surgery centers;
- the National Ambulatory Medical Care Survey which examines office visits to non-Federal, office-based physicians;
- the National Hospital Ambulatory Medical Care Survey which examines visits to emergency and outpatient departments of non-Federal, short-stay and general hospitals;

- the National Health Provider Inventory which is a national listing of nursing homes, hospices, home health agencies and licensed residential care facilities;
- the National Home and Hospice Care Survey; and
- the National Nursing Home Survey.

IMPROVING SELF-REPORTS OF HEALTH STATUS BY THE ELDERLY

The National Laboratory for Collaborative Research in Cognition and Survey Measurement of NCHS has conducted several cognitive research projects with elderly respondents. In 1998, Lab staff continued their investigation of recall and judgment issues that elderly respondents may have when answering questions regarding health status and quality of life. This project involved both in-house and extramural research. In-house research is conducted by recruiting subjects to the NCHS Questionnaire Design Research Laboratory. Extramural is conducted by the University of Maryland's Survey Research Center using split-ballot field experiments.

NATIONAL IMMUNIZATION PROGRAM

The disease burden due to the occurrence of vaccine-preventable diseases (VPDs) in adults in the U.S. is staggering. Though surveillance of the impact of influenza and pneumococcal disease is imprecise, it is estimated that in 7 influenza seasons since 1990, an average of 23,000 persons died each year from complications of illness due to influenza and over ten thousand more die from pneumococcal infections annually. Increasing antibiotic resistance in pneumococcal bacteria makes pneumococcal vaccination all the more important. Hepatitis B infection still accounts for over 5,000 deaths annually. The overall cost to society of these and other vaccine-preventable diseases of adults exceeds 10 billion dollars each year.

In addition to morbidity and mortality, the quality of life for older Americans is substantially affected by vaccine-preventable diseases. 25% of older adults in nursing homes who survive influenza infections experienced decline in major life functions and independence 3–4 months later, as compared to only 16% of adults not infected.

Vaccines are effective in preventing disease, and cost-effective. For example, CDC estimates that in 1996–97, between 8,000 and 12,000 deaths were prevented by influenza vaccination in persons ≥65 years of age. In addition, using data from CDC's Behavioral Risk Factor Surveillance System (BRFSS) and CDC pneumococcal surveillance data for adults 65 years and over, researchers have estimated that an almost 17% increase in self-reported receipt of pneumococcal vaccine between 1993 and 1997 resulted in a gain of over 19,000 quality life years and a savings of almost $27 million (1995 dollars) in hospital costs.

Recommendations from health care providers for vaccination are critically important to improve vaccination levels, yet adult vaccines are underutilized. Reasons for this include: (1) limited appreciation of the impact of adult vaccine-preventable diseases and missed opportunities to vaccinate during contacts with health-care providers; (2) failure to organize programs in medical settings that ensure adults are offered the vaccines they need; (3) doubts about

the safety and efficacy of adult vaccines; (4) selective rather than universal approaches to vaccination; and (5) inadequate reimbursement for adult vaccination services.

Improvements in adult immunization levels will require major changes in clinical practice, increased financial support by public and private health insurers, and closer working relationships among public and private health care professionals and vaccine companies. HEDIS 3.0 reporting measures for influenza vaccination are currently in place for persons 65 years and over, and in the testing set for persons under 65 years with high-risk medical conditions. CDC is working with the American Association of Health Plans and the National Committee on Quality Assurance to develop and implement a pneumococcal vaccination measure.

Significant accomplishments in 1998: The Healthy People 2000 national objective for influenza vaccination in persons ≥65 years of age was achieved. The median influenza vaccination level reported by CDC's 1997 BRFSS for persons ≥65 years of age was 65%, and also exceeded 60% in 45 States. While pneumococcal vaccination levels did not exceed 60% in any State for this population, the median level had increased 9.8% since 1995, and levels were ≥50% in 18 states. Although BRFSS vaccination data do not provide national estimates as the National Health Interview Survey, or NHIS, does, they are usually very similar to NHIS estimates.

CDC documented continuing vaccine effectiveness. Three health plans collaborated with CDC in assessing the effectiveness of influenza vaccine in patients age 65 or older in preventing hospitalizations for influenza and pneumonia from all causes, and in preventing death from all causes for the 1996–1997 influenza season. Vaccinating elderly patients against influenza during the fall of 1996 prevented about 22% of the hospitalizations for pneumonia of any etiology in vaccinated persons during influenza season. It prevented 57% of all deaths in vaccinated older patients during this period. These findings support the concept that not only should health plans cover influenza vaccination, but they should actively promote vaccination each fall.

Through partnerships, CDC implemented strategies to improve influenza and pneumococcal vaccination. These strategies include feedback of patient vaccination data to providers, standing orders and provider reminder-recall strategies. Based on work done during the 1988–92 Medicare Influenza Vaccine Demonstration and expanded in a number of childhood immunization programs, CDC undertook a 2-year pilot project in collaboration with the Health Care Financing Administration in 6 New Jersey counties using the Assessment, Feedback, Incentives, and exchange (AFIX) model, with results expected in the Fall of 1999. The components of this project include:

Assessment: Medicare claims data for beneficiaries with more than I visit to a provider were assessed;

Feedback: Profiles were developed for each physician summarizing the proportion of beneficiaries vaccinated and listing all patients' vaccination status;

Incentives: Professional recognition of providers' efforts; and

Exchange: Newsletters publicizing aggregate baseline data and best practices, along with presentations at a statewide adult immunization conference.

The first national satellite video-conference on adult immunization technical issues aired on June 4, 1998. The satellite conference, presented three times during the day to ensure prime time availability for participants coast-to-coast, reached an estimated 20,000 public and private health care professionals. CDC partners included the University of North Carolina School of Public Health, the North Carolina Department of Public Health, the Association of Schools of Public Health, the Health and Sciences Television Network, and the Long Term Care Network.

Significant accomplishments in 1997: From the 1995 National Nursing Home Survey, CDC documented that 62% and 23% of nursing home residents had received influenza vaccine in the previous year and pneumococcal vaccine ever, respectively. It is important to note that for 22% and 43% of residents, no documentation or inadequate documentation of influenza or pneumococcal vaccination status, respectively, existed.

The National Immunization Program (NIP), the National Vaccine Program Office (NVPO) and the HHS Adult Immunization Working Group developed a department-wide Adult Immunization Action Plan. This Plan, based on recommendations of the National Vaccine Advisory Committee (NVAC) Report on Adult Immunization, will enhance activities to protect adults against vaccine preventable diseases and maximize accruable health care costs savings.

The first national video conference on successful adult immunization strategies aired on April 24, 1997. The satellite conference, presented 3 times during the day to ensure prime time availability for participants coast-to-coast, reached an estimated 20,000 public and private health care professionals. CDC partners included the University of North Carolina School of Public Health, the North Carolina Department of Public Health, the Association of Schools of Public Health, the Hospital and Sciences Television Network, and the Long Term Care Network.

CDC continues to provide the Health Care Financing Administration (HCFA) technical consultation and assistance to improve influenza and pneumococcal vaccination; uses HCFA data systems to develop new vaccination strategies; and executes special interventions and assessment activities.

CDC collaborated with HRSA to establish projects to assess adolescent and adult vaccination levels and provider practices in Community/Migrant Health Centers in three States.

CDC enhanced the grant guidance for adult immunization activities for FY 1998, requiring grantees to outline their activities for reaching Healthy People 2000 adult immunization objectives and to assign responsibility and accountability to existing or new staff to ensure that adult immunization strategies are coordinated and intensified.

CDC established projects in four States to vaccinate persons with diabetes.

CDC supported a project with the Association of Teachers of Preventive Medicine (ATPM) which summarized "best practices" to

successfully vaccinate adults. Software will also be disseminated to teach providers these strategies.

CDC co-sponsored a scientific symposium in September 1997 to review efforts to prevent disease and death among women through immunization and develop a work plan on vaccination and women's health. Representatives from 16 health organizations participated.

In collaboration with the Roybal Institute of Applied Gerontology, California State University, Los Angeles, the Center for the Study of Latino Health at the University of California at Los Angeles, and the California Department of Health, CDC documented low vaccination levels against influenza, pneumococcal disease, and tetanus in older Hispanic persons in Los Angeles, as well as barriers to vaccination perceived by older Hispanics. Interventions based on these findings have been implemented to improve vaccination levels

NATIONAL CENTER FOR INFECTIOUS DISEASES

Infectious diseases have a disproportionate impact on older Americans. Pneumonia and influenza remain the sixth leading cause of death in the United States and septicemia has risen dramatically during the past three decades to become the 13th leading cause of death. Chronic liver disease, most due to hepatitis C virus, is the 10th leading cause of death in the U.S. Pneumonia and septicemia are also contributing and precipitating factors in the deaths of many Americans with other illnesses, especially cardiovascular diseases, cancer, and diabetes. Quality of life declines for millions of older Americans as a result of infectious illnesses. Prevention and control of infectious diseases will enhance and lengthen the lives of older Americans.

CDC emphasizes surveillance and training to prevent and control hospital-acquired and other institutionally acquired infections in elderly patients. CDC conducts surveillance of elderly patients in hospitals and trains practitioners in nursing homes. Additionally, CDC staff provides education regarding infection control to care providers at nursing home and patient care conferences. This education focuses on patient care treatment and procedures associated with the highest risk of infection. Through the National Nosocomial Infections Surveillance (NNIS) system, special infection risks of elderly patients have been identified. According to NNIS, over half of the hospital-acquired infections occur in elderly patients, although these patients represent about one-third of all discharges from hospitals. The use of certain devices, such as urinary catheters, central lines, and ventilators, are associated with high risk of infection in all types of patients. In elderly patients, the risk of infection is high even when a device is not used, suggesting that infection control must address other risk factors such as lack of mobility and poor nutrition, in addition to device use.

MONITORING INFLUENZA

Although delivering the influenza vaccine to persons at risk is a critical step in preventing illness and death from influenza, immunization is only part of the prevention equation. Other CDC efforts to combat influenza in the elderly include: (1) improving domestic

surveillance through the sentinel and state health department laboratory surveillance networks; (2) conducting studies to better define the immunological response of the elderly to influenza vaccines and to natural infection; (3) conducting immunological studies involving laboratory and clinical evaluation of inactivated and live attenuated influenza vaccines in an effort to identify improved vaccine candidates; (4) increasing surveillance of influenza in the People's Republic of China and other countries in the Pacific Basin to better monitor antigenic changes in the virus; (5) improving methodologies for rapid viral diagnosis; (6) using recombinant DNA techniques to develop influenza vaccines that may protect against a wider spectrum of antigenic variants; and (7) providing laboratory training in the People's Republic of China, other Pacific Basin countries, and Latin America to develop and expand capacity for the diagnosis and detection of antigenic changes in the virus.

PREVENTING PNEUMOCOCCAL DISEASE

Pneumococcal pneumonia causes an estimated 40,000 deaths each year; about 60 percent of these are in persons 65 years old. Prevention of pneumococcal disease in the elderly requires widespread application of effective immunization. CDC is currently evaluating the emergence of drug-resistant pneumococcal strains through laboratory-based surveillance and is actively promoting increased vaccine use in the elderly and other groups at risk. This is critical to decrease illness and death from pneumococcal infections in the elderly.

OTHER RESPIRATORY INFECTIONS

Recent studies have suggested that noninfluenza viruses such as respiratory syncytial virus the parainfluenza viruses may be responsible for as much as 15 percent of serious lower respiratory tract infections in the elderly. These infections can cause outbreaks that may be controlled by infection control measures and treated with antiviral drugs. Respiratory syncytial virus vaccines are being evaluated for use by the elderly population. Consequently, it is important to define the role of these viruses and risk factors for these infections among the elderly population. CDC is working to define the disease burden associated with respiratory syncytial virus and parainfluenza virus infections in the elderly and helping to develop vaccination strategies for respiratory syncytial virus in elderly populations.

GROUP B STREPTOCOCCUS DISEASE

Group B streptococcus (GBS) is a major cause of invasive bacterial disease in elderly persons in the United States. To document the magnitude of GBS disease in the elderly and develop preventive measures, CDC established population-based surveillance for GBS disease and case control studies to identify risk factors for GBS disease in the elderly. An article published in June 1993 in The New England Journal of Medicine documents some of the findings. The incidence of GBS disease in nonpregnant adults increased with age and was particularly high in older blacks. For example, the incidence of black adults who are 70 years and older was 47

per 100,000 compared to 5 per 100,000 in black adults ages 20–29. The in-hospital mortality rate for this particular study was 21 percent among the nonpregnant adults. This data will be utilized to develop and evaluate vaccines and to promote the prevention and treatment of GBS disease in the elderly population.

FOODBORNE DISEASE

Foodborne disease is of particular concern in the elderly, who typically can have higher illness and death rates from foodborne pathogens than younger persons. Of particular concern are Salmonella enteritidis infections, often caused by undercooked eggs, and Escherichia coli O157:H7 infections, often caused by undercooked hamburger. CDC is working with USDA and FDA to encourage use of pasteurized eggs in nursing homes and thorough cooking of hamburger meat.

GASTROINTESTINAL DISEASE

Studies using information from national data bases show that of all age groups, the elderly (70 years) have the highest rates of hospitalizations and deaths associated with diarrhea in the United States. In the elderly, caliciviruses (also called Norwalk-like viruses or Small Round Structured Viruses) are likely to be the most common cause of both epidemics and sporadic hospitalizations for acute gastroenteritis and studies needed to confirm this hypothesis are now underway. These studies should lead to a better understanding of ways to prevent gastrointestinal disease in the elderly. The recent identification of rotavirus as a cause of epidemic diarrhea in the elderly suggests that one approach to control may involve use of vaccines currently used for young children. Further study is now needed to determine the importance of rotavirus to gastrointestinal disease in the elderly.

OTHER INFECTIOUS DISEASES

It is becoming increasingly evident that infections play a major role in causing or contributing to some chronic diseases. Some of these conditions result from infection acquired at a younger age (including liver cancer and cirrhosis from chronic hepatitis B and hepatitis C viruses, stomach and duodenal ulcers or gastric cancer from Helicobacter pylori), while others develop from exposures later in life. CDC is actively promoting and pursuing ways to prevent initial infection and the chronic consequences of such infections. Microbes are also suspected but not yet proven as triggers of still other chronic conditions. CDC is developing research activities that identify and define these relationships. The potential to use infection control in the prevention or treatment of infections that produce chronic disease can improve the quality and length of life for many elderly persons.

NATIONAL CENTER FOR INJURY PREVENTION AND CONTROL

FALL INJURIES

National studies show that one-third of the people over 65 living at home will fall each year, and for people over 80, this rate in-

creases to 40%. Falls are the second leading cause of injury deaths among persons aged 65–84 years and the leading cause among persons aged 85 years and older. Of all fall injuries, hip fractures produce the greatest morbidity and mortality. Approximately 250,000 hip fractures occur each year and half of those who sustain hip fractures never regain their former level of functioning. Research shows that in order to decrease the incidence and severity of fall-related injuries, interventions must be multifaceted and include behavioral as well as environmental components (e.g., exercising regularly, reducing home hazards, and improving vision).

In 1998, CDC's National Center for Injury Prevention and Control (NCIPC) awarded a grant to the San Diego State University Foundation to establish a Resource Center for the Prevention of Unintentional Injuries Among Older Americans. The purpose of this Resource Center is to collect, organize, and disseminate injury prevention information to health care professionals, caretakers, and other individuals concerned about reducing injuries among older Americans.

Since 1996, CDC has been collaborating with the National Fire Protection Association, Consumer Product Safety Commission, United States Fire Administration, Indian Health Service, and Administration on Aging, on "Remembering When", a fire and falls prevention program for older adults. To date, the program has been pilot tested in the states of Mississippi, Arkansas and Alaska, and the cities of Atlanta and Cleveland. The program materials are now being revised and printed and will be ready for distribution by Spring of 1999.

CDC has also worked with the Southern California Injury Prevention Research Center (SCIPRC) at the University of California at Los Angeles on a project to prevent falls and fall-related injuries among elderly Hispanics living in East Los Angeles. A fall prevention program has been developed and is currently being field tested and evaluated among Hispanic elderly in East L.A.

NCIPC has examined weight loss and risk of hip fracture among women. Body weight has been shown to be an important factor in determining hip fracture risk. In collaboration with researchers from the National Center for Health Statistics and the National Institute on Aging, data from the Epidemiologic Follow-up Study of the National Health and Nutrition Examination Survey (NHANES–I) were analyzed to determine the association between weight loss from maximum body weight and risk of hip fracture. The factors associated with weight loss also were investigated.

OLDER DRIVER ACTIVITIES

By the year 2020, it is estimated that there will be 51 million persons aged 65 and above eligible to drive, or 17 percent of the licensed driving population. In 1996, 178,000 older persons were injured in traffic crashes. Little is known about how the physical changes that accompany the aging process and diagnosed medical conditions affect driving performance. For example, there is some evidence to suggest that Parkinson's disease may impair driving, although the evidence is weak. More needs to be known about the connection between specific medical conditions and adverse driving outcomes.

NCIPC has conducted research concerning fatal motor vehicle crashes among older people. Understanding the component risks associated with fatal crashes may contribute to a better understanding of the potential usefulness of certain types of interventions to prevent them. The decomposition method is an innovative approach to determining the relative contribution of specific factors (such as exposure to the risk of a crash) to the overall fatal crash involvement rate. Using this method, a study is currently being conducted to determine how these factors contribute to age and gender differences in fatal crash involvement rates and their relationship to changes in the rates over time among the US population aged 65 years or older.

NCIPC has also conducted a longitudinal study of elderly drivers. A prospective cohort study is underway to assess the impact of selected functional impairments and medical conditions on the safety of older drivers. Data collection for the study was carried out from July 1994 through December 1995 at eight North Carolina driver's license offices (Durham, Greensboro, Asheville, Wilmington, Roanoke Rapids/Greenville/Rocky Mount (combined site), and Hendersonville). All data were collected by specially trained data collectors working at the licensing office. Drivers ages 65 and above coming to renew their license were asked to participate in the study, which involved a series of visual and cognitive functional assessments along with a survey to gather information on self-reported medical conditions, use of medications, and driving habits. The entire assessment required about 20 minutes per subject to complete.

During the 1½ year data collection period, a total of 5,438 license renewal applicants were identified by the license examiners as potential study participants. Of these, 3,238, or 60 percent, elected to participate in the study. Participant and non-participant cases were linked with the North Carolina driver history files, and initial data analyses were carried out examining the role of various cognitive and visual functional impairments in recent prior crash involvement and in current driving exposure. Follow up analyses are planned in the project's final year to examine the usefulness of the driver functional assessments in predicting future crash involvement.

In addition to these efforts, supplemental funding was made available by NCIPC to link North Carolina driver history data to data collected by UNC's Sheps Center for Health Services Research as part of an earlier study examining changes in health status and costs associated with Medicare-reimbursed screening and health promotion services. This add-on effort permitted further analyses of associations between motor vehicle crashes and injuries and a broad range of health measures in a separate population of elderly NC residents.

NCIPC has also developed the Elderly Driver Referral Project, which is a study attempting to ascertain relationships between the capabilities of drivers and their safety of operation in order to enable license administrators to initiate licensing actions that minimize the threat from those who cannot operate safely while preserving the mobility of those who can. The psychophysical capabilities of the entire sample will be assessed through a battery of test measures designed specifically to tap capabilities shown to relate

separately to age and highway accidents. The relationships obtained in this manner will be applied to (1) improve the methods of detecting drivers whose abilities may be diminished by age, (2) develop tests to validly assess drivers' ability to drive safely, and (3) formulate licensing actions capable of achieving an optimum balance between safety and mobility.

Finally, NCIPC is examining driving ability and car crashes as they relate to old age and dementia. A study is underway to objectively determine which neuropsychological and psychophysical measures best discriminate between safe and unsafe drivers, by comparing the performance of the Alzheimer's Disease (AD) patients on the driving simulator and on a battery of off-road behavioral tests. One of the ultimate goals of this line of research is the development of fair and accurate criteria to predict driving ability in cognitively disabled populations.

OTHER INJURIES

NCIPC also analyzed the performance of trauma systems for elderly trauma patients. Hospital discharge data from 8 U.S. trauma systems were used to evaluate the extent to which elderly major trauma patients are triaged to a trauma center when needed. A complimentary analysis using Maryland ambulance trip report forms addressed the issue of compliance with pre-hospital triage protocols for major trauma patients.

FOOD AND DRUG ADMINISTRATION

As the percentage of elderly in the Nation's population continues to increase, the Food and Drug Administration [FDA] has been giving increasing attention to the elderly in the programs developed and implemented by the Agency. By the year 2000, Americans aged 75 and older will be the fastest growing group on the United States. The elderly (those over 65) have disproportionately high health care demands. Challenges associated with this patient subpopulation, such as multiple drug interactions, different physiological characterizations and reactions to drug regimens, and the need for better medical device design for home self-diagnostics and therapies, will become more acute. These challenges will require greater inclusion of the elderly in clinical testing for drugs, medical devices, and other FDA-regulated products. Further, the increasing educational needs of the elderly will require more focused education programs, including specific dietary information and foods targeted to their nutritional requirements. The elderly population and food service workers who prepare food for the elderly also will require special education initiatives concerning proper food handling, because as the population ages it becomes more susceptible to foodborne diseases.

On October 1, 1998, the United Nations launched the International Year of Older Persons 1999 as a worldwide recognition of the global aging society and the need to ensure that policies and programs are responsive to the needs of older people. The Agency is an active participant on the Federal Committee to Prepare for the International Year of Older Persons, which is managed by the Administration on Aging. As a member of this Committee, FDA is

expanding its networks both within and outside of the federal government to coordinate program activities, exchange information, and disseminate material. Working relationships continue with the National Institute on Aging, the Centers for Disease Control and Prevention, and the Administration on Aging of the Department of Health and Human Services to further strengthen programs that will assist the elderly now and in the future. Some of the major initiatives that are underway are described below.

INTERNATIONAL YEAR OF OLDER PERSONS 1999

During 1998, the FDA started several major Agency-wide initiatives to strengthen its relationship and interactions with the aging community. The Office of External Affairs established a steering committee to develop and coordinate an approach for making FDA materials not only pertinent to the lives of older people, but also more accessible to the aging community. Another priority for the steering committee was to devise new approaches for informing the aging community of FDA activities related to enriching the quality of their lives and how to become more active in these activities.

The following are the primary initiatives undertaken by the steering committee in 1998:

- *Awareness Campaign on Successful Aging,* including a specialized logo and related theme "Active Aging—A Lifetime of Good Health," standard information packet that can be tailored for national and grassroots audiences.
- *Internet Website for Older Persons* to publicize the availability of FDA materials addressing the health interests of older people, with links to national and international organizations within the aging network.
- *Outreach and Network Building* to publicize available FDA publications through such vehicles as Parade magazine, disseminating tailored information packets, and building the relationships among aging organizations to enhance the interactions between these organizations and the Agency.

FDA PLAN FOR STATUTORY COMPLIANCE

FOOD AND DRUG ADMINISTRATION MODERNIZATION ACT OF 1997

As required by the 1997 FDA Modernization Act, FDA developed a plan outlining innovative approaches for meeting the increasingly complex public health challenges of the 21st century. The plan sets forth the strategic directions over the next 5 years and the specific performance goals that will guide FDA in accomplishing what it is required to do under the law as well as in meeting public expectations. This plan recognizes the International Year of Older Persons and focuses on the significant demographic shift that, coupled with longevity, will impact the Agency and its work.

Objective B of this FDA plan—to maximize the availability and clarity of information for consumers and patients concerning new products—discusses the aging population within the context of FDA's mission and identifies specific themes directing the Agency's efforts to fulfill this objective including:

- Tailoring product information to meet the special needs of diverse populations, such as through the public awareness campaigns that will be targeted to, or involve, older people—such as Take Time To Care, Mammography Awareness Seminars, Food Safety Programs (Fight BAC!), Over-the-Counter Labeling Changes Campaign, and the Partnership for Food Safety Education.
- Increasing the number of stakeholder collaborations, such as the Pharmacist Education Outreach Program, that will assist pharmacists in explaining the drug approval process to consumers, many of whom will be older consumers.
- Ensuring that patients are an integral part of the health care decisionmaking process.
- Providing consumers with quick access to a wide range of information through various methods, such as the Internet and clinical trial registry.

The 1999 objectives established in the plan published by FDA in November 1998 focus on two goals for over-the-counter and prescription drugs—evaluating drug information provided to 75 percent of individuals receiving new prescriptions and improving over-the-counter information and consumers' ability to understand it by the year 2001.

PUBLIC PARTICIPATION

As part of the Agency's long-standing tradition of involving the public in its activities, FDA is forging new relationships with organizations in the aging network on both the national and grassroots levels. During 1997 and 1998, the Agency conducted a variety of activities intended to establish and strengthen two-way communication between FDA and its constituencies. These activities included national and local consumer forums, meetings with organizations, stakeholder meetings, and public meetings. The Agency continues its efforts to involve older people as consumer members of its advisory committees by working with aging organizations to identify potential candidates.

PROJECT ON CALORIC RESTRICTION

The National Center for Toxicological Research (NCTR) in partnership with the National Institute on Aging has been working for several years on the role caloric restriction (CR) plays in the aging process and what effect a reduced caloric diet has on disease etiology. Scientists working on the Project on Caloric Restriction have concentrated on determining the mechanisms by which caloric restriction inhibits spontaneous disease, modulates agent toxicity and effects the normal aging process. Studies over the last year have focused on the premise that by using a single paradigm (caloric manipulation) and through interdisciplinary studies a comprehensive integrated approach can be developed to understand the effect diet has on the initiation and development of disease. The hypotheses that support this paradigm are mechanistically based and include the following: CR acts through its effects on body growth, on glucocorticoids and inflammation, on DNA damage, repair and/or gene expression, on toxicokinetics and/or its modification of oxida-

tion and fat metabolism. All of these hypotheses have been explored through interdisciplinary studies being conducted at NCTR or at other institutions in collaboration with scientists at NCTR.

Body Growth

Rodent studies at NCTR have found that body weight can be used to predict tumorigenicity. For most organs, size is directly proportional to the body weight of the animal and it has been shown that organ weight can be used to predict tumorigenicity. CR inhibits the induction of tumor expression and growth and changes the state of differentiation in replicating cells. It has also been found that CR can specifically alter drug metabolism and reduce drug toxicity. This could be very useful in treating and diagnosing disease. In addition, the relevance of CR to the human population has been strengthened by the fact that biomarkers observed in rodents are associated with the risk of chronic disease in humans. Plans are in place to extend the CR observation in rodents to clinical studies in humans.

Oxidation and Fat Metabolism

A common hypothesis for tumor induction suggests that DNA, the blue print of the cell, is damaged by oxidative chemical species in the cell released by the metabolism of fat. CR has been shown to reduce the impact of oxidative damage at the organ level by increasing the oxygen scavengers in the liver and in muscle. Similarly, it has been shown that CR reduces high fat induced oxidative damage in cellular DNA.

Glucocorticoids and Inflammation

Glucocorticiods are used to diminish normal but undesirable body responses to noxious stimuli and trauma, advantages are gained by their use in counteracting stressful situations and in decreasing pain and discomfort. Another group of normal body protective agents are stress proteins, which are produced in the body whenever the body undergoes a stress induced response. CR has been shown to elevate glucocorticoid levels shortly after inception, and has also been shown to alter stress proteins levels in the brain.

DNA Damage, Repair and/or Gene Expression

As mentioned above DNA is the blueprint of the cell, therefore any damage done to DNA has the potential of resulting in a disease response. CR has been shown to inhibit genes that are associated with tumor induction and enhances various forms of DNA repair. One hypothesis for tumor induction suggests that chemicals exert their damage to DNA by binding to the components of DNA forming adducts. Animals exposed to a CR regime and carcinogenic insult show an altered induction of various forms of DNA adducts.

Toxicokinetics

Toxicokinetics describes the absorption, distribution, metabolism and excretions of toxic chemicals from the body with time. Therefore, it refers to the compartmentalization of a toxicant within the

body. Organs are complicated structures that are made up of different kinds of cells, transport structures and biological functioning units. CR has been shown to alter water transport, fat deposition and waste transport, thus complicating cellular compartmentalization, and toxic exposure of certain cells to damaging substances.

Although the work over the last year has concentrated on the mechanisms of toxic interaction in the body and the role CR has on this process, studies with calorically restricted animals have repeatedly shown that CR extends the lifetime of animals. How this effects aging is still in question; however, the research being conducted in this area is continuing to chip away at the problem of how diet effects the aging process, and what elements or lack thereof in the human diet may help to extend human life.

RARE DISEASES AFFECTING PRIMARILY OLDER AMERICANS

It is the intent of the Orphan Drug Act, and the Office of Orphan Products Development [OPD], to stimulate the development and approval of products to treat rare diseases. The OPD plays an active role in helping sponsors meet agency requirements for product approval. Between 1983—when the Orphan Drug Act was passed—through the end of 1998, 181 products to treat small populations of patients were approved by FDA.

By the end of 1998, there were 744 designated orphan products. Two hundred and sixteen—29 percent—of these designated orphan products represent therapies for diseases predominately affecting older Americans. One hundred twenty-five are for treating rare cancers in the elderly—for instance ovarian cancer, pancreatic cancer, and metastatic melanoma. Forty-five of the orphan products designated for treating elderly populations are for rare neurological diseases, such a amyotrophic lateral sclerosis [ALS], and advanced Parkinson's disease. Twenty-six orphan-designated therapies for elderly populations have received FDA market approval: Most noteworthy among these is Eldepryl for treatment of idiopathic Parkinson's disease, postencephalitic Parkinsonism, and symptomatic Parkinsonism; riluzole for treatment of ALS; and Novantrone for treatment of refractory prostate cancer.

FDA's orphan products grants had their beginning in 1983 as one of the incentives of the Orphan Drug Act. This incentive of the Act provides financial support for clinical studies [clinical trials] to determine the safety and efficacy of products to treat rare disorders, and to achieve marketing approval from the FDA under the Federal Food, Drug, and Cosmetic Act. Studies funded by the orphan products grants program have contributed to the marketing approval of twenty-one of these products.

Because the orphan products program is issue-specific/indication-specific, it is typical for an approved product to be funded under the orphan products grant program for study in an indication unique to a distinct group of people: for example, women, children, or a population of elderly. Under the orphan drug program, disease populations are small; in many instances, the firms themselves are very small. The goal of orphan product development is to bring to market products for rare diseases or conditions. In so doing, it is evident that the goals of the Orphan Drug Act promote research and labeling of drug for use by and for special populations.

The orphan products grant program has funded 42 studies specifically aimed at treatment of diseases affecting adults and older adults. The IV Formulations of Busulfan was approved in 1999 for use in geriatric patients undergoing bone marrow transplantation.

ALZHEIMER'S DISEASE RESEARCH

Alzheimer's disease currently affects approximately four million people age 65 and older, with the number projected to increase to fourteen million by the year 2050. Development of new drugs to diagnose, treat, and prevent this disease represents a goal of profound importance. Alzheimer's drug research efforts depend in part upon the availability of patients who can participate in clinical studies of these new drugs.

During 1996, FDA's Office of Special Health Issues [OSHI] conducted a search and assessment of information in the public domain regarding Alzheimer's drug development, and particularly opportunities to participate in Alzheimer's drug research. It was learned that little information is publicly available regarding Alzheimer's research and opportunities to participate in Alzheimer's drug development.

To address this problem, OSHI has undertaken an initiative with the National Institute on Aging [NIA] to develop a database containing information regarding opportunities to participate in clinical trials of Alzheimer's drugs. This database, which received some initial funds from the FDA, will be maintained at the NIA's Alzheimer's Disease Education and Referral [ADEAR] Center, and will be accessible by toll-free telephone and the NIA home page on the world wide web. OSHI and NIA developed the database and announced the initiative to pharmaceutical manufacturers involved in domestic development of Alzheimer's drugs. Some manufacturers have submitted information for entry into the database, which will be operational during Spring 1998.

GENERIC DRUG APPROVALS

During 1997–1998, the Office of Generic Drugs (OGD) approved 775 abbreviated new drug applications (ANDA's). These drug products are often substantially less expensive, and provide a safe and effective alternative to the brand-name products. Many of these approvals represent the first-time a generic drug was available for products of special interest to older Americans such as terazosin hydrochloride capsules used as an antihypertensive and isosorbide mononitrate tablets used for angina. These and other recently approved generic drug products could save the American Public and Federal Government millions of dollars. [In July, 1998 the Congressional Budget Office (CBO) published a report: How Increased Competition from Generic Drugs Has Affected Prices and Returns in the Pharmaceutical Industry. The CBO estimates that in 1994, purchasers saved a total of $ 8 billion to $10 billion on prescriptions at retail pharmacies by substituting generic drugs for their brand-name counterparts.]

NEW DRUG APPROVALS

In 1997 and 1998, the Center for Drug Evaluation and Research approved more than 20 new drug products that are used more often, although not solely, in populations 55 or older for conditions generally associated with an aging population. Indications for these drugs include glaucoma, osteoarthritis, benign prostatic hypertrophy, incontinence, prostate cancer, and hormone replacement therapy.

GERIATRIC LABELING FINAL RULE AND GUIDANCE FOR INDUSTRY

In a final rule published in the Federal Register on August 27, 1997, (62 FR 45313), FDA established a "Geriatric Use" subsection in the labeling for human prescription drug and biological products to provide information pertinent to the use of drugs in the elderly (persons aged 65 years and over). This final rule recognizes the special concerns associated with the geriatric use of prescription drugs and acknowledges the need to communicate important information so that drugs can be used safely and effectively in older patients. The medical community has become increasingly aware that prescription drugs can produce effects in elderly patients that are significantly different from those produced in younger patients. Although both young and old patients can exhibit a range of responses to drug therapy, factors contributing to different responses are comparatively more common among the elderly. For example, elderly patients are more likely to have impaired mechanisms of drug excretion (e.g., decreased kidney function), to be on other medications that can interact with a newly prescribed drug, or to have another medical condition that can affect drug therapy.

In January 1998, the FDA published a guidance document entitled "Guidance for Industry-Content and Format for Geriatric Labeling." This document, which is available in hard copy, as well as on the CDER website, is intended to provide industry with information on submitting geriatric labeling of human prescription drugs and biological products.

DRUG LABELING

On February 26, 1997, FDA proposed new labels for over-the-counter (OTC) drug products. This proposed labeling is designed to provide consumers with easier-to-read and understand information about the products' benefits and risks, and how they should be used. According to the American Pharmaceutical Association's Handbook of Nonprescription Drugs, the elderly comprise about 12 to 17 percent of the United States population but consume about 30 percent of all OTC medications. The elderly are projected to consume as much as 50 percent of all OTC medications by the year 2000. The new bulleted format, including minimum type size and type style, simplified language, and uniform, standardized headings, as proposed in this rulemaking may be particularly helpful to the elderly.

In the Federal Register dated February 11, 1998, FDA amended its regulations pertaining to new drug applications (NDA) to clearly define in the NDA format and content regulations, the requirement to present effectiveness and safety data for important demographic

subgroups, specifically gender, age and racial subgroups. The rule also amended regulations pertaining to investigational new drug applications to require sponsors to tabulate in their annual reports the numbers of subjects enrolled to date in clinical studies for drug and biological products according to age group, gender, and race. This amendment is intended to alert sponsors as early as possible to potential demographic deficiencies in enrollment that could lead to avoidable deficience later in the NDA submission.

POSTMARKET DRUG SURVEILLANCE AND EPIDEMIOLOGY

The Office of Post Marketing Drug Risk Assessment (OPDRA), FDA Center for Drug Evaluation and Research [CDER], prepared an annual report—entitled "Annual Adverse Drug Experience [ADE] Report"—which provides summary statistics describing some of the activities of the postmarketing drug risk assessment program. Each year this report contains a number of tabulations which show the number of reports received and evaluated by such factors as age group, sex, source of report, drug or type of outcome. In 1997, there were 243,350 evaluable reports that were evaluated and added to the database. In 1998, the Agency added 232,500 reports to the evaluation database. At this time, we have not stratified this database by age. However, we anticipate that the percentage of reports submitted by individuals age 60 or older will remain similar to the percentages from previous years (23 to 26 percent).

FDA staff participated in an interagency conference entitled "Substance Abuse and Aging: Estimating Future Requirements", in which the goal of the meeting was to identify data sources to assess the future needs of substance abuse, drug misuse, and polypharmacy among the elderly. Information from the current spontaneous reporting systems, as well as previous findings from OPDRA sponsored studies were shared. Information about the outpatient use of prescription sedative hypnotic drugs in the U.S. from 1970 through 1989 was described, documenting the decline in total prescriptions of sedative hypnotic drugs, the decline in barbiturate and increase in benzodiazepine prescriptions, the increasing use of antidepressant drugs for insomnia, and increasing use with age.

DIALYSIS ACCESS GRAFT

A dialysis access graft made by Possis Medical Systems, Inc., was approved on September 25, 1998. The Perma-Seal Graft is for use as a subcutaneous arteriovenous shunt graft to provide immediate and subsequent chronic blood access for high-efficiency hemodialysis in patients who have a central venous cannulation that is deemed hazardous or is technically unavailable or are being maintained on chronic anticoagulation or antithrombotic therapy or are morbidly obese.

VASCULAR STENTS (6)

Before October 1, 1996, only three vascular stents were approved and only two of them were for coronary vessels. Six coronary vascular stents have been approved since then and are for use in patients with symptomatic ischemic heart disease due to discrete de novo and restonotic native coronary artery lesions with a reference

vessel diameter ranging from 3.0 mm to 3.75 mm and is intended to improve the coronary luminal diameter. Coronary stents have made a major impact on the treatment of coronary artery disease (prevalence increases with age).

TRANSMYOCARDIAL REVASCULARIZATION

The first transmyocardial revascularization (TMR) device The Heart Laser CO2 TMR System marketed by PLC was approved on September 25, 1998. Transmyocardial revascularization with The Heart Laser System is indicated for the treatment in patients with stable angina (Canadian Cardiovascular Society class 3 or 4) refractory to medical treatment and secondary to objectively demonstrated coronary artery atherosclerosis not amenable to direct coronary revascularization.

VENTRICULAR ASSIST DEVICE SYSTEMS (3)

On May 21, 1998, the Thoratec Ventricular Assist Device System was approved for an expanded indication. The original indication was for use as a bridge to cardiac transplantation to provide temporary circulatory support for cardiac failure in potential transplant recipients at imminent risk of dying before donor heart procurement. The expansion of the indications is to include post-cardiotomy myocardial recovery. These are patients who have had a technically successful open-heart operation but are unable to be weaned from cardiopulmonary bypass.

On September 29, 1998, two ventricular assist device systems were approved. Baxter Healthcare had its first application approved and Thermo Cardiosystems (TCI) supplemented its previously approved application. The TCI device is the electric version of the already approved pneumatic device. The HeartMate electric (VE) and the pneumatic (IP) LVASs made by TCI are approved for bridge to cardiac transplantation. What is unique about both the Novacor LVAS and the TCI HeartMate VE LVAS is that both are intended for use inside and outside the hospital, thus providing the patient with greater mobility.

PACEMAKERS (4)/ABLATION/IMPLANTABLE DEFIBRILLATORS (3)/LEADS (3)

Eleven applications for these devices were approved in this time period and all are used increasingly with age.

LASER TO EXTRACT LEADS

On December 9, 1997 the Spectranetics Laser Sheath was approved for use as an adjunct to conventional lead extraction tolls in patients suitable for transvenous removal of chronically implanted pacing or defibrillator leads constructed with silicone or polyurethane outer insulation. This device is the first of its kind.

PERCUTANEOUS VASCULAR SURGICAL SYSTEM

The Prostar Percutaneous Vascular Surgical System approved on April 30, 1997, is the first of its kind and is indicated for the percutaneous delivery of sutures for closing the common femoral

artery access site and reducing the time to hemostasis and ambulation (time-to-standing) of patients who have undergone interventional procedures using 8 to 11 Fr. Sheaths.

Deep Brain Stimulator To Control Tremors in Patients With Parkinson's

On July 31, 1997, the Medtronic Activa Tremor Control System was approved. It is a unilateral thalamic stimulation and the first device to be approved for the purpose of suppression of tremor in the upper extremity. The system is intended for use in patients who are diagnosed with essential tremor or Parkinsonian tremor not adequately controlled by medications and where the tremor constitutes a significant functional disability. Both essential and Parkinson's associated tremor are more frequent in the elderly.

Laser for Resurfacing and Treatment of Wrinkles

FDA, Center for Device and Radiological health has cleared a number of laser wavelengths for the indication of skin resurfacing and treatment of wrinkles. These devices are capable of removing layers of facial skin in a manner that wrinkles around the eyes, nose and mouth are partially or completely removed and at the same time the aged skin of the face is also removed. The result of this treatment, upon healing, is both lack of prominent wrinkles and the appearance of new facial skin/baby skin.

The use of lasers for this purpose potentially will affect the older population of people as well as persons who have experienced lengthy period of time in sunlight. The potential use of this new procedure will therefore be seen in the older population and in those locals of high sun exposure, that is the southwest and west coast.

Even if the wrinkles themselves are not completely removed, the resurfacing effect alone results in improved cosmetic appearance of the face, since the healed skin does not have the same appearance as older, sun exposed skin.

Intraocular Lenses

Over 1 million intraocular lenses are implanted each year in the U.S. predominately in the senior population. These implants have revolutionized the treatment of cataracts, which a few decades ago were the leading cause of blindness in the adult population. A number of flexible lens models have been approved by FDA in the last few years and are now on the market. These lenses permit smaller incisions which heal more rapidly with less scarring and subsequent distortion of the optics of the eye.

However, flexible lenses have led to a number of unexpected post-approval consequences. Discoloration, haziness, and glistening have all been reported. In 1996, primarily because of FDA laboratory testing and discovery of such problems, one company voluntarily recalled all distributed units of its recently approved flexible IOL model. FDA verified that the recall was effective and that monitoring was in place to access patients implanted before the recall. FDA tasked all involved firms with identifying the sources of these problems and revising their quality control to prevent future

occurrences. FDA's device laboratory developed methods and tested lenses to assess the effect of these problems on vision.

Data on intraocular lenses (IOLs) have demonstrated that a high proportion (85–95 percent) of the patients who have undergone cataract surgery and IOL implantation will be able to achieve 20/40 or better corrected vision with a low risk of significant postoperative complications. Because of the proven safety and effectiveness of IOLs, they have become the treatment of choice for the correction of visual loss caused by cataracts. This has allowed elderly patients to maintain their sight and a normal lifestyle. FDA continues to monitor some investigational IOLs and to date has approved thousands of models that have demonstrated safety and effectiveness.

The first IOLs were all "monofocal," which were designed to provide good vision at one distance, usually far. Patients who receive monofocal IOLs usually need spectacles to obtain satisfactory near vision. Typically, these patients will need bifocal spectacles to obtain optimal distance and near vision. On September 5, 1997, FDA approved the first "multifocal" IOL. The multifocal IOL is designed to provide clear distance and near vision. The advantage of the multifocal IOL is that there is a greater chance that the patient may have satisfactory distance and near vision without spectacles, or will only need "monofocal" (not bifocal) spectacles to improve both distance and near vision. The disadvantages of multifocal IOLs are : (1) distance vision may not be quite as "sharp" as with a monofocal IOL; (2) there is a higher chance of difficulty with glare and halos than with a monofocal IOL; and (3) under poor visibility conditions, vision may be worse than with a monofocal IOL.

Throughout the time period of this update, FDA has worked closely with industry, ophthalmologists, and researchers to assure that the regulatory requirements for new intraocular lens models are scientifically valid, but not overly burdensome. This activity has occurred via work with both the ANSI and ISO standards organizations. FDA also participates in the Eye Care Forum, an annual meeting sponsored by the National Eye Institute to address issues of mutual interest to the clinical, research, and regulatory communities.

PROSTHETIC HEART VALVES

Approximately 80,000 people in the U.S. have artificial heart valves implanted every year, both mechanical and bioprosthetic (pig, bovine valves). The characteristics of the blood flow through these valves can affect the risk of thrombo-embolism and ultimate valve failure. Turbulence, stagnation and cavitation (bubble formation and collapse) may all cause adverse effects. For the past few years, and currently, the FDA has had programs in place, both research and regulatory, to evaluate the flow characteristics of these devices and their impact on the valves and blood components.

These programs include the development of: (1) improved techniques to directly measure the flow patterns associated with valves using fluorescent particle visualization and Doppler ultrasound; (2) mathematical models to assess flow patterns as a function of valve design and aortic geometry; (3) guidance for manufacturers to standardize and improve their testing; (4) techniques to acous-

tically detect flow induced cavitation; (5) methods to directly assess effects on red blood cells. Also evaluation of specific valve designs, both currently implanted and prototype is ongoing. Finally, analysis of a much used diagnostic tool, color Doppler, is being undertaken to improve diagnosis or diseased or faulty valves.

On November 4, 1997, St. Jude Medical's Toronto SPV valve was approved, which is a stentless subcoronary porcine aortic valve comprised of the valve cusps and enough aortic tissue to support the commissures and leaflets. On November 26, 1997, the Medtronic FREESTYLE Aortic Root Bioprosthesis which is comprised of a porcine aortic root with a cloth covering to add to the strength of a proximal (inflow) suture line and to cover any exposed porcine myocardium was approved. The design of the FREESTYLE bioprosthesis allows the physician to trim the prosthesis for replacement using the subcoronary, full-root or root-inclusion technique. The need for replacement heart valves increases with age.

PACEMAKERS

On October 28, 1994, the EP Technologies, Inc.'s Cardiac Ablation System, the first radio frequency powered catheter ablation system was approved. It is indicated for interruption of accessory atrioventricular (AV) conduction pathways associated with tachycardia, treatment of AV nodal re-entrant tachycardia, and for creation to complete AV block in patients with a rapid ventricular response to an atrial arrhythmia.

On December 20, 1995, the Thoratec Ventricular Assist Device System was approved. It is indicated for use as a bridge to cardiac transplantation to provide temporary circulatory support for cardiac failure in potential transplant recipients at imminent risk of dying before donor heart procurement. The System may be used to support patients who have left ventricular (LVAD), right ventricular (RVAD), or biventricular failure (BVAD). The Thoratec VAD differs from the other two previously approved VADs in that it can be used for right heart and/or biventricular failure.

On May 15, 1996, a new indication for use was approved for CPI Guidant's family of Implantable Cardioverter Defibrillators (ICDs). The PMA supplement was received in six days and contained clinical data in electronic format from the Multicenter Defibrillator Implant Trial (MADIT). The new patient population consists of patients who have a Left Ventricular Ejection Fraction of less than 35%, and a documented episode of non-sustained ventricular tachycardia with inducible, non-suppressible, ventricular tachycardia. Previously, only patients who had sustained ventricular tachycardia were candidates for implantation. The MADIT data provided evidence that an ICD used in high risk, asymptomatic patients produces significantly better results than drugs in reducing deaths.

In 1998, the FDA, Center for Device and Radiological Health Office of Surveillance and biometrics, Epidemiology Branch conducted and published a study of the epidemiology of cardiac pacemakers in the elderly U.S. population. Data for the study were obtained from the Nationwide Inpatient Sample, a massive, nationally representative sample that includes 850 hospitals and six million patient discharge records. The study estimated that in a 12 month span, a total of 131,361 pacemakers were implanted in recipients

65 years of age or older. The study also demonstrated the outward diffusion of pacemaker implantations from academic to community hospitals, as the majority of pacemakers were found to be implanted outside of academic centers.

RENAL DIALYSIS

There were a projected 244,000 patients with kidney failure in the United States in 1996. More than 100 individuals are diagnosed with end stage renal disease (ESRD) each day. ESRD patients will need to remain on either hemodialysis or peritoneal dialysis for the rest of their lives unless they are able to receive a successful kidney transplant. Therapy can be delivered at dialysis facilities or in the home, depending on various factors.

Today, more than 50 percent of the ESRD population is over 60 years of age. Through age 50, the average remaining life span is greater than 5 years for ESRD patients. Although the remaining lifetimes are shorter for the elderly ESRD population, the general population also faces higher mortality with aging. The projected expected remaining lifetime for dialyzed patients with ESRD is approximately one-fourth to one-sixth that for the general population through age 50, while the ratio is often closer to one-third for older patients. These figures are based on actuarial calculations and assumed death rates, and are taken from the U.S. Renal Data System 1997 Annual Data Report.

Because of the nature of the underlying disease and necessary supportive therapy, ESRD patients are at risk for a number of potential complications during or as a result of their therapy. Many of the potential complications can occur from a failure to correctly maintain or use dialysis equipment, insufficient attention to safety features of the individual dialysis system components, or insufficient staffing or personnel training. FDA's Center for Devices and Radiological Health (CDRH), in conjunction with major hemodialysis organizations, such as the Health Industries Manufacturers Association (HIMA), the Renal Physicians Association (RPA), and the American Nephrology Nurses Association (ANNA), developed several educational videotapes which address human factors, water treatment, infection control, reuse, and delivering the prescription, as well as manuals on water treatment and quality assurance. Complimentary videos illustrating health and safety concerns and the use of proper techniques have been distributed to every ESRD facility in the United States. These videos have received a favorable acceptance from the nephrology community.

On October 6, 1995, CDRH completed the final draft of the Guidance Document on Hemodialyzer Reuse Labeling for safe and effective reprocessing for reuse manufacturers. A letter was issued to Manufacturers and Initial Distributors of Hemodialyzers on May 23, 1996 to inform them of the requirement to obtain 510(k) clearance for ReUse labeling for all hemodialyzers which were being marketed for clinics reusing their dialyzers. They were given until February 25, 1997, to comply with the request. A video on the methods for correct reprocessing and reuse of hemodialyzers developed by the FDA, RPA, and other concerned groups is available. The video attempts to follow the standard protocols that have been detailed in the Association for the Advancement of Medical Instru-

mentation (AAMI) Recommended Practice for the Reuse of Hemodialyzers. These practices also have been adopted by HCFA as a condition of coverage to ESRD providers that practice reuse.

A multistate study conducted for the FDA in 1987 indicated that dialysis facilities appeared to have inconsistent quality assurance (QA) techniques for many areas of dialysis treatment. To address this problem, FDA funded a contract to develop guidelines that could be used by all dialysis facility personnel to establish effective QA programs. The guidelines printed in February 1991 were mailed to every dialysis facility in the United States free of charge.

During 1995–1996, FDA prepared a Draft Guidance Document for the Content of Premarket Notifications for Water Purification Components and Systems for Hemodialysis. This document was circulated for comment by regulated industry and other government agencies and was presented at both AAMI and Water Quality Association Meetings. The purpose for preparing this document was to remind the water treatment community of the Federal requirement for submission of premarket notifications for these types of device systems (21 CFR 876.5665). The importance of the quality of the water used for preparation of hemodialysate solutions used during hemodialysis was strongly emphasized in these presentations and the Guidance Document.

In September 1996, seven patients in Alabama received hemodialysis when the blood alarms activated on six of the seven patients. Subsequently, the patients began to exhibit serious central nervous (CNS) symptoms. FDA field staff, CDRH and CDC investigated the various aspects of the incident. The epidemiological analysis suggests a causal relationship between the age of the dialyzer filters used (ten plus years), and the injuries reported to the patients. As a result, CDRH and CDC issued a joint Public Health Advisory in December 1996, with the simple message, to "rotate your dialysis stock using first-in-first-out practices," to avoid this type of problem in the future. FDA laboratories began a research program to investigate the effects of aging on dialyzer filters, with the objective of establishing safe expiration dating labeling.

Dialyzers of various ages were retrieved from the field and tested for material changes. The results of material characterization indicated that the cellulose acetate membranes degraded over time. To verify the cause of the incident in Alabama, water-soluble extracts from aged dialyzers and chemically oxidized resin were injected IV into a rabbit model. Symptoms similar to the case patients were observed. It was concluded that oxidative stress, either at manufacture or storage, can generate soluble fractions capable of adversely affecting patients. The FDA is working with industry and manufacturing associations to develop shelf-life criteria.

FDA has continued to work cooperatively with the nephrology community and the ESRD patient groups to improve the quality of dialysis delivery. These efforts appear to be yielding positive results. CDRH has also been cooperating with CDC and HCFA in the exchange of information to try to increase the safety of dialysis delivery.

FLUOROSCOPICALLY-GUIDED INTERVENTIONAL PROCEDURES

An increasing number of therapeutic procedures are being employed for a variety of conditions, such as coronary artery disease or irregular heart rhythms, which require x-ray fluoroscopy to provide visualization and guidance during the procedures. Due to the time required to complete these procedures, the potential for large radiation exposures leading to acute skin injury exists. During the early 1990s, the FDA received reports of such injuries, investigated the circumstances and issued an FDA Public Health Advisory to alert physicians and health care facilities to this concern. This advisory was sent to hospitals and specialist physicians who perform such procedures. During 1995 and 1996, the FDA continued activities to increase the awareness of physicians to this problem, including publishing supporting information for physicians, an article in the radiology literature and numerous presentations at medical professional meetings. These activities brought the attention of physicians to this issue and resulted in activities in many healthcare facilities to assure proper attention is given to this concern. As many of these interventional procedures are performed on older patients, this activity contributed to improved care for older Americans. During 1997 and 1998, the agency continued efforts to assure that new fluoroscopic x-ray systems will be designed in a manner that will facilitate dose reduction. This is being done through development of an international consensus standard for fluoroscopic systems used for interventional procedures and development of amendments to the mandatory U.S. performance standard. FDA staff is also contributing to the development of a report by the international Commission on Radiation Protection designed to inform physician users fluoroscopic equipment regarding steps which should be observed to prevent skin injuries.

MAMMOGRAPHY

Since 1975, CDRH [formerly the Bureau of Radiological Health (BRH)] has conducted a great many mammography activities. These have been done with several goals in mind:

To reduce unnecessary radiation exposure of patients during mammography to reduce the risk that the examination itself might induce breast cancer; and

To improve the image quality of mammography so that early tiny carcinoma lesions can be detected at the state when breast cancer is most treatable with less disfiguring and more successful treatments.

THE NATIONAL STRATEGIC PLAN FOR THE EARLY DETECTION AND CONTROL OF BREAST AND CERVICAL CANCER

FDA, the National Cancer Institute, and the Centers for Disease Control have coordinated a combined effort to cover 75 professional, citizen, and government groups to develop the National Strategic Plan for the Early Detection and Control of Breast and Cervical Cancer. The goal of this plan, approved by the Secretary of Health and Human Services on October 16, 1992, is to mount a unified effort by all interested groups to combat these two serious cancer threats. FDA staff took the lead in writing the Breast Cancer Qual-

ity Assurance section, one of six components of the plan, and participated in the development of the other components.

MAMMOGRAPHY QUALITY STANDARDS ACT OF 1992

On October 27, 1992, the President signed into law the Mammography Quality Standards Act [MQSA] of 1992. This Act requires the Secretary of Health and Human Services to develop and enforce quality standards for all mammography of the breast, regardless of its purpose or source of reimbursement.

Since October 1, 1994, any facility wishing to produce, develop, or interpret mammograms has had to meet these standards to remain in operation. The Secretary delegated the responsibility for implementing the requirements to FDA on June 1, 1993, and Congress first appropriated funds for these activities on June 6, 1993. Implementation of MQSA is a key component of Secretary Shalala's National Strategic Action Plan Against Breast Cancer.

FDA's accomplishments since the Agency was delegated authority to implement MQSA in June 1993 include—staffing of a new division; development of final standards; approval of four accreditation bodies; certification of 10,000 facilities by the statutory deadline of October 1, 1994; implementation of a rigorous training program for inspectors; development of a compliance and enforcement strategy [coordinated with the Health Care Financing Administration {HCFA}]; outreach to facility and consumer communities; and planning for program evaluation.

On October 9, 1998, the Mammography Quality Standards Reauthorization Act of 1998 (MQSRA) was enacted, extending the program to 2002. On April 28, 1999, most of the final regulations under MQSA will become effective, replacing the interim standards, under which facilities have been operating since October 1994. Most regulations will not change, though a number clarify the requirements of the interim regulations. Although there are new personnel and equipment regulations, the most significant changes that are directly patient-related are as follows:

- Mandated by Congress in the Reauthorization Act, all patients (not just self-referred patients) must receive a written report of their exam results from the facility that performs the mammography exam. This was in response to reports, though rare, of women receiving inaccurate exam reports or no report at all. Because the reports must be written in terms a lay person can easily understand, this provision will help assure that all women have this information for effective communication with their health care providers, and thus are more likely to receive appropriate medical follow-up when a breast problem is detected.
- A mammography facility must notify its patients when FDA determines that there are significant problems with the facility's mammography services, so that patients involved can take appropriate follow-up actions with respect to their healthcare.
- A facility must release original mammograms, not copies, when a patient requests the films, regardless of whether the transfer is permanent or temporary.

- Each mammography facility must develop a consumer complaint mechanism, to assure that all its unresolved serious complaints, such as unqualified personnel or an expired FDA certification, are brought to the attention of the facility's accreditation body or FDA for resolution.
- MQSA inspections have supplanted the Health Care Financing Administration's Medicare Screening Mammography Inspections. Under MQSA, HCFA has agreed to recognize FDA-certification of a mammography facility as meeting quality standards for reimbursement purposes.

Blood Glucose Monitoring

A proposed ISO standard [draft ISO TC 212/WG3] was proposed for evaluating the performance of self-monitoring blood glucose monitors by comparing monitor results to those obtained by clinical laboratory methods. Because the draft standard did not address how to select a clinical laboratory method, an attempt was made, based upon telephone surveys and discussions with CAP, the three most commonly used clinical methods for analysis of blood glucose. A strategy was developed to evaluate the accuracy of these methods by comparison to the recently released Standard Reference Material from the National Institute of Standards and Technology that has three certified levels of glucose in human sera. Criteria were developed for selection of high performance clinical laboratories in order to minimize effects due to analysts.

Patient Restraints

Patient restraints are intended to limit the patient's movement to the extent necessary for treatment, examination, or for the protection of the patient or others.

One of the most common uses of these devices has been to protect the elderly from falls and other injuries. Seventy-nine documented deaths have been reported to FDA's Medical Device Reporting System (MDR) related to patient restraint use. Scientific literature suggests that annual deaths related to the use of restraints may be as high as 200. These alarming numbers of deaths, with the use of protective restraints raised serious concerns regarding the safe use of these devices and prompted the FDA to alert the healthcare community about these problems.

The agency worked closely with industry in arriving at solutions to help reduce the risk of injury and death associated with the use of these devices. As a result, in November 1991, FDA moved to make protective restraints prescription devices to be used under the direction of licensed health care practitioners. In addition, manufacturers were required to label patient restraints as "prescription only" to help ensure appropriate medical intervention with the use of these devices. In July 1992, FDA issued a Safety Alert to healthcare providers to heighten their awareness of the potential hazards associated with the use of these devices. FDA identified labeling as its primary focus for intervention in resolving this issue, and provided additional labeling recommendations as guidance to manufacturers to ensure safer designs. Education and training of

personnel in the application of these devices has also been emphasized.

On March 4, 1996, FDA published a final rule requiring manufacturers of protective restraints to submit premarket notifications (510(k)s) to the Agency. Since 1996, FDA has reviewed approximately 150 premarket notifications for these devices.

Today, healthcare providers are electing the restraint-free alternative. As a result, current literature reports that restraint use is dropping.

HEARING AIDS

Several events occurred in 1995–1996 which related to FDA's development of a guidance document that indicated criteria for clinical hearing aid study protocols. Manufacturers met with FDA staff to review proposed clinical studies, consultants met with FDA to discuss interpretations of the guidance document and how they might best interface with the regulated industry, and FDA had meetings with the Hearing Industries Association (HIA), representing many of the major manufacturers of hearing aids, wherein the use of the guidance document was discussed.

In addition, members of FDA's Hearing Aid Working Group completed its draft of the proposal to amend the 1977 hearing aid regulation. This new regulation, if adopted, would cover 21CFR 801.420 and 801.421, Hearing Aids, Professional and Patient Labeling and Conditions for Sale.

ORTHOPAEDIC IMPLANT POROUS COATINGS

Porous coatings are widely used in both the orthopedic and dental implant industries to fix prosthetic devices through the process of bony in-growth without the aid of cements. However, the coating qualities such as strength, solubility, and abrasion resistance vary considerably depending on manufacturing methods and have significant impact on durability of the implants. Concern over the long-term revision rates for plasma sprayed porous coatings prompted the FDA to require post-market surveillance studies for these types of coatings. In order to help industry evaluate the coatings under surveillance, FDA developed a consensus standard based test, qualified it using standard interlaboratory study methods and has incorporated that method into a Federal Register Notice that is currently out for comment. FDA also began a program to evaluate tests to assess the durability of such coatings in order to help in the development of longer-lived implants.

HAZARDS WITH HOSPITAL BEDS

On August 23, 1995, FDA issued a Safety Alert, Entrapment Hazards with Hospital Bed Side Rails. The Alert noted that the majority of deaths and injuries reported to FDA involving bed rails were to elderly patients, and recommended a number of actions to prevent deaths and serious injuries. This Alert was sent to nursing homes, hospitals, hospices, home healthcare agencies, nursing associations, and biomedical and clinical engineers throughout the United States.

RETINAL PHOTIC INJURIES

On October 16, 1995, FDA issued a Public Health Advisory, *Retinal Photic Injuries from Operating Microscopes During Cataract Surgery*. Cataract surgery is most frequently performed on elderly patients. The Advisory discussed the types of injuries to patients reported to FDA, and recommended actions to reduce the risk of retinal photic injury. The Advisory was sent to ophthalmologists and cataract centers throughout the United States.

ELECTRIC HEATING PADS

On December 12, 1995, FDA working with the CPSC, issued a Public Health Advisory, Hazards Associated with Use of Electric Heating Pads. At the time of the Advisory, 45% of those reporting injuries from using heating pads, were over the age of 65. The Advisory pointed out that patients who may be unable to feel pain to the skin because of advanced age, diabetes, spinal cord injury, or medication, are at high risk for injury. This Advisory was sent to hospitals, nursing homes, hospices, home healthcare agencies, and biomedical and clinical engineers throughout the United States.

FDA PROBLEM REPORTING SYSTEM FOR MEDICAL DEVICES

The Office for Surveillance and Biometrics receives reports involving medical devices through reporting from consumers, medical professionals, manufacturers, distributors, and user facilities. On the 191,537 reports received during the calendar years 1995 and 1996 from all sources, 22,749 (12 percent) reported the age of the patient. Of these, 10,855 (48 percent) were for individuals 60 years of age or older. Prior to August 1, 1996, manufacturers of medical devices were not required to provide age information. In many instances when manufacturers were required to provide age information, the information was unknown and therefore not reported.

MARKERS OF BONE METABOLISM

Osteoporosis is a major health concern. It is estimated that 1.5 million fractures are attributable to osteoporosis in the United States each year. One third of women older than 65 years suffer vertebral crush fractures, and the lifetime risk of hip fracture is 15%. The mortality rate accompanying hip fracture may be as high as 20%. Twenty-five percent of the survivors are confined to long-term care in nursing homes. The estimated cost of medical care for osteoporosis each year is more than $ 10 billion.

If a woman has postmenopause-associated osteoporosis, an assessment of bone turnover may be helpful. Because of an increasing interest in bone disease and a greater understanding of bone metabolism, a number of urinary markers of bone turnover were cleared by the FDA in 1995 and 1996. The rate of bone loss is related to an overall increase of bone turnover which can be assessed using these biochemical indicators.

YEAR 2000 HEALTH OBJECTIVES

A consortium of over 300 government and private agencies developed a set of health objectives for the Nation which is serving as

a national framework for health agendas in the decade leading up to the year 2000. The overall program is called "Healthy People 2000." FDA co-chairs the working group responsible for monitoring progress on the set of 21 objectives that focus on nutrition, dietary improvements and availability of nutrition services and education. In the food and drug safety area, objective 12.6 sets as a target to:

> Increase to at least 75 percent the percentage of health care providers who routinely review all prescribed and over-the-counter medicines taken by their patients 65 years and older each time medication is prescribed or dispensed.

Objective 12.8 sets as a target to:

> Increase to at least 75 percent the proportion of people who receive useful information verbally and in writing for new prescriptions from prescribers or dispensers.

FDA's Marketing Practices and Communications Branch conducted a number of studies that track patients' receipt of medication information from doctors and pharmacists from 1982 to 1996. The most recent survey shows that 67% of Americans 65 and over received at least some oral information about prescriptions from physicians and 43% from pharmacists, while 13% received written information about their prescription medications from physicians and 62% received such information from pharmacists. Only 2% reported asking questions at the doctor's office, and 3% at the pharmacy. The survey is being conducted again in 1998 to track progress toward meeting this objective. An article outlining results of the surveys from 1982–1994 will be published in Medical Care in October 1997.

Efforts are in the final stages to prepare the Healthy People 2010 objectives. A draft of the 2010 objectives was published for public comment on the September 15, 1998, with comments being accepted through December 15, 1998 on over 300 objectives in 22 focus areas. FDA would lead or co-lead the sections on nutrition, food safety, and medical product safety. A copy of the draft of the 2010 Healthy People objectives is available on the worldwide web at http://www.cfsan.fda.gov—on the Center for Food Safety and Applied Nutrition (CFSAN) homepage, click on "Foodborne illness" and then go further down the next page and click on HP2010.

FOOD LABELING

Food labeling is very important to the elderly. Elderly people have a greater need for more information about their food to facilitate preparation of special diets, maintain adequate balance of nutrients in the face of reduced caloric intake, and ensure adequate levels of specific nutrients which are known to be less well absorbed as a result of the aging process [e.g., vitamin B 12].

The food label, which is now required on most foods offers more complete, useful, and accurate nutrition information to help the elderly meet their nutritional needs. The food label includes nutrition labeling for almost all foods; information on the amount per serving of saturated fat, cholesterol, dietary fiber, and other nutrients of major concern to today's consumers; nutrient reference values to help consumers see how a food fits into an overall daily diet; uniform definitions for terms that describe a food's nutrition content [e.g., light, low fat, and high-fiber], claims about the relationship

between specific nutrients and disease, such as sodium and hypertension; standardized serving sizes; and voluntary quantitative nutrition information for raw fruit, vegetables, and fish.

To help consumers get the most from the food label, educational materials have been widely disseminated. Among materials now available is a large-print brochure, "Using the New Food Label to Choose Healthier Foods," which is easier to read for senior citizens who may have vision problems.

A food label education program has been developed that coordinates the efforts of FDA and USDA with various public and private sector organizations to educate consumers about the availability of new information on the food label and the importance of using that information to maintain healthful dietary practices. Consumer Research was used to guide the development of educational materials and their messages. Print and video materials were developed for diverse target audiences, emphasizing skills and tips on how to use the food label quickly and easily to achieve a healthier diet. The agency has released two "Question and Answers" documents, giving answers to about 400 frequently asked questions.

FDA's food labeling education program seeks to coordinate the Government's efforts with those of the public and private sector to insure consistent, action-oriented label education messages. A key goal is to promote integrating label education into new and existing nutrition education programs for diverse target audiences (for example, through national video teleconferences on nutrition interventions, children's games and nutrition-oriented programs on CD ROMs, and community-based programs for multi-cultural populations). Public information and education materials are available from FDA's Office of Consumer Affairs and have also been posted on CFSAN's home page of the World Wide Web (WWW).

DIETARY SUPPLEMENTS

The Dietary Supplement Health and Education Act of 1994 (DSHEA) was signed by the President on October 25, 1994. This Act amended the Federal Food, Drug, and Cosmetic Act to alter the way the Food and Drug Administration regulates dietary supplements and requires the Agency to undertake rulemaking and other actions to fully implement the scope of the Act.

The DSHEA established a new regulatory definition for "dietary supplement," established a framework for regulating the safety of dietary supplements that is different than that for conventional food ingredients, defined the term "new dietary ingredient" and established circumstances under which such ingredients can be safely used in dietary supplements, and amended the safety provisions of the Act such that FDA must establish that a product presents a significant or unreasonable risk of illness or injury under the label's conditions of use before it can be removed from the marketplace.

The DSHEA allows dietary supplement manufacturers to make certain types of claims for their products. A dietary supplement may claim a benefit related to a classical nutrient deficiency disease, describe the role of a nutrient or dietary ingredient intended to affect the structure or function of the body, describe the mechanism by which it acts to maintain structure or function, or describe

general well-being from consumption of a nutrient or dietary ingredient. In order to make such claims, manufacturers must have substantiation that the claim is truthful and not misleading, the claim must contain the mandatory disclaimer stating this statement has not been evaluated by the FDA. This product is not intended to diagnose, treat, cure, or prevent disease, and the firm must notify FDA it is using the claim. However, a firm does not have to provide FDA its substantiation for the claim nor get FDA approval to use the claim.

The DSHEA also authorizes FDA to Issue regulations for good manufacturing practices for dietary supplements. The Agency published an advance notice of proposed rulemaking (ANPR) in the February 6, 1997 Federal Register. FDA is reviewing the comments received to the ANPR and intends to publish a proposed rule. Good manufacturing practices would ensure that dietary supplements are manufactured in such a manner that consumers can be confident they contain what they purport to contain and that they are not adulterated in any way.

FDA published final labeling regulations for dietary supplements in the September 23, 1997 Federal Register. The labeling regulations are effective on March 23, 1999 and will ensure that dietary supplements are labeled in a clear and informative manner. The new labeling requirements should assist consumers in making informed choices on whether a particular dietary supplement is appropriate for their particular needs.

TOTAL DIET STUDIES

The Total Diet Study, as part of FDA's ongoing food surveillance system, provides a means of identifying potential public health problems related to the diets of the elderly and other age groups. Through the Total Diet Study, FDA is able to measure the levels of pesticide residues, toxic elements, chemicals, and nutritional elements in selected foods of the U.S. food supply. In addition, the study allows FDA to estimate the levels of these substances in the diets of 14 age groups: infants 6 to 11 months old; children 2, 6, and 10 years old; 14- to 16-year-old boys; 14- to 16-year-old girls; 25- to 30-year-old men; 25- to 30-year-old women; 40- to 45-year-old men; 40- to 45-year-old women; 60- to 65-year-old men; 60- to 65-year-old women; men 70 years and older; and women 70 years and older. Because the Total Diet Study is conducted yearly, it also allows for the determination of trends and changes in the levels of substances in the food supply and in daily diets.

POSTMARKET SURVEILLANCE OF FOOD ADDITIVES

FDA's Center for Food Safety and Applied Nutrition (CFSAN) monitors complaints from consumers and health professionals regarding food and color additives and dietary practices as part of its Adverse Reaction Monitoring System. Currently, the database contains 13,158 records. Of the complainants who reported their age, approximately 21 percent were individuals over age 60. The Special Nutritionals Adverse Event Monitoring System (AEMS) may be accessed on the worldwide web at http://vm/cfsan.fda.gov/-dms/.

MEDICARE COVERAGE DETERMINATIONS

FDA provides representatives and scientific input to the Health Care Financing Administrations's Technology Advisory Committee (TAC). The TAC is a committee of government employees, which advises HCFA on national coverage decisions for Medicare recipients. FDA also provides input and expert review for technology assessments produced by the Agency for Health Care Policy and Research (AHCPR). AHCPR technology assessments are used by HCFA and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) as a basis for coverage decisions.

During the 1995–1996 reporting period, FDA and HCFA formulated an arrangement to afford beneficiaries Medicare coverage for investigational medical devices determined by FDA to constitute only a minor change from an already covered device. This arrangement allows manufacturers to validate the safety and efficacy of improved products without denying coverage during the period of study.

PHARMACY INITIATIVE

During 1995 and 1996, DHHS and FDA have sought to encourage greater pharmacy-based counseling. Through speeches, articles, and editorials in major medical and pharmacy journals, DHHS and FDA have encouraged the increased role of pharmacists, using computers to print information to informing patients about the uses, directions, risks and benefits of prescription medications. The pharmacy profession has responded positively, bringing many examples of their initiatives to FDA's attention. In particular, several organizations have informed FDA of the expanded use of new technology to provide patient instructional materials to their customers. In August of 1996 Congress took up this issue and developed performance goals for the private sector to meet. In December of 1996 the private sector had developed an Action Plan with criteria on how to determine the usefulness of information for consumers. The Plan would then be presented to the Secretary of HHS for concurrence. A survey by FDA, with data collected beginning December 1996, showed 67% of patients reporting that they received written information with their prescription drugs. FDA will conduct studies in the future to review the usefulness of that information and will continue to work closely with private sector organizations in an effort to increase the dissemination of useful information to patients about their prescription medications.

HEALTH FRAUD

Health fraud is the deceptive promotion and distribution of false and unproven products and therapies to diagnose, cure, mitigate, prevent, or treat disease. These fraudulent practices can be serious and often expensive problems for the elderly. In addition to economic loss, health fraud can also pose direct and indirect health hazards to those who are misled by the promise of quick and easy cures and unrealistic physical transformations.

The elderly, more often than the general population, are the victims of fraudulent schemes. Almost half of the people over 65 years of age have at least one chronic condition such as arthritis, hyper-

tension, or a heart condition. Because of these chronic health problems, senior citizens provide promoters with a large, vulnerable market.

To combat health fraud, the FDA uses a combination of enforcement and education. In each case, the Agency's decision on appropriate enforcement action is based on considerations such as the health hazard potential of the violative product, the extent of the product's distribution, the nature of any mislabeling that has occurred, and the jurisdiction of other agencies.

The FDA has developed a priority system of regulatory action based on two general categories of health fraud: direct health hazards and indirect hazards. The Agency regards a direct health hazard to be extremely serious, and it receives the Agency's highest priority. FDA takes immediate action to remove such a product from the market. When the fraud does not pose a direct health hazard, the FDA may choose from a number of regulatory options to correct the violation, such as a warning letter, a seizure, or an injunction.

The Agency also uses education and information to alert the public to health fraud practices. Both education and enforcement are enhanced by coalition-building and cooperative efforts between government and private agencies at the national, State, and local levels. Also, evaluation efforts help ensure that our enforcement and education initiatives are correctly focused.

The health fraud problem is too big and complex for any one organization to effectively combat by itself. Therefore, FDA is working closely with many other groups to build national and local coalitions against health fraud. By sharing and coordinating resources, the overall impact of our efforts to minimize health fraud will be significantly greater.

FDA has worked with the National Association of Attorney's General [NAGS] and other organizations to provide consumers with information to help avoid health fraud. Since 1986, FDA has worked with the National Association of Consumer Agency Administrators [NCAA] to establish the ongoing project called the NCAA Health Products and Promotions Information Exchange Network. Information from FDA, the Federal Trade Commission [FTC], the U.S. Postal Service [USPS], and State and local offices is provided to NCAA periodically for inclusion in the Information Exchange Network. This system provides information on health products and promotions, consumer education materials for use in print and broadcast programs, and the names of individuals in each contributing agency to contact for additional information.

In 1995 and 1996, FDA's Public Affairs Specialists [PASs] continued to alert diverse and culturally specific elderly populations throughout the United States by sponsoring community-based education programs, information exchanges, and outreach efforts. Dietary supplements remained a key issue. In addition to health fraud workshops and other community-based programs, the PASs also convey this important information through additional networks such as radio, television shows, and public service announcements. With respect to enforcement, in 1997 and 1998, the Agency took actions against the importation of Corvalolum, a Russian product containing dangerous levels of phenobarbital. The Agency issued

national publicity to alert consumers to the dangers of this product and worked with the U.S. Customs Service to immediately confiscate this product upon entry into the U.S. In addition, the Agency took actions against firms marketing various unproven products offered for cancer, AIDS, diabetes, gonorrhea, lupus, schizophrenia and other serious disease conditions.

WOMEN'S HEALTH

Information about drug effects in certain populations.

Over the past decade there has been growing concern that the drug development process does not provide sufficient information about drug effects in certain populations, including minorities and women of all ages. On September 8, 1995, the FDA, in an effort to collect this necessary information, proposed to amend its regulations regarding the format and content of investigational new drug applications (INDs) and new drug applications (NDAs). The proposed rule would require IND sponsors of drugs and biological products to include in their annual reports a characterization of study subjects by subgroups, such as age, gender, and race. Sponsors would also be required to present safety and efficacy data by subgroup when submitting NDAs. This rule has since gone into effect and will assist in the determination of the optimal use of drugs in special populations which have a variety of factors that can lead to different responses to medical products.

Women's health research agenda

During 1995 and 1996, FDA participated with the NIH Office of Women's Health in defining specific objectives of the research agenda for the 21st century. The effort culminated in plans for a workshop including experts from the federal government and universities to be held in 1997. Some specific age-related conditions were evaluated including cardiovascular and pulmonary diseases, oral health, bone and musculoskeletal disorders, kidney conditions, and cancer.

Hispanic women's health conference

On May 9–10, 1996, the Office of Women's Health sponsored the Hispanic Women's Health Conference held in Miami, Florida. Over 150 people attended the conference which was designed as a grassroots effort to bring together community based organizations, academia, federal, state and local agencies and public/private health care providers concerned with Hispanic women's health issues, many of which affect aging American women. The two day meeting featured national and local speakers who addressed key Hispanic health concerns in the areas of diabetes, heart disease, cancer, mental health, substance abuse, osteoporosis, and HIV/AIDS. Its purposes were to create an ongoing network of health professionals in Southern Florida to address this community's health needs, and to consider priority issues on which ongoing public education should occur.

Minority women health empowerment: Workshops

The office sponsored this series of Conferences in 1995, 1996 and 1997. The purpose of the workshops was to equip minority women, including the aging, in urban areas of the New Jersey and Delaware Valley with information on how to take care of themselves, how to prevent illness and disease, and what the benefits are of early detection and treatment. This project targeted women who were at high risk for HIV/AIDS, cardiovascular disease, breast and other cancers, and diabetes. The programs were conducted in community centers, Head Start Centers, local parish halls, school auditoriums, and hospital conference rooms. Audiotapes in English and Spanish were given to participants at the end of the workshop.

Women's health: Take time to care

In 1996, the FDA Office of Women's Health (OWH) conceived of a new program partnering with American women. In order to enhance the health of women, the FDA wanted to provide mid-life and older women, particularly in under served populations, with the information they need to promote and protect their own health. OWH met with 46 advocacy groups representing women, the elderly, and disease conditions, to discuss their health concerns. The theme, Women's Health: Take Time To Care, will be used for a variety of health prevention messages. Women, as represented by these organizations, told us that the first message should be presented Use Medicines Wisely. As major consumers of pharmaceuticals, women and their health are significantly effected by the use of medications. In 1997, Pilot programs using this message were conducted in Chicago, IL and Hartford, CT. FDA provided the printed materials and information and community organizations sponsored numerous public awareness events. This program will be rolled out nationally in 1998 and will be brought to 15 cities, rural empowerment zones, and Native-American reservations across the country.

"Before time runs out"

Breast cancer is the number one cause of cancer related deaths among African American women. The FDA Office of Women's Health provided funds to educate African American women in the Houston area about the importance of screening and the impact of breast cancer on the African American community through the use of a locally-inspired play. This drama, which was written and produced by an African American playwright (Thomas Meloncon) entitled "Before Time Runs Out" was inspired by Mr. Meloncon's sister who died of breast cancer. The play was followed by a panel discussion and pertinent brochures were distributed. This series was presented in selected churches in under served communities in Houston in 1996 and 1997.

Public education brochures

Asian Pacific Islander women have low rates of utilization of breast and cervical cancer screening procedures due to language barriers and a subsequent lack of understanding of the importance of these tests. In 1995, the Office of Women's Health sponsored the translation of mammography and cervical cancer screening mate-

rials into several languages to address the needs of linguistically isolated Asian Pacific Islander women.

MATERIALS, OUTREACH, AND EXHIBITS

The FDA Center for Food Safety and Applied Nutrition is working with the American Association of Retired Persons (AARP) to develop information for seniors on food safety. The project will support the United Nation's observation of the International Year of Older Persons 1999. AARP has developed a program geared toward making seniors better able to manage independently in their own homes, and food safety is an important component of this effort.

FDA launched a public awareness campaign on the risk that unpasteurized or untreated juices may present to vulnerable populations, including the elderly. Educational materials including a press kit, consumer brochure, video news release, and a public service announcement were distributed to senior citizen groups, as well as day care centers, elementary schools, state PTA offices and media outlets. AARP and other organizations also assisted in distribution of the information.

FDA issued an advisory that the elderly, children and people with compromised immune systems should avoid eating raw alfalfa sprouts due to the increased risk of pathogens.

The Agency routinely develops Talk Papers, Press Releases, and FDA Consumer articles that focus on topics of high interest to older consumers. During 1998, the Agency issued Talk Papers and Press Releases on the FDA approval of the first ultrasound device for diagnosing osteoporosis (Sahara Clinical Bone Sonometer) that does not involve the use of x-rays; the launch of a grassroots campaign, Women's Health: Take Time To Care, which is primarily directed to women over age 45 focusing on the management of medications for themselves and their families; and the FDA approval of the first oral treatment for active rheumatoid arthritis (Arava or leflunomide).

During 1997 and 1998, FDA published articles in the FDA Consumer on a wide variety of topics of interest and concern to older consumers. The topics of these articles included FDA's early warning system for unforeseen medical product problems; FDA regulation of label claims linking food with disease prevention or better health; testing and treatments for prostate cancer; remedies for sleeplessness; new drugs and medical devices for treating Parkinson's Disease; new medications and therapies for treating serious depression; helping caregivers to learn more easily about the latest on Alzheimer's; advances in the prevention and treatment of stroke; treating back pain; medications and older adults; hair replacement; new drugs and medical devices that show promise in curbing ventricular arrhythmias; and estrogen replacement therapy.

The Agency has established networks and communication channels to reach the national and local aging network with consumer-oriented information. By working with a variety of external constituencies—consumers, patients, health professional community, academia and scientific organizations, industry, women's organizations, minority groups, and the international community—FDA is able to form the collaborations and cooperative arrangements to

significantly extend its outreach to older consumers. The Agency exhibits at major annual meetings of national—such as the American Public Health Association—as well as at community events and local health fairs sponsored by grassroots organizations.

COMMUNITY-BASED PROGRAMS

Public Affairs Specialists, located throughout the country in FDA field offices, conducted a variety of community-based programs in 1997–1998 to address the health concerns and information needs of older Americans. The topics addressed by field programs, exhibits and outreach efforts are timely and diverse, including such topics as food labels; food safety; the safe use of medications; Take Time To Care; health fraud; clinical trials; dietary supplements; prostate cancer; osteoporosis; breast cancer; arthritis; and cataracts.

During 1995–1996, FDA Public Affairs Specialists focused on informing older Americans about the Nutrition Labeling and Education Act and how to use the new food label for a healthy or special diet. These Specialists developed information kits for older people and distributed these kits in communities throughout the country. These kits included wallet cards on the new food labeling law; large-print fact sheets; place mats; and trainer guides. Senior volunteers were trained in a nutrition program sponsored by DHHS Region V Administration on Aging in Chicago, Illinois to disseminate information on food labeling to senior citizens, especially older people in minority communities.

In 1997–1998, the FDA Public Affairs Specialists used a variety of approaches and met with wide diversity of elderly organizations on three key issues—food safety, Take Time To Care and safe medication use, and health fraud. Food safety presentations and roundtable discussions provided valuable vehicles for communicating the safe food handling message of the "Fight BAU campaign to senior citizens and to food service workers. Take time To Care and the safe medication use message were held throughout 1997–1998. This program, which is directed primarily to older women, was held at locations throughout the country—the programs held in San Francisco are representative of the Take Time To Care Programs held in other locations where the program was held from March 21–28, 1998. During this time, approximately 50 events were held, with 100,000 brochures being disseminated, and a wide diversity of community organizations participating—such as American Diabetes Association, American Indian Family Health Center, Area Agency on Aging, Center for Elder's Independence, HealthNet Seniority Plus, National Council of Negro Women, Older Women's League, San Francisco General Hospital, and the YWCA. Numerous food safety presentations to Meals-on-Wheels programs and senior centers in the San Francisco District area were conducted. The presentations focused on food microbiology and prevention of foodborne illness through proper food handling techniques. Fight BAC brochures were distributed at each location. The FDA Public Affairs Specialists continue to work with community-based organizations to cooperate in communicating important information about contemporary health frauds and how to avoid them.

HEALTH CARE FINANCING ADMINISTRATION

The mission of the Health Care Financing Administration (HCFA) is to promote the timely delivery of appropriate, quality health care to its beneficiaries-over 75 million aged, disabled, and poor Americans.

Medicaid and Medicare ore the principle sources of funding longterrn care in the United States. The primary types of care reimbursed by these programs of HCFA are a variety of institutional (e.g., skilled nursing facilities (SNFs), intermediate care facilities for the mentally retarded (ICFs/MR), inpatient rehabilitation, and home and community-based care services (e.g., home health, personal care).

HCFA conducts demonstration projects that demonstrate and evaluate optional coverage, eligibility delivery system, payment and management alternatives to the present Medicare and Medicaid programs. HCFA also conducts research studies on a range of issues relating to long-term care services and their users, providers, quality and costs.

Information follows on specific HCFA demonstrations and research:

Wisconsin partnership program

Project No.: 11–W–00123/05
Period: October 16, 1998–December 31, 2004
Funding: $0
Award: Waiver-Only
Principal Investigator: Steve Landkamer
Awardee: Wisconsin Division of Health and Family Services, 1 West Wilson Street, Madison WI 53701
HCFA Project Officer William D. Clark, Office of Strategic Planning

Description: The State of Wisconsin submitted an application to HCFA in February 1996 for Medicare and Medicaid demonstration waivers to establish a "Partnership" model of care for dually entitled nursing home certifiable beneficiaries who are either under age 65 with physical disabilities or frail elders. Waivers were approved for this demonstration on October 16, 1998. One site (Elder Care—Madison) became operational under Medicare and Medicaid waivers on January 1, 1999; Community Care for the Elderly—Milwaukee is expected to become operational on March 1, 1999. Community Living Alliance—Madison and Community Health Partnership—Eau Claire are expected to become operational in spring, 1999.

The partnership model

The "Partnership" model is similar to the Program for All-inclusive Care for the Elderly (PACE) model in the use of multi-disciplinary care teams, prepaid capitation, and sponsorship by community-based service providers. This model is a variant of PACE. Rather than the physician being co-located with the multi-disciplinary team, the "Partnership" program will enable participants to use a physician of their choice in the community who agrees to participate as a contractor with the Partnership Plan. This model uti-

lizes nurse practitioners and other multi-disciplinary team members to provide continuity and coordination with the physicians who elect to participate. The Partnership also will rely less on adult day care centers than do PACE sites, as the organizing focus for the provision of care. The model is proposed as a fully voluntary enrollment model for 1,200 beneficiaries.

Benefits

All Medicare and Medicaid covered benefits are offered under full capitation for eligible participants who elect to enroll.

Four demonstration sponsors

Partnership sites for the frail elderly are the existing PACE sites in Milwaukee and Madison. The Partnership model for people with disabilities will utilize Centers for Independent Living in Madison and Eau Claire. The model for people with disabilities is believed to be the first site in the nation for fully capitated Medicare and Medicaid services for people with physical disabilities.

Status: The project is in the early development stage.

Multi-state evaluation of dual eligibles demonstrations

Period: 9/30/1997–9/29/2002

Funding: $5,623,414

Contractor: University of Minnesota, 420 Delaware Street, SE., Minneapolis, MN 55455–0392

Investigator: Robert L. Kane, M.D.

The Department of Health and Human Services has been encouraging efforts to better coordinate services provided to individuals who are eligible for both Medicare and Medicaid, also known as dual eligibles. As a result of this policy, a number of demonstration applications have been submitted and the Health Care Financing Administration has approved or expects to approve several of these demonstrations to test various models of managed care that are specifically directed at better coordinating care received by dual eligibles. These include the Minnesota Senior Health Options Program, the Wisconsin Partnership Program, Monroe County Continuing Care Networks Demonstration (New York), and the Colorado Integrated Care and Financing Project. While directed at different populations and having very different operational approaches, each is designed to use a managed care approach to better integrate Medicare and Medicaid services to meet the needs of dual eligibles more efficiently and effectively.

This evaluation is designed to assess the impact of dual eligible demonstrations in the States of Minnesota, Wisconsin, New York, and Colorado. Analyses will be conducted for each State and across States. The quasi-experimental design will utilize surveys, case studies, and Medicare and Medicaid data for analysis. Major issues to be examined include the use of a capitated payment strategy to expand services while reducing/controlling costs, the use of case management techniques and utilization management to coordinate care and improve outcomes and the goal of responding to consumer preferences while encouraging the use of noninstitutional care. A universal theme to be developed is the difference between managing and integration.

Beneficiary surveys and case study interviews are in progress in the Minnesota demonstration. Preliminary discussions have been held between the contractor and representatives from the demonstrations in Wisconsin and New York. Summaries and findings from completed work to date will be included in the First Annual Report to HCFA.

Multi-State dual eligible data base and analysis development

Project No.: 500–95–0047/03
Period: September 1997–September 2000
Funding: $1,350,000
Award: Task Order
Principal Investigator: Don Lara
Awardee: Mathematica Policy Research, Inc., 101 Morgan Lane, Plainsboro, NJ 08536
HCFA Project: William D. Clark, Officer, Office of Strategic Planning
Description: This project will use available Medicare/Medicaid-linked statewide data in 10–12 States to develop a uniform database that can be used by States and the Federal government to improve the efficiency and effectiveness of the acute- and long-term care services to persons eligible for both Medicare and Medicaid (dual eligibles). It will also conduct analyses derived from these data to strengthen the ability to develop risk-adjusted payment methods and deepen the understanding of Medicare-Medicaid program interactions as they relate to access, costs, and quality of service. Finally, it will recommend longer range options that will improve the usefulness of the database for operational and policy purposes.
Status: The project is constructing a multi-State dual eligible database and beginning their analyses. Results from some of the studies conducted in this contract are anticipated in early 2000.

Continuing care networks demonstration, Monroe County, New York

The Health Care Financing Administration is reviewing a demonstration proposal entitled: "Continuing Care Networks Demonstration (CCN): Monroe County, New York" which was submitted by the New York State Department of Health and the Community Coalition for Long Term Care (CCLTC). The CCN project, a 5-year demonstration, is designed to test the efficiency and the effectiveness of financing and delivery systems which integrate primary, acute, and long-term care services under combined Medicare and Medicaid capitation payments. Participants will be both Medicare only, and dually eligible Medicare/Medicaid beneficiaries, who are 65 or older. The State is proposing that the CCNs will enroll, over a five-year period, at least 10,000 Medicare-only and dually eligible Medicare/Medicaid beneficiaries in Monroe County, New York. Enrollment will be voluntary for all participants.

The State is proposing that CCN participants be eligible for all Medicare Part A and Part B covered services. Medicaid participants will be eligible for the full range of Medicaid-covered services in the New York State Plan, including long term benefits as provided under the State's 1915 waiver program. Medicare enrollees will be offered the same package of chronic (long-term) care bene-

fits as is available to the dually eligible participants. Payment for the benefit package will be either in the form of a capitation premium equivalent to the Medicaid impaired-in-the-community capitation rate, or on a private pay, fee-for-service basis from CCN providers. A limited chronic care benefit of up to $2,600 per year (and not to exceed a $6,000 lifetime maximum) will be available to all who join the CCN as community-based unimpaired participants on enrollment. The benefit is designed to prevent, or delay, functional decline among members who are considered to be at risk of future institutionalization.

All enrollees will complete a Health Assessment Questionnaire at the time of enrollment. The questionnaires will be reviewed by the care management staff to determine the level of services needed, based on risk targeting criteria developed for this project. Depending upon the results of the risk targeting process, the care manager may arrange for an assessment to be performed. The proposed assessment instrument, the DMS–1, is currently used State-wide to assess eligibility for both the Long Term Home Health Care Program, and, beyond a certain score, nursing home admission. Since the DMS–1 assessment will be used for both care planning and determining the assessed enrollee's payment cell, the tool will be administered under the CCN demonstration, by designated project staff from an independent assessment organization.

Medicare and Medicaid payments will be capitated. Existing county rate book rates, established as a result of the Balanced Budget Act of 1997, will be used for Medicare. The county rate book rates will be multiplied by a combination of existing AAPCC adjustors and additional adjustors which reflect three levels of impairment (based on the DMS- I score) within the population that could be certified for nursing home admission. Adjustors for the "unimpaired/non-Medicaid" and "unimpaired Medicaid" categories are lower than existing AAPCC adjustors to balance the higher adjustors being proposed for those enrollees who are living in the community, but could be certified for nursing home admission. There will be three separate categories for Medicaid rates: nursing facility residents, beneficiaries living in the community who could be certified for nursing home admission, and unimpaired beneficiaries.

The State is hypothesing that combined capitated payments from Medicare and Medicaid coupled with an integrated service delivery system will facilitate more rational, efficient, and cost-effective clinical approaches to providing health services for older persons, including those who are functionally impaired.

Evaluation of the nursing home case-mix and quality demonstration

Project: 500–94–0061
Period: 9/30/1994–9/29/1999
Funding: $2,980,219
Award: Contract
Principal Investigator: Robert J. Schmitz, Ph.D.
Awardee: Abt Associates, Inc., 55 Wheeler Street, Cambridge, MA 02138–1168
HCFA Project Officer: Edgar A. Peden REG/DPR

Description: Using data from the Nursing Home Case-Mix and Quality (NHCMQ) Demonstration, HCFA is evaluating the new practice of paying skilled nursing facilities (SNFs) for Medicare skilled nursing services on a prospective basis. Prior to July 1, 1998, SNFs were reimbursed on a retrospective basis for their reasonable costs. Since that date, however, following methods used in the NHCMQ demo, a new prospective methodology has been implemented. Under this methodology, patients are classified into resource utilization groups which are then used to calculate each facility's case mix. HCFA then pays facilities for each covered day of care, according to the case mix of patients residing there on any given day. Though some costs will continue to be paid on a retrospective cost basis under the demonstration, the prospective rate will eventually include inpatient routine nursing costs and therapy costs. To guard against the possibility that inadequate care would be provided to patients with heavy care needs, a system of quality indicators has been developed that will be used to monitor the quality of care. The demonstration project which led to the current program was implemented in six States (Kansas, Maine, Mississippi, New York, South Dakota, and Texas) in the summer of 1995, with Medicare-certified facilities in these States being offered the opportunity to participate on a voluntary basis. The evaluation of this demonstration project seeks to estimate specific behavioral responses to the introduction of prospective payment and to test hypotheses about certain aspects of these responses. The principal goal of the evaluation of the NHCMQ Demonstration is the estimation of the effects of case-mix-adjusted prospective payment on the health and functioning of nursing home residents, their length of stay, and use of health care services; on the behavior of nursing facilities; and on the level and composition of Medicare expenditures.

Status: The evaluation design has been finalized, interim analyses of admitting patterns and select outcomes have been undertaken, and visits to demonstration and non-demonstration facilities have been conducted in order to understand provider response to the payment demonstration. Current analytic activities center around database construction and analysis of the third phase of the demonstration, which bundled skilled therapy services into the prospectively paid routine rate. Of special interest is the analysis of primary data regarding the provision of professional therapy services from both demonstration sites and comparison sites. This primary data collection activity was completed in January, 1999, and will serve to augment Medicare claims data, which may not offer reliable information on the quantity and duration of professional therapies. Another key issue being evaluated is the probability of patient discharge or transfer under case-mix-adjusted prospective payment.

Case-mix adjustment for a national home health prospective payment system

Project: 500–96–0003/02
Period: 7/26/1996–4/30/2000
Funding: $2,966,5524
Award: Task Order

Principal Investigator: Henry Goldberg

Awardee: Abt Associates Inc., 55 Wheeler Street, Cambridge, MA, 02138–1168

HCFA Project Officer: Ann Meadow, Sc.D. REG/DPR

Description: The primary focus of this study is to understand existing variation in home health resource patterns and to use this information to develop a case-mix adjustment system for a national home health prospective payment system (PPS). In this study, the Outcome and Assessment Information Set (OASIS), which has been developed for outcome-based quality assurance and improvement for Medicare home health agencies, is being examined to see whether items included in this instrument will be useful for case-mix adjustment. Detailed information, including information on resource utilization and additional items needed for case-mix adjustment not included on OASIS, is being collected from participating agencies.

Status: Ninety agencies from eight States were recruited and trained in the spring and summer of 1997. All agencies began data collection on a six-month cohort of new admissions to home care beginning in October 1997. Data collection is scheduled to end in the spring of 1999. Analysis to date has resulted in a viable, clinically coherent system of 80 case mix groups that explains more than 30% of the variation in resource use on a development sample drawn from the cohort members. Resource use is measured for 60-day periods of care, to conform to the planned unit of payment under the forthcoming national PPS. Selected OASIS assessment items, collected at the start of care, are used in the grouping system. The case mix items fall into three major domains: clinical factors, functional-status factors, and utilization factors. Within each domain, a parsimonious set of items is summarized into a score for the patient. In two of the domains, scores are partitioned into four levels corresponding to high, moderate, low, and minimal impact, based on the relationship of the score to resource utilization. In the third domain, scores are partitioned into five impact levels. A patient's combination of levels on all the three domains identifies the group into which the patient is classified for purposes of case-mix adjusting the prospective payment amount. Under this system, the patient's case mix classification is updated at the end of the payment period to reflect the actual amount of home therapy services received during the 60-day payment period. This information is necessary to arrive at a final score for the utilization domain.

Results of the study to date are described in two reports:

Case-Mix Adjustment for a National Home Health Prospective Payment System: First Interim Report, July, 1998 (revised December, 1998)

Case-Mix Adjustment for a National Home Health Prospective Payment System: Second Interim Report, January 25, 1999

A third interim report is expected early in 1999.

Maximizing the cost effectiveness of home health care: The influence of service volume and integration with other care settings on patient outcomes

Project: 17–C–90435/8

Period: 9/1/1994–12/31/1999
Funding: $1,496,245
Award: Cooperative Agreement
Principal Investigator: Robert Schlenker, Ph.D.
Awardee: Center for Health Policy Research, 1355 South Colorado Boulevard, Suite 706, Denver, CO 80222
HCFA Project Officer: Ann Meadow, Sc.D., REG/DPR

Description: Home health care (HHC) has been the most rapidly growing component of the Medicare budget in recent years. The rapid growth in home health use has occurred despite limited evidence about the necessary volume of HHC to achieve optimal patient outcomes and whether it substitutes for more costly institutional care. Little is known about integrating HHC with care in other settings to reduce overall health care costs. The central hypotheses of this study are that volume-outcome relationships are present in HHC for common patient conditions; that upper and lower volume thresholds exist that define the range of services most beneficial to patients; and that a strengthened physician role and better integration of HHC with other services during an episode of care can optimize patient outcomes while controlling costs. To test these hypotheses, a target sample size of 3,600 patient records has been set, to be gathered from agencies in 20 States. Trained data collectors at each agency will record patient health status and service information between HHC admission and discharge to assess patient outcomes and costs within the HHC episode. Long-term, self-reported outcomes will be assessed from telephone interview data at HHC admission and from 6-month follow ups. These primary data concerning patient status and outcomes will be combined with Medicare claims data over the episode of care to assess the relationship between service volume in HHC and both patient outcomes and costs. Analysis of data relating to physician involvement and the sequence of use of other providers will address issues of integration with other services.

Status: Study Paper 1, Research Design Update, which summarized the research design and its evolution from the original proposal, was finalized in September, 1998. Primary data collection ended in late 1998. An interim, descriptive report on a subsample of 1,000 patients is scheduled for delivery early in 1999.

Evaluation of phase 11 of the home health agency prospective payment demonstration

Project: 500–94–0062
Period: 9/30/1994–9/29/1999
Funding: $3,732,642
Award: Contract
Principal Investigator: Valerie Cheh, Ph.D.
Awardee: Mathematica Policy Research, Inc., P.O. Box 2393, Princeton NJ 08543–2393
HCFA Project Officer: Ann Meadow, Sc.D., REG/DPR

Description: This contract is evaluating Phase II of the Home Health Agency Prospective Payment Demonstration, under which home health agencies (HHAs) are paid on a prospective basis for an episode of care reimbursed by the Medicare program. (Phase I tested per-visit prospective payment for home health agencies.)

Ninety-one agencies from five sites—California, Florida, Illinois, Massachusetts, and Texas—were randomly assigned to either the treatment group (PPS payment, 48 agencies) or the control group (conventional cost-based reimbursement, 43 agencies). The agencies phased in to the demonstration at the beginning of their 1996 fiscal year. Treatment-group agencies can reduce the cost of care they provide during a 120-day payment period by reducing visits, changing the mix of visits to make less costly visits a larger proportion of visits, reducing per-visit costs, or some combination of all three. The cost-reducing activities raise the possibility that quality of care might deteriorate under episode-based payment. Quality impacts, along with cost, utilization, and qualitative, behavioral effects, are the focus of the evaluation. The findings will indicate not only the overall effects of the change in payment methodology, but also how the effects are likely to vary with the characteristics of agencies and patients.

Status: Interim findings from the evaluation based primarily on the first 8 to 15 months of demonstration operations are described in six documents:

Transition Within a Turbulent System: An Analysis of the Initial Implementation of the Per-episode Home Health Prospective Payment Demonstration, August 6, 1997

Preliminary Report: The Impact of Prospective Payment on Medicare Home Health Quality of Care, January 30, 1998

Preliminary Report: The Impact of Prospective Payment on the Cost per Episode: Striking the Balance Between Decreasing Use and Increasing Cost, Draft Report, February 26, 1998

Preliminary Report: The Impact of Prospective Payment on Medicare Home Health Use—Promising Results for a Future Program, July 22, 1998

Preliminary Quality Results from Four-Month Survey, Memorandum, November 24, 1998

The Impact of Prospective Payment on Medicare Service Use and Reimbursement During the First Demonstration Year, December 1998.

Findings from the interim analysis of cost impacts suggest that, on average, prospective payment reduced the cost of care during the 120-day episode period by $419, or 13 percent. The impact on cost was similar across different types of agencies, except that small agencies (less than 30,000 visits in the year before the demonstration) exhibited a significantly smaller effect than large agencies. Findings from the utilization study suggest that the per-episode group of home health agencies was able to reduce the number of visits provided during the 120-day episode period by 17 percent and the time from admission to discharge by 15 percent. The proportion of patients receiving care in each home health discipline changed little under episode payment. The utilization findings generally applied to agencies regardless of size, nonprofit status, affiliation status (hospital or freestanding), or use pattern (that is, whether the agency provided more or less than the average number of visits during a base year, given its case mix).

The reduction in visits has not led to compensating utilization in other parts of the health care system. An analysis of utilization and reimbursement for Medicare-covered services other than home

health found that prospective payment did not affect the use of, or reimbursement for, such services during the 120-day episode period. An investigation of spillover effects in settings not covered by Medicare similarly found no compensating utilization. For example, prospective payment did not affect the likelihood of receiving nonresidential services such as personal care aides and adult day care, based on results from a patient survey. These findings suggest that a reduction in home health utilization at the level observed under the demonstration does not adversely affect care quality or shift costs to services in other settings. Other interim analyses of quality impacts found few differences in patient outcomes between treatment and control agencies, and when differences were found, they were small. Analysis of claims data indicated that PPS patients have significantly lower emergency room use. There were no significant differences due to PPS in any other outcomes studied from the claims data, including institutional admissions for a diagnosis related to the home health diagnosis, and mortality.

Results from the first patient survey on client satisfaction suggested that both treatment and control group clients were generally satisfied. On three specific components of satisfaction with agency staff, treatment-group clients were found to be somewhat less satisfied than control group clients, although satisfaction levels were quite high in both groups. Measures of health and functional outcomes from the survey offered equivocal evidence for small negative effects of prospective payment in a few of the functional outcomes. These results are preliminary and require further study in a planned follow up survey. Half of the treatment agencies selected for the case study early in the demonstration reported plans for specific initiatives to reduce per-episode costs spurred by their participation in the demonstration project. From the case studies, the evaluators concluded that treatment agencies were not planning to change their behavior in ways that threatened access or quality of care.

Subsequent evaluation reports will focus on utilization, cost, and quality effects beyond the 120-day episode period. There will be further case study results on agency response to the demonstration and an extension of previous work on cost impacts to include an analysis of agencies' financial performance. Finally, supplementary analyses will consider the representativeness of the demonstration sample and the patient selection behavior of agencies.

Evaluation of the program of all-inclusive care for the elderly (PACE)

Project: 500–96–0003/04
Period: 4/23/1997–3/31/1999
Funding: $1,081,029
Award: Task Order
Principal Investigator: David Kidder, Ph.D.
Awardee: Abt Associates, Inc., 55 Wheeler Street, Cambridge, MA 02138–1168
HCFA Project Officer: Fred Thomas, REG/DPR

Description: The Evaluation of the Program of All-inclusive Care for the Elderly (PACE) consists of both qualitative and quantitative components. The purpose of the qualitative component is to exam-

ine, in detail, the structure and process of case management as well as gain a better understanding of the factors that drive interdisciplinary team decision-making in the PACE model. Since enrollment in PACE has been lower than originally expected, except for On Lok, the first part of the quantitative part of the evaluation of PACE is examining the decision to participate in PACE. This is particularly important given the anomaly of under-enrollment in virtually all long-term care alternatives, as well as the policy interest in encouraging increased use of managed care. In the evaluation, the process by which people come to participate in PACE is modeled. The "refusers" or those who apply to PACE and pass the initial screening eligibility criteria but do not actually enroll in the program serve as the comparison group for the evaluation of the impact of PACE. The impact evaluation of PACE is addressing a broad range of questions including:

Does the government spend less on PACE clients than it would have spent on them in the absence of PACE?

Does the PACE program spend no more on PACE clients than the capitation amount?

Does PACE alter the mix of services provided?

Does the quality of life and satisfaction with services increase for participants and family members?

Does PACE impact the presence and amount of formal in-home care, formal care outside the home, informal in-home care and informal care outside the home?

How does PACE affect the health status and functional status of PACE participants?

Status: All of the data collection for this project has been completed and the contractor is analyzing the impact of PACE on Medicare costs. A final report entitled, "The Impact of PACE on Participant Outcomes" has been received. Briefly, this study found that compared to the comparison group: (1) PACE enrollees had much lower rates of nursing home and inpatient hospital utilization, and higher rates of ambulatory care, (2) PACE enrollees reported better health status and quality of life, (3) PACE participants had lower mortality rates. The benefits of PACE appeared to be magnified for those participants with high levels of physical impairment. Work continues on the study of the cost effectiveness of PACE and a final report on this issue is expected before March 31, 1999.

Project: 500–96–0010/02

Period: 9/12/1997–6/30/1999

Funding: $178,125

Award: Task Order

Principal Investigator: Steven Garfinkel

Awardee: Research Triangle Institute, PO Box 12194, Research Triangle Park, NC 27709–2194

HCFA Project Officer: Fred Thomas REG/DPR

Description: The purpose of this task order is to: (1) compare Medicare costs for the population that could be certified for nursing home admission to costs for the overall Medicare population; and (2) make recommendations regarding an appropriate frailty adjuster for this population. Currently, the Program of All-inclusive Care for the Elderly (PACE) demonstration projects receive a frail-

ty adjuster of 2.39. This project will determine whether this is an appropriate adjuster, using data from the National Long-term Care Survey and the Medicare Current Beneficiary Survey.

Status: The final report was submitted on December 30, 1998. The study found that there is significant variation among States in the manner in which they determine the population that could be certified for nursing home admission. The application of these various definitions to available survey data indicates that there is a natural clustering of results, despite the apparent difference among definition formats. Marginal cost differences between those who could be certified for nursing home admission and individuals who could not can be explained in part by key variables: age, sex, functional impairment, and the level of recent health service utilization. With no prior risk adjustment, the data suggest that an average frailty factor of about 200% is appropriate. However, this factor should be adjusted for the profile of participants at each site,

Evaluation of the District of Columbia's demonstration project, managed care system for disabled and special needs children

Project: 500–96–0003/03
Period: 9/25/1996–3/24/2000
Funding: $1,397,452
Award: Contract
Principal Investigator: David Kidder, Ph.D.
Awardee: Abt Associates, Inc., 55 Wheeler Street, Cambridge, MA 02138–1168
HCFA Project, Officer Fred Thomas REG/DPR

Description: The District of Columbia submitted a waiver-only request for Medicaid waivers under section 1115(a)(1) for a 3-year demonstration project to test the efficacy of a managed care service delivery system designed for children and adolescents under the age of 22 who are eligible for Medicaid and are considered disabled according to Supplemental Security Income (SSI) Program guidelines. This study represents a unique opportunity to examine the experiences of a managed-care system with voluntary enrollment of children with disabilities. The project, which seeks to integrate acute- and long-term-care services for children with disabilities into a single capitated payment methodology, is the first approved demonstration of its kind. The information gathered will be used to inform both State and Federal policy makers who have increasingly come to regard managed care as a mechanism to contain growing health care expenditures. This study will provide for a special analysis of the enrollment and disenrollment processes, as well as of the project's implementation process (including enrollment and participation, services/benefits, provider participation and training, organizational and administrative issues, contracting and risk-sharing arrangements, provider fee schedules, community involvement, and quality assurance, administrative and data management systems). Outcome analyses will focus on enrollee/family outcomes (including care management, service utilization and costs, enrollee/family satisfaction, quality of care and health status indicators, access to care, and family/informal care giving), organizational outcomes (including an analysis of Health Services for Children with Special Needs, Inc.'s (HSCSN) financial performance, and the risk

sharing arrangements between HSCSN and the District of Columbia), and the impact upon the provider community. Data for the evaluation will come from surveys (primary data collection), case study interviews, focus groups, Medicaid Management Information System and encounter data, and SSI data.

Status: The first and second year reports have been completed. In the first year, considerable time was spent in planning and finalizing details of the research design. Interviews were conducted with HSCSN providers in order to obtain information on their incentives and how they participate in HSCSN's care management system. The evaluators also conducted the first set of focus groups with parents. In the second year, additional interviews were conducted with providers and participants. Quantitative analyses were increased, and the survey component neared completion. The HSCSN and the District Medicaid program both experienced major reorganizations during the year, which may have led to difficulties in coordination. The HSCSN reorganization was also accompanied by changes in strategy and operations, which may have contributed to improved financial performance. In July, 1998, the District requested and subsequently received a one-year extension to develop a replacement waiver. There is increasing evidence that care managers experienced an overload of cases during the past year, and the HSCSN has both recognized and begun to address this problem. Evidence from two sources suggests that selection for the demonstration is adverse. Most parents believe that their children have been better off since joining the plan.

Evaluation of the medicare+choice risk adjustment method

Project: 440–98–40200
Period: 8/5/98–2/5/99
Funding: $24,900
Award: Purchase Order
Principal Investigator: Bill Bluhm, FSA, MAAA
Awardee: The American Academy of Actuaries, 1100 17th St, NW, Washington, DC 20036
HCFA Project Officer: Fred Thomas, REG/DPR

Description: The Balanced Budget Act of 1997 requires Medicare to implement a risk-adjusted payment system for its Medicare-Choice program by January 1, 2000. The BBA requires the Secretary to write a Report to Congress that outlines the method of risk adjustment that will be used. An independent actuarial evaluation of the soundness of this method must be attached to this Report to Congress. The American Academy of Actuaries will evaluate the risk methodology and soundness of the proposal and will prepare a report of their findings.

Status: The American Academy of Actuaries has formed a Work Group to review and evaluate the risk adjustor method. HCFA provided documentation of the methodology, met with the Work Group, and answered questions posed by the group. The final report is expected before January 31, 1999.

Design of an integrated post acute care system

Project: 500–96–0008/04
Period: 9/30/1997–9/29/1999

Funding: $880,427
Award: Task Order
Principal Investigator: Robert L. Kane, M.D.
Awardee: University of Minnesota, 420 Delaware Street, SE., Minneapolis, MN 55455–0392
HCFA Project Officer: Fred Thomas, REG/DPR
Description: HCFA intends to create an infrastructure of post-acute and long-term care delivery and payment systems that are better integrated and more flexible in meeting the needs of beneficiaries with chronic illnesses and disabilities. The transition from our current benefit and provider-based system to a beneficiary centered system requires several elements—an assessment tool that can be used and shared across provider types, and more flexible benefit packages. Funding based on beneficiary health and functional needs, and case management that involves formal and informal caregivers in care planning, and supports and encourages, where appropriate, beneficiaries to direct their own care. Additional work that incorporates beneficiary preferences into outcome measures, as well as further attempts to differentiate outcomes by post-acute care modality for different patient conditions, is also needed. The purpose of this project is to design several elements needed in a more integrated system—an assessment tool, potential case management models, appropriate payment systems, and outcome measures that cross settings and incorporate beneficiary preferences, with the ultimate intent of pilot testing and refining these elements in a demonstration. A second purpose of this project is to design an optional demonstration that tests the feasibility and effectiveness of creating a more integrated post-acute care system.
Status: Work has begun on developing potential case management models as well assessment instrument.

94–074 Design and implementation of medicare home health quality assurance demonstration

Project: 500–94–0054
Period: 9/30/1994–12/31/2000
Funding: $4,340,309
Award: Contract
Principal Investigator: Peter W. Shaughnessy, Ph.D.
Awardee: Center for Health Policy Research 1355 South Colorado Boulevard, Suite 706 Denver, CO 80222
HCFA Project Officer: Armen Thoumaian, Ph.D., QCSQ
Description: Currently, Medicare's home health survey and certification process is primarily focused on structural measures of quality. Although this process provides important information about home health care, an approach based on patient outcome measures would substantially increase the Medicare program's capacity to assess and improve patient well-being. To address this need, the Medicare home health quality demonstration will test an approach to developing outcome-oriented quality assurance and promoting continuous quality improvement in home health agencies.
The demonstration was implemented through a contract with the Center for Health Policy Research (CHPR), University of Colorado, to determine the feasibility of and establish the methodology for

national approach for outcome-based quality improvement (OBQI). Outcome measures are computed using the Outcomes and Assessment Information Set (OASIS), a set of valid, reliable measures, developed through research efforts conducted for HCFA by the Center for Health Policy Research (CHPR) (1988–1994) to assess patient outcomes to care provided in the home.

Under the demonstration, staff of 50 regionally dispersed home health agencies (HHAs) complete the OASIS data collection instrument for each patient at the start of care and at 60-day intervals (up to and including discharge). The OASIS data is submitted monthly to CHPR for validation and storage. There are three rounds of data analysis and outcome report generation each based on 12 months of data.

The general framework for OBQI is a two stage process of continuous quality improvement. Data is collected at regular time intervals for all adult patients. Risk adjustment is undertaken and outcome reports are produced for specific patient conditions ("focused reports") and for all adult patients ("global reports"). These reports are provided to the participating HHAs and are used to determine which outcomes are inferior, there by, providing a focus for agency staff to target problematic care. Exemplary care is also investigated in order to reinforce positive care behaviors. A plan of action allows the agency to monitor the changes in care behavior and through the next round of data collection, determine if targeted outcomes have improved and if reinforcement activities have maintained exemplary outcomes.

Status: Fifty agencies in 26 States were phased into the demonstration beginning January, 1996. In January, 1997 the demonstration agencies received their first outcome reports and developed plans of actions to improve care for two patient outcomes during 1997. Agencies received their second annual reports in May, 1998 which contained baseline comparisons from 1997 and will receive their third and final reports in May, 1999. The original contract was modified extending it to September, 30, 2000. In August, 1998, the contract was further modified to provide assistance in the nationwide implementation of OASIS collection and reporting with funding increased to a total of $4,340,000. A final report on the evaluation of the demonstration effort is expected by the Summer, 2000.

Research Plan ID: 2626.11

Program of All-Inclusive Care for the Elderly (PACE) Quality Assurance

Period: 9/24/1990–6/30/2000

Funding: $1,837,148

Contractor: Center for Health Policy Research, 1355 S. Colorado Blvd, Suite 306 Denver, CO 80222

Investigator: Peter W. Shaughnessy, Ph.D.

This project will develop a core data set that will provide the foundation for an outcome-based continuous quality improvement system (OBCQI) for the PACE program. The OBCQI System consists of two phases. During the first phase, the PACE sites will complete a draft data instrument which will contain items for outcome measurement and risk adjustment at specific time intervals.

In the second phase, the sites will take a closer look at why and how they are achieving specific outcomes and make recommendations for improvements in the case of poor outcomes. This project is currently in the initial phase of feasibility testing.

Quality Assurance for Phase 11 of the Home Health Agency Prospective Payment Demonstration

Period: 9/22/1995–9/29/2000
Funding: $2,799,265
Contractor: Center for Health Policy Research, 1355 South Colorado Boulevard, Suite 306 Denver, CO 80222
Investigator: Peter W. Shaughnessy, Ph.D.

This project was designed to test the effect of per-episode prospective payment on the quality of care provided to Medicare patients receiving home care. (HHAs receive an agency-specific episode payment based on 120 days of care and outlier payments, reimbursed at per-visit prospective rates, for episodes that extend beyond 120 days). A new episode of care is identified when there has been a gap in home health services for 45 or more days after the initial 120 days. Agencies receiving per-episode payments were subject to stop-loss and profit sharing provisions as well as case-mix adjustments. Ninety volunteer HHAs from five States (CA, FL, IL, MA, TX) were randomly assigned to either the control group (cost-based payment) or the treatment group (per-episode payment). All HHAs had entered the demonstration by January 1996. As of December 31, 1998, all participating agencies ended participation in the QA Component of the PPS Demonstration. All data collection will be complete by January 18, 1999. A final report is due to HCFA September, 1999.

Community nursing organization demonstration

Period: September 1992–December 1999
Contractors: See below

Section 4079 of Public Law 100–203 directs the Secretary of the Department of Health and Human Services to conduct demonstration projects at four or more sites to test a capitated, nurse-managed system of care. The two fundamental elements of the Community Nursing Organization (CNO) demonstration are capitated payment and nurse case management. These two elements are designed to promote timely and appropriate use of community health services and to reduce the use of costly acute care services. The legislation mandates a CNO service package that includes home health care, durable medical equipment, and certain ambulatory care services. Four applicants were awarded site demonstration contracts on September 30, 1992. The selected sites represent a mix of urban and rural sites and different types of health providers, including a home health agency, a hospital-based system, and a large multi speciality clinic. All CNO sites have undergone a 1-year development period and began a 3-year operational period in January 1994, which continued in 1998. The Balanced Budget Act of 1997 extends the demonstration through December 31, 1999. Abt Associates Inc. was selected to evaluate the project and to provide technical assistance to the sites. Abt Associates Inc also was awarded the external quality assurance contract.

Contractor: Care Clinic Association, 307 East Oak, Suite 3, P.O. Box 718, Mahomet, IL 61853

Contractor: Carondelet Health Services, Inc., Carondelete St. Mary's Hospital, 1601 West St. Mary's Road, Tucson, AZ 85745

Contractor: Living at Home/Block Nurse Program, Ivy League Place, Suite 225, 475 Cleveland Avenue North, St. Paul, MN 55104

Contractor: Visiting Nurse Service of New York, 107 East 70th Street, New York, NY 10021–5087

Site development and technical assistance for the second generation social health maintenance organization demonstration

Period: September 1993–December 2000.

Funding: $2,251,123.

Contractor: University of Minnesota, School of Public Health Institute for Health Services Research, D–351 Mayo Memorial Building, 420 Delaware Street, SE., Box 197 Minneapolis, MN 55455–0392.

Investigator: Robert L. Kane, M.D.

In January 1995, the Health Care Financing Administration selected six organizations to participate in the Second Generation Social Health Maintenance Organization (HMO) Demonstration. The purpose of this project is to study the impact of integrating acute- and long-term care services with a capitated managed care system. It was developed to refine the targeting and financing methodologies and the benefit design of the current Social HMO model, which was initiated as a demonstration in 1985.

Although similar services are provided under both of these projects the Second Generation Social HMO Demonstration features a greater emphasis on geriatric care and a more inclusive case management system. Another distinguishing characteristic of the project is its risk-adjusted payment methodology that is based on individuals' health status and functioning level. The primary focus of the project's evaluation will be to compare beneficiaries enrolled in the demonstration with beneficiaries in a section 1876 HMO program.

The University of Minnesota and its subcontractor, the University of California, San Francisco are providing technical assistance and support in the development, implementation, and operation of the Second Generation Social HMO Demonstration.

The developmental phase of the Second Generation Social HMO Demonstration began in January, 1995. Since that time, The University of Minnesota and the University of California, San Francisco have been providing technical assistance to the organization participating in the project. They also have developed a questionnaire that will be used to determine a beneficiary's capitated payment rate, a series of geriatric protocols to help physicians identify and treat certain health conditions, and a care coordination assessment instrument to assist case managers with care planning. The Health Plan of Nevada began enrolling beneficiaries into the demonstration in November, 1996.

Second generation of social health maintenance organization demonstration

Period: November 1996–December 2000

Funding: Waiver-only
Grantees: See below
Description: In accordance with section 2344 of Public Law 98–369, the concept of a social health maintenance organization (S/HMO) integrates health and social services under the direct financial management of the provider of services. All acute- and long-term-care services are provided by or through the S/HMO at a fixed, annual, prepaid capitation sum. The Omnibus Budget Reconciliation Act (BBA) of 1990 authorized the expansion of the S/HMO demonstration. The BBA–97 extended the demonstration through December 31, 2000. The purpose of this second generation S/HMO (S/HMO–11) demonstration is to refine the targeting and financing methodologies and the benefit design of the current S/HMO model. The S/HMO model also will provide an opportunity to test more geriatrically-oriented models of care. Six organizations in the project will be selected to participate. Only one plans is operational, the Health Plan of Nevada.
Grantee: CAC Ramsey Health Plan, 75 Valencia Avenue, Coral Gables, FL 33134.
Grantee: Contra Costa County Health Plan, 5 95 Center Avenue, Suite 100, Martinez, CA 94553.
Grantee: Fallon Community Health Plan, Chestnut Place, 10 Chestnut Street, Worcester, MA 01608.
Grantee: Health Plan of Nevada, Inc., P.O. Box 15645, Las Vegas, NV 89114.
Grantee: Richland Memorial Hospital, Five Richland Medical Park, Columbia, SC 29203.
Grantee: Rocky Mountain Health Maintenance Organization, 2775 Crossroads Boulevard, Grand Junction, CO 81506 Phase 11 implementation of the Home Health Agency (HHA) Prospective Payment Demonstration.
Period: September 1995–December 2001
Funding: $1,811,184
Contractor: Abt Associates Inc, 55 Wheeler Street, Cambridge, MA 02138
Investigator: Henry Goldberg
Description: This contract implements and monitors Phase II of the Home Health (HHA) Prospective Payment Demonstration. Under phase II, a single payment per episode approach will be tested for Medicare-covered home health care. HHA participation is voluntary. It is expected that approximately 100 agencies in California, Florida, Illinois, Massachusetts, and Texas will participate in the demonstration. HHAs that agree to participate will be randomly assigned to either the prospective payment method or a control group that continues to be reimbursed in accordance with the current Medicare retrospective cost system. HHAs will participate in the demonstration for three years.
Phase II recruitment began in Fall 1994 under a previous contract with Abt Associates, Inc. The HHA entered into the demonstration at the beginning of their fiscal years. Several HHAs began receiving per-episode payments in June, 1994, with the majority entering the demonstration in January 1996. The episodic payment rates are prospectively set for each HHA, reflecting their previous practice and cost experience. Rates are to be adjusted an-

nually. As a protection to both the HHAs and the Medicare program, there will be retrospective adjustments for sharing of gains or losses and for changes in an HHA's projected case mix.

On Lok's risk-based community care organization for dependent adults: On Lok Senior Health Services

Period: November 1983–Indefinite

Funding: Waiver only

Grantee: On Lok Senior Health Services, 1333 Bush Street, San Francisco, CA 94109 and California Department of Health Services, 714–744 P Street, P.O. Box 942732, San Francisco, CA 94234–7320

Description: As mandated by sections 603(c) (1) and (2) of Public Law 98–21, the Health Care Financing Administration granted Medicare waivers to On Lok Senior Health Services and Medicaid waivers to the California Department of Health Services. Together, these waivers permitted On Lok to implement an at-risk, capitated payment demonstration in which more than 300 frail elderly persons, certified by the California Department of Health Services for institutionalization in a skilled nursing facility, are provided a comprehensive array of health and health-related services in the community. The current demonstration maintains On Lok's comprehensive community-based program but has modified its financial base and reimbursement mechanism. All services are paid for by a predetermined capitated rate from both the Medicare and Medicaid (Medi-Cal) programs. The Medicare rate is based on the average per capita cost for the San Francisco County Medicare population. The Medi-Cal rate is based on the State's computation of current costs for similar Medi-Cal recipients, using the formula for prepaid health plans. Individual participants may be required to make copayments, spend down income, or divest assets based on their financial status and eligibility for either or both programs. On Lok has accepted total risk beyond the capitated rates of both Medicare and Medi-Cal, with the exception of the Medicare payment for end stage renal disease. The demonstration provides service funding only under the waivers. Research and development activities are funded through private foundations.

Section 9220 of Public Law 99–272 has extended On Lok's Risk-Based Community Care Organization for Dependent Adults indefinitely, subject to the terms and conditions in effect as of July 1, 1985, with the exception of the requirements relating to data collection and evaluation. On Lok is continuing to collaborative projects with other organizations in the San Francisco Bay area. A pilot agreement with the Institute on Aging (IOA) has been completed and the two organizations have entered into a venture agreement in which IOA established an adult day health center, operating it under the rules of the program of All-Inclusive Care for the Elderly protocol. The site is in the Richmond area of San Francisco. On Lok provides quality assurance oversight as well as marketing and enrollment support. IOA receives a portion of On Lok's capitation via the HCFA demonstration and a portion is retained by On Lok to cover administrative expenses.

Randomized controlled trail of expanded medical care in nursing homes for acute care episodes: Monroe County Long-Term Care Program, Inc.

Period: March 1992–December 1996

Funding: $1,054,007

Grantee: Monroe County Long-term Care Program, Inc., 349 West Commercial Street, Suite 2250, Piano Works East Rochester, NY 14445

Investigator: Gerald Eggert, Ph.D.

Description: The objective of this demonstration is to develop, implement, and evaluate the effectiveness of expanded medical services to nursing home residents who are undergoing acute illnesses that would ordinarily require hospitalization. The intervention would here include many services that are available in acute hospitals and are feasible and safe in nursing homes. These include an initial physician visit, all necessary follow up visits, diagnostic and therapeutic services, and additional nursing care (including private duty), if necessary. The major goals are to reduce medical complications and dislocation trauma resulting from hospitalization and to save the expense of homes with expanded services. The design phase of the demonstration has been completed. This demonstration did not enter the operational phase because of the rapid changes in treatment patterns and the impact of the implementation of the case mix demonstration.

Texas nursing home case-mix and quality demonstration

Period: February 1992–December 1998

Funding: $532,830

Grantee: State of Texas Department of Human Services, P.O. Box 149030 (MC–E–601), Austin, TX 78714–9030

Investigator: Ken. C. Stedman

Texas will participate in the Multistate Nursing Home Case-Mix and Quality (NHCMQ) Demonstration. The objective of the demonstration is to test the feasibility and cost effectiveness of a case-mix payment system for nursing facility services under the Medicare and Medicaid programs that are based on a common patient classification system. The addition of Texas enhances the Health Care Financing Administration's ability to project the results of the demonstration on a national basis. Texas represents a western pattern of service using more proprietary multistate chain providers than is the pattern used in the East. Twenty Texas Medicare facilities were part of the original data collection for the development of the resource utilization group (RUG) III system. Texas has the second largest number of hospital-based facilities in the country. There are more than 20 metropolitan statistical areas of varying size. In addition, the State has a large number of rural areas. The State was traditionally a flat-rate intermediate care facility Medicaid payment system. This RUG-type payment system makes Texas well-suited for inclusion in the Medicare portion of the demonstration.

During the first year of participation, the Texas Department of Human Services worked with the Texas Department of Health to change the resident assessment being used in the State. In April, 1993, Texas implemented the minimum data set plus statewide as

its resident assessment instrument. Analyses of 1990 Medicare Cost Report data, Medicare provider analysis and review Part A skilled nursing facility stay data, and the Texas Client Assessment and Review Evaluation (CARE) data have been conducted for use in developing the demonstration's Medicare case-mix payment system. Under the Medicaid demonstration, Texas began development of the Quality Evaluation System of Texas, a resident characteristic information and reporting system using the CARE instrument. During the first year, the staff continued the development and enhancement of the system, which was codified into law by the Texas Legislature in Summer 1993. They now are producing facility-level reports with statewide comparisons for Texas providers on a twice-a-year basis. The Medicare portion of the NHCMQ demonstration was implemented July 1, 1995, in Texas.

HEALTH RESOURCES AND SERVICES ADMINISTRATION

BUREAU OF PRIMARY HEALTH CARE

The Bureau of Primary Health Care (BPHC) helps assure that primary health care services are provided to persons living in medically underserved areas and to persons with special health care needs. It also assists States and communities in arranging for the placement of health professionals to provide health care in health professional shortage areas. The Bureau provides services to older Americans through Bureau-supported Health Centers, including Community Health Centers, Migrant health Centers, Health Care for the Homeless program sites, Public Housing Primary Care program sites, the National Health Service Corps, and the Division of Federal Occupational Health.

In 1996, the Bureau established a Geriatric Work Group, consisting of members of the various Bureau divisions and programs that serve elderly populations, to determine if there was a need for the Bureau to target elderly populations for the provision of services. In addition, the Work Group is currently establishing partnerships with other Federally funded programs and BPHC-supported programs at the State and local levels and is working with Primary Care Organizations and Primary Care Associations to expand existing program efforts to meet the health needs of older persons.

A study was initiated during 1996 to examine service provision to older populations, as well as to identify barriers to services, in Bureau-supported Health Centers. The findings of this study are now available (attached). In addition, a project is currently underway to develop training curricula for community-based health care providers to better serve older patients.

CONSOLIDATED HEALTH CENTERS

On October 11, 1996, the President signed the Health Centers Consolidation Act of 1996. This Act consolidates the Community Health Centers, Migrant Health Centers, Health Care for the Homeless programs, and Public Housing Primary Care programs under a single statutory umbrella that revised section 330 of the Public Health Service (PHS) Act. Health Center programs are designed to promote the development and operation of community

based primary health care service systems in medically underserved areas for medically underserved populations. Legislation governing this program can be found in section 330 of the PHS Act, as amended (42 U.S.C. 254b). The Health Centers Consolidation Act of 1996, under section 330(a)(1) of the PHS Act, defines the term "health center" as an entity that serves medically underserved population comprised of migratory and seasonal agricultural workers, the homeless, and residents of public housing.

The Community Health Centers (CHC) Program entered into fiscal year 1997 with 631 grantees and a total of approximately $633 million covering over 3,000 sites, located in medically underserved areas throughout the United States and its territories. The CHC program entered into fiscal year 1998 with 645 grantees and approximately $657 million.

Health Centers provide access to case-managed, family-oriented, culturally sensitive preventive and primary health care services for people living in rural and urban medically underserved areas. The medical services include: preventive health and dental services, acute and chronic services, and appropriate hospitalization and specialty referrals. Health Centers also provide essential ancillary services such as laboratory tests, X-ray, environmental health and pharmacy services. In addition, many centers provide such enabling health and community services as transportation, health education, nutrition, counseling, and translation. Case management—the coordination of the center's services with community services appropriate to the needs of the patient (social, medical, or economic)—is emphasized.

Health Centers target medically underserved, disadvantaged populations. These populations include: minorities, women of childbearing age, infants, persons with HIV infection, substance abusers and/or homeless individuals and their families. In fiscal year 1997, the Health Center program served more than 8,000,000 patients annually. Of this total, 7 percent were age 65 or older.

The BPHC has implemented clinical performance measures related to the primary and preventive care of elderly users. The measures include: (1) a functional assessment of activities of daily living; (2) an inventory of prescription and nonprescription drug use; and (3) pneumococcal and influenza immunization administration.

EXHIBIT A.—BREAKDOWN BY PROGRAM AND AGE CLUSTER OF THE NUMBER OF ELDERLY PERSONS WHO RECEIVED HEALTH CARE SERVICES FROM BPHC-SUPPORTED PROGRAMS FOR THE YEAR 1997

Program	Age 65 + years	Total users
Community & migrant	Females: 376,290	Medical: 7,085,235
Health center	Males: 228,691	Dental: 1,124,576
	Total: 604,981	Total: 8,209,811
Homeless program	Females: 3,624	430,000
	Males: 5,767.	
	Total: 9,391.	
Public housing	Females: 1,337	47,378
Primary care program	Males: 598.	
	Total: 1,935.	
Total	616,307	8,687,189

EXHIBIT B.—BREAKDOWN BY PROGRAM AND AGE CLUSTER OF THE NUMBER OF ELDERLY PERSONS WHO RECEIVED HEALTH CARE SERVICES FROM BPHC FOR THE YEAR 1997

Program	Age 65–74	Age 75–84	Age 85+	Subtotal elderly	Total users
1997 Cluster	362,165	181,689	67,267	611,121	8,253,898

THE NATIONAL HEALTH SERVICE CORPS

The National Health Service Corps (NHSC) places primary care physicians, nurse practitioners, physician assistants, certified nurse midwives, dental and mental health professionals in health professional shortage areas. There are now 2,400 clinicians serving communities and populations of greatest need (60 percent rural/40 percent urban). Older Americans with special health care needs benefit from the proximity of dedicated primary care clinicians that provide high quality health care. The NHSC works closely with Bureau-supported Health Centers, other primary care delivery systems, and the Indian Health Service to provide assistance in recruiting and retaining health personnel for the poorest, the least healthy, and the most isolated of our fellow Americans, including the aging population.

DIVISION OF FEDERAL OCCUPATIONAL HEALTH

The Division of Federal Occupational Health (DFOH) provides a variety of services related to health promotion and disease prevention in the elderly to managers and employees of over 3,000 Federal agencies. Retirement planning, care of aging parents, and prevention of osteoporosis are some examples of generic issues that are regularly addressed in educational seminars and employee assistance programs.

ALZHEIMER'S DEMONSTRATION GRANT TO STATES PROGRAM

The Alzheimer's Demonstration Grant to States Program, established under section 398 of the Public Health Service Act, as amended by Public Law 101–157, the Home Health Care and Alzheimer's Disease amendments of 1990, was transferred from the Health Resources and Services Administration's Bureau of Primary Health Care to the Administration on Aging. The effective date was November 1, 1998. Eight of the programs funded through this initiative continue to collaborate with consolidated health centers and their service areas.

BUREAU OF HEALTH PROFESSIONS

The Bureau of Health Professions (BHPr) provides national leadership to assure a health professions workforce that meets the health care needs of the public. The Bureau has established five strategic functions to guide the implementation of the Bureau's programs to achieve its mission. These functions are:

1. Enabling access to health care through improved health professions distribution,

2. Enabling culturally competent health care through improved racial and ethnic diversity and cultural competence in the health professions workforce.

3. Ensuring adequate information, analysis and planning to strategically enable national health professions workforce development.

4. Enabling ongoing improvement in the quality of health professions education through demonstration, education research, innovation and dissemination; and of health professions practice through innovations in financing and regulation.

5. Providing public information and technical assistance relating to health professions.

The strategy defined by these functions will be implemented through a variety of collaborative public and private efforts and programs supported and operated by the Bureau. Programs include: education and training grant programs for institutions such as health professions schools and health professions education and training centers; loan and scholarship programs for individuals, particularly those from disadvantaged backgrounds; the National Practitioner Data Bank; and the Vaccine Injury Compensation Program. In addition, BHPr administers several education-service network multi-disciplinary and inter-disciplinary programs such as the Area Health Education Centers (AHECs), the Geriatric Education Centers (GECs), and Rural Interdisciplinary Training Programs.

The Bureau supports the Council on Graduate Medical Education, which reports to the Secretary and the Congress on matters related to graduate medical education, including the supply and distribution of physicians, shortages, or excesses in medical and surgical specialties and subspecialties, foreign medical graduates, financing medical educational programs, and changes in types of programs. It also supports the National Advisory Council on Nurse Education and Practice which provides advice and recommendations to the Secretary concerning policy matters relating to nurse workforce, education, and practice improvement.

The National Vaccine Injury Compensation Program is administered by BHPr. The program which became effective October 1, 1988, was created by the National Childhood Vaccine Injury Compensation Act of 1986, as a no-fault system through which families of individuals who suffer injury or death as a result of adverse reactions to certain childhood vaccines can be compensated without having to prove negligence on the part of those who made or administered the vaccines.

BHPr maintains a federally sponsored health practitioner data bank on all disciplinary action and malpractice claims. The National Practitioner Data Bank (NPDB) was created by The Health Care Quality Improvement Act of 1986, Title IV of P.L. 99–660, as amended November 1986. The Act authorized the Secretary of Health and Human Services to establish a data bank to ensure that unethical or incompetent medical and dental practitioners do not compromise health care quality. The NPDB is a central repository of information about: malpractice payments made on behalf of physicians, dentists, and other licensed health care practitioners; licensure disciplinary actions taken by State medical boards and State boards of dentistry against physicians and dentists; and adverse professional review actions taken against physicians, den-

tists, and certain other licensed health care practitioners by hospitals and other health care entities, including health maintenance organizations, group practices, and professional societies. The NPDB opened on September 1, 1990.

The Secretary of the U.S. Department of Health and Human Services, acting through the Office of Inspector General, was directed by the Health Insurance Portability and Accountability Act of 1996 to create the Healthcare Integrity and Protection Data Bank (HIPDB). The HIPDB is a national health care fraud and abuse data collection program for the reporting and disclosure of certain final adverse actions taken against health care providers, suppliers and practitioners.

The Notice of Proposed Rulemaking was published October 29, 1998. The Division of Quality Assurance is in the process of preparing the Final Rule. The Data Bank is expected to be operational by the end of this year.

DIVISION OF MEDICINE

The Division continues to support through its grant and cooperative agreement programs significant educational and training initiatives in geriatrics.

For FYs 1997 and 1998, 13 predoctoral grantees and 57 graduate program grantees indicated that they were actively involved in the development, implementation, and evaluation of their geriatrics curriculum and training. The predoctoral grantees received funds totaling $639,643, the residency program grantees received funds totaling $858,108. In addition, 15 faculty development programs reported that they provided geriatrics training. One program grantee received an award totaling $172,800 for the purpose of strengthening geriatric training and carrying out research activities in this area.

Nine Physician Assistant Training Program grantees have instituted training activities in geriatrics. These grantees were awarded $398,610 specifically for their efforts in this area.

Seven grantees receiving support for Podiatric Primary Care Residency Training have included curricular emphasis in geriatric health. These grantees received a total of $652,603.

DIVISION OF NURSING

The Division of Nursing continues to administer grants awarded through four programs:

(1) Advanced Nurse Education, (2) Nurse Practitioner/Nurse Midwifery, (3) Special Projects, and (4) Professional Nurse Traineeships. The fourth program provides funds to schools that allocate these funds to individual full-time master's and doctoral students preparing to be nurse practitioners, nurse-midwives, nurse educators, public health nurses, or other clinical nurse specialists.

The Advance Nurse Education Program supported two programs totaling $484,208 in FY 1997, and three programs totaling $872,116 in FY 1998 for gerontological nursing programs leading to a master's or doctoral degree. Graduates of these programs are prepared broadly to meet a wide range of health needs relative to the elderly in many settings, but are particularly prepared to deal with

the older individual with multiple health care needs. In addition, the program prepares nurses who can teach and offer consultation in this important field.

The Nurse Practitioner and Nurse-Midwifery Program, supported seven master's or postmaster's geriatric nurse practitioner (GNP) program grants totaling $1,284,115 in FY 1997, and six master's or postmaster's GNP program grants totaling $1,255,000 in FY 1998. In addition, ten Adult Nurse Practitioner (ANP) programs were supported in FY 1997 for a total of $1,972,260, and seven Family Nurse Practitioner (FNP) programs were supported in FY 1998 for a total of $7,123,120. Both ANPs and FNPs provide primary care services to older adults. As nurses with advanced academic and clinical preparation, they are prepared as primary health care providers to manage the health problems of the elderly in a variety of settings, such as long-term care facilities, ambulatory clinics, and homes. They provide nursing care and clinical management of common acute and chronic health problems, including health promotion and maintenance, disease prevention, health assessment, and long-term management of chronic health problems. Emphasis is placed on teaching and counseling the elderly to actively participate in their own care and to maintain optimal health.

The Nursing Special Projects Grant Programs supported six Long-Term Care Fellowships for Paraprofessional projects in four institutions totaling $321,988 in FY 1997, and five projects in five institutions totaling $1,205,960 in FY 1998. These fellowships supported approximately 45 individuals in FY 1997 and 73 individuals in FY 1998 employed by nursing facilities, including long-term care facilities or home health agencies as paraprofessionals and enrolled in approved nursing program. The agencies assist the fellows financially to obtain further education in nursing.

The Nursing Special Projects Grant Program supports nursing clinics to demonstrate methods of improving access to primary health care in medically under served communities. In FY 1997, three nursing clinics providing services to elderly populations received support totaling $469,709. In FY 1998, ten nursing clinics providing services to elders in housing and other community sites received support totaling $1,662,090. The nursing clinic project at the University of Delaware, Newark, Delaware, now in its fourth year of a five year grant award, is designed to establish a community-based nurse-managed health center to improve access to primary care for older adults. The HEALTH (Healthy Elder Adult Living Through Holistic Healthcare) Center provides a wide variety of health promotion, disease prevention, and chronic disease management services through case management by advanced practices nurses (APNs). The HEALTH Center initially featured two extremely needed services in Delaware: (1) comprehensive geriatric assessment and (2) mental health services for older adults. In addition to filling health care gaps, the HEALTH Center provides clinical experiences for nursing students that will prepare them to provide the specialized care needed by older adults. Project activities are based in home and community settings in both urban and rural areas.

OFFICE OF RURAL HEALTH POLICY

The Office of Rural Health Policy (ORHP) was established in 1987 at the urging of the Senate Special Committee on Aging in order to address severe shortages of health services in rural areas, where one quarter of the Nation's elderly live. Aging-related issues are of particular importance to the Office, since rural counties have, on average, a higher percentage of seniors over 65 years of age than urban counties; and these residents are often poorer, sicker, and more isolated than their urban counterparts.

To strengthen support for health services in rural areas, the office plays a collaborative role throughout the Department and with the States and the private sector. For example, it apprises interest groups, such as the National Council on Aging and the American Association of Retired Persons about its activities and about the needs of the rural elderly. Within the Department, the Office advises the Secretary on the effects that Medicare and Medicaid programs have on rural health care, on the shortage of health care providers, the viability of rural hospitals, and the availability of primary care and also emergency medical services to elderly and other rural residents.

The Office supports local and States initiatives to build rural health care services through a $32.0 million grant program to rural communities, themselves, and a $3 million program of matching grants to the States to support States offices of rural health, which can recruit rural providers and assist their rural communities in developing more local health services.

The ORHP also promotes informed policy making by administering a small $2.5 million program of grants for policy-relevant studies at established rural research centers throughout the country. These centers provide data capability on a wide range of rural health concerns, including areas relevant to the elderly. For example, one study currently underway looks at the development in rural communities of assisted living facilities to determine what challenges exist to their growth and viability. Another is comparing mental health treatment for residents of rural nursing homes with treatment available to residents of urban facilities. Also under study is the supply of health practitioners for the care of chronically ill Medicare beneficiaries in rural areas.

The Office also administers a new $25 million grant program to States to help them implement the Rural Hospital Flexibility Program. Under this program, rural hospitals that convert to a smaller Rural Critical Access Hospital can receive cost-based payments from the Medicare. The grants help States and rural communities plan and implement the conversion of rural hospitals and promote the development of new local networks of care.

In collaboration with other Federal agencies such as the Health Care Financing Administration, the Department of Agriculture, the Department of Transportation, and the National Institute on Aging, ORHP sponsors workshops and seeks public advice on a range of rural health needs. These issues may include such issues as emergency medical services, managed care options for Medicaid and Medicare clients, physician recruitment, and rural economic development.

To enhance dissemination of information on strategies for better health services to rural regions, the Office initiated a national rural health information and referral service with USDA that is available to rural residents throughout the Nation with a toll-free line (1 -800–633–7701) and through an electronic bulletin board.

The Office also channels public advice on rural issues to the Department by staffing the Secretary's National Advisory Committee on Rural Health, a citizen's advisory panel chartered in 1987 to address health care crises in rural America.

DIVISION OF ASSOCIATED DENTAL AND PUBLIC HEALTH

The Division supports the training of health professionals through its Geriatric Education Centers (GECs). GECs use ambulatory care centers, hospitals, long-term care facilities and senior centers to provide appropriate educational experiences to health professions students and providers, to prepare them to deliver humane and dignified care and to be responsive to older individuals whose ability to care for themselves has been reduced by physical and/or mental disorders.

Of the 43 Geriatric Education Centers that make up the membership of the National Association of Geriatric Education Centers, 30 received awards in FY 1997 and 30 received awards in FY 1998. In FY 1997, sixteen GECs were consortia partnerships of two or more universities with many representing multiple schools of the health professions in their respective States. In FY 1998, nineteen GECs were consortia. At the State and National level the GECs comprise a comprehensive educational system, serving as the primary coordinating body for the preparation of faculty, health professions students, and health care personnel to better serve the Nation's elderly in their own homes and in long-term care institutions and community based agencies. Over 40,000 health care professionals received education and training through the GECs in FY 1997–1998. Awards were made to the following institutions in FY 1997 and FY 1998:

	FY 1997	FY 1998
Consortia:		
University of California, Los Angeles, Univ. of California, Davis; Univ. of California, San Francisco; UCLA School of Medicine; California State University at Fresno	$316,665	$159,796
New York University; Columbia University; Hunter College	161,209	263,639
University of Pittsburgh; Pennsylvania State University; Temple University	262,963	317,362
University of Miami; Barry University; Florida A&M; Florida International University	322,810	161,672
St. Louis University; U. of Missouri, School of Optometry; Washington U., Occupational Therapy; St. Louis College of Pharmacy; Kirksbille College of Osteopathic Medicine	156,733	269,990
University of Kentucky; East Tennessee State Univ.; U. of Ohio Cincinnati	160,569	261,653
University of Medicine & Dentistry. of NJ; Rutgers University School of Social Work	162,000	271,823
University of Oregon; Portland State University	288,431	159,292
University of Iowa; University of Osteopathic Medicine and Health Sciences	0	161,999
Baylor College of Medicine; University of Texas, Houston HSC; Univ. Texas, Medical Branch; Univ. of North Texas; Univ. of Texas-Pan AM; Texas Southern Univ.; Univ. of Houston; Texas A&M University	162,000	270,000
George Washington University; Georgetown University; Howard University	161,283	299,201
Case Western Reserve University; Ohio University college of Osteopathic Medicine; Bowling Green State University; Northeastern Ohio Universities College of Medicine	161,199	266,401
Marquette University; Univ. of Wisconsin-Madison; Univ. of Wisconsin-Milwaukee; Milwaukee Area Technical College; Medical College of Wisconsin; Geriatrics Inst. of Sinai Samaritan Medical Center	306,675	0

	FY 1997	FY 1998
Michigan State University, Wayne State University; Michigan Primary Care Association; St. Lawrence Hospital	165,359	162,000
University of New Mexico; New Mexico State University; New Mexico Highlands University; National Indian Council on Aging; Indian Health Service; Sisters of Charity Health Care System	325,426	160,648
University of Pennsylvania; Geisinger Medical Center; Lehigh Valley Hospital; Philadelphia College of Pharmacy	277,251	160,209
University of Rhode Island; Rhode Island College; Brown University; Rhode Island Hospital	262,681	317,126
Meharry Medical College; Alabama A&M University; Tennessee State University	158,760	162,000
Stanford University; San Jose State University; On Lok, Senior Health Services	302,064	162,000
Single Institution:		
University of Hawaii	107,840	161,760
University of Oklahoma	185,715	161,890
University of Puerto Rico	162,000	0
University of Texas San Antonio HSC	160,940	214,051
University of Washington	215,639	107,974
University of South Florida	104,489	162,000
University of Nevada	0	75,131
University of Rochester	167,832	271,970
University of Virginia Commonwealth	107,854	161,744
University of West Virginia	107,130	155,633
Harvard Medical School	158,443	260,197
University of Florida	100,956	95,267
University of Minnesota	162,000	270,000

Awards for the 30 GECs totaled $5,851,916 for Fiscal Year 1997. Funding for FY 1998 was $6,051,428. Awards for FY 1999 are expected to be approximately $8 million. These Centers are educational resources providing multi disciplinary and interdisciplinary geriatric training for health professions faculty, students, and professionals in allopathic medicine, osteopathic medicine, dentistry, pharmacy, nursing, occupational and physical therapy, podiatric medicine, optometry, social work, and related allied and public or community health disciplines. They provide comprehensive services to the health professions education community within designated geographic areas. Activities include faculty training and continuing education for practitioners in the disciplines listed above. The Centers also provide technical assistance in the development of geriatric education programs and serve as resources for educational materials and consultation.

During FY 1995, a three phase Geriatric Education Futures Project was developed to improve geriatric education in the health professions and thereby respond to a national health care need. The first phase was the development of eleven study groups to develop white papers on the status of geriatric education in medicine, nursing, dentistry, public health, social work, allied and associated health, interdisciplinary education, ethnogeriatrics, case management, managed care and long-term care. Recommendations were presented to Federal, non-Federal and response panels during the second phase. Two reports emerged from these phases: “A National Agenda for Geriatric Education: White Papers and A National Agenda for Geriatric Education: Forum Report”. Copies are available from the Bureau of Health Professions, HRSA. The third phase of the Futures Project is the development of innovative educational collaborative.

FACULTY TRAINING PROJECTS IN MEDICINE, DENTISTRY, AND PSYCHIATRY

Eight joint medicine and dentistry projects were funded under the Faculty Fellowship Program in Geriatric Medicine, Dentistry, and Psychiatry. These interdisciplinary programs have four learning components: longitudinal clinical experience, teaching, research, and administration.

The following institutions received awards for both 1997 and 1998.

	FY 1997	FY 1998
University of California, Los Angeles	$190,812	$196,566
Boston University	307,708	310,178
Harvard University	348,494	353,582
University of Michigan	374,178	361,499
University of Medicine and Dentistry of New Jersey	351,976	268,323
Duke University	328,631	335,705
University of North Texas	314,112	247,721
University of Texas, San Antonio	357,828	276,741

CONTRACTS UNDER TITLE VII OF THE PHS ACT

Funding—FY1995–FY1996

Project: State University of New York at Buffalo, "Education Performance Outcomes Measures Model," 8/13/96–8/12/97—$25,000.

Project: Baylor College of Medicine, "Tenth Workshop for Key Staff of Geriatric Education Centers," 7/19/96–7/18/97—$149.000.

Project: American Society on Aging, "Local Implementation of a Key Ethnogeriatrics Recommendation," 8/6/96–5/5/97—$6,460.

Project: Institute for Health Care Improvement, "Community—Based Quality Improvement Education for the health Professions," 9/30/96–9/29/98—$150,228.

Project: Virginia Geriatric Education Center, "Geriatric Education Centers Resources Project," 12/30/97–3/l/98—$5,941.

Project: Stanford University, "Ethnogeriatric Education Collaborative," 7/3/97–2/28/99—$35,000.

Project: State University of New York at Buffalo, "Education and Evaluation of an Expanding Education Performance Outcomes Measures Model," 6/28/97–6/30/98—$22,500.

Project: American Society on Aging, "Local Implementation of a Key Ethnogeriatric Recommendation," 9/5/97 & 7/22/98—$6,460.

Project: Wisconsin Geriatric Education Center, "Updated Geriatric Education Centers Directories," 6/18/98—$5,001.

PUBLICATIONS

A National Agenda for Geriatric Education: Forum Report, Volume 2. Rockville, MD: Interdisciplinary, Geriatrics and Allied Health Branch, Division of Associated, Dental and Public Health Professions, Bureau of Health Professions, Health Resources and Services Administration, Public Health Service, U.S. Department of Health & Human Services. 1996.

A National Agenda for Geriatric Education: White Papers, Volume I—Rockville, MD: Interdisciplinary, Geriatrics and Allied Health Branch, Division of Associated, Dental and Public Health Professions, Bureau of Health Professions, Health Resources and

Services Administration, Public Health Service, U.S. Department of Health & Human Services. 1995.

Geriatric Education Centers: A Resource Directory, Rockville, MD: Interdisciplinary, Geriatrics and Allied Health Branch, Division of Associated, Dental and Public Health Professions, Bureau of Health Professions, Health Resources and Services Administration, Public Health Service, U.S. Department of Health & Human Services. 1998.

EVENTS

Advisory Committee for the joint American Geriatric Society/ John A. Hartford Foundation initiative entitled "Enhancing Geriatric Care Through Practicing Physician Education, New York, NY—April 6,1997.

I0th Geriatric Education Centers Workshop for key leadership of grantees sponsored by BHPr, Washington, DC—February 2–9, 1997.

Gerontological Society of America's Annual Meeting. Cincinnati, OH— November 13–17,1997.

Association for Gerontology in Higher Education, Present information from the Bureau—sponsored "National Agenda for Geriatric Education: White Paper" Chapter on Interdisciplinary Education at a preconference Workshop, Boston, MA—February 19–23, 1997.

Collaborative on Ethnogeriatric Education Workgroup , San Francisco, CA—March 26, 1998

1998 Leadership in Collaborative Practice: A cross—program conference, Las Vegas, NV—June 8–10, 1998, for interdisciplinary programs of the Division of Associated, Dental and Public Health Profession, BHPr, HRSA.

National Assocaition of Medical Minority Educators Conference (NAMME), Chicago, IL—September 27–28, 1998.

Gerontological Society of America's Annual Meeting. Philadelphia, PA—November 20–23,1998

OFFICE OF INSPECTOR GENERAL

INTRODUCTION

The Office of Inspector General (OIG) was established by the Inspector General Act of 1978. The OIG's mission is to identify ways to improve effectiveness and promote economy and efficiency in HHS programs and operations, and protect them against fraud, waste, and abuse. This is accomplished by conducting independent and objective audits, evaluations, and investigations which provide timely, useful, and reliable information and advice to Department officials, the Administration, the Congress, and the public. In carrying out its mission, the OIG partners with the Department and its operating divisions, the Department of Justice (DOJ), other Federal and State agencies, and the Congress to bring about systemic improvements in HHS programs and operations, and successful prosecutions and recovery of funds from those who defraud the Government. The OIG is comprised of the following components:

The Office of Audit Services (OAS) conducts and oversees audits of HHS programs, operations, grantees, and contractors; identifies

systemic weaknesses that give rise to opportunities for fraud, and abuse; and makes recommendations to prevent their recurrence. The OAS also provides overall leadership and direction in carrying out the responsibilities mandated under the Chief Financial Officers Act of 1990 and the Government Management Reform Act of 1994 relating to financial statement audits.

The Office of Evaluation and Inspections (OEI) seeks to improve the effectiveness and efficiency of departmental programs by conducting program inspections that provide timely, useful, and reliable information and advice to decision makers. These inspections are program and management evaluations that focus on specific issues of concern to the Department, the Congress, and the public. The results of these inspections generate accurate and up-to-date information on how well HHS programs are operating and offer specific recommendations to improve their overall efficiency and effectiveness.

The OIG's Office of Investigations (OI) conducts investigations of fraud and misconduct to safeguard the Department's programs and protect the beneficiaries of those programs from individuals and activities that would deprive them of rights and benefits. Working with Federal and State law enforcement agencies, OIG investigators seek criminal, civil, and exclusion actions against those who commit fraud or who thwart the effective administration of HHS programs.

The Office Counsel to the Inspector General (OCIG) coordinates the OIG's role in the resolution of health care fraud and abuse cases, including the litigation and imposition of administrative sanctions, such as program exclusions, civil monetary penalties, and assessments; the global settlement of cases arising under the Civil False Claims Act; and the development of corporate agreements for providers that have settled their False Claims Act liability with the Federal Government. It also develops and promotes industry awareness of models for corporate integrity and compliance programs and monitors ongoing integrity agreements. The OCIG also provides all administrative litigation services required by OIG, such as patient dumping cases and all administrative exclusion cases. In addition, OCIG issues special fraud alerts and advisory opinions regarding the application of OIG's sanction statutes and is responsible for developing new, and modifying existing, safe harbor regulations under the anti-kickback statute. Finally, OCIG counsels OIG components on personnel and operations issues, subpoenas, audit and investigative issues, and other legal authorities.

The Office of Management and Policy (OMP) provides support services to the OIG, including congressional relations; public affairs; strategic planning and budgeting; financial and information resources management; and preparation of the OIG's semiannual and other reports.

ACCOMPLISHMENTS

During Fiscal Years 1997 and 1998, the OIG reported more than $1.2 billion in fines and restitutions deposited into the Medicare Trust Fund. More than 5,700 individuals and entities were excluded from doing business with Medicare, Medicaid, and other Federal and State health care programs—up from 2,846 exclusions

in the previous two years. In addition, convictions increased by nearly 20 percent in 1997, and another 16 percent in 1998. The OIG's 1998 accomplishments included 261 convictions of individuals or entities that engaged in crimes against departmental programs, and 927 civil actions.

The OIG reported record savings of $11.6 billion for Fiscal Year 1998. This is comprised of $10.9 billion in implemented legislative or regulatory recommendations and actions to put funds to better use; $146 million in audit disallowances: and $515 million in investigative receivables. The savings that result from OIG recommendations that are implemented into law or regulation represent the dollars that will not be spent.

HEALTH CARE

In recent years, Medicare has been a major focus of OIG work. Approximately 75 percent of OIG resources in the past two years were dedicated to Medicare audits, evaluations, and enforcement activities. OIG work continues to show that Medicare is not always a prudent purchaser of health care goods and services and is inherently vulnerable to making improper payments. In discharging its responsibilities, the OIG responds both reactively and proactively to counteract these problems and is pleased to report that measurable progress is being made.

Increasingly, the OIG is working with representatives of the health care provider community to develop reasonable and voluntary compliance guidelines for insuring accurate billings to the Medicare program. Medicare beneficiaries are also enlisted for their support. For example, the OIG recently launched a major outreach campaign with the Health Care Financing Administration (HCFA), the Administration on Aging (AOA), DOJ, and the American Association of Retired Persons (AARP) to encourage senior citizens to identify improper Medicare payments. Beneficiaries are encouraged to carefully review their health care bills and to call their health care provider when a possible improper item, service or good not received is spotted. If that fails to "clear up" the matter, it is suggested that the beneficiary call their Medicare contractor and, only if necessary, to report a suspected fraud to the OIG hotline.

Some of the significant OIG work involving the elderly, during this reporting period, includes the following:

Outreach/Hotline: Enlisting beneficiaries as partners in fighting fraud assists in identifying abuses at an early stage, and preventing ongoing or widespread abuse. An OIG survey found that Medicare beneficiaries are well-positioned to identify fraud, with three out of four stating that they "always" read their Explanation of Medicare Benefit statements. The HHS/OIG continued to work with AOA, HCFA, and AARP to develop a national outreach campaign designed to educate beneficiaries and those who work with the elderly to recognize fraud and abuse and to report it appropriately. This campaign will be fully "launched" in 1999. OIG operates an HHS/OIG Hotline to receive complaints of improprieties in the Medicare program and other HHS programs. In FY 1997, the Hotline was expanded to accommodate more callers and to provide more user friendly service. In FY 1997 and 1998, the Hotline received over 134,000 calls, which resulted in more than 19,500 com-

plaints. An estimated $4 million in collections are associated with Hotline complaints referred to and resolved by HCFA and its contractors.

Beneficiary Satisfaction: OIG continued to report on Medicare beneficiary satisfaction and understanding with the Medicare program, including fee-for-service and managed care. The reviews examined general satisfaction with the program as well as beneficiary satisfaction with supplemental health insurance and the Medicare handbook. Reviews also examined beneficiary awareness of Medicare risk HMOs, HMO appeals and grievance processes, and HCFA publications.

Safeguarding Long-Term Care Residents: The OIG found shortcomings in State nurse aide registries, which are required to record findings of abuse, neglect and misappropriation of property involving the elderly. This work is an indication that, among other things, HCFA and AOA should work with States to improve the safety of long term care residents and to strengthen safeguards against the employment of abusive workers by elder care facilities. In addition, the OIG recommended that HCFA consider establishing Federal requirements and criteria for performing criminal background checks. The HCFA and AOA generally agreed with our findings and recommendations.

NATIONAL INSTITUTES OF HEALTH, NATIONAL INSTITUTE ON AGING

There are great differences in how people age; some persons lead healthy, independent, and productive lives well into their 70's, 80's, 90's and even beyond; other persons succumb to age-associated diseases and disabilities in their 60's or even earlier. The National Institute on Aging (NIA), part of the National Institutes of Health (NIH), promotes research to understand the mechanisms of normal aging and their relationship to costly age-associated disease and disability. Each day experts translate this new knowledge into strategies to improve the health and quality of life for older Americans. NIH is the principal biomedical research arm of the Federal Government. NIA is the primary sponsor of aging research in the United States.

This report highlights a number of research advances conducted or supported by NIH during 1997 and 1998. Section 1 of this report outlines NIA's key advances for 1997. Section 2 presents NIA's key advances for 1998. Section 3 provides selected findings from some of the other NIH institutes involved in aging research. They are the National Eye Institute (NEI); National Library of Medicine (NLM); Office of Research on Women's Health (ORWH); National Heart, Lung, and Blood Institute (NHLBI); National Institute of Nursing Research (NINR); National Center for Research Resources (NCRR); National Human Genome Research Institute (NHGRI); National Institute on Deafness and Other Communication Disorders (NIDCD); National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS); National Institute of Mental Health (NIMH); National Institute of Dental and Craniofacial Research (NIDCR); National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK); National Institute of Child Health and

Human Development (NICHD); National Institute on Neurological Disorders and Stroke (NINDS).

SECTION 1.—1997 INTRODUCTION

Congress created the NIA in 1974 as part of the National Institutes of Health. At that time, aging research was in the early stages of developing ways to explore fundamental aspects of the aging process. Since then, knowledge about the fundamental processes of biology has grown as have new insights about the processes of health and disease in later years. The goal of NIA-supported research is to understand the basic mechanisms of normal aging and age-associated disease, disability, and other special problems and needs of the aged, and to translate this knowledge into treatment and prevention strategies.

An increasing interest in aging research is driven in part by a projected dramatic increase in the older population. People over age 65, who made up only four percent of the U.S. population in 1900, constitute approximately 12 percent now and will make up about 20 percent of the population by the year 2025. The over-85 age group, often referred to as the "oldest old", is the fastest growing segment of the older population. Population aging will become an important phenomenon of the next half century as the presently middle-aged "baby-boom" generation becomes eligible for Social Security and Medicare.

Alzheimer's disease

As the baby boomers age and Americans continue to live longer, there is an increasing concern about Alzheimer's disease (AD), a devastating neurological disease which affects the cognitive function of sufferers who are primarily in the 65 and older age group. AD now affects an estimated four million Americans and is projected to reach critical proportions in the U.S. in the near future. Unless we can develop interventions to prevent or delay this dreaded disease, perhaps as many as 15 to 20 million older people and their families will experience the nightmare of Alzheimer's disease early into the 21st century. This is one reason that AD research continues to be a top priority for NIA.

In the past five years we have made remarkable progress in AD research. Scientists have discovered genetic mutations linked to AD on four separate chromosomes: 1, 14, 19, and 21. Chromosomes 1, 14, and 21 are associated with early-onset, familial AD, an aggressive form of the disease that can cause symptoms in people as young as 30 years of age. Scientists are now trying to discover precisely what abnormal proteins or processes these mutations generate and to clarify how these, together with environmental factors, play a role in the disease. Within the past five years, scientists discovered that the risk of developing the more common, late onset form of AD is linked to a gene located on chromosome 19 that codes for a protein known as ApoE. One of the variants of this gene, ApoE4, is associated with greatly increased susceptibility to AD and earlier age of onset. In contrast, ApoE2 may confer a protective effect. These important discoveries have led to increased research activity to discover the molecular mechanisms underlying the effects of ApoE on the development of AD pathogenesis. If ApoE is

directly involved in susceptibility for AD, it would then become a target for interventions.

The dual goals of accurate diagnosis and early detection have long been central to AD research. A recently reported study that combined the use of ApoE4 typing with brain imaging showed that it is possible to identify abnormalities in brain function of individuals who are at high risk for Alzheimer's disease, but who have no detectable disease symptoms, as many as 20 years before they would be expected to develop symptoms. This advance opens the opportunity for potential treatments which could be started before the brain has suffered damage from more advanced AD.

Basic biology of aging

Parallel to the discoveries in basic neurobiology, which should eventually enable us to prevent nerve cell destruction and onset of Alzheimer's disease symptoms, research on the basic biology of aging will provide the foundation for developing new or improved interventions to combat multiple age-associated diseases and disabilities. Recent research has advanced our understanding of the genes and biochemical pathways involved in regulating the life span of some lower organisms. By incorporating these "longevity" genes into the chromosomes of experimental animals, NIA researchers have actually been able to increase life span. Once researchers have a better understanding of life span control in simple animals, they will be able to study life span control in more complex animals and determine the relationship of these processes to human aging, health and disease, and longevity.

Both aging and cancer researchers share interest in one particular field that concerns the end structures on chromosomes known as "telomeres," structures which serve to maintain the chromosome's integrity and stability. We now know that telomeres play a key role in determining the capacity of individual cells to divide; after losing this capacity, cells become senescent. Telomerase is an enzyme that works to maintain telomere length by compensating for the shortening which occurs each time the cell divides. Cancer cells express relatively high levels of telomerase which enables them to divide indefinitely. A more complete understanding of telomerase and telomere length regulation should lead directly to studies on the delay of cellular senescence and age-related disease, as well as to new strategies to prevent the unlimited replication of cancer cells.

Another important area in basic aging research is that of oxidative damage. Damage to cells and subcellular components from "free radicals," which are naturally occurring byproducts of normal metabolism, has long been believed to be a factor in the degenerative processes which accompany aging in all animal species. Recently completed research demonstrated a strong inverse correlation between life span and the level of free radicals produced by mitochondria, the energy-producing powerhouses located within all cells. Thus, a promising intervention against age-associated disease and disability might be one which would reduce the level of free radicals by increasing the biochemical efficiency within the cell's mitochondria.

Applied/clinical research

The NIA also conducts research with immediate clinical significance. NIA-supported research on treatments for AD span a wide range of approaches, from research to develop candidate drugs to clinical trials of drugs that show promise. In addition to these efforts at drug development, research will continue on the effectiveness of behavioral approaches and services such as AD special care units, which are long-term care settings designed to meet the needs of people with AD and related cognitive impairments. The results of research on special care units should inform public policy on ways to improve care for Alzheimer's patients by determining the effectiveness of special care units for their residents, their families, and the unit staff members.

Physical disability is a major concern to older persons and is associated with billions of dollars spent annually on long-term care. For many older persons, physical disability is the result of multiple, complex, and interacting factors. Osteoporosis, which affects an estimated 25 million older Americans, most of them women, is an obvious example of a major risk factor for physical disability. Osteoporosis predisposes older persons to serious and debilitating fractures. Each year, thousands of older Americans, more women than men, are hospitalized and then admitted to costly long-care facilities because of hip fracture. Recent studies revealed that estrogen use is associated with lower hip fracture rates, indicating the potential for preventing bone loss and related fractures. Other researchers, conducting a four-year longitudinal study of women, identified hip fracture risk factors which allow targeting of very high-risk women for preventive strategies. There was a 25–fold difference in hip fracture rate between those women with two or fewer risk factors and normal bone density, and those women with five or more risk factors and low bone density. Maintaining body weight, walking for exercise, avoiding long-acting benzodiazepines, minimizing caffeine intake, treating impaired vision, and taking measures to maintain bone density are among the steps identified that may decrease hip fracture risk. NIA will continue to fund basic laboratory studies of the biology of osteoporosis and bone cell function, clinical studies of age-related bone loss and fracture epidemiology, and trials to prevent and reverse bone loss.

Menopause is a universal phenomenon in women and until recently has been understudied. To gather critical information on the chronology of the biological and psychosocial factors related to menopause and its subsequent effects on health and age-related disease, NIA supports the *Study of Women's Health Across the Nation (SWAN).* This study will generate extensive data on menstrual cycle characteristics such as ovarian function, nutrition, ethnicity, reproductive history, risk factors for diabetes, hypertension and cardiovascular disease, and physical activity.

Cardiovascular disease is another major cause of disability and remains the leading cause of death of older Americans, killing approximately half of those age 65 and older. Although age is the main risk factor for cardiovascular disease, the precise reasons are presently unknown. One potential risk factor for cardiovascular disease in the elderly is stiffening of the large and medium-sized arteries, leading to increased stress on the heart. NIA is conducting re-

search to identify ways of preventing and reversing vascular stiffening, such as exercise and other beneficial lifestyle changes. Other NIA researchers are evaluating the possible roles gene therapy may have for treatment of age-associated heart disease. These scientists are examining whether gene therapy can be used to enhance blood circulation in animal models of chronic heart disease and have successfully induced the growth of new coronary blood vessels in laboratory animals to reestablish blood flow following heart attack. In another study, gene therapy is being tested as a way to combat the renarrowing of blood vessels following angioplasty, a technique used to open narrowed coronary arteries. The potential benefit of preventing or reducing age-associated cardiovascular disease is considerable, both in terms of cost savings and quality of life of older Americans.

Many of the problems of aging result from behaviors that place individuals at greater risk for poor health, depression, and other negative outcomes. NIA-supported research has documented the benefits for health and longevity of adopting healthy lifestyle practices, such as physical activity and nutrition, and avoiding health-impairing habits, such as smoking, even at a very old age. As one example, numerous studies have documented the influence of exercise and physical activity on longevity, even among the oldest old. Recent studies also show the benefit of regular exercise in reducing costly hospital stays and nursing home admissions. Current research advances document the importance of the social and behavioral context when studying physical activity and exercise among older adults. Nevertheless, surveys report that older people often are not motivated to make the desired changes. Additional research is therefore being stimulated on topics such as the social and behavioral factors involved in initiating and maintaining health-enhancing behaviors, the role of health care providers in identifying risk and encouraging positive self-care practices, and the design of regimens appropriate for older people in community and institutional settings. Even with the hope of major advances in the treatment and prevention of disabling conditions, the demand for long-term care is expected to increase due to predictable demographic trends. Research will be conducted on many aspects of long-term care, particularly on new and evolving forms of care with a goal of identifying the most effective and cost-efficient approaches.

As life span and vitality in later life have increased, more and more older people are able and willing to work productively well into late adulthood. According to NIA's Health and Retirement Survey, almost three-fourths of American workers now would prefer to phase in their retirement with a gradual shift to part-time work rather than stop working abruptly. One major goal of this research is to understand the productive potential represented by workers over age 60, especially for part-time engagement in the workforce.

A vision for 21st century America drives our research efforts. It is the prospect of an older but healthier population of productive and independent citizens. Some of the progress made toward this goal through the multi-faceted research approach of the NIA is described in the following pages.

EXTRAMURAL RESEARCH

NIA funds a broad portfolio of research grants, contracts, and training awards encompassing many research fields and scientific disciplines. Although not all of NIA's research initiatives can be covered within this document due to space limitations, many high priority research areas are described in the following sections:

Declining cognitive function and interventions for older adults

A major concern of older adults is thinking and remembering. A particularly exciting development is the rapid advance of neuroimaging techniques, such as magnetic resonance imaging (MRI) and positron emission tomography (PET), which permit researchers to study images of the brain while cognitive processing occurs. These and other techniques are relating learning and memory impairments to changes in brain structure and physiology, permitting a mapping of areas affected by Alzheimer's disease (AD) and other neurological disorders. This knowledge is valuable for detection, early diagnosis, and treatment of cognitive losses due to disease. Future research promises to identify the locations and processes of various components of memory and to differentiate the memory loss that can occur during normal aging to that which results from disease. Promising work has also produced interventions that can enhance some aspects of cognitive ability in older people. The NIA and the National Institute of Nursing Research are now soliciting grant applications for a trial to test such behavioral interventions in older adults of varying racial, ethnic, socioeconomic, and cognitive characteristics. The study should identify means of maintaining or increasing basic abilities critical for independence.

Alzheimer's disease: a decline in cellular communication

In AD, communication between nerve cells breaks down and leads to nerve cell dysfunction and cell death. AD destroys neurons in parts of the brain involved with cognition, especially in the hippocampus (a structure deep in the brain that plays an important role in memory encoding). As the hippocampal nerve cells degenerate, short-term memory falters, and eventually the ability to perform familiar tasks declines as well. AD also attacks the cerebral cortex (the outer layer of the brain). The greatest damage occurs in areas of the cerebral cortex responsible for functions such as language and reasoning. Emotional outbursts and disturbing behaviors appear with increasing frequency as the disease progresses. In the final stages, AD destroys the affected person's ability to recognize close family members or communicate in any way, leaving the person totally dependent upon others for care.

Prevalence and costs of Alzheimer's disease

An estimated 4 million Americans currently suffer from AD, and the lives of their caregivers are affected by this devastating illness. Families experience great emotional, physical, and financial stress. As the disease progresses and abilities steadily decline, family members face painful decisions about the long-term care of their loved ones. Moreover, AD puts a heavy economic burden on society. One recent NIA-supported study estimated that the cost of caring

for one person with advanced AD can be more than $47,000 a year, whether the patient lives at home or in a nursing home. For a disease that can range in duration from two to 20 years, the overall costs of AD to families and to society are staggering.

Other factors in our changing society will compound the problem of AD in the near future. Life expectancy has been increasing since the turn of the century. Today in most industrialized countries, the 85 plus age group is the fastest growing segment of the older population and is also the segment of the population most devastated by AD, with an estimated 47 percent prevalence rate. These demographics emphasize the urgency of the need to find successful interventions that will delay or prevent onset of AD.

Genes in early-onset Alzheimer's disease

AD can strike early and often in some families—and the disease in families such as these is identified as early-onset familial Alzheimer's disease (FAD). Studying the DNA of some of these early-onset FAD families, NIA-supported researchers have recently identified abnormalities in a gene on chromosome 21 in a subset of people with FAD. Over the last year, other investigators identified mutations in a gene on chromosome 1 in a set of families from Germany and mutations in a recently identified gene on chromosome 14 in other FAD families. The FAD genes on chromosome I and on chromosome 14 code for highly similar membrane proteins whose functions are not yet known. These mutated genes are responsible for very aggressive forms of FAD and may also play a role in the development of other types of AD. Further research on these mutations is expected to clarify key steps in the disease process. The FAD gene on chromosome 21 codes for an abnormal form of the precursor for amyloid protein, consistent with a role of amyloid protein in some forms of AD. Interestingly, people with Down's syndrome, who have an extra copy of chromosome 21, usually develop AD-like pathologies as they grow older.

ApoE4 and Alzheimer's disease

In addition to the genes on chromosomes 1, 14, and 21 associated with FAD, the ApoE4 gene on chromosome 19 has been linked to late-onset AD, the most common form of the disease. Everyone has ApoE, a protein which helps transport cholesterol in the blood throughout the body. The gene coding for the production of ApoE occurs in three versions: ApoE2, ApoE3, and ApoE4. ApoE3 is the one most commonly found in the general population. ApoE2 may confer some protective effect against AD. ApoE4 is associated with greatly increased susceptibility to AD and earlier age of onset. It is found in many late-onset AD patients and is not limited to people with a family history of AD. On average, people with two copies of the gene for ApoE4 start showing AD symptoms before age 70 and are eight times more likely to develop AD than those who have two copies of the more common ApoE3 version. For those with no copies of ApoE4, the average age of onset is over 85.

Researchers have discovered that ApoE is localized in the two abnormal structures found in the AD brain: amyloid plaques and neurofibrillary tangles. Located outside and around neurons, these plaques contain dense deposits of amyloid protein. Neurofibrillary

tangles are twisted fibers inside neurons. Progress continues to be made in determining the makeup of these abnormal structures and in elucidating the mechanisms that account for their buildup in AD.

The presence of ApoE4 in a blood sample does not necessarily predict AD. A person can have ApoE4 and not get the disease, and a person can get AD without having ApoE4. Because screening for ApoE4 would miss a large percentage of those who will develop AD and falsely identify others as future AD patients, widespread screening cannot presently be advocated. However, testing for the ApoE gene in combination with other tests, may soon contribute to the diagnosis of AD. The mechanism by which ApoE influences the risk of AD is currently under study. Scientists found marked differences in the rates at which ApoE3 and ApoE4 bind to critical nerve cell proteins involved in receiving signals from other cells, providing a potential basis for the influence of ApoE variants on the risk of AD.

While still controversial and far from proven, the hypotheses surrounding ApoE4 are driving new research. The relatively rare protein ApoE2 may protect people against the disease; it seems to lower risk and delay the age of onset. For instance, people with one ApoE2 gene and one ApoE3 gene have only one-fourth the risk of developing AD as people with two ApoE3 genes. If ApoE2 proves to be beneficial, then substances that mimic its effects might be candidate therapies to be tested for the ability to slow or prevent the progress of AD. Similarly further explanation of preliminary findings may lead to ways to reduce the effects of ApoE4, develop drugs to treat or prevent AD, and ultimately, decrease its occurrence.

Research on dementia special care units

Another line of AD research sponsored by the NIA concerns the effectiveness of special care units (SCUs), which are long-term care settings designed to meet the needs of people with AD and related cognitive impairments. The results of these studies may provide ways to improve care for these patients by determining the effectiveness of SCUs for their residents, the residents' families, and the unit staff members. This research also assesses the impact of SCUs on residents with and without dementia in non-specialized nursing home units. Research will define what constitutes "special care" and identify effective features of SCUs, including environment, staffing, activities, care planning, admission policies, size, and patient segregation. Preliminary results reveal how care in SCUs influences behavior, cognition, and physical functioning. For example, some of the most promising outcomes of SCUs are seen in the residents' quality of life as measured by increases in social behaviors and interactions.

Alzheimer's disease cooperative study: clinical trials of experimental treatments

The Alzheimer's Disease Cooperative Study is composed of 35 research sites and was established to conduct clinical studies of promising drugs. This important work broadly complements other areas of AD research activity sponsored by the NIA such as the 27

NIA-funded Alzheimer's Disease Centers and an almost equal number of satellite centers. A study to assess the effectiveness of Deprenyl and vitamin E in slowing the course of AD began in October 1992. NIA-supported researchers found that the two drugs delayed important milestones, such as entry into nursing homes, for people with moderately severe Alzheimer's disease, and decreased their loss of daily activities, including bathing, dressing, and handling money, by about 25 percent. Another study on drug and behavioral treatment of agitation began in June 1994 and is scheduled to end October 1996. A study of the anti-inflammatory drug prednisone to treat AD began in January 1995 and is scheduled to end in January 1997.

The latest trial, a pilot study investigating whether or not estrogen can improve function in women with AD who had previously undergone complete hysterectomy (with removal of both ovaries), was initiated in September of 1995. Previous reports suggested that post-menopausal women on estrogen therapy experienced benefits including improvements in mood, concentration, and memory. The major question addressed by this study is whether or not women with AD who had undergone prior complete hysterectomy show benefit from a twelvemonth period of estrogen therapy. Study results should be available by the end of 1997.

Aging at the cellular level: senescence, longevity genes, and telomeres

The initial discovery that isolated mammalian cells have only a limited potential for continued cell division has provided an important paradigm for the study of aging and of cancer. Scientists think that this phenomenon, also known as cellular senescence, is a tumor-suppressive mechanism as well as an underlying cause of aging. Previously, the demonstration of cellular senescence was limited to an analysis of cells in culture. This year NIA-sponsored research has demonstrated that cell senescence also occurs in cells within live organisms. Additional efforts by NIA-funded researchers have resulted in the identification of specific genes involved in cell senescence.

Recent research on longevity assurance genes using invertebrate model systems, has significantly advanced our understanding of the genes and biochemistry involved in the regulation of longevity. Researchers have actually extended the life and/or health span of some lower organisms by incorporating these genes within their chromosomes. Once researchers gain a better understanding of life-span control in simple model systems, they will be in a better position to study these processes in animals such as mammals, and to determine the relationship of these processes to aging, health, and disease.

Although it has long been known that cells in culture have a limited life span before proliferation ceases, the counting mechanism that determines this species-specific limit has been unknown. Somewhat akin to the plastic wrap on the end of a shoelace that prevents its unraveling and destruction, chromosomes have end structures known as "telomeres", which serve to maintain the structural integrity and stability of the chromosome. A recent hypothesis is that telomeres shorten each time they are replicated

during cellular division, and that continued cellular proliferation requires some minimal telomere length, yet to be defined. However, relationships among telomere shortening, cellular proliferative potential, and age-related disease remain to be clarified. Telomerase is an enzyme that functions to elongate telomeres, thus compensating for the telomere shortening which occurs with cell division. Cancer cells have been found to express relatively high levels of telomerase, thus allowing the cancer cell to replicate indefinitely. A more complete understanding of telomerase and telomere length regulation has the potential to elucidate approaches to delaying cell senescence as well as to prevent the unlimited replication of cancer cells.

Oxidative damage, antioxidant defense, and aging

"Free radical" damage has long been believed to be a risk factor for the degenerative processes which accompany aging in animal species ranging from insects to humans. Free radicals are byproducts of normal metabolism that are produced as cells turn food and oxygen into energy. To defend against these reactive and damaging molecules, cells have a multi-layer defense system including antioxidants that react with and neutralize the radicals which otherwise will damage proteins, membranes, and nucleic acids including DNA. Evidence continues to accumulate about the ubiquity of free radicals and their considerable destructive potential in living tissues. Recent NIA-funded studies demonstrated a strong inverse correlation between life span and production in the mitochondria (energy-producing powerhouses located within each cell) of reactive oxygen species, one particular form of free radicals. Thus, a promising aging intervention might be one which can increase the efficiency of the mitochondrial electron transport system.

Aging research in rodents has demonstrated that caloric restriction results in substantial increases in life span. Recent studies have shown that the extension of life span in mice by caloric restriction is accompanied by decreases in resting respiratory rate, mitochondrial generation of free radicals, and one type of damage in the mouse DNA, all of which are consistent with the hypothesis that oxidative stress is an important factor in aging. More research is needed to establish the critical relationships among free radical sources and the body's protective systems. An improved understanding of free radical processes may lead to the development of interventions (dietary, pharmacological, or genetic) for many of the diseases associated with aging and markedly increase healthy life span.

Nutrition in the elderly

Recently, attention has focused on the nutritional status and nutrition-related needs of older individuals in this country. Researchers have indicated that a substantial proportion of Americans over the age of 50 have diets or diseases that place them at a high risk of malnutrition. Malnutrition can be either primary, which is defined by deficits in dietary intake or excesses (obesity, alcohol intoxication and various dietary imbalances) caused by the diet alone; or secondary, which arises from other factors such as the presence of disease, special physiological states, or inborn errors of

metabolism. In order to focus on the role of nutritional factors in preventing age-related diseases, it is imperative to define the alterations in nutrition and nutritional requirements which occur during aging and determine what interventions could be implemented to prevent or delay malnutrition. NIA will continue to promote nutrition-related research in order to improve our understanding of the interrelationships between nutrition, aging, health, and disease.

Melatonin and sleep

There has been much recent publicity in the media about the potential effects of melatonin, including claims that this brain hormone can slow the human aging process, improve immune function, and scavenge DNA and protein damaging "free-radical" molecules. These claims unfortunately are unsubstantiated and controlled research is needed to confirm or deny them. However there is a solid base of data related to melatonin's role in the regulation of the body's circadian (day-night) rhythms and sleep, and it is possible that melatonin may act as an effective "hypnotic" agent for humans, able to induce sleep in both young and old individuals. Studies are underway to understand how melatonin affects the cells within the body's circadian clock, located deep within the brain. Melatonin appears to be a signal molecule telling the body that night is present; how it affects other systems in the brain and body requires further study. There is a need for continued research to determine potential interactions between time of administration and disruption of normal circadian rhythms with chronic usage, as well as possible other adverse health effects, and the delineation of what types of sleep disorders may be treated with melatonin.

Cardiovascular disease, vascular stiffening, and control of hypertension

Cardiovascular disease remains a main cause of disability and the leading cause of death of older Americans, killing approximately 50 percent of those age 65 and older. Although age is the main risk factor for cardiovascular disease, the precise reasons are presently unknown. Continued research in cardiovascular and related fields is essential to ensure progress in defining important age-associated changes in the heart and blood vessels and in understanding the interactions between common age-related changes and the development of cardiovascular disease.

A potential risk factor that may underlie cardiovascular disease in the elderly is a stiffening of the large (e.g., the aorta) and medium-sized arteries. Age-associated vascular stiffening is accompanied by an increase in systolic blood pressure. In some individuals, vascular stiffening may become severe enough to lead to the development of isolated systolic hypertension. High blood pressure is the major risk factor for stroke and is also an important risk factor for coronary artery disease, heart attacks, and heart failure in older Americans. Since vascular stiffening has been considered a part of "normal" aging, treatment that may decrease arterial stiffness (e.g., lifestyle modification or pharmacologic intervention) is rarely advocated. NIA is conducting research to identify ways of preventing and reversing vascular stiffening, such as exercise and

other beneficial lifestyle changes. The potential benefit of preventing or reducing age-associated vascular stiffening is considerable, both in terms of cost savings and quality of life of older Americans.

Control of systolic hypertension now appears to be more important for good health than previously believed. A recent NIA-supported epidemiologic study has shown that high blood pressure in mid-life is a risk factor for cognition and memory problems in late life. As systolic blood pressure goes up, so does the risk of later cognitive difficulties. The study compared scores on cognitive tests given in old age with blood pressure readings taken up to 25 years before. Data from the study strongly suggest that early control of high blood pressure reduces the risk for cognitive impairment in old age.

Menopause, osteoporosis, and estrogen replacement therapy

Menopause, a universal phenomenon in women as they age, has been remarkably understudied. To rectify this situation, NIA, in collaboration with other organizations will continue to support the recently initiated multi-site, multi-discipline Study of Women's Health Across the Nation (SWAN). This study will gather critical information on the chronology of the biological and psychosocial factors related to the menopausal transition and the effect of this transition on subsequent health and age-related disease. SWAN will generate extensive data on menstrual cycle characteristics such as markers of ovarian function, nutrition, ethnicity, reproductive history, risk factors for diabetes, hypertension and cardiovascular disease, and physical activity.

Osteoporosis and its consequences, particularly vertebral and hip fractures, are a significant cause of frailty, morbidity, and mortality in old age. An estimated 25 million older Americans are currently affected by osteoporosis. Each year, thousands of older Americans, more women than men, are admitted to costly long-care facilities due to hip fracture. NIA-supported osteoporosis research includes clinical studies of age-related bone loss and fracture epidemiology, intervention trials to prevent or reverse bone loss, and basic laboratory studies on the biology of osteoporosis and bone cell function. Results of studies are encouraging as to the potential for preventing bone loss and related fractures. For example, newly published results further indicate the benefits of estrogen replacement therapy. Estrogen use and bone mass were assessed in more than 9,000 older women to determine the association between estrogen use and fractures. Current estrogen use was associated with a decreased risk for many fractures when compared with no estrogen. Data from the study indicates that for optimal protection against fractures, estrogen should be initiated soon after menopause and continued indefinitely; additional studies are needed to confirm these findings.

Laboratory studies will continue to generate the knowledge based upon which new or improved interventions can be designed to prevent or reverse bone loss. One recently completed NIA-supported study was designed to determine the ability of parathyroid hormone (PTH) to restore lost bone in animals at skeletal sites with moderate and severe bone loss. The findings from this study indicate that: (1) PTH is much more effective than antiresorptive

agents in restoring lost bone in the estrogen-deficient skeleton, (2) treatments with antiresorptive agents and PTH have no additional benefit over PTH alone, and (3) PTH fails to restore the most severe states of bone loss. The latter finding may provide insight into the failure of some osteoporotic patients to respond adequately to agents such as fluoride or PTH. Further animal studies are needed to build upon these findings before initiating human studies.

Strategies to prevent disability in older persons

Disability among older Americans is a major contributor to the more than $100 billion spent annually on long-term care in the U.S. Identification and reduction of risk factors in older people can make a critical contribution to quality of life and help prevent the disability that leads to long-term care. Recently completed studies typify NIA's approach to applying relatively simple, inexpensive technologies to prevent the complex and expensive problems brought on by disability. To identify older individuals with pre-clinical disabilities who may benefit from targeted interventions, NIA scientists have been evaluating functional assessment tests for use in screening. One such study of older non-disabled persons found that three short tests of physical performance abilities strongly predicted disability as much as four years in advance.

In another study, researchers conducted the first randomized controlled trial using the multiple risk factor approach to reduce falls in older people. The interventions targeted risk factors for falls, such as muscle weakness, postural hypotension, use of sedatives or multiple medications, and impairments of motion such as balance and gait. Participants received individualized treatment, including medication adjustments, strength and balance training, and instruction on safe practices to avoid lightheadedness and environmental hazards. Over a one-year follow-up period, the participants' rate of falls was reduced by nearly half compared to that of the control group which had received only social visits. The intervention was also shown to be cost-effective, particularly among individuals at high risk for falling. Since more than 250,000 hip fractures occur each year among persons over age 65, a substantial national cost savings should result from incorporating the tested strategy into the usual health care of older persons.

A four-year longitudinal study of women identified risk factors for hip fracture that allow targeting of very high-risk women for preventive strategies. There was a 25-fold difference in hip fracture rate between those women with two or fewer risk factors and normal bone density, and those women with five or more risk factors and low bone density. Maintaining body weight, walking for exercise, avoiding long-acting benzodiazepines, minimizing caffeine intake, treating impaired vision, and taking measures to maintain bone density are among the steps identified that may decrease hip fracture risk.

Older people often lose their independence and require long-term care after hospitalization for acute illnesses. In a recent study, older persons admitted to a teaching hospital for general medical care were randomly assigned to receive either usual care or special care including a carefully prepared environment, specific protocols for prevention of disability and rehabilitation, and planning for the

patient's return home. Without increasing in-hospital or post-discharge costs, the study showed that individuals who were helped to maintain or achieve independence in self-care activities were significantly more able than individuals receiving usual care to perform basic activities of daily living and less likely to need institutional long-term care at the time of discharge.

Elder-friendly environments

Human factors research adapts technologies and redesigns home and community environments to accommodate the sensory, motor, and cognitive abilities of older adults. This research results in devices and other components of the physical environment that better match the skill levels and abilities of users, helping to prevent injuries such as hip fractures, and remove physical and social barriers to independence. In addition to modifying structures to foster community access, this research targets design of kitchens, bathrooms, and security systems as well as medical devices, instructions, and labeling. Data from human factors research has already helped improve driving safety and product ease of use. Special emphasis is now being given to how older people use computers and other aspects of the office environment and new information technology as the U.S. workforce ages.

Health behaviors and behavior change over the life course

Many of the problems of aging result from behaviors that place individuals at greater risk for poor health, depression, and other negative outcomes. NIA-supported research has documented the benefits for health and longevity of adopting healthy lifestyle practices, such as physical activity and nutrition, and terminating health-impairing habits, such as smoking, even at a very old age. These benefits and recommended steps for lifestyle changes have been well publicized. Nevertheless, surveys report that older people often are not motivated to make the desired changes. Additional research is therefore being stimulated on topics such as the social and behavioral factors involved in initiating and maintaining health-enhancing behaviors, the role of health care providers in identifying risk and encouraging positive self-care practices, and the design of regimens appropriate for older people in community and institutional settings.

As one example, numerous studies have documented the influence of exercise and physical activity on longevity, even among the oldest old. Recent studies are also showing the benefit of regular exercise in reducing costly hospital stays and nursing home admissions. Current research advances document the importance of the social and behavioral context when studying physical activity and exercise among older adults. There is a growing consensus that exercise programs, to be effective, must be tailored to older people's functional status, also taking into account older people's beliefs and readiness to adopt and maintain new exercise habits. Home-based physical activity programs supervised by telephone contact represent one promising strategy for reducing barriers to regular exercise experienced by caregivers with demanding care responsibilities.

However, more than half of older people are sedentary or underactive. For men and women aged 55–84, the primary reason for not exercising was "lack of interest." The remaining leading reasons given by older people for inactivity vary by gender; women specified not having an exercise companion as a major reason. Among the men and women older than 85, fatigue, imbalance, and concerns about falls were the primary reasons given for not exercising. Understanding the reasons older people give for limiting or avoiding many moderate and vigorous physical activities is a critical step in designing exercise programs that will actually be incorporated into older adults' daily routines.

Health, work, and retirement: Medicare, technology, and rising health costs

As lifespan and vitality in later life have increased, more and more older people are able and willing to work productively well into late adulthood. According to NIA's Health and Retirement Survey, almost three-fourths of American workers now would prefer to phase in their retirement with a gradual shift to part-time work rather than stop working abruptly. The economic cost of workers who retire for 25 percent or more of their lives is already creating a considerable social and financial burden that will increase when the baby boomers retire. One major goal of this research is to understand the potential represented by workers over age 60, especially for part-time engagement in the workforce.

NIA's research on the economics of health and retirement focuses on the determinants and implications of economic well-being and health among older households as individuals age. Given the changing context of Medicare, pensions, and Social Security, many demographic, sociological, and health components of aging may be best understood in concert with economic analyses. Recently developed data indicate that Medicare hospital expenditure growth is not restricted to the highest-cost beneficiaries, but occurs across the board. Similar rates of hospital expenditure growth were found among high-cost and low-cost users, and similar growth rates occur among different age, race, and gender groups. Related research has found that more use of intensive procedures, many of which are relatively low cost has accounted for much of the growth in hospital expenditures for Medicare beneficiaries in recent years. Thus, more characterization of the specific technologies associated with rising expenditures might be particularly useful to guide strategies for cost containment. Research has made significant progress in demonstrating how some provisions of Medicare policy can actually result in relatively more frequent use of certain intensive procedures.

Other work has measured the effectiveness of alternative treatments in improving health outcomes. Results suggest that the use of invasive procedures for heart attack patients could be reduced by at least one-fourth with no consequences for mortality, but with savings of over $300 million per year in hospital costs alone. Similar studies will be carried out examining heart arrhythmias and major cancers and will include outcomes such as the subsequent development of medical complications.

INTRAMURAL RESEARCH PROGRAM

In addition to the extramural research supported through grant and contract awards, NIA directly funds and conducts aging-related research in its own intramural laboratories located at the Gerontology Research Center in Baltimore, Maryland, as well as on the NIH campus in Bethesda.

Characterization of normal aging

In order to understand the biological changes found in various disease states associated with old age, it is important that the changes occurring in normal aging be properly defined. At NIA laboratories, these changes are studied at the systemic, cellular, and molecular levels. One area of study focuses on identifying the mechanisms responsible for the progressive cell loss observed in the aging brain. This work is complemented by longitudinal studies assessing the general decline in total brain mass, the increases in cerebrospinal fluid volumes, and the difference in brain function observed in aging. Using a variety of testing methods, researchers at the NIA have found that blood flow to the brain during information processing differs significantly between healthy young and old subjects. It also has been reported that increasing age is associated with difficulty in shifting attention from one sense (sight, hearing, etc.) to another. These results complement other studies showing immediate visual memory impairment in older participants. One theory regarding the aging process and some age-associated diseases is that such changes occur as a result of accumulated damage to the genes and an inability to repair damage to the genes. Recent studies by scientists at NIA have demonstrated that gene repair declines with increasing age. Ongoing studies are clarifying the mechanisms of genetic repair which may lead to a better understanding of how repair mechanisms are altered by the aging process.

Factors that alter normal aging

In an attempt to improve the longevity and quality of life, scientist seek medical interventions that reduce the degenerative changes associated with aging. At the NIA, several laboratories have been successful in developing new strategies that appear to ameliorate some of the deleterious changes associated with aging. Scientists are examining risks associated with heart disease, estrogen hormone deficiencies, and dietary factors. For example, it is known that reducing caloric intake by about 30 percent lengthens the life span of laboratory rats and that these animals have a lower incidence of cancer and other diseases. Parallel studies are now being done in monkeys. These studies aim to identify the biochemical mechanisms that are altered by caloric restriction. It is hoped that the results from these studies will lead to development of interventions that can promote longevity and reduce age-associated diseases.

Novel treatment intervention strategies

Current treatment for many diseases associated with aging relies on the use of new or improved pharmaceutical compounds. How-

ever, other methods are also being explored including the use of gene therapy. Experimental gene therapy is being used to (1) replace damaged or " bad" genes, (2) add new (or previously deleted) genes, or (3) increase or decrease the production of critical proteins. NIA researchers are evaluating the possible roles gene therapy may have for treatment of age-associated diseases such as heart disease, central nervous system degeneration, and cancer. Studies are underway to investigate if gene therapy can be used to enhance blood circulation in animal models of chronic heart disease. Using laboratory rabbits bred for the study of heart disease, NIA scientists have successfully induced the growth of new coronary blood vessels to reestablish blood flow following heart attack. In another study, gene therapy is being tested as a way to combat the renarrowing of blood vessels following angioplasty, a technique used to open narrowed coronary arteries. Gene therapy is also being tested in laboratory animal studies of Parkinson and Huntington diseases. These studies inserted a dopamine (a neurochemical) receptor gene into cells normally deficient in doparnine receptors. The results from these studies were dramatic and showed that the cells with the inserted dopamine receptor gene produce new, normally functioning, dopamine receptors that improved motor control in the animals.

Alzheimer's disease

Although the exact cause of Alzheimer's disease (AD) is still unknown and therapeutic treatments remain limited, the pace of new discoveries continues to increase. One of the characteristic features of AD is the accumulation of amyloid in brain plaques, a defining pathologic change associated with the disease. NIH researchers have found a possible link between specific mutations in the amyloid precursor protein and the characteristic neuronal cell death that is seen in AD patients. Early detection studies have reported that identifiable cognitive changes are evident in patients who subsequently progress to develop clinically apparent AD. Similarly, specific cognitive changes have been identified with sustained attention and immediate visual memory tasks. Although it is unclear where the cellular and biochemical changes initially occur in the brains of AD patients, there is a consistent decrease in the level of acetylcholine (a key neurotransmitter). Scientists at the NIA are researching new drug therapies for treatment of AD which target this and other neurotransmitter systems. One such candidate agent, phenserine, dramatically improved the ability of laboratory rats that had memory-affecting brain lesions, to navigate a maze. This drug is now in preclinical toxicology testing.

Cancer

NIA researchers are studying cancers that increase in incidence with aging, including breast, prostate, and colon cancers. It is known that through normal cellular processes, oxygen is metabolized and forms several compounds (metabolites) which, if not cleared, appear to be toxic to cells. The accumulation of these metabolites appears to cause genetic damage that if left unrepaired by the cell, can seriously interfere with its ability to produce key proteins, and may initiate the transformation of a normal to a can-

cerous cell. One group of NIA researchers is specifically studying the role oxidative damage plays in breast cancer. Another group is studying the genetic programming that is thought to determine how breast cancer cells divide and proliferate. Collectively, these studies will advance our understanding of the genetic changes involved in breast cancer, which may help us understand the cause for other cancers such as colon and prostate.

Diabetes

Diabetes is a common illness among the elderly. It is the high glucose blood levels that lead to most of its clinical complications including blindness, vascular disease, and kidney disease. Adult diabetes is associated with a (1) diminished ability of the pancreatic beta cells to release insulin in response to blood glucose, and (2) reduced sensitivity of target tissues to insulin. Research efforts are directed at developing methods to lower blood glucose safely by restoring glucose sensitivity to beta cells and improving insulin action at the target cells. The NIA's interest in finding new ways to maintain the pancreatic beta-cell function in aged animals has led to the cloning of the genes that control beta-cell regeneration in mice. NIA investigators have also synthesized a new compound that increases insulin receptor signaling when introduced into intact cells. The development of such reagents that act as specific modulators of insulin receptor function may provide an effective way to treat diabetes.

Osteoporosis

Osteoporosis occurs frequently among the elderly, and is associated with increased morbidity and mortality. NIA researchers have discovered that there are several deficits associated with aged bone including reduced bone formation, reduced number of cells which make bone, and impaired production of the compounds needed to make and maintain bone. Researchers are investigating several interventions for treatment of osteoporosis including enzyme regulation, cell replacement, and growth factor supplementation. These scientists have found that anticollagenase (an enzyme) treatment can prevent the bone loss seen in certain laboratory animals used to study osteoporosis. It is hoped that similar studies in patients can be conducted to determine if such an approach will work as a treatment for osteoporosis in humans.

Baltimore longitudinal study on aging

The NIA manages and operates the Baltimore Longitudinal Study on Aging (BLSA) which began in 1958. To date, over 2,200 men and women research volunteers have participated. Recent studies using BLSA participants found that women who received estrogen hormone treatment made significantly fewer errors in short-term visual memory tasks than women not taking estrogen. Even women who had recently started estrogen treatment had less memory loss compared to women who never received estrogen therapy. These findings support a beneficial role of estrogen replacement on cognitive functioning in aging women. In prostate cancer, BLSA studies have altered the standard of practice. Rather than using an absolute value of serum levels of prostate specific antigen

(PSA) to screen for prostate cancer, data from BLSA studies have showed that the rate of change of PSA levels over time is a more specific indicator of disease. Restricting diagnostic biopsies to patients with PSA increases greater than 0.75 units/yr. can significantly reduce the number of biopsy procedures thereby reducing the total number and cost of unnecessary surgeries. Other studies using BLSA participants have provided equally valuable scientific information for other medical conditions including cardiovascular disease, and AD.

Research management and support

The research and management support (RMS) activity provides administrative support and scientific management for the extramural grants and contract awards, for NIA's intramural research program, as well as for overall program direction and policy development. The extramural initiatives supported by NIA have been developed and are managed by the extramural program staff funded by the RMS activity. Scientific staff members focus their efforts on developing research initiatives, reviewing, awarding, and administering grants/contracts on aging research and training to universities, hospitals, medical centers, and other organizations. The RMS mechanism also provides funding for facility support costs, related expense items essential to all research programs, and the mandated Alzheimer's Disease Education and Referral (ADEAR) Center which gathers, maintains, and disseminates information on Alzheimer's disease research and services. The center operates a toll-free telephone number to provide the latest information and referral services to health professionals. Direct support is also provided for the operation of several interagency coordinating committees related to aging research; NIA is chair or co-chair of these committees which include the Federal Forum on Aging, and the DHHS Advisory Panel on Alzheimer's Disease.

SECTION 2.—1998 SELECTED SCIENTIFIC ACCOMPLISHMENTS AND OPPORTUNITIES

ALZHEIMER'S DISEASE

Taking estrogen after Menopause may delay the onset and reduce the risk of Alzheimer's disease

A recently completed epidemiologic study of 1,124 women over age 70 provides the strongest evidence to date that taking estrogen after menopause may delay the onset and reduce the risk of Alzheimer's disease in postmenopausal women. At the end of the five-year study period, researchers found that 16.3 percent of the women who had not used estrogen developed Alzheimer's disease, while only 5.8 percent of the women who had taken estrogen developed the disorder. The age at onset of Alzheimer's disease was significantly later in life in women who had taken estrogen than in those who did not. Even women who took estrogen for as little as one year were less likely to develop the disorder. None of 23 women who were taking estrogen at study enrollment developed the disease. African-American, Hispanic, and Caucasian women who took estrogen benefited equally from estrogen replacement, as did women with varying educational and socioeconomic levels. Al-

though researchers are not sure how estrogen might be protective against Alzheimer's disease, studies suggest that estrogen promotes the growth and survival of neurons. Estrogen also may protect neurons from being injured by toxic substances. A prospective controlled clinical trial is planned to confirm the preventive effects of estrogen, to assess its safety, and to establish the dose and duration of estrogen required to provide any observed benefits in elderly postmenopausal women.

New mouse model developed for Alzheimer's disease displays hallmarks of disease

Researchers have genetically engineered the first animal model that exhibits both the behavioral and neuropathological symptoms of Alzheimer's disease (AD). The mice were produced by insertion of a gene, found in a large Swedish family with early-onset AD, that overproduces a protein (beta-amyloid precursor protein) which in turn produces the toxic protein (beta-amyloid) associated with amyloid plaques. Large numbers of these plaques are found in the brain tissue of AD patients, and their presence is used to diagnose the disease. While the transgenic mice appeared normal at two to three months of age, by 9–10 months they exhibited impaired ability in spatial learning tasks, and their brains contained dense deposits of amyloid plaques; both symptoms and plaques increased with age. This model provides an important research tool for understanding AD and for expediting means of testing potential drug therapies.

Study suggests causes of dementia may vary between cultures

While overall dementia rates seem to be generally similar among nations, reports of the relative frequencies vary between the two major subtypes of dementia, AD and vascular dementia. For some time, AD has emerged as the major subtype in most Western nations, and vascular dementia usually has been reported to be the dominant subtype in Japan and possibly in other Asian nations. To determine the basis for these disparate rates, NIA intramural investigators and others analyzed data on 3,734 participants aged 71 to 93 years, living in the community and in institutions, from the Honolulu-Asia Aging Study (HAAS), an epidemiologic investigation of aging and dementia being conducted in cooperation with NHLBI's Honolulu Heart Program. Cognitive performance was assessed using standardized methods, instruments, and diagnostic criteria. The researchers found that Japanese-American men living in Hawaii have a higher rate of Alzheimer's disease when compared with levels found in several studies of men of similar age living in Japan, but similar to rates of AD among European-ancestry populations. In contrast, the prevalence of vascular dementia is slightly lower in Hawaii than in Japan, but higher than rates of vascular dementia in European-ancestry populations. These results suggest that environmental factors which differ for men of Japanese ancestry living in Hawaii or in Japan influence the risk of AD and vascular dementia. Observations from this study will guide a search for environmental, genetic, and cultural factors that may influence the development of both Alzheimer's disease and vascular dementia.

Discovery of the genetic defect that causes Werner's syndrome may provide insights into biological aging processes

Werner's syndrome, a rare, recessive disease with clinical symptoms resembling premature aging, results in shortened life span and early susceptibility to a number of major age-related diseases, including atherosclerosis, cancer, diabetes, and osteoporosis. People with Werner's syndrome begin to have gray hair, lose elasticity in their skin, and develop cataracts while in their twenties, and most die before age 50. Werner's syndrome is therefore considered a partial model of human aging. Researchers have identified the genetic defect that causes Werner's syndrome in a gene on chromosome 8. The gene shows a significant similarity to those coding for enzymes that unwind paired DNA strands to prepare for repair, replication, or expression of genetic material. Scientists are speculating that the consequences of this defective gene may be related to the accumulation of DNA damage in the patient's cells, leading to the premature development of age-related diseases. Continuing research, including studies in transgenic mice to determine the biological function of the mouse gene that performs a function similar to the human Werner's syndrome gene, is aimed at determining the role of the gene product. Besides the importance of this finding to understanding Werner's syndrome, this work is expected to yield important insights into cancers, because of the array of rare tumors associated with Werner's syndrome; into other age-related diseases; and into the biological processes involved in aging.

Gene involved in regulating longevity in C. elegans *may provide clues to human aging*

Several "longevity genes" have been discovered in mammals and lower organisms. These genes have provided insight into biologic control of life span, and appear to make the animals less susceptible to environmental stresses. Normal development and longevity in a primitive worm, *C. elegans,* are regulated by the "*age-1*" gene. Lack of *age-1* activity in adult worms, due to mutations in the *age-1* gene, results in a doubling of adult lifespan. NIA-supported researchers determined that the normal *age-1* gene encodes the analogous gene in the worm of a key enzyme (phosphatidyl-inositol-3-OH-kinase) in cellular communication and signal transduction. The research team speculates that mutations in the *age-1* gene, resulting in lower levels of this enzyme, may trigger a biochemical program in the worm, ultimately leading to a decreased rate of aging and senescence. Often the effect of longevity genes depends upon the activity of other genes. Human genes that serve the same function as *age-1* have also been identified. The effect of these genes on aging is now being investigated. Continued research on *age-1* and other longevity assurance genes is viewed as a critical first step in the design of biologically-based interventions to promote human longevity, extend healthy life span, and improve the quality of life in older individuals.

Progress made in telomere genetics

Telomeres are segments of DNA that protect the ends of chromosomes from degradation and recombination. Study of these structures and the enzyme telomerase that causes telomeres to lengthen has relevance to broad issues of human aging and disease. There is a strong correlation between telomere shortening and senescence, the loss of cells' ability to divide and replicate. Senescence may play a central role in age-related disease processes and loss of function. The uncontrolled growth of malignant cells seen in cancer is in a sense the reciprocal phenomenon to senescence. The enzyme telomerase, which lengthens telomeres, is rarely active in normal cells, but is highly active in nearly all malignant or immortalized human cells that have been examined. Because of this link to cancer, understanding the role and regulation of telomerase activity in normal and malignant cells is of critical importance. During the past year, significant progress has been made toward understanding the nature of telomerase regulation. Scientists cloned the mouse and human genes for a portion of telomerase. The molecular cloning of the remaining (protein) segment of telomerase is under way. Recently, scientists reported on the expression of telomerase by normal human cells, including those of the immune system. Parallel initiatives are exploring whether and how telomerase governs the function and replication of tumor and immune cells.

MUSCULOSKELETAL RESEARCH

Antibiotic shows promise in treating osteoporosis

Osteoporosis is a major public health threat, and afflicts 25 million Americans, 80 percent of whom are women. The loss of bone mass due to osteoporosis contributes to 1.5 million fractures annually. NIA intramural scientists showed that minocycline, one of the tetracycline-like antibiotics, improves bone strength and formation and slows bone resorption in aged laboratory animals with surgically-induced menopause. While estrogen has been shown to prevent bone loss, minocycline appears to prevent bone loss and to increase bone formation, possibly achieving mineral density beyond premenopausal levels. Minocycline is inexpensive and, because it is not a hormone, may not exert the adverse effects seen with estrogen, such as those on the uterine lining. Researchers are now launching a one-year clinical trial to study the effects of minocycline in postmenopausal women with osteoporosis.

Exercise found to be safe and effective for knee osteoarthritis

The osteoarthritic diseases are the most prevalent disorders of the joint, with radiographic evidence seen in at least 70 percent of those over age 65. A clinical study, conducted at one of NIA's Claude D. Pepper Older Americans Independence Centers, suggests that people with osteoarthritis of the knee who exercise in moderation experience a significant improvement in physical functioning, and up to a 12 percent reduction in knee pain, compared with individuals who received health education only. In this 18-month study of 439 people over age 60, aerobic training was divided into a three-month walking program on an indoor track with a trained ex-

ercise leader, followed by a 15-month walking program in the home environment designed by the exercise leader. Participants exercised for 1 hour, which included warm-up calisthenics and stretching three times a week, during each phase. The resistance training program, involving dumbbells and cuff weights for strengthening both the upper and lower body, also consisted of a three-month facility-based program followed by a 15-month home-based program. The study concluded that exercise over a long period of time is safe as well as beneficial for older people with knee osteoarthritis. Further research is needed to understand how to prevent degenerative joint disease, a problem that afflicts tens of millions of older persons.

CARDIOVASCULAR AGING

Treatment found effective in preventing major cardiovascular events

After five years of treatment of isolated systolic hypertension with low doses of diuretic-based anti-hypertensive medication, men and women aged 60 and older had fewer strokes, heart attacks, and other coronary heart disease, as well as lower overall mortality, than those given a placebo. The reduction in the rate of major cardiovascular disease with treatment was 34%, and the absolute risk reduction was twice as great for diabetic as compared with nondiabetic patients, reflecting the diabetic patients' higher risk. Increased use of the relatively inexpensive medication to treat isolated systolic hypertension could save substantial hospital and medical costs.

Exercise boosts cardiac fitness in sedentary older people

Cardiovascular diseases remain a main cause of disability and the leading cause of death of older Americans, accounting for approximately 50 percent of deaths in persons age 65 and older. Declines in cardiovascular reserve capacity with aging lead to a greater prevalence and severity of cardiovascular disease in older individuals. With age, the hearts of otherwise healthy sedentary people gradually lessen their ability to increase their heart rate and ejection fraction (the percentage of blood leaving the heart during each heart beat) during acute exercise. While it has become clear that aerobic exercise conditioning can partially offset age-associated cardiovascular declines, even for those who begin at age 60 or 70, scientists questioned whether the beneficial effects of aerobic exercise training in older individuals depend upon their prior fitness level. A team of investigators led by NIA intramural researchers started with two groups of men at opposite ends of the fitness spectrum and inversely varied their training status. A group of sedentary older men exercised for 24 to 32 weeks, and a group of endurance-trained older athletes stopped their exercise for 12 weeks. Researchers measured the subjects' aerobic capacity and cardiovascular performance at the beginning and end of the study using a treadmill exercise test and a graded bicycle exercise test of the heart's ability to pump blood. With training, the sedentary men increased their ejection fraction from 73 to 81 percent and their $VO_{2\,max}$, a measure of a person's aerobic capacity, by 11.3 percent; the detrained athletes had decreases in these functions that were qualitatively and quantitatively similar in magnitude, although di-

rectionally opposite. The results show that even the most sedentary older men can improve cardiac function through aerobic exercise, and that age and prior fitness level is no barrier to achieving these gains.

Vascular stiffness contributes to cardiovascular disease

Recent findings have identified the stiffening of large and medium-sized elastic arteries, such as the aorta, as a potential risk factor for cardiovascular morbidity in the elderly. This stiffening occurs in healthy older people; but for approximately half of Americans age 65 and older, the degree of vascular stiffening may become great enough to lead to isolated systolic hypertension, a major risk factor for stroke, and to other cardiovascular disorders. Research into the biological and physiological mechanisms involved in vascular stiffening may suggest effective treatments, and may enable physicians to determine when the degree of vascular stiffening passes from the normal to the pathological range, thus helping to prevent its negative effects. NIA is promoting research to reduce both vascular stiffening and cardiovascular risk factors associated with lifestyle, as well as to understand age-related changes in cardiac function, circulatory hemodynamics, blood pressure regulation, and lipid metabolism, all significant contributors to morbidity and mortality in the elderly.

AGING AND CANCER

Test provides earlier prediction of prostate cancer

An estimated 81 percent of persons affected by prostate cancer are 65 years and older. It was projected that, in 1996, approximately 317,000 men would be diagnosed with prostate cancer, and approximately 41,400 men would die of this disease. African-American men experience the highest incidence of this cancer in the world. In a recent advance, NIA intramural investigators have found that prostate cancer may be predicted up to ten years before it is diagnosed, by comparing, over time, the ratios in a man's blood of free (not bound to a protein) to total prostate specific antigen (PSA, an enzyme produced by the prostate gland). Repeating measurements of both free and total PSA and calculating the ratio between the two over time may allow the physician to predict whether prostate cancer is developing, and to distinguish it from benign prostatic hypertrophy.

Breast cancer a major health problem in elderly women

Women age 65 and older have an incidence rate more than six times that of women under age 65, and mortality rates show similarly dramatic increases with age. Nevertheless, no comprehensive guidelines for prevention, diagnosis, pretreatment evaluation, or treatment have been formulated that take into account the multiple health problems and special needs of older women. There are also insufficient data from clinical trials about the effect of breast cancer treatment on older women, and minimal research on how to encourage older women to increase their participation in cancer prevention practices. With the projected increase in the aged fe-

male population in the U.S., the need for findings relevant to breast cancer control is becoming more critical.

AGING AND DISABILITY

Chronic disability rates continue to decline in the elderly U.S. population

Between 1982 and 1994, the prevalence rates for chronic disability in the U.S. elderly population, ages 65 and older, declined 3.6 percentage points, based upon data from the 1982, 1989, and 1994 National Long Term Care Surveys. The decline is highly significant statistically, and occurred at nearly all levels of disability. In absolute terms, the differences in prevalence suggest that there are approximately 1.2 million fewer disabled persons in 1994 than would have been predicted if the 1982 rates had remained the same; that is, 7.1 instead of 8.3 million persons. The declines in disability rates are linked to differences among birth cohorts, with those in the oldest cohorts (born 1888 to 1897) having much higher rates of disability than younger cohorts. This suggests that declines in disability are likely to continue with new cohorts. The findings have implications for health care costs and needs for health care resources. Given the higher acute and long term care service needs of the disabled elderly population, Medicare, Medicaid, and private expenditures may be significantly lower than if declines had not occurred. NIA plans to analyze the dynamics underlying this apparent decline in old-age disability in order to enhance this trend.

For people 80 years old or older, life expectancy is greater in the United States than in Sweden, France, England, or Japan

In many developed countries, life expectancy at birth is higher than in the United States. In contrast, once American men and women celebrate their eightieth birthday, they are likely to live about 1 to 2 years longer than their counterparts in other highly developed countries. The study, comparing life expectancy at advanced ages in the U.S., Sweden, France, England, and Japan, shows that in 1987 American women lived 9.1 years and American men lived 7 years, on average, past age 80. The investigators calculated life expectancies for people at the age of 80 as well as the probability of surviving five years at ages 80 through 95. Counter to demographers' expectations, regardless of how the data were analyzed, life expectancy at age 80, and survival probabilities from 80 to 100, were significantly greater for white U.S. men and women than for the oldest cohorts in the other countries studies. The findings highlight U.S. success in increasing survival of the very old and suggest that Medicare and the overall U.S. health care system, as well as comparatively higher education among American elderly, may play a role in extending U.S. life expectancy in later years.

Benefits of exercising encourage a healthy lifestyle in old age

Studies such as the Institute's Baltimore Longitudinal Study of Aging and the Claude D. Pepper Older Americans Independence Centers have shattered stereotypes about inevitable physical and mental decline with age, and have demonstrated the benefits of exercise, even for people well into their nineties. Regular physical ex-

ercise has been shown repeatedly to improve health and functioning. A study of more than 13,000 men and women found that, at any age, even modest amounts of regular exercise, equivalent to walking 30 to 60 minutes a day, can significantly improve health, prevent disease, and reduce the risk of death. A more recent study by the same investigator of more than 9,000 men aged 20 to 82, which compared death rates in physically unfit men who remained unfit over five years with physically fit men who became fit during the same period, found that unfit men aged 60 and over who became fit had death rates 50 percent lower than those who remained unfit. These findings have helped form the basis for recommendations, where health permits, for older people to adopt a more active lifestyle.

BEHAVIORAL AND SOCIAL RESEARCH

Individualized care in nursing homes produces positive effects on residents

An intervention program consisting of interdisciplinary care planning, family support, and activity programming for persons with moderate dementia produced a decrease in psychiatric and behavioral problems, as well as a decrease in daytime levels of verbal agitation, when compared with nursing home residents not exposed to the intervention. This study is representative of NIA research designed to improve the long-term care of older people in institutional and residential settings. In addition, a recent survey of 16,876 nursing facilities documented a doubling in the number of special care units (such as special units for dementia, rehabilitation, and AIDS) between 1991 and 1996. Investigators who studied this trend suggest that special care units may be an organizational strategy for concentrating limited resources where needs and benefits to the resident and facility may be the greatest. NIA is encouraging development of cross-site analyses of special care units and outcome studies of long-term care in residential settings.

Study identifies factors that influence compliance with medical regimens

A significant number of persons with diabetes, arthritis, and hypertension demonstrate misunderstanding of recommended medical treatments. In a recently reported study, middle-aged and elderly members of a health maintenance organization were randomly selected on the basis of whether they had arthritis, hypertension and/or diabetes, and then interviewed to evaluate self-reports of treatment as compared to the treatment regimens recorded by their physicians. Patients with arthritis demonstrated a greater likelihood to misunderstand treatment regimens (50%) than patients with diabetes or hypertension (30%). The study showed that several factors influenced the lack of patient understanding of treatments, and highlighted the influence of doctor-patient relationships on older clients' understanding of and compliance with treatment regimens. Physician style (shared decision making, tolerance of non-compliance) was related to how well individuals with arthritis and hypertension understood prescribed treatments. Age contributed to reported inaccuracies for diabetic patients only, with older

age groups demonstrating the least complete understanding when compared to other diabetic patients. The implications for health and well-being for the group who misunderstood information, particularly the arthritis patients, warrant continued research on best strategies to educate patients about their recommended treatment regimens, especially in light of the growth of managed care arrangements which provide a new context for doctor-patient interactions.

SECTION 3.—RESEARCH SPONSORED BY OTHER NIH INSTITUTES

NATIONAL EYE INSTITUTE

Age-related macular degeneration

Age-related macular degeneration (AMD) is the leading cause of new blindness in persons over age 65. Based on recent advances, research is being directed toward the identification of genes which, when mutated, contribute to the development of AMD. Techniques of molecular genetics allow scientists to examine "candidate" genes to determine whether mutations occur with a higher frequency in persons affected by AMD than in unaffected persons. While such mutations might not by themselves be sufficient to cause AMD, they may contribute to the occurrence of AMD in the presence of other mutant genes or environmental insults. Scientists in the NEI intramural program will screen approximately 1000 patients and age-matched control individuals from the Age-Related Eye Disease Study (AREDS). AREDS is a large, multi-center, research program designed to improve our understanding of the predisposing factors, clinical course, and prognostic factors of AMD and cataract. DNA samples from the study's participants will be examined for mutations or sequence variants in a group of well-characterized genes known to be involved in a fundamental retinal function or to cause retinal disease. A repository of genetic material from the AREDS participants is being created to test candidate genes for AMD as they are identified. Extramural investigators will have access to this resource. Finding a genetic basis for AMD will increase our understanding of the pathophysiology of the disease and assist in developing new treatments or methods of prevention.

Prevention of complications from age-related macular degeneration

Another new direction for age-related macular degeneration research has been through NEI support for the Complications of Age-related Macular Degeneration Prevention Trial (CAPT). This trial will assess the safety and effectiveness of laser treatment in preventing loss of vision among patients at high-risk for developing age-related macular degeneration. In addition to the primary outcome, which is visual acuity loss, quality of life will be assessed. Twenty-five clinical centers will conduct the study over the next five to seven years.

Low vision education program

The NEI staff, through its National Eye Health Education Program (NEHEP), has begun the development of a new Low Vision Education Program. The primary target audience for this program is people age 65 and older with a visual impairment that interferes

with daily activities. Focus groups were conducted across the country to learn more about the knowledge, attitudes, and practices of this target audience as they relate to how their visual impairment affects their lives and whether they know about and access services and devices available. Planning meetings were held with an ad hoc working group and NEHEP Partnership members to define program messages and strategies as well as to identify avenues to strengthen this public-private partnership. Based on recommendations from these groups, the following strategies will be utilized: (1) a broad-based consumer media campaign; (2) an education kit with resources for health care professionals, social service organizations, and other groups to use in educating the target audience; and (3) an outreach program, including traveling exhibits, for both the general public and health care and social service professionals that work with and serve older adults. It is anticipated that the program will be launched during FY2000.

NATIONAL LIBRARY OF MEDICINE

Seniors enter medical cyberspace

The National Library of Medicine (NLM), co-sponsored a project to "train trainers" of senior citizens from around the country in how to access health information on the Internet. NLM coordinated the joint project with two other components of the NIH—the National Heart, Lung, and Blood Institute and the Office of Research on Women's Health—and the HHS Health Care Financing Administration and the Office of Disease Prevention and Health Promotion.

The project was administered by the SPRY (Setting Priorities for Retirement Years) Foundation in Washington, D.C. SPRY is a nonprofit national organization devoted to research and education efforts on senior citizens health and retirement issues.

The train-the-trainer project, consisted of a series of intensive workshops for 21 trainers of senior citizens from a dozen states (AZ, DC, FL, IA, MA, MD, MO, NC, NY, OH, PA, VA). The program gave special emphasis to trainers from public libraries, senior centers, and subsidized housing who work with low income and minority seniors. After they participate in the training in Bethesda, the trainers returned home to train a minimum of 10 seniors per site. A multiplier effect is expected to raise that number substantially as more and more senior citizens find that they can retrieve valuable information about their health.

Seniors cruise the net for health information

NLM joined the National Heart, Lung, and Blood Institute, the Office of Research on Women's Health, and the Department of Health and Human Service's Health Care Financing Administration to release findings of a jointly sponsored project to "train trainers" of senior citizens from around the country in how to access health information on the Internet.

Results of the project indicate that training had a positive impact on seniors' confidence in using computers and the Internet, in conducting consumer health information searches online, and in sharing health care information with doctors, families and friends. The

report also found that seniors can learn to use the Internet and don't want to be left behind on the information superhighway. Two-thirds of those who searched for health information on the Internet talked about it with their doctors, and more than half indicated they were more satisfied with their treatment as a result of their search. The findings suggest that the "train the trainer" approach may be used successfully to enable older adults to access credible medical information on the Internet.

The report, "Internet Train-the-Trainer Program for Older Adults," may be requested from the Library's Office of Communications and Public Liaison.

OFFICE OF RESEARCH ON WOMEN'S HEALTH

In conjunction with the NIA, the Office of Research On Women's Health (ORWH) supports a variety of studies through the Research Enhancement Awards program including:

Functional decline in victimized older women

The specific aim of this research is to identify risk factors for functional decline in an observational cohort of urban community-dwelling older women who are followed for 12 months after experiencing violence or the threat of violence. The long-term goal of this project is to develop intervention strategies to prevent functional decline in victimized older women based on identified risk factors.

Age, ethnicity and clinical trials participation

The goal of this research is to develop barrier models for participation of older women, particularly minority older women, in prevention clinical trials for heart disease and breast cancer. The purpose is to improve recruitment strategies to ensure greater participation by this under-represented group of women in prevention clinical trials. The effects of ethnicity will also be tested and added to the limited database on the decision-making processes of older adults.

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

Several research areas supported by the National Heart, Lung, and Blood Institute (NHLBI) are closely entwined with improving the health of older people. For example, heart failure affects about 4.8 million Americans—3.4 million age 60 or older, and heart disease is a major health concern of postmenopausal women. The following describes some recent NHLBI-supported research results of special relevance to older Americans.

Treatment for systolic hypertension in the elderly

Clinical trial results from the Systolic Hypertension in the Elderly Program (SHEP) have revealed that treatment with a low-dose diuretic antihypertensive drug cuts in half the risk that an older person with isolated systolic hypertension will develop heart failure. The study also found that treatment with diuretics decreases the risk of heart failure even further—by 80 percent— among individuals who have already had a heart attack. Rates for both fatal and nonfatal cases of heart failure dropped dramatically with treatment. Even patients aged 80 and older benefited from treatment.

The potential public health impact of these findings is considerable, because millions of Americans over age 60 have isolated systolic hypertension, and more than 3 million have blood pressure as high as that treated in the SHEP trial.

Designer estrogens

Investigators have found that at least two independent pathways exist by which estrogen can act on the blood vessels in mouse models, and that a variety of estrogen-like compounds produce different effects. Estrogen replacement therapy has been recommended for postmenopausal women as a preventive measure against heart disease, but it has unwanted side effects such as a slightly increased risk of breast cancer and an increase in deep-vein thrombosis. The research findings suggest that it may be possible to develop specific "designer estrogens" that could provide safe, acceptable protection against heart disease while, at the same time, reducing or eliminating unwanted and potentially costly health side effects.

Lifestyle interventions to reduce blood pressure

The Trial of Nonpharmacologic Interventions in the Elderly examined the extent to which weight control and reduction of dietary sodium diminished the need for antihypertensive medication in older patients. Researchers found that reducing sodium intake by about 30 percent or losing an average of about 9 pounds reduced the need for drug treatment substantially; an even greater benefit was derived from combining these two strategies, and no adverse effects of either lifestyle intervention were observed. These results, which indicate that older patients can successfully change life-long habits, provide strong impetus for programs using such approaches to improve control of high blood pressure.

First estimate of lifetime risk for developing heart disease

The lifetime risk for developing coronary heart disease (CHD) has been estimated for the first time by researchers at the NHLBI Framingham Study. The risk is high at all ages: 50 percent of men and 33 percent of women aged 40 and under will develop CHD. Even among those 70 years old, 33 percent of men and 25 percent of women will develop CHD in their remaining years of life. It is clear that to improve overall public health, increased attention must be focused on this fast-growing older segment of our population.

NATIONAL INSTITUTE OF NURSING RESEARCH

Americans expect to live longer than earlier generations, but these additional years should be lived well—with health and independence intact for as long as possible. Nursing researchers are exploring interventions with this goal in mind in order to preserve cognition and the ability to function, and to maintain or improve quality of life.

The National Institute of Nursing Research (NINR) supports studies that address these and other health issues of the older population, including prevention of illness and disability; health promotion strategies; management of the symptoms of chronic diseases, including pain; interventions for family caregivers to help

them maintain their own health as well as that of their ill relatives; and end-of-life issues to ensure that dying patients receive compassionate and life-affirming health care that promotes comfort and dignity.

Among the findings of FY 1997–98 are studies that help older people recover after hospitalization for chronic illnesses, such as heart attack and respiratory failure, and that address end of life issues that promote comfort and dignity throughout the dying period.

- Older people with common medical and surgical problems, who were discharged from the hospital following treatment, realized a significant improvement in their health at reduced costs to the health care system. A study tested a transitional care model using a multidisciplinary team. The model involves comprehensive discharge planning, including determination of patient care needs outside the hospital, and follow-up in the home by advanced practice nurses specializing in geriatrics. Findings indicate that six months after discharge, only 20% had multiple hospital readmissions versus 14.5% for controls. Per-patient days in the hospital were fewer for the group receiving transitional care—1.53 versus 4.09 for controls, and the costs of post-discharge health services for the 177 patients in the group were about $600,000 lower than for controls. When considering the number of frail older people hospitalized each year with similar conditions, the potential benefits to the patient and savings to the health care system could be substantial.
- As the lead Institute to coordinate research on end-of-life palliative care, NINR is committed to a focus on improving interactions between the health care system and those who are dying. Multidisciplinary research led by an NINR scientist has explored what patients and families want and expect in end-of-life care. The investigator found that families in the study whose relatives were dying in hospitals were willing to stop aggressive treatment if the condition was terminal and if they believed high quality comfort care would be provided. They reported that in the last week of life, their relatives had more pain and other physical distress than the health care team realized. They also expressed concern about the views of some health care professionals that death is a medical failure. Patients without adequate health insurance were found to lack access to good palliative care and were likely to require expensive hospitalization for symptoms that could have been managed by hospice or home-health nurses. These research results help guide current and future NINR research directions in management of pain and other physical stressors, caregiving training, bioethical issues and the decision-making processes of patients, their families, and clinicians.

NATIONAL CENTER FOR RESEARCH RESOURCES

The National Center for Research Resources (NCRR) creates, develops, and provides a comprehensive range of human, animal, technological, and other resources to enable biomedical research advances in aging research. NCRR serves as a “catalyst for discov-

ery" for NIH-supported investigators by supporting resources in four areas: Biomedical Technology, Clinical Research, Comparative Medicine, and Research Infrastructure.

Conversion of electron microscope images to three-dimensional structures

Using an intermediate high-voltage electron microscope and a massive parallel supercomputer, investigators at an NCRR-supported microscopy and imaging research center at the University of California, San Diego, have devised a method to derive three-dimensional structures from electron microscopy images. With the electron microscope, researchers obtained images of tissue specimens at various depths from the surface, roughly comparable to cutting a sausage in thin slices. After converting the stack of "slices" to computer-readable data, the supercomputer used a process called electron tomography to derive a three-dimensional image from the multilayer flat images. Used in conjunction with other advanced tools, electron tomography provides unprecedented details of structures inside cells. The new method may provide fresh approaches to detect and treat Alzheimer's and Parkinson's diseases as well as other diseases that involve buildup of harmful structures inside cells.

Scientists home in on gene for age-related sight loss

By studying a large family affected by macular degeneration, NCRR-supported researchers at the Oregon Health Science University have homed in on the location of a gene that causes this inherited form of eye disease. Millions of Americans suffer gradual fading of central vision known as age-related macular degeneration and 7 percent of those older than 75 have progressed to the late stage of this disease. This research will help develop tools for early detection and ultimately lead to treatments than can eliminate the disease.

Estrogen replacement and blood pressure in postmenopausal women

Coronary heart disease (CHD) is the leading cause of death for women in the United States, responsible for one-quarter million deaths each year. One in nine women who are between 45 and 65 years old has clinical evidence of CHD, but one in three women older than 65 years has CHD. Although there is a significant risk reduction for CHD in postmenopausal women receiving estrogen replacement therapy, estrogen's effect on blood vessel stiffness—a contributing factor to hypertension—and blood pressure sensors in blood vessels was unknown. Now researchers at the NCRR-supported General Clinical Research Center at Columbia University have shown that short-term estrogen treatment decreased vascular stiffness and increased the sensitivity of the pressure receptors, producing significantly lower blood pressure both during rest and during isometric exercise. These findings provide a basis for better treatment of cardiovascular risk factors in older women.

Vitamin D deficiency

A study of 290 patients at an NCRR General Clinical Research Center in Boston found that more than half had too little vitamin

D in their bodies. Vitamin D deficiency, common among older people, can lead to fractures and can also exacerbate arthritis, affect immune function, and lead to muscle weakness and a bone condition called osteomalacia. This study supports other scientific evidence that most people should take vitamin D supplements.

Slowing progression of Alzheimer's disease

In a multicenter trial involving several NCRR-supported General Clinical Research Centers, researchers studied whether treatment to reduce accumulation of free radicals would slow progression of Alzheimer's disease. More than 300 patients with moderately severe Alzheimer's disease received the antioxidants selegiline, vitamin E, a combination of the two, or a placebo daily for two years while being monitored for disease progression. Compared to those receiving placebo, the time to severe disease deterioration was prolonged by 150 to 200 days in patients receiving antioxidant treatment.

Early diagnosis of Parkinson's disease using SPECT imaging

Destruction of dopamine-producing nerve cells is a principal cause of Parkinson's disease, which affects about one million Americans, according to the American Parkinson Disease Foundation. Using nonhuman primates, scientists at the NCRR-supported New England Regional Primate Research Center have discovered a chemical that selectively binds to dopamine transporters and can be detected using a novel imaging procedure—single-photon emission computer tomography. This procedure can diagnose Parkinson's disease much earlier than before by measuring the level of the chemical that transports dopamine in nerve cells.

Pathology of aging in rhesus macaques

For 14 years, a researcher at the NCRR-supported Wisconsin Regional Primate Research Center evaluated the causes of death of 175 macaques aged 20 to 37. His research showed that while these macaques lived in controlled and sheltered environments, they still died of many of what are considered the most common human geriatric diseases, including colon cancer, hardening of the arteries, and brain plaques similar to Alzheimer's. According to his research, the diseases appear to be brought on by old age and predisposing genetic factors, versus environmental or lifestyle factors.

NATIONAL HUMAN GENOME RESEARCH INSTITUTE

The National Human Genome Research Institute (NHGRI) funds a project to address the ethical and policy issues regarding current genetic susceptibility testing for late-onset Alzheimer disease (AD). It also addresses ethical aspects of ongoing gene testing in families with early-onset AD. The project's Community Advisory Board and National Study Group will take up the following tasks: examine current testing developments in AD genetics, their pre-symptomatic applicability, and clinical usefulness; consider costs of testing, potential testing pool, and justice in access to testing; address potential impact of susceptibility testing on private long-term care insurance industry; develop ethics guidelines for the use of susceptibility tests that detect a form of the apolipoprotein (ApoE) gene;

develop ethics guidelines for the use of tests that detect an alteration in the amyloid precursor protein (APP) gene; and develop recommendations for the Alzheimer's Association in ensuring public understanding of test developments. In addition, a pilot questionnaire study of population attitudes toward ApoE susceptibility testing, to be implemented in Chicago, is included. This project is conducted in collaboration with the national Alzheimer's Association.

NHGRI also funds efforts to create the tools and infrastructure to locate genes contributing to human disease. These efforts often focus on diseases that may affect people in later life, such as Alzheimer's disease, heart disease, diabetes, and many common cancers such as prostate and breast cancer. The Center for Inherited Disease Research (CIDR), located on the Bayview campus of Johns Hopkins University, supports disease research by providing high-throughput genotyping services, study design advice, and sophisticated database assistance to research efforts attempting to identify genetic loci and allelic variants. CIDR is a joint effort by eight NIH institutes: National Cancer Institute (NCI); National Institute of Child Health and Human Development (NICHD); National Institute on Deafness and Other Communication Disorders (NIDCD); National Institute on Drug Abuse (NIDA); National Institute of Environmental Health Sciences (NIEHS); National Institute of Mental Health (NIMH); National Institute of Neurological Disorders and Stroke (NINDS); and the National Human Genome Research Institute (NHGRI) serving as the lead. A more complete description of CIDR, including application procedures, is available at: http://www.cidr.jhmi.edu/

NATIONAL INSTITUTE ON DEAFNESS AND OTHER COMMUNICATION DISORDERS

Hearing loss

Presbycusis, the late onset of progressive hearing loss, is one of the most common health problems in the elderly. Hearing loss of at least 25 decibels occurs in only 1 percent of young adults between 18–24 years of age; however, this figure increases to 10 percent of individuals between 55–64 years of age and to approximately 50 percent in octogenarians. Scientists supported by the National Institute on Deafness and Other Communication Disorders (NIDCD) are examining the underlying molecular and cellular events that lead to the loss of hearing function with age. By characterizing age-related alterations in the inner ear, scientists will foster the development of a rationale for designing pharmacological gene-mediated therapies for some forms of hearing impairment, including presbycusis.

Stroke

NIDCD-supported scientists are taking a cross-linguistic approach to language development, language processing, and language breakdown in aphasia. Aphasia is a language disorder that results from damage to portions of the brain that are responsible for language; it usually occurs suddenly, frequently the result of a stroke or head injury. The disorder impairs both the expression and understanding of language as well as reading and writing. For

centuries, language was believed to be a fixed, special-purpose "organ" that is neatly localized in one or two well-defined parts of the left side of the brain. Studies of patients with aphasia and other types of disorders of language function are revealing that language is a plastic, broadly distributed, dynamic system that is organized in time as well as space. These studies are valuable in developing the highest level of function and communication for persons with aphasia.

Using functional magnetic resonance imaging (fMRI), NIDCD-supported investigators have documented reorganization of brain activity after treatment for acquired reading disorders following a stroke. fMRI performed during a reading task before and after treatment indicated a shift in brain activation from one area of the brain to another, showing that it is possible to alter brain activity patterns with therapy for acquired language disorders.

Additionally, stroke or head injury may affect the coordination of the swallowing muscles or limit sensation in the mouth and throat. NIDCD supported-scientists are conducting research that will improve the ability of physicians and speech-language pathologists to evaluate and treat swallowing disorders.

NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES

Researchers supported by the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) use powerful research tools to acquire and apply new knowledge to studies on some of the most challenging diseases affecting older Americans today. Many of these diseases have troubled patients and their health care providers for decades, but each year significant discoveries have brought researchers closer to fully understanding, diagnosing, treating, and ultimately preventing these common, crippling, costly, and chronic diseases, which greatly compromise quality of life. These disorders include the many different forms of arthritis and numerous diseases of joints, muscles, bones, and skin.

Osteoarthritis

Osteoarthritis, the most prevalent disease of the joints, is characterized by progressive degeneration of the cartilage, primarily affecting the hip and knee joints. It is predicted that osteoarthritis will affect at least 70 percent of the population over 65. In a clinical trial funded by the NIAMS and the NIA, researchers began studying the effects of the antibiotic doxycycline on osteoarthritis. Certain antibiotics, such as doxycycline, inhibit the enzymes that degrade cartilage. The NIAMS also started an initiative to study the biological responses of cartilage and bone to various mechanical forces and how those responses affect the onset and progression of osteoarthritis.

Rheumatoid arthritis

NIAMS researchers and their colleagues studied rats with an autoimmune inflammatory arthritis that resembles human rheumatoid arthritis. Through genetic analyses of rats with different disease susceptibilities and severity, they found that the genetic basis in the inflammatory arthritis bore a striking similarity to

what is known about the genetics of rheumatoid arthritis. Multiple genes are involved in both diseases making it more complicated for researchers to reveal the causes of the disease and design effective therapies. The researchers located several of the particular genes that affect arthritis susceptibility and severity in rats. One of these genetic loci has been previously linked to other autoimmune diseases and may play a role in the phenomenon of autoimmunity.

The NIAMS began support for the North American Rheumatoid Arthritis Consortium to comprehensively study the genetic aspects of rheumatoid arthritis in a national project involving 800 sibling pairs affected with rheumatoid arthritis.

The Institute also issued a Request for Proposals to encourage studies of technology and methodology of gene therapy relating to arthritis and skin diseases. Finally, the NIAMS took the initiative in developing a roundtable forum of major participants interested in rheumatoid arthritis and osteoarthritis: the NIH, the FDA, and representatives from industry, academia, and voluntary and professional groups.

Osteoporosis

Osteoporosis, a disease characterized by low bone mass and structural deterioration of bone tissue, is the leading cause of bone fractures in postmenopausal women and older people in general. The NIAMS cosponsored the NIH Postmenopausal Estrogen/Progestin Interventions trial that reported that postmenopausal women taking hormone replacement therapy gained significant amounts of bone mass at the hip and spine. In other work, investigators showed that estrogen induces "programmed cell death" in the cells (osteoclasts) responsible for bone degradation, and that supplemental calcium prevents spine fractures in elderly women.

The NIAMS also partnered with other NIH Institutes in issuing a Program Announcement for the study of the basic biology, epidemiology, prevention, and treatment of osteoporosis and osteoporosis-related fractures in men.

NATIONAL INSTITUTE OF MENTAL HEALTH

The National Institute of Mental Health (NIMH) program of research on aging includes studies in the basic sciences as well as research in neurobiology and brain imaging, clinical neuroscience, treatment assessment, psychosocial and family studies, and service systems research. Studies involve mental disorders with initial occurrence in late life as well as illnesses that begin in early adulthood but continue throughout the life course. Major areas of research focus are the psychiatric aspects of Alzheimer's disease and related dementias, depressive disorders, schizophrenia, anxiety disorders, and sleep disorders.

Alzheimer's disease

An estimated 4 million Americans age 65 and older suffer from Alzheimer's disease or other forms of dementia. An important area of NIMH research on Alzheimer's disease focuses on genetic factors. NIMH-supported researchers recently identified a new gene mutation strongly associated with the risk of developing late-onset Alzheimer's disease, the most common form of the brain disorder.

Using the NIMH Genetics Initiative Alzheimer's disease sample (a collection of DNA samples and clinical information from hundreds of families in which more than one individual has Alzheimer's), and new methodology, the researchers found that a particular gene mutation, alpha-2 macroglobulin-2 (A2M–2), was significantly associated with Alzheimer's. The finding, if replicated, will offer important clues into the disease process and will help discern the role of additional genetic and environmental factors involved in creating vulnerability to the disease.

Depression

Nearly 5 million of the 32 million Americans age 65 and older suffer from depression. Significantly, many late-life depressions are amenable to treatment. Recent NIMH-supported studies provide important information relevant to depression treatment in the elderly. One study compared treatment response among elderly depressed patients who had their first depressive episode early in life and those whose first episode occurred at age 60 or older. Although age at onset did not affect overall efficacy of treatment, patients who had experienced their first depressive episode early in life took 5–6 weeks longer to reach remission. This slower treatment response, combined with the increasing rates of suicide among the elderly, particularly among males, indicates that elderly depressed patients with early-onset illness need particularly careful management.

Another study found that a combination of pharmacotherapy and psychotherapy is extremely effective in preventing recurrence of depression among the elderly. Older adults who received interpersonal therapy and an antidepressant medication during a three-year period were much less likely to experience recurrence than those who received medication only or therapy only. Positive long-term outcome, however, was less durable in individuals above age 70 than in those below this age.

Suicide

Older Americans are disproportionately likely to commit suicide. Comprising only 13 percent of the population, they account for 20 percent of all suicide deaths. The rate of suicide is particularly striking among white males aged 85 and older: in 1996, the most recent year for which statistics are available, the rate in this group was 65.4 per 100,000—about six times the national U.S. rate of 10.6 per 100,000. Researchers interviewed families and associates of elderly individuals who committed suicide to determine the state of mind of such individuals just prior to their suicide. The investigators concluded that major depression was the sole predictor of suicide in this study population. At least 70 percent of those who committed suicide had visited primary care providers within a month of the suicide. The findings point to the urgency of enhancing both the detection and adequate treatment of depression in primary care settings as a means of reducing the risk of suicide among the elderly. NIMH is currently funding a multi-site study in the elderly to test the effectiveness of an intervention aimed at improving the recognition of suicidal ideation and depression by primary care providers.

NATIONAL INSTITUTE OF DENTAL AND CRANIOFACIAL RESEARCH

The National Institute of Dental and Craniofacial Research (NIDCR) is interested in structures and functions of the craniofacial complex which are critical throughout the human lifespan. This is evident in behaviors that range from the most basic necessary to sustain life to the complex behaviors encompassing interpersonal communication. For example, both the cleft lip or palate that is frequently found in infants with craniofacial birth defects and the lack of saliva that accompanies Sjogren's syndrome in older adults, pose threats to both normal feeding and speaking behaviors.

Oral and pharyngeal cancer

Ninety five percent of oral cancer cases are diagnosed in individuals older than 40 years of age, with an average age at diagnosis of 60 years. Recent NIDCR-sponsored findings have increased knowledge of tumor suppression mechanisms for oral cancers. Understanding the genetic basis for cancers afflicting the head and neck provides the opportunity to develop new diagnostics and preventive strategies.

Salivary gland dysfunction

Many older Americans are affected by salivary gland dysfunction which can result from cancer therapy, Sjogren's syndrome, and treatment with any of the more than 500 drugs known to impair salivary function. Oral dryness interferes with normal functions of talking, chewing and swallowing and, deprived of the protective properties of saliva, puts patients at high risk for dental and oral infections. NIDCR scientists have developed an animal model of gene therapy to restore salivary gland function and work on developing an artificial salivary gland is in progress.

Bone and hard tissues

NIDCR has a long history of support for research on bone and hard tissues. A new mouse model of osteoporosis, developed by NIDCR scientists, provides a means to test new therapies for prevention of osteoporosis. In addition, recent findings on bone morphogenetic proteins (BMPs) and cartilage-derived morphogenetic proteins (CDMPs) offer promise for therapeutic regeneration of bone and cartilage tissue.

Pain

It is estimated that about 22 percent of adults have experienced some form of orofacial pain within the last 6 months. Orofacial pain is a major component of Bell's palsy, trigeminal neuralgia, fibromyalgia, and diabetic neuropathy. A recently developed animal model of gene therapy to stimulate production of beta-endorphins may form the basis of a future treatment for chronic pain conditions.

Arthritis

It is projected that by the year 2020, nearly 60 million Americans will experience some form of arthritis. Using "naked DNA", NIDCR

scientists have developed an animal model of gene therapy for arthritis. They observed dramatic reductions in inflammation and joint degeneration in arthritic rats.

NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) supports basic and clinical research in several major diseases that disproportionately afflict older Americans. Several major research initiatives are yielding advances in the understanding and treatment of these debilitating disorders.

Diabetes

The risk of type 2 diabetes, the most common form of this devastating disease, rises dramatically in middle age and takes a major toll on older people. Of the nearly 15 million Americans who have type 2 diabetes, 6.3 million are age 65 or older. Among Americans age 65 and older, 18.4 percent have diabetes, with the highest prevalence in minority groups.

The most important risk factors for type 2 diabetes are obesity, insulin resistance, physical inactivity, impaired glucose tolerance, and a history of gestational diabetes or a family history of diabetes. The Diabetes Prevention Program, a clinical trial taking place in 26 medical centers nationwide, seeks to determine whether type 2 diabetes can be prevented with diet and exercise or medication. The study will find out whether lowering blood sugar levels in people with impaired glucose tolerance (IGT) can prevent or delay development of type 2 diabetes. People with IGT, a precursor to diabetes, have high blood sugar but not high enough to be diagnosed as having diabetes. The study has nearly completed its recruitment goal of 3,000 volunteers.

NIDDK also supported a multicenter clinical trial in patients with type 2 diabetes, the United Kingdom Prospective Diabetes Study, that recently demonstrated the importance of good blood sugar control in slowing the, eye, nerve, and kidney damage caused by diabetes. These findings reinforce the results of the nationwide Diabetes Control and Complications Trial, which showed similar benefits in type 1 diabetes.

Type 2 diabetes is a multifactorial disease with a significant genetic component. A genetic mutation has been implicated in a rare form of type 2 diabetes called Maturity-Onset Diabetes of the Young (MODY), but the vast majority of type 2 cases follow a complex pattern of inheritance, and the genes underlying most cases remain elusive.

Scientists supported by NIDDK are making major gains in understanding the genetic factors that control both pancreatic development and insulin secretion, and such research may lead to ways of producing insulin-secreting cells that could be transplanted into patients with diabetes. Recently, the NIDDK issued a Request for Applications to encourage research in this area.

Renal disease

Kidney disease of diabetes mellitus; (KDDM) is the single most common cause of end-stage renal disease. Several avenues of

NIDDK research are approaching the problem of how KDDM develops and how it might be arrested before serious organ damage occurs. Results of a major NIDDK-supported clinical trial indicate that a heart medication used to control high blood pressure can significantly slow the progression of KDDM.

End-stage renal disease (ESRD) is a major public health problem whose incidence has doubled in individuals aged 65–74 and more than doubled in those over 75 years of age in the last decade. A major cause of ESRD in the elderly is hypertension. The Institute is currently supporting a multicenter clinical trial, "The African American Study of Kidney Disease and Hypertension," that will help determine the treatment most likely to retard progression of hypertensive kidney disease.

In addition, a recently completed five-year study of the U.S. Renal Data System (USRDS), the Dialysis Morbidity and Mortality Study, will help clarify what causes excessively high rates of illness and death among elderly ESRD patients. The Hemodialysis Clinical Trial is addressing the effects of increased dialysis dose as well as the effects of high-flux dialysis in treating elderly dialysis patients.

Osteoporosis

Parathyroid hormone (PTH), an important regulator of bone metabolism, may have potential benefits for the treatment of osteoporosis, a major public health problem that inflicts significant pain and disability in older people. Therapeutic use of glucocorticoid hormones such as prednisone causes a severe form of osteoporosis. Last year, a small-scale clinical trial in women with osteoporosis due to long-term use of glucocorticoids showed that treatment with PTH resulted in increased bone mineral density in the lumbar spine, hip, and arm. Another small trial in young women with estrogen deficiency as a result of treatment for endometriosis showed that PTH administered once a day for a year increased bone mineral density in the spine, while stopping loss of bone mineral in other bones including the hip and arm. These preliminary findings raise the hope that PTH administration may have therapeutic value for people with osteoporosis.

Prostate disease

Prostate diseases affect over 2 million American men. NIDDK is studying the genes and other factors that may affect prostate growth and prostate cancer. The Institute currently supports five George M. O'Brien Urology Research Centers, three of which are dedicated to studying benign and malignant prostate cell growth and the mechanisms that regulate the expression of prostate specific antigen (PSA) and tumor progression. The Chronic Prostatitis Collaborative Clinical Research Study is a large multicenter trial designed to gather specific clinical information on prostatitis that will allow testing and evaluation of new treatments for this problematic disorder.

Enlarged prostate or benign prostatic hyperplasia (BPH) affects more than 50 percent of men past age 60 and 80 to 90 percent of men past age 80. NIDDK supports basic research on prostate cell structure and function in BPH, biomarkers of BPH, and prostate

stem cells and stem cell genes. Clinical research focuses on a major multicenter clinical trial. The Medical Therapy of Prostatic Symptoms (MTOPS) study is assessing the effectiveness of two different drugs in preventing the progression of symptomatic BPH.

NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

The National Institute of Child Health and Human Development (NICHD) supports a broad research portfolio that has far-reaching implications for the entire human lifespan. Listed below are examples of the Institute's initiatives on aging-related research highlighting major studies in a range of important topics.

In keeping with the Institute's commitment to advancing women's reproductive health, the NICHD is supporting research on the effects of maternal aging on the process of meiosis in the human oocyte. Women attempting to reproduce beyond their prime reproductive years often experience an increased incidence of "nondisjunction" (failure of chromosomes to separate) in their oocytes. Recent advances in molecular cytogenetics permit researchers to identify the specific chromosomes that most frequently separate improperly. Continued research in this area will provide information on the mechanisms responsible for the effect of maternal aging on reproduction. Since more women are attempting to become pregnant later in life, studies within this area can lead to strategies to foster healthy pregnancies in women as they age.

The transition to menopause encompasses a wide ranging set of changes for women. In this area, NICHD-supported scientists are conducting a range of research:

- Biodemographic models of reproductive aging in women are being developed. This work offers a unique opportunity to explore women's transition to menopause by linking it to their prior menstrual, reproductive, and health-related histories. Research will yield new insight into the patterns and causes of variation in women's experience of the menopausal transition and will provide a foundation for future epidemiological studies of the health consequences of different patterns of reproductive aging.
- Uterine fibroids (leiomyomata), benign tumors of smooth muscle cells and fibrous connective tissues that develop within the wall of the uterus, are responsible for approximately 200,000 hysterectomies in the U.S. each year. When women with fibroids reach the perimenopausal or postmenopausal periods, they face a troubling treatment dilemma. If they wish to preserve their uterus, they may change the risk of increasing fibroid growth by taking hormone replacement therapy (HRT) during this time period. Yet, the benefits of using HRT are substantial, particularly for women at risk for cardiovascular disease or osteoporosis. The NICHD is supporting a randomized controlled trial to investigate the extent to which a commonly prescribed, low-dose, HRT regimen stimulates fibroid growth and proliferation in both Black and White postmenopausal women. The results of this study will be of significant value to a growing number of fibroid patients reaching menopause and the clinicians who treat them.

Physical disability is one of the most prevalent major health problems in the aging population, and the associated need to enhance our scientific understanding of medical rehabilitation is great for all age groups, particularly the elderly. As the home to the National Center for Medical Rehabilitation Research, the NICHD is sponsoring research on the following:

- Researchers are trying to identify the major risks and other factors associated with physical disability, the use of medical services, and the subsequent costs of care. A major goal is to assess trends and changes in these factors as individuals progress from young adulthood through old age.
- Researchers are trying to develop treatments that can substantially reduce the incapacitating motor deficit of many elderly stroke patients and improve their independence. In particular, scientists are developing a technique to strengthen the upper limbs of stroke patients. The goal is to find a way to improve motor function, amount of limb use, and range of motion shortly following and in the long term after a stroke.
- Through continuing and innovative work under a Small Business Innovation Research Grant, investigators have developed a new approach to correct urinary incontinence. This condition affects more than 13 million people in the U.S. and costs the health care system over $ 10 billion per year. Using recombinant DNA technology, scientists have developed special polymers that, when injected around the urethra, effectively strengthen the damaged muscles found in patients with stress incontinence. This discovery holds tremendous promise for restoring independence and improving the quality of life for millions of men and women, particularly elderly women who may experience incontinence due to estrogen loss in menopause.

The prevention of osteoporosis, a disease that is most prevalent in older women, is dependent upon maximizing peak bone mass and minimizing subsequent bone loss during childhood and adolescence. NICHD research in this area includes a number of studies, including the following:

- Scientists are investigating the influence of calcium supplementation using dairy products and skeletal loading on bone mineral accretion in the preadolescent. In particular, researchers are investigating the effect of a school-based exercise and calcium intervention program on bone accrual at the lumbar spine, at the proximal femur and for the total body, in a group of elementary school children.
- Researchers are conducting genetic linkage analyses in seven families to help identify a region on their chromosome that could account for low bone mineral density. This study will define the importance of two genes that effect the inheritance of bone density, and will provide the basis for susceptibility testing in the population.

Dementia is a condition commonly associated with aging. Early diagnosis and improved knowledge about the etiology of dementia are important in developing improved and appropriate interventions. In this area, the NICHD, with its research targeting mental retardation and developmental disabilities is focusing on Down syndrome (DS). Although adults with DS are believed to be at in-

creased risk for dementia of the Alzheimer's type, the natural history of dementia in these individuals is not well understood. Researchers are comparing adults with DS and with other forms of mental retardation to better understand the differences and similarities in their neuropsychological and behavioral function. Results from this study will contribute to improved diagnosis, treatment and prediction of risk for dementia.

NATIONAL INSTITUTE ON NEUROLOGICAL DISORDERS AND STROKE

The National Institute of Neurological Disorders and Stroke (NINDS) supports major research programs on a number of nervous system disorders such as Parkinson's disease, Alzheimer's disease, and stroke that occur over the course of the lifespan but that increase in incidence with age.

Parkinson's disease

Parkinson's disease research focuses on many areas. Some investigators are studying the functions and anatomy of the motor system and how it regulates movement and relates to major command centers in the brain. Scientists looking for the cause of Parkinson's disease will continue to search for possible environmental factors, such as toxins that may trigger the disorder, and to study genetic factors to determine which defective genes play a role. While genetic defects have been identified that cause Parkinson's in some families, the search for new genes will continue through FY 1999 in response to an NINDS program announcement on the genetics of Parkinson's disease. For the great majority of patients under 50 years of age, the origins of the disease are genetic; for those over 50, genetic factors are not significantly important. Understanding the genetic forms of the disease will help scientists understand the mechanisms of action in the brain which cause Parkinson's symptoms to appear.

Another major approach focuses directly on the study of cell biology. To capitalize on the genetic gains, whole new areas of research techniques are being used by NINDS grantees, including making transgenic mice that often mimic the clinical disease, using yeast two-hybrid systems to identify interacting proteins, and investigating pathological functions or related proteins in simple organisms. Further work to clarify the role of Lewy bodies, alpha-synuclein and other proteins, and to determine their relation to the disease, has begun.

NINDS intramural scientists are studying the regulation of brain receptors for dopamine. The ability to regulate these receptors on cells grown in culture will allow more efficient screening of experimental drugs for Parkinson's disease, resulting in more effective treatments with fewer side effects. NINDS intramural scientists are also studying several alternative non-dopaminergic drugs that would mimic the actions of dopamine, targeting the specific dopamine receptors involved in Parkinson's disease, but avoiding the receptors involved in the negative side effects now experienced by nearly half of the patients receiving levodopa.

NINDS grantees are currently conducting five therapeutic trials to determine the efficacy of several interventions, including: the surgical implantation of fetal tissue: pallidotomy for advanced Par-

kinson's disease; the effects of coenzyme Q10 in early disease; and the effects of earlier or later administration of levodopa. The NINDS Intramural Division is also conducting several clinical studies on Parkinson's disease. The NINDS Experimental Therapeutics Branch is conducting follow-up clinical studies to investigate the neuroprotective effect of a new free radical scavenger, OPC–14117. NINDS scientists are investigating the mechanisms of cell death in the substantia nigra and are seeking ways to successfully interdict this process. They are also studying the mutated form of synuclein that triggers cell death, and the transcription factors that stimulate the premature death of dopamine cells. NINDS is supporting both intramural and extramural studies to evaluate the results of surgical implantation of deep brain stimulators.

Attempts to replace doparnine cells by transplantation of fetal tissue are also ongoing; this procedure has provided benefits to at least some patients. Transplants of cultured cell lines and stem cells should eventually replace fetal tissue with further study.

With NINDS support, two new genes have been identified that provide clues to the pathogenesis and mechanisms of Parkinson's disease. One gene carries the blueprint for a protein called alpha-synuclein, earlier identified as one of the components of "amyloid plaques," the abnormal clumps of proteins in the brains of Alzheimer's patients. Under NINDS and NHGRI sponsorship, scientists are now pursuing this lead to discover the role of synuclein in Parkinson's disease and to find other defective genes that may contribute to Parkinson's disease in other families.

In another follow up study, scientists demonstrated that synuclein is found in Lewy bodies of the most common, non-inherited form of Parkinson's disease. Lewy bodies are abnormal clumps of material in certain parts of the brain that are a hallmark of Parkinson's disease and are also found in certain other diseases. This finding supports the idea that inherited Parkinson's disease may provide insights about the more common forms of the disease. The finding also complements a growing body of evidence that abnormal aggregations of proteins, such as those found in Lewy bodies of Parkinson's disease, amyloid plaques of Alzheimer's, and the "nuclear inclusions" in Huntington's disease, are not just disease markers but actively harmful in damaging the brain. Stopping or slowing the formation of these aggregations may present an entirely new approach to preventing the death of brain cells in neurodegenerative diseases.

NINDS-supported scientists and their collaborators have shown that a growth factor derived from glial (supporting) cells of the nervous system (GDNF) supports and protects dopamine neurons in vivo. They have also demonstrated that recombinant GDNF has similar effects. This growth factor preserves cells from destructive effects and repairs cells after damage.

Intramural NINDS scientists found that when the experimental drug Ro 40–7592 is added to the standard drug treatment for Parkinson's disease, levodopa-carbidopa, symptom relief is prolonged by more than 60 percent. This promising new drug that blocks the breakdown of dopamine and levodopa would allow patients to take fewer doses and smaller amounts of levodopa-carbidopa and to decrease the problems of the wearing-off effect. Ro 40–7592 was ap-

proved by the Food and Drug Administration and is now available for physicians to prescribe for their Parkinson's patients.

NINDS and the NHGRI sponsored a workshop on the genetics of Parkinson's disease in December, 1997, at Cold Spring Harbor that has continued to spark research interest. Encouraged by the workshop, additional work is being focused on understanding the products and processes that are affected by the genes involved in familial, and perhaps other, forms of Parkinson's disease.

Stroke

The NINDS supports a large number of basic and clinical studies on stroke. This research program includes investigations of stroke risk factors, especially those that are treatable; genetic causes of stroke; the biology and pathology of certain brain cells involved in stroke; the events that damage and kill nerve cells in the minutes and hours following a stroke and the brain's reaction to them; and the cellular and molecular interactions among blood, cerebral vessel and brain cells involved in stroke. Other studies are looking at brain imaging to improve diagnosis; the use of targeted protective agents for compromised cells; and ways to isolate, purify, and characterize neuropeptides that confer tolerance to hypoxia and ischernia. Studies to identify potential new treatments and clinical trials of surgical and medical methods to prevent stroke are also a major part of the NINDS stroke research program.

Additional studies to find ways to facilitate recovery of function; determine the points at which reversible and irreversible damage occur; identify the fundamental biochemical processes that may lead to DNA damage and repair in the brain; determine the role of angiogenesis in CNS cell and tissue survival; and find growth and trophic factors that can accelerate the repair and recovery of specific types of neurons are also being supported.

Several major clinical trials are either ongoing or have recently been completed. They include:

- The North American Symptomatic Carotid Endarterectomy Trial (NASCET). This trial is attempting to determine whether surgery (carotid endarterectomy) can prevent stroke in selected patients who have had a stroke or experienced warning signs of stroke. In 1998, this study determined that, for symptomatic patients with stenosis in the 50–69% range, surgery may be worthwhile.
- Carotid Stenting. Carotid endarterectomy, whether done in symptomatic or asymptomatic patients, has a low but important rate of serious complications, including stroke and death. A new method has been developed for treating carotid stenosis through less invasive angiographic techniques using metallic stents to hold the vessel open after the stenosis has been expanded from within the arterial system. A planned trial will compare carotid angioplasty and stenting to the standard endarterectomy, which has been shown to be effective for many patients in the NASCET and earlier ACAS trials.
- Aspirin and Carotid Endarterectomy (ACE). The purpose of this trial was to determine if aspirin reduces surgical complications from carotid endarterectomy. Patients received one of four daily doses of aspirin, and were followed for 3 months

after surgery to record all strokes, deaths, and changes in functional status. The results of the study indicated that aspirin did not have a major effect on the outcome of this form of surgery.

• NINDS Stroke Trial. This trial determined that, if tissue plasminogen activator (t-PA) is administered within three hours of the onset of the more common form of stroke, there is a 33 percent increase in the number of patients that are free of disability three months post-stroke. The trial also showed that effective treatment can be carried out in a variety of health care settings. The findings were so convincing that the FDA approved t-PA in 1996 for the emergency treatment of ischemic stroke six months after the clinical trial results were published.

• Trial of Org 10172 in Acute Stroke Treatment (TOAST). For many years, it has been common practice to administer anticoagulants such as heparin to patients immediately after a stroke in an effort to limit brain injury and to prevent recurrent strokes. However, this study showed that, for most patients, this therapy may not work. These results may bring about a change in the way the medical community treats stroke.

• Warfarin Antiplatelet Recurrent Stroke Study (WARSS). This is an ongoing study to find out whether warfarin or aspirin is more effective in preventing a second stroke in persons who have had a prior ischemic stroke.

• Antiphospholipid antibodies and stroke study (APASS). APASS investigators are studying the blood levels of anti phospholipid antibody (aPL) in patients to see if it is a cause of ischemic stroke.

• Stroke Prevention in Atrial Fibrillation III (SPAF). The initial NINDS Stroke Prevention in Atrial Fibrillation (SPAF) study was launched to evaluate the effectiveness of aspirin and warfarin to prevent an initial stroke in patients with atrial fibrillation, a common type of irregular heartbeat associated with an increased risk of stroke. Results from the study revealed that both drugs were so beneficial that the risk of stroke was cut by 50 to 80 percent. The results suggested that 20,000 to 30,000 strokes could be prevented each year with proper treatment. The SPAF study was continued to determine long-term effects from treatment and to determine the relative benefits of warfarin compared to aspirin. Results showed that a daily adult aspirin can provide adequate stroke prevention for many of the people with atrial fibrillation. For most people with atrial fibrillation under 75 years old, and for those over 75 with no additional stroke risk factors such as high blood pressure or heart disease, aspirin provided adequate protection with minimal complications. This is good news for patients with atrial fibrillation, since warfarin is significantly more expensive and must be monitored regularly. SPAF III studied the remaining atrial fibrillation patients with additional risk factors for stroke and for whom warfarin had been shown effective. The study clearly demonstrated the benefit of standard warfarin therapy over the combination therapy of aspirin and

fixed-dose warfarin in these high-risk patients. An ongoing component of the SPAF III study is assessing the reliability of the method of identifying atrial fibrillation patients at low risk for stroke, for whom anticoagulation therapy may be avoided or postponed.

• Women's' Estrogen for Stroke Trial (WEST). In order to investigate the interrelationship of estrogen and stroke, this trial has been studying the use of estrogen to decrease the risk of stroke in post menopausal women who have already had a stroke. When follow-up is completed, significant new information will be available to those treating this special population.

• Vitamin Intervention for Stroke Prevention. This ongoing trial seeks to determine whether the addition of a multivitamin with high dose folic acid and B6 and B12 can reduce recurrent cerebral infarction and coronary heart disease in patients with non-disabling cerebral infarction: The role of homocysteine in heart disease and stroke has received public attention in the public news media, and NINDS supported a study which showed high homocysteine concentrations and low concentrations of folate and vitamin B6 are associated with an increased risk of stenosis in the elderly. Folate levels in the American diet have recently been increased in an attempt to prevent birth defects caused by abnormal brain development in the unborn children of women with low levels of the vitamin folate. The trial will see if even higher levels of supplementation will reduce stroke and heart disease without causing serious problems.

• African American Antiplatelet Stroke Prevention Study. This ongoing major clinical trial seeks to evaluate the use of the drug ticlopidine compared to aspirin to prevent stroke in an African American population. Both medicines are considered "antiplatelet" medications, but they work by different mechanisms. The reason for this trial is that previous studies suggest that African-Americans may have a more favorable response to ticlopidine than the general population. An additional aspect of this trial is making the community more aware of the importance of stroke prevention and early treatment of high blood pressure and other modifiable risk factors.

• Motor Recovery in Treatment of Patients with Recent Stroke Using Amphetamine and Rehabilitation Medicine. NINDS intramural scientists are conducting this clinical study to determine if the administration of the drug dextroamphetamine linked with intense physical therapy will accelerate motor recovery after stroke. Additionally, the study will allow identification of the brain regions activated in associated with recovery.

Findings from other NINDS-supported research include preliminary results of a study by researchers at the University of Cincinnati Medical Center suggesting that the number of strokes in the United States may be dramatically higher than previously reported. According to the study, which was published last year, approximately 700,000 first-ever and recurrent strokes occur in the United States every year, a figure substantially higher than the previous estimate of 500,000 strokes a year. Earlier studies count-

ed only the number of first-time strokes, a traditional method of epidemiological study. Yet people who suffer strokes frequently experience more than one stroke, and their recurrent strokes are often more disabling and deadly than their first stroke. The Greater Cincinnati/Northern Kentucky study included strokes in individuals who had experienced more than one stroke. In the new study, the incidence rate of stroke in 1993 was found to be 1.6 times greater for blacks than the overall age and sex-adjusted incidence rate of stroke among the white population of Rochester Minn. during 1985-1989. Blacks under the age of 65 in the Greater Cincinnati study had a two to four times greater incidence of first-ever stroke compared with the rates among whites of similar age in the Rochester population; however, age-specific stroke incidence rates were similar for elderly blacks and whites.

At the time of a stroke, some brain cells are immediately killed; others brain cells are at risk of dying in the days following a stroke. One mechanism of cell death is believed to be an overabundance of calcium ions. Now, a protective mechanism has been discovered that may help to delay cell death. A protein, Bcl-2, has been previously identified as a critical regulator of the "cell suicide" program by which the body can eliminate unwanted cells. A new study by an NINDS-supported investigator now shows that Bcl-2 seems to help fight cell death by enhancing the ability of nerve cell mitochondria—structures found within many cells—to sequester large amounts of calcium ions.

There is overwhelming evidence that harmful "free radicals" are involved in the pathophysiology of cerebral ischernia. Although the molecular mechanisms are not completely understood, strong evidence supports the principle that cerebral ischernia and the restoration of blood flow cause an increase in oxygen free radicals and can damage cell membranes and function. Recent evidence from and NINDS-supported study now shows that programmed cell death is mediated via genetic damage caused by elevated oxygen free radicals during and after cerebral ischernia. The hydroxyl radical, a known mutagen, causes DNA damage and induces DNA repair synthesis through the expression of a repair enzyme.

NINDS leads the Brain Attack Coalition, an umbrella group of national organizations dedicated to reducing the occurrence, disabilities, and death associated with stroke. On behalf of the Coalition, NINDS has established a web site (www.stroke-site.org) that features an acute stroke "toolbox" which consists of guidelines, protocols, and critical pathways to guide the development of stroke teams, along with links to other organizations with information about the treatment of stroke.

NINDS published the Proceedings of the 1996 National Symposium on the Rapid Identification and Treatment of Acute Stroke, which provided guidelines on how to respond rapidly to acute stroke. Copies have been distributed in to EMS physicians, state EMS program directors, EMS dispatchers, emergency departments, etc., to establish better emergency treatment procedures.

Other public education activities include the distribution of the booklet "Preventing Stroke," along with a book mark with risk factors and symptoms of stroke, at health fairs and to libraries in inner cities where a high number of people are African-American.

All stroke public information materials are now posted on the World Wide Web.

NINDS has also begun an effort to reach out to the Hispanic community with information about stroke, its symptoms, and how to seek medical help. "Preventing Stroke" and the stroke bookmark are available in Spanish. In addition, as part of a new NIH initiative, NINDS staff worked with Dr. Elmer Huerta, who broadcasts health information on 49 Spanish language radio stations in the U.S. and Puerto Rico, to prepare a message about stroke that was broadcast on March 9, 1998.

Alzheimer's disease

NINDS supports a broad array of studies directed toward understanding how Alzheimer's disease develops. Identifying the causes of dementia and methods of early diagnosis are major goals. To achieve understanding of these areas, the NINDS focuses on the pathogenesis of Alzheimer's disease. NINDS-funded researchers are looking at the organization of memory in the cerebral cortex of mammals, the structure and function of neurons in this system, the pathology of these neurons including plaques and tangles, and genetic factors. They also seek to develop and use animal models of the disorder.

Continued research involving neurotransmitters is also integral to the study of diseases such as Alzheimer's disease. As more is learned about the disorder, researchers are discovering their role in normal brain activity as well as in disease. Areas of research include studies to characterize neurotransmitters and their receptors, and therapies that modulate neurotransmitter systems.

The NINDS Intramural Laboratory of Adaptive Systems is continuing its efforts to develop a successful laboratory test that may be a useful as a diagnostic test for Alzheimer's disease.

Investigators do not yet know how the various factors that may play a role in Alzheimer's disease interrelate. Scientists are focusing on a number of research issues, including:

- Clarifying the role of presenilins. Current challenges include identifying additional mutations; determining how presenilins 1 and 2 are produced and processed, how they interact with cellular systems, and whether they play a role in the development of late-onset Alzheimer's disease; learning the effect of different presenilin mutations on APP metabolism; and studying patterns of presenilin 2 expression at the cellular level over the life span of both healthy people and those with Alzheimer's disease.
- Developing animal models. Ongoing research to develop animal models (e.g., for presenilins and FAD) is aiding researchers' understanding of the pathology of the disease and helping them identify treatments to retard disease progression. For example, comparing behavioral and anatomical approaches, researchers are trying to determine whether the appearance of the plaques in transgenic mice carrying human APP mutations comes before or after learning and memory problems.
- Determining the relationship of beta-amyloid to Alzheimer's disease. Alzheimer's disease researchers are extend-

ing the search for additional cellular receptors affected by beta-amyloid; working to understand the pathways involved in oxidative stress and beta-amyloid production and looking for substances that may protect against these processes; and attempting to determine whether defects in the system that moves electrons within cells contribute to brain diseases.

- Understanding why cells weaken and die. Much research is under way to determine why cells stop functioning properly and die in Alzheimer's disease. Some researchers now believe that cells previously thought to be dying may actually be resting. If further research confirms this theory, scientists may be able to find substances that will reactivate cells.
- Improving diagnostic methods. Scientists are seeking to validate and refine current diagnostic and autopsy procedures; establish whether differences in disease patterns in Alzheimer's disease reflect genetic- and gender-based factors; determine how age affects the clinical and pathological criteria; find tests to determine which people with mild cognitive impairment will progress to clinical Alzheimer's disease; develop biochemical and molecular methods for quickly diagnosing Alzheimer's disease and compare the results to data obtained from currently recommended methods; develop and standardize qualitative methods; and determine the nature and significance of white matter pathological changes in Alzheimer's disease.
- Identifying pharmacological treatments. Researchers are initiating studies of a variety of types of pharmacological treatments for Alzheimer's disease, including comparative, combination, and sequential approaches. Studies are under way to determine the effectiveness of estrogen, anti-inflammatory agents, and other treatments.

The pace of discovery in Alzheimer's disease research has been most impressive in genetic studies. Scientists supported by the NIA and the NINDS found two genes linked to FAD, presenilins 1 and 2. The two genes produce similar proteins with unknown functions. In analyzing gene sequences, scientists recently have shown that proteins produced by these two genes have chemical structures that are similar to that of a protein involved in the signaling and development of cells in a species of worm (c. elegans). The powerful genetic techniques that can be applied in this species may help researchers understand the function of these proteins. Additional recent studies suggest that these proteins are made by neurons throughout the brain and that they play a role in the processing of other proteins such as APP.

The NINDS Intramural Experimental Therapeutics Branch is conducting a clinical trial of a new anti-dementia medication, CX 516 (Ampakine), for patients with mild to moderate dementia. Scientists are studying CX 516 for properties that improve thinking and memory.

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1K01AG00816-01	MARTIN, JUDY C PHYSICAL DISABILITY/QUALITY OF LIFE POST MENOPAUSE	10-01-97/	UNIVERSITY OF TENNESSEE MEMPHIS	
1K01AG00820-01	LEONARD, KIMBERLY J PATTERNS OF SMOKING IN POST MENOPAUSAL WOMEN	12-01-97/	HOWARD UNIVERSITY CANCER CENTER	
1K01AG00821-01	KEYS, PATTY J OSTEOPOROSIS MENOPAUSAL WOMEN:A PHARMACOECONOM STUDY	03-01-98/	WAYNE STATE UNIVERSITY	
2R01AG10565-04	HEINRICH, GERHARD AGING AND NEUROTROPHINS	04-01-97/	EAST BAY INSTITUTE FOR RSCH & EDUC	
1R01AG13389-01A2	NEUHAUS, JOHN M STATISTICAL METHODS FOR LONGITUDINAL AND CLUSTERED DATA	04-01-97/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R01AG13794-01A2	GLASGOW, RUSSELL E INCREASING PHYSICAL ACTIVITY IN A MEDICARE HMO	07-01-97/	OREGON RESEARCH INSTITUTE	
1R01AG14026-01A1	ACKERMAN, PHILLIP L KNOWLEDGE STRUCTURES AND ADULT INTELLECTUAL DEVELOPMENT	09-30-97/08-31-98	REGENTS OF THE UNIV OF MINNESOTA	130,489
1R03AG14800-01	FRIEDBERG, LEORA PARTIAL RETIREMENT AND PART-TIME WORK AMONG THE ELDERLY	07-01-97/	UNIV OF CALIF SAN DIEGO	
1R03AG14872-01	SANDEFUR, GARY D WORK, FAMILY, AND HEALTH: PRELIMINARY ANALYSES WITH THE	07-01-97/	UNIVERSITY OF WISCONSIN	
1R03AG15251-01	GUO, XIAOHUI CULTURE, AGE, AND GENDER EFFECTS IN EVALUATORS' IMPRESS	09-30-97/	FLORIDA INTERNATIONAL UNIVERSITY	
1P30AG15253-01	LANGER, ROBERT D RESOURCE CENTER FOR MINORITY AGING RESEARCH	09-30-97/	UNIVERSITY OF CALIFORNIA SAN DIEGO	
1P30AG15267-01	RODRIGUEZ, BEATRIZ L HAWAII API RESOURCE CENTER FOR AGING RESERCH	09-01-97/	PACIFIC HEALTH RESEARCH INSTITUTE	
1P30AG15269-01	WYKLE, MAY L PROJECT PROMOTE- A MINORITY AGING RESEARCH RESOURCE	09-30-97/	CASE WESTERN RESERVE UNIVERSITY	
1P30AG15282-01	YOSHIKAWA, THOMAS T CENTER FOR AGING RESEARCH AND ETHNOGERIATRICS (CARE)	09-30-97/	CHARLES R. DREW UNTY OF MED. AND SCI	
1P30AG15285-01	CHARLSON, MARY E CORNELL RESOURCE CENTER FOR MINORITY AGING RESEARCH	10-01-97/	CORNELL UNIVERSITY MEDICAL CENTER	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1P30AG15287-01	MARKIDES, KYRIAKOS S TEXAS RESOURCE CENTER FOR MINORITY AGING RESEARCH	09-01-97/	UNIVERSITY OF TEXAS MEDICAL BR GALVE	
1P30AG15290-01	LEVKOFF, SUE E RESOURCE CENTER ON MINORITY AGING RESEARCH	09-01-97/	HARVARD UNIVERSITY	
1P30AG15291-01	WOLINSKY, FREDRIC D THE MAPLES RESOURCE CENTER FOR MINORITY AGING RESEARCH	09-30-97/	ST LOUIS UNIVERSITY	
1P30AG15293-01	MAGAI, CAROL L RCMAR FOR OLDER AFRICAN AMERICANS AND AFRICAN CARIBBEANS	09-30-97/	LONG ISLAND UNIVERSITY	
1P30AG15296-01	SILLIMAN, REBECCA A BOSTON MINORITY AGING RESOURCE CENTER	09-30-97/	BOSTON MEDICAL CENTER	
1P30AG15298-01	LINDEMAN, ROBERT D NM CENTER FOR HISPANIC & AMERICAN INDIAN AGING RESEARCH	09-30-97/	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	
1P30AG15299-01	PHILLIPS, LINDA R CENTER ON HEALTH/ILLNESS OF AGING SOUTHWEST MINORITIES	09-01-97/	UNIVERSITY OF ARIZONA	
1P30AG15300-01	ALLMAN, RICHARD M ALABAMA RESOURCE CENTER FOR MINORITY AGING RESEARCH	09-30-97/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1R01AG15381-01	BINDER, LESTER I FUNCTION OF TAU POLYMERIZATION IN ALZHEIMER'S DISEASE	04-01-97/	NORTHWESTERN UNIVERSITY	
1R03AG15739-01	WONG, REBECCA IMMIGRATION AND INTERGENERATIONAL TRANSFER	01-01-97/	GEORGETOWN UNIVERSITY	
2P01AG00001-22A1	ROSENE, DOUGLAS L NEURAL SUBSTRATES OF COGNITIVE DECLINE IN AGING	02-01-97/01-31-98	BOSTON UNIVERSITY	1,322,293
5T32AG00029-22	COHEN, HARVEY J BEHAVIOR AND PHYSIOLOGY IN AGING	05-01-97/04-30-98	DUKE UNIVERSITY	255,699
2T32AG00030-21	STORANDT, MARTHA A AGING AND DEVELOPMENT	06-01-97/04-30-98	WASHINGTON UNIVERSITY	232,082
2T32AG00037-21	BENGTSON, VERN L MULTIDISCIPLINARY RESEARCH TRAINING IN GERONTOLOGY	05-15-97/04-30-98	UNIVERSITY OF SOUTHERN CALIFORNIA	272,536
5T32AG00048-20	ZARIT, STEVEN H INTERDISCIPLINARY TRAINING IN GERONTOLOGY	05-01-97/04-30-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	227,691

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5T32AG00057-20	RABINOVITCH, PETER S GENETIC APPROACHES TO AGING RESEARCH	05-01-97/04-30-98	UNIVERSITY OF WASHINGTON	374,373
5T32AG00078-17	HOLLOSZY, JOHN O EXERCISE AS PREVENTIVE MEDICINE IN THE AGING PROCESS	05-01-97/04-30-98	WASHINGTON UNIVERSITY	182,503
5T32AG00080-18	OLDSTONE, MICHAEL B A NEUROBIOLOGIC AND IMMUNOLOGIC ASPECTS OF AGING	05-01-97/04-30-98	SCRIPPS RESEARCH INSTITUTE	69,007
2T35AG00086-17	HOLLOMAN, WILLIAM K SHORT-TERM TRAINING STUDENTS IN HEALTH PROFESSIONAL SCHO	04-15-97/	WEILL MEDICAL COLLEGE OF CORNELL UNI	
2T32AG00093-16	FINCH, CALEB E TRAINING IN ENDOCRINOLOGY AND NEUROBIOLOGY OF AGING	05-15-97/04-30-98	UNIVERSITY OF SOUTHERN CALIFORNIA	378,637
5T32AG00096-15	COTMAN, CARL W TRAINING IN THE NEUROBIOLOGY OF AGING	05-01-97/04-30-98	UNIVERSITY OF CALIFORNIA IRVINE	110,426
5T32AG00105-13	CAPLAN, ARNOLD I CELLULAR & MOLECULAR AGING	05-01-97/04-30-98	CASE WESTERN RESERVE UNIVERSITY	120,134
5T32AG00107-14	COLEMAN, PAUL D TRAINING IN GERIATRICS AND NEUROBIOLOGY OF AGING	05-01-97/04-30-98	UNIVERSITY OF ROCHESTER	113,941
5T32AG00114-13	ADELMAN, RICHARD MULTIDISCIPLINARY RESEARCH TRAINING IN AGING	05-01-97/04-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	396,939
5T32AG00115-13	POLGAR, PETER R PRE- AND POSTDOCTORAL TRAINING IN BIOCHEMISTRY OF AGING	05-01-97/04-30-98	BOSTON UNIVERSITY	338,341
3T32AG00115-13S1	POLGAR, PETER R PRE- AND POSTDOCTORAL TRAINING IN BIOCHEMISTRY OF AGING	05-01-97/04-30-98	BOSTON UNIVERSITY	26,374
5T32AG00117-13	DUNKLE, RUTH E SOCIAL RESEARCH TRAINING ON APPLIED ISSUES OF AGING	05-01-97/04-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	427,886
2T32AG00120-11	ROTH, JESSE RESEARCH TRAINING IN GERONTOLOGY AND GERIATRICS	05-15-97/04-30-98	JOHNS HOPKINS UNIVERSITY	264,438
2T32AG00129-09A2	HAUSER, ROBERT M POPULATION, LIFE COURSE AND AGING	05-15-97/04-30-98	UNIVERSITY OF WISCONSIN MADISON	82,026
5T32AG00131-13	CRISTOFALO, VINCENT J CELLULAR AND MOLECULAR ASPECTS OF AGING	05-01-97/04-30-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	163,056

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5T32AG00134-12	WEISSERT, WILLIAM G PUBLIC HEALTH AND AGING TRAINING PROGRAM	08-15-97	04-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	96,853
2T32AG00139-11	LAND, KENNETH C SOCIAL AND MEDICAL DEMOGRAPHY OF AGING	09-01-97	04-30-98	DUKE UNIVERSITY	187,990
5T32AG00144-11	KOWAL, JEROME RESEARCH TRAINING IN GERIATRIC MEDICINE	05-01-97	04-30-98	CASE WESTERN RESERVE UNIVERSITY	150,958
5T32AG00149-11	BRANDT, JASON RESEARCH TRAINING IN DEMENTIAS OF AGING	05-01-97	04-30-98	JOHNS HOPKINS UNIVERSITY	139,295
5T32AG00153-10	KASL, STANISLAV V RESEARCH TRAINING IN THE EPIDEMIOLOGY OF AGING	06-15-97	04-30-98	YALE UNIVERSITY	233,520
5T32AG00155-10	ELDER, GLEN H, JR DEMOGRAPHY OF AGING AND THE LIFE COURSE	05-01-97	04-30-98	UNIVERSITY OF NORTH CAROLINA CHAPEL	36,705
5T32AG00156-08	HORN, JOHN L FORMING CAREERS IN DEVELOPMENTAL NEUROCOGNITION	05-01-97	04-30-98	UNIVERSITY OF SOUTHERN CALIFORNIA	322,474
5T32AG00158-10	BURING, JULIE E TRAINING PROGRAM IN EPIDEMIOLOGIC RESEARCH ON AGING	05-15-97	04-30-98	BRIGHAM AND WOMEN'S HOSPITAL	132,116
5T32AG00164-10	DEMENT, WILLIAM C RESEARCH TRAINING IN GERIATRIC SLEEP DISORDERS MEDICINE	05-01-97	04-30-99	STANFORD UNIVERSITY	66,494
5T32AG00165-10	CHATTERJEE, BANDANA TRAINING PROGRAM IN MOLECULAR BASIS OF AGING	05-01-97	04-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	62,391
3T32AG00165-10S1	CHATTERJEE, BANDANA TRAINING PROGRAM IN MOLECULAR BASIS OF AGING	06-01-97	04-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	15,651
3T32AG00172-09S1	CUMMINGS, JEFFREY L DEMENTIA AND BEHAVIORAL NEUROLOGY: RESEARCH FELLOWSHIP	01-01-97	04-30-97	UNIVERSITY OF CALIFORNIA LOS ANGELES	40,404
5T32AG00175-10	SMITH, ANDERSON D RESEARCH TRAINING IN COGNITIVE AGING	05-01-97	04-30-98	GEORGIA INSTITUTE OF TECHNOLOGY	159,551
2T32AG00177-09	PRESTON, SAMUEL H DEMOGRAPHY OF AGING	05-15-97	04-30-98	UNIVERSITY OF PENNSYLVANIA	118,788
5T32AG00181-08	CAULEY, JANE A TRAINING IN THE EPIDEMIOLOGY OF AGING	05-01-97	04-30-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	205,051

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5T32AG00182-09	ETTINGER, WALTER H, JR TRAINING GRANT: GERONTOLOGY AND GERIATRIC MEDICINE	05-01-97/04-30-98	WAKE FOREST UNIVERSITY	305,963
5T32AG00183-09	DARLINGTON, GRETCHEN J CELL & MOLECULAR BIOLOGY OF AGING	05-01-97/04-30-98	BAYLOR COLLEGE OF MEDICINE	256,061
3T32AG00183-09S1	DARLINGTON, GRETCHEN J CELL & MOLECULAR BIOLOGY OF AGING	09-30-97/04-30-98	BAYLOR COLLEGE OF MEDICINE	27,145
5T32AG00184-08	HU, TEH-WEI ECONOMICS OF AGING AND HEALTH SERVICES	01-17-97/12-31-97	UNIVERSITY OF CALIFORNIA BERKELEY	
5T32AG00186-09	WISE, DAVID A ECONOMICS OF AGING TRAINING PROGRAM -- EXTENSION	09-30-97/04-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	148,798
3T32AG00186-09S1	WISE, DAVID A ECONOMICS OF AGING TRAINING PROGRAM -- EXTENSION	09-30-97/04-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	54,487
5T32AG00189-09	LIEM, RONALD K CELLULAR AND NEUROBIOLOGICAL ASPECTS OF AGING	05-01-97/04-30-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	258,329
5T32AG00194-09	HAMERMAN, DAVID AGING TRAINING GRANT	05-01-97/04-30-98	YESHIVA UNIVERSITY	335,332
5T32AG00196-09	MEYER, EDWIN M TRAINING IN THE NEUROBIOLOGY OF AGING	05-01-97/04-30-98	UNIVERSITY OF FLORIDA	46,005
2T32AG00198-06A1	KANE, ROBERT L MINNESOTA TRAINING GRANT AGING	08-15-97/04-30-98	UNIVERSITY OF MINNESOTA TWIN CITIES	259,371
5T32AG00204-08	WINGFIELD, ARTHUR TRAINING IN COGNITIVE AGING IN A SOCIAL CONTEXT	05-01-97/04-30-98	BRANDEIS UNIVERSITY	130,534
5T32AG00205-07	NELSON, JAMES F TRAINING IN NUTRITIONAL & INTERVENTIONAL GERONTOLOGY	05-01-97/04-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	138,466
5T32AG00208-08	HAYWARD, MARK POPULATION BIOLOGY, GENERATIONS, AND COHORT SUCCESSION	05-01-97/04-30-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	119,223
5T32AG00209-08	RUSSELL, ROBERT M RESEARCH TRAINING PROGRAM IN NUTRITION AND AGING	05-01-97/04-30-98	TUFTS UNIVERSITY MEDFORD	112,559
5T32AG00213-07	WEINDRUCH, RICHARD H BIOLOGY OF AGING AND AGE-RELATED DISEASES	05-01-97/04-30-98	UNIVERSITY OF WISCONSIN MADISON	239,877

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5T32AG00214-07	HEISTAD, DONALD D INTERDISCIPLINARY RESEARCH TRAINING PROGRAM IN AGING	05-01-97	04-30-98	UNIVERSITY OF IOWA	393,330
2T32AG00216-06	GAGE, FRED H TRAINING IN THE NEUROPLASTICITY OF AGING	06-01-97	04-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	297,743
3T32AG00219-05S1	GOLDBERG, ANDREW P RESEARCH TRAINING OF GERONTOLOGY AND EXERCISE PHYSIOLOGY	07-15-97	04-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	100,997
5T32AG00220-04	MARKSON, ELIZABETH MULTIDISCIPLINARY TRAINING PROGRAM IN AGING RESEARCH	05-01-97	04-30-98	BOSTON UNIVERSITY	177,067
2T32AG00221-06	THORNTON, ARLAND D TRAINING IN THE DEMOGRAPHY AND ECONOMICS OF AGING	05-15-97	04-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	295,461
2T32AG00222-06	POTTER, HUNTINGTON TRAINING IN THE MOLECULAR BIOLOGY OF NEURODEGENERATION	07-01-97	04-30-98	HARVARD UNIVERSITY	422,785
5T32AG00223-04	RAMSDELL, JOE W GERIATRIC RESEARCH INSTITUTIONAL TRAINING GRANT	05-01-97	04-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	29,658
5T32AG00226-05	KEMPER, SUSAN RESEARCH TRAINING PROGRAM IN COMMUNICATION AND AGING	05-01-97	04-30-98	UNIVERSITY OF KANSAS LAWRENCE	138,106
5T35AG00230-05	RICHARDSON, ARLAN G SHORT-TERM TRAINING STUDENTS IN HEALTH PROFESSIONAL SCHO	05-01-97	04-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	52,056
5T32AG00231-05	FURNER, SYLVIA EPIDEMIOLOGY AND BIOSTATISTICS IN AGING RESEARCH	05-01-97	04-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	
2T32AG00237-04	SCHOEN, ROBERT POSTDOCTORAL TRAINING IN THE DEMOGRAPHY OF AGING	06-15-97	04-30-98	JOHNS HOPKINS UNIVERSITY	60,454
5T32AG00238-04	BURKHAUSER, RICHARD V ECONOMICS & DEMOGRAPHY OF AGING	05-01-97	04-30-98	SYRACUSE UNIVERSITY	60,666
5T32AG00241-04	KAHANA, EVA F PREDOC TRNG: SOCIAL ASPECTS OF HEALTH RESEARCH AND AGING	05-15-97	04-30-98	CASE WESTERN RESERVE UNIVERSITY	100,702
5T32AG00242-04	WISE, PHYLLIS M MOLECULAR AND CELLULAR BASIS OF BRAIN AGING	05-01-97	04-30-98	UNIVERSITY OF KENTUCKY	70,322
5T32AG00243-04	WAITE, LINDA J SPECIALIZED TRAINING PROGRAM IN THE DEMOGRAPHY & ECON.	05-01-97	04-30-98	UNIVERSITY OF CHICAGO	163,005

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5T32AG00244-04	KAROLY, LYNN A POSTDOCTORAL TRAINING IN THE STUDY OF AGING	05-01-97/04-30-98	RAND CORPORATION	70,620
5T32AG00245-03	SMALL, GARY W UCLA GERIATRIC RESEARCH FELLOWSHIP PROGRAM	05-01-97/02-28-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	61,367
5T32AG00246-03	LEE, RONALD D TRAINING IN THE DEMOGRAPHY AND ECONOMICS OF AGING	05-01-97/04-30-98	UNIVERSITY OF CALIFORNIA BERKELEY	45,616
3T32AG00246-03S1	LEE, RONALD D TRAINING IN THE DEMOGRAPHY AND ECONOMICS OF AGING	09-30-97/04-30-98	UNIVERSITY OF CALIFORNIA BERKELEY	25,156
5T32AG00247-02	FRIED, LINDA P EPIDEMIOLOGY AND BIOSTATISTICS OF AGING	05-01-97/04-30-98	JOHNS HOPKINS UNIVERSITY	164,043
1T32AG00250-01A1	ZIRKIN, BARRY R TRAINING IN THE CELLULAR AND MOLECULAR BASES OF AGING	05-15-97/04-30-98	JOHNS HOPKINS UNIVERSITY	55,627
5T32AG00251-02	WEI, JEANNE Y HARVARD INSTITUTIONAL RESEARCH TRAINING PROGRAM ON AGING	05-01-97/04-30-98	HARVARD UNIVERSITY	243,108
1T32AG00252-01	BREDESEN, DALE E APOPTOSIS--BASIC MECHANISMS AND DISEASE RELEVANCE	06-15-97/04-30-98	BURNHAM INSTITUTE	123,477
1T32AG00253-01	GRISSO, JEANE A GERIATRIC CLINICAL EPIDEMIOLOGY TRAINING GRANT	06-15-97/04-30-98	UNIVERSITY OF PENNSYLVANIA	54,475
1T32AG00254-01	NESSELROADE, JOHN R TRAINING GRANT IN QUATITATIVE PSYCHOLOGY	07-01-97/	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	
1T32AG00255-01	LEE, VIRGINIA M TRAINING IN AGE RELATED NEURODEGENERATIVE DISEASES	08-01-97/04-30-98	UNIVERSITY OF PENNSYLVANIA	215,337
1T32AG00256-01	PACK, ALLAN I MD/PHD PROGRAM IN SLEEP AND CHRONOBIOLOGY	06-15-97/04-30-98	UNIVERSITY OF PENNSYLVANIA	67,170
1T32AG00257-01	MUFSON, ELLIOTT J TRAINING IN AGE-RELATED NEURODEGENERATIVE DISORDERS	06-15-97/04-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	63,273
5K12AG00294-13	WEI, JEANNE Y PHYSICIAN SCIENTIST PROGRAM AWARD	08-01-97/07-31-99	HARVARD UNIVERSITY	834,562
5P01AG00378-25	CRISTOFALO, VINCENT J CELLULAR SENESCENCE AND CONTROL OF CELL PROLIFERATION	02-10-97/12-31-97	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	850,429

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
3R01AG00424-34S1	WALFORD, ROY L LIFE EXTENSION EFFECT OF CALORIC RESTRICTION	05-22-96/04-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	30,000
5R01AG00443-24	SCHIFFMAN, SUSAN S GUSTATORY AND OLFACTORY CHANGES WITH AGE	09-01-97/08-31-98	DUKE UNIVERSITY	298,149
5K08AG00481-05	RUBIN, CRAIG D TREATMENT OF SENILE OSTEOPOROSIS	03-01-97/02-28-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	85,995
5K12AG00488-07	SORENSEN, LEIF B GERIATRIC ACADEMIC PROGRAM AWARD	09-01-97/08-31-98	UNIVERSITY OF CHICAGO	506,520
5K12AG00503-08	ABRASS, ITAMAR B GERIATRIC ACADEMIC PROGRAM AWARD	09-01-97/08-31-98	UNIVERSITY OF WASHINGTON	640,413
5K12AG00521-07	WEINER, LESLIE P MCSDPA--NEUROGERONTOLOGY	08-15-97/07-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	479,248
5K11AG00523-05	GERHARD, GLENN S MITOCHONDRIA IN AGING	01-01-97/12-31-98	PENNSYLVANIA STATE UNIV HERSHEY MED	102,128
5K07AG00532-06	CRISTOFALO, VINCENT J GERIATRIC LEADERSHIP ACADEMIC AWARD	12-15-96/11-30-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	54,000
5P01AG00538-21	COTMAN, CARL W BEHAVIORAL AND NEURAL PLASTICITY IN THE AGED	08-01-97/06-30-98	UNIVERSITY OF CALIFORNIA IRVINE	931,509
5K08AG00540-06	DUBEAU, CATHERINE E DIAGNOSIS OF PROSTATIC OBSTRUCTION	03-01-97/02-28-98	BRIGHAM AND WOMEN'S HOSPITAL	76,140
5K08AG00546-06	REED, RICHARD L GROWTH HORMONE AND MUSCLE STRENGTH	09-01-97/08-31-98	UNIVERSITY OF MINNESOTA TWIN CITIES	89,424
5K01AG00554-05	HORIUCHI, SHIRO RELATIONSHIPS BETWEEN AGING AND MORTALITY	08-01-97/06-30-98	ROCKEFELLER UNIVERSITY	108,173
5K01AG00565-05	RAHMAN, MOHAMMED O IMPACT OF KIN NETWORKS	04-15-97/03-31-98	HARVARD UNIVERSITY	100,381
5K11AG00568-06	EIDE, FERNETTE F NEUROTROPHINS AND THE HIPPOCAMPUS	08-01-97/06-30-98	UNIVERSITY OF CHICAGO	99,684
5K08AG00583-05	CALLAHAN, CHRISTOPHER M GERIATRIC DEPRESSION IN PRIMARY CARE	07-01-97/06-30-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	96,514

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5K01AG00585-05	BROWN, MARYBETH SIMULATED BEDREST AND TREATMENT EFFECTS ON AGING MUSCLE	04-01-97/03-31-99	WASHINGTON UNIVERSITY	88,425
5K01AG00588-05	EWBANK, DOUGLAS C DEMOGRAPHY OF ALZHEIMERS DISEASE	07-01-97/06-30-99	UNIVERSITY OF PENNSYLVANIA	106,553
5K01AG00589-03	NEUMARK, DAVID RESEARCH ON THE ECONOMICS OF AGING & AGE DISCRIMINATION	01-01-97/12-31-97	NATIONAL BUREAU OF ECONOMIC RESEARCH	83,970
5K01AG00593-04	HEADEN, ALVIN E JR RACE, LTC SERVICE MIX, AND CAREGIVER TIME COST	01-01-97/12-31-97	NORTH CAROLINA STATE UNIVERSITY RALE	88,896
5K04AG00594-05	MEDRANO, ESTELA E SENESCENCE IN THE MELANOCYTE	04-01-97/03-31-98	BAYLOR COLLEGE OF MEDICINE	81,648
5K08AG00599-04	DUGAN, LAURA L FREE RADICAL MECHANISMS IN NEURAL INJURY IN VITRO	02-01-97/01-31-98	WASHINGTON UNIVERSITY	93,549
5K01AG00602-05	SCHMIDT, ANN M AGING, DIABETES AND VASCULAR DISEASE	07-01-97/06-30-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	108,108
5K08AG00605-06	MANGIONE, CAROL M IMPACT OF CATARACT EXTRACTION ON VISUAL FUNCTION STATUS	07-01-97/06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	90,990
5K07AG00608-05	GOLDBERG, ANDREW P GERIATRIC LEADERSHIP ACADEMIC AWARD	07-01-97/06-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	86,403
5K08AG00615-04	WALLACE, JEFFREY I WEIGHT LOSS AND FAILURE TO THRIVE	04-01-97/03-31-98	UNIVERSITY OF WASHINGTON	89,100
2K07AG00618-04	GOODWIN, JAMES S GERIATRIC LEADERSHIP ACADEMIC AWARD	04-15-97/03-31-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	60,042
5K11AG00621-05	LEEHEY, MAUREEN A MITOCHONDRIAL DNA ANALYSIS IN HUNTINGTONS DISEASE	08-01-97/07-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	102,881
5K07AG00622-03	KANE, ROBERT L GERIATRIC LEADERSHIP ACADEMIC AWARDS	01-01-97/12-31-99	UNIVERSITY OF MINNESOTA TWIN CITIES	92,504
5K08AG00623-04	MAHONEY, JANE E FALLS AFTER HOSPITAL DISCHARGE	01-01-97/12-31-97	UNIVERSITY OF WISCONSIN MADISON	95,105
5K08AG00627-04	HEUSER, MARK D FAILURE TO THRIVE IN ELDERS	03-01-97/02-28-98	UNIVERSITY OF MARYLAND BALT PROF SCH	94,856

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5K04AG00631-04	ZAKERI, ZAHRA MECHANISMS OF PROGRAMMED CELL DEATH	05-01-97/04-30-98	QUEENS COLLEGE	68,998
5K01AG00633-04	TULLY, CHRISTINE L ZINC, B12 AND COGNITIVE DECLINE IN THE ELDERLY	07-01-97/06-30-98	UNIVERSITY OF KENTUCKY	99,587
5K04AG00634-04	GOATE, ALISON M GENETIC APPROACH TO THE ETIOLOGY OF ALZHEIMER DISEASE	05-15-97/04-30-98	WASHINGTON UNIVERSITY	76,584
2K07AG00635-04	WISE, DAVID A GERIATRIC LEADERSHIP ACADEMIC AWARD--EXTENSION	05-15-97/04-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	86,080
5K08AG00639-04	BARZILAI, NIR AGING AND PERIPHERAL AND HEPATIC GLUCOSE METABOLISM	09-30-97/08-31-98	YESHIVA UNIVERSITY	96,660
5K01AG00645-04	MORIN, CATHERINE L INTERACTION OF TNF ALPHA & NUTRITION IN AGED ADIPOSE TIS	09-01-97/08-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	81,999
2K01AG00646-03	ELIAS, PENELOPE K AGE, HYPERTENSION, AND COGNITIVE FUNCTIONING	12-15-96/11-30-97	BOSTON UNIVERSITY	101,596
7K01AG00647-04	WONG, REBECCA ECONOMICS OF INTERGENERATIONAL TRANSFERS--US HISPANICS	11-01-97/07-30-99	GEORGETOWN UNIVERSITY	90,000
5K11AG00649-05	YUEN, ERIC C BDNF AND OXIDATIVE INJURY IN MOTOR NEURONS	07-15-97/06-30-98	UNIVERSITY OF WASHINGTON	100,008
5K01AG00650-03	PUGH, THOMAS CALORIES, AGING, AND LOCALIZATION OF MTDNA ABNORMALITIES	09-01-97/08-31-98	UNIVERSITY OF WISCONSIN MADISON	78,697
5K08AG00656-03	CHIN, STEVEN SUEY-MING TAU PATHOLOGY IN PROGRESSIVE SUPRANUCLEAR PALSY	01-01-97/12-31-97	COLUMBIA UNIVERSITY HEALTH SCIENCES	99,090
5K01AG00657-04	GARDNER, ANDREW W EXERCISE REHABILITATION OF YOUNGER AND OLDER CLAUDICANTS	02-01-97/01-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	107,150
5K11AG00658-03	OLICHNEY, JOHN M ERPS AND VERBAL MEMORY IN AGING DEMENTIA AND AMNESIA	08-01-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	96,913
5K04AG00659-03	MAGNUSSON, KATHY R AGE RELATED CHANGE IN GLUTAMATE RECEPTORS	01-01-97/12-31-97	COLORADO STATE UNIVERSITY	79,935
5K01AG00661-03	KLERMAN, ELIZABETH B REHABILITATION OF CIRCADIAN BLINDNESS IN OLDER PEOPLE	01-01-97/12-31-97	BRIGHAM AND WOMEN'S HOSPITAL	97,740

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5K04AG00663-03	KOHRT, WENDY M EXERCISE AND HRT IN OSTEOPENIC ELDERLY WOMEN AND MEN	01-01-97/12-31-97	WASHINGTON UNIVERSITY	74,150
5K01AG00670-02	SCHOENI, ROBERT F HEALTH STATUS AND FAMILY SUPPORT OF THE ELDERLY	02-01-97/01-31-98	RAND CORPORATION	112,290
5K11AG00671-02	HISAMA, FUKI M POSITIONAL CLONING OF THE WERNERS SYNDROME GENE	07-01-97/06-30-98	YALE UNIVERSITY	97,335
5K04AG00676-03	LESNEFSKY, EDWARD J MITOCHONDRIA INCREASE OXIDATIVE INJURY IN AGING HEART	07-15-97/06-30-98	CASE WESTERN RESERVE UNIVERSITY	81,000
5K01AG00677-03	PAHLAVANI, MOHAMMAD A DOES CALORIC RESTRICTION AFFECT IL-2 TRANSCRIPTION?	08-01-97/07-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	52,195
5K07AG00678-03	WYKLE, MAY L GERIATRIC LEADERSHIP ACADEMIC AWARD	04-01-97/03-31-99	CASE WESTERN RESERVE UNIVERSITY	86,425
5K08AG00680-03	ROSEN, HAROLD N ADJUSTMENT OF ESTROGEN DOSING ACCORDING TO BONE TURNOVER	04-01-97/03-31-98	BETH ISRAEL DEACONESS MEDICAL CENTER	94,627
5K08AG00681-03	MARQUEZ-STERLING, NUMA R ENDOCYTOTIC TRAFFICKING OF APP IN CULTURED CNS NEURONS	04-25-97/03-31-98	NORTHWESTERN UNIVERSITY	91,530
5K08AG00684-03	BONOMO, ROBERT A MECHANISMS OF ANTIBIOTIC RESISTANCE IN THE NURSING HOME	09-01-97/08-31-98	CASE WESTERN RESERVE UNIVERSITY	94,500
5K01AG00685-02	BERMAN, DORA M WEIGHT LOSS AND FAT METABOLISM IN POSTMEMOPAUSAL WOMEN	04-01-97/03-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	93,420
5K01AG00686-02	ARKIN, SHARON M AD REHAB BY STUDENTS--EFFECTS ON FUNCTIONING AND DECLINE	09-15-97/08-31-98	UNIVERSITY OF ARIZONA	79,661
7K01AG00687-03	DAVY, KEVIN P DIET AND EXERCISE EFFECTS IN OBESE POSTMENOPAUSAL WOMEN	08-15-97/03-31-98	COLORADO STATE UNIVERSITY	62,872
5K01AG00690-03	YAN, SHI DU ALZHEIMERS, GLYCATION, RECEPTORS AND OXIDANT STRESS	08-01-97/06-30-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	99,090
5K01AG00691-02	RITCHIE, CHRISTINE S NUTRITIONAL STATUS AND ORAL HEALTH IN FRAIL OLDER ADULTS	04-01-97/03-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	101,952
5K01AG00692-02	DELBONO, OSVALDO SKELETAL MUSCLE IMPAIRMENT IN AGING	03-01-97/02-28-98	WAKE FOREST UNIVERSITY	88,560

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5K04AG00694-04	PEACOCKE, MONICA GENETIC STUDIES OF COWDENS SYNDROME	06-15-97/05-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	86,508
1K08AG00695-01A2	KELLER, BRENDA K VISUAL IMPAIRMENT AND FUNCTIONAL STATUS IN FRAIL ELDERLY	09-01-97/08-31-98	UNIVERSITY OF NEBRASKA MEDICAL CENTE	102,600
7K08AG00698-03	CHAI, TOBY C NEUROPLASTICITY OF THE AGING BLADDER	12-15-97/01-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	45,646
5K01AG00701-02	LARKIN, LISA M REHABILITATION OF MICRONEUROVASCULAR GRAFTS IN OLD RATS	08-15-97/07-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	92,598
5K01AG00702-02	ZOHOORI, NAMVAR DEMOGRAPHY OF HEALTHY AGING--ROLE OF NUTRITIONAL FACTORS	08-15-97/07-31-98	UNIVERSITY OF NORTH CAROLINA CHAPEL	100,335
5K01AG00703-02	WEIR, DAVID R RESEARCH TRAINING IN ECONOMIC ASPECTS OF CHRONIC DISEASE	03-01-97/01-31-98	UNIVERSITY OF CHICAGO	95,310
5K02AG00708-02	LI, CHRISTINE FUNCTION OF AMYLOID PRECURSOR-RELATED GENE IN C ELEGANS	12-01-96/11-30-97	BOSTON UNIVERSITY	72,190
1K08AG00710-01A1	BROWN, JEANETTE S URINARY INCONTINENCE--PREVALENCE, INCIDENCE, AND RISKS	05-01-97/04-30-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	98,466
1K02AG00711-01A1	SCHWARZMAN, ALEXANDER L TRANSTHYRETIN VARIANTS IN ALZHEIMER'S DISEASE	12-01-96/	STATE UNIVERSITY NEW YORK STONY BROO	
1K08AG00712-01A1	BEYTH, REBECCA J IMPROVING THE USE OF ANTICOAGULANT THERAPY IN THE AGED	09-01-97/08-31-98	CASE WESTERN RESERVE UNIVERSITY	70,729
5K11AG00713-03	MOALLI, MARIA R MECHANOTRANSDUCTION IN TRABECULAR BONE	09-01-97/08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	105,981
5K08AG00714-02	COVINSKY, KENNETH E IMPROVING QUALITY OF LIFE IN ELDERS WITH MEDICAL ILLNESS	04-01-97/03-31-98	CASE WESTERN RESERVE UNIVERSITY	85,941
5K08AG00715-03	MARGOLIS, DAVID J PREDICTION MODEL FOR THE TREATMENT OF VENOUS LEG ULCERS	09-15-97/06-30-98	UNIVERSITY OF PENNSYLVANIA	106,358
1K01AG00717-01A1	ELO, IRMA T SOCIOECONOMIC STATUS, HEALTH AND MORTALITY	09-30-97/08-31-98	UNIVERSITY OF PENNSYLVANIA	86,400
5K07AG00718-02	LIPSCHITZ, DAVID A GERIATRIC LEADERSHIP ACADEMIC AWARD	04-01-97/03-31-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	88,236

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1K01AG00722-01A1	STEVENS, ALAN B THERAPEUTIC ACTIVITIES IN THE NURSING HOME	02-27-97/01-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	81,528
5K01AG00723-03	DENGEL, DONALD R INSULIN ACTION, SODIUM AND EXERCISE IN HYPERTENSION	09-01-97/08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	98,280
5K04AG00724-03	PETERSON, CHARLOTTE A REGULATION OF GENE EXPRESSION IN MUSCLE SATELLITE CELLS	09-01-97/08-31-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	81,000
5K08AG00725-02	GREENBERG, STEVEN M MOLECULAR RISK FACTORS FOR CEREBRAL AMYLOID ANGIOPATHY	08-01-97/07-31-98	MASSACHUSETTS GENERAL HOSPITAL	89,112
1K01AG00726-01A1	CRUISE, PATRICE A INTERVENTION RESEARCH WITH COMMUNITY FRAIL ELDERLY	04-01-97/	UNIVERSITY OF CALIFORNIA LOS ANGELES	
5K02AG00728-02	BICKFORD, PAULA C NORADRENERGIC FUNCTION IN BRAIN AGING & OXIDATIVE STRESS	08-01-97/06-30-98	UNIVERSITY OF COLORADO HLTH SCIENCES	71,764
5K07AG00729-02	FINCH, CALEB E MULTIDISCIPLINARY APPROACHES IN BIOGERONTOLOGY	09-15-97/08-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	83,044
1K02AG00730-01A1	PASINETTI, GUILIO M A MODEL FOR ALZHEIMER'S DISEASE	02-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
5K01AG00732-02	SPECTOR, ALEXANDER A MATHEMATICAL MODELING OF THE AGING COCHLEA	08-15-97/06-30-98	JOHNS HOPKINS UNIVERSITY	89,583
5K02AG00733-02	BIGELOW, DIANA J AGING AND OXIDATION IN SKELETAL AND CARDIAC MUSCLE	07-15-97/06-30-98	UNIVERSITY OF KANSAS LAWRENCE	72,581
1K07AG00739-01	WAITE, LINDA J ACADEMIC LEADERSHIP CAREER AWARD	12-01-96/11-30-97	UNIVERSITY OF CHICAGO	85,766
1K01AG00740-01	GOWER, BARBARA A POSTMENOPAUSAL HORMONE THERAPY AND INTRA ABDOMINAL FAT	01-01-97/11-30-97	UNIVERSITY OF ALABAMA AT BIRMINGHAM	70,573
1K08AG00741-01	BINKLEY, NEIL C AGE-RELATED BONE LOSS CAN BE CAUSED BY ACUTE ILLNESS	12-01-96/	UNIVERSITY OF WISCONSIN MADISON	
1K07AG00744-01	CARNES, MARY L WOMENS HEALTH ACADEMIC LEADERSHIP AWARD	07-01-97/06-30-98	UNIVERSITY OF WISCONSIN MADISON	85,760
5K02AG00745-02	SCHWINN, DEBRA A TRANSCRIPTIONAL REGULATION OF THE HUMAN 1A ADRENOCEPTORS	05-15-97/04-30-98	DUKE UNIVERSITY	72,414

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1K01AG00746-01A1	HAN, EUN-SOO IDENTIFYING GENES ACUTELY RESPONSIVE TO FOOD RESTRICTION	08-15-97/06-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	72,538
1K01AG00747-01A1	RYAN, ALICE S OBESITY, GLUCOSE METABOLISM AND DIET IN OLDER WOMEN	09-01-97/08-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	93,418
1K01AG00748-01	GRIGORENKO, ELENA V MOLECULAR CHARACTERIZATION OF RETINA AGING	04-01-97/03-31-98	WAKE FOREST UNIVERSITY	73,159
1K08AG00749-01	BLAUM, CAROLINE S DISABILITY--RECOVERY AND IMPROVEMENT	07-01-97/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	106,758
1K08AG00751-01	HIGGINS, DONALD S, JR AGE, ENERGY AND EXCITOTOXICITY	04-15-97/03-31-98	OHIO STATE UNIVERSITY	101,693
1K01AG00752-01	SKINNER, JONATHAN S WHY DO THE RICH LIVE LONGER	12-06-96/11-30-97	DARTMOUTH COLLEGE	106,319
1K01AG00753-01	HEYDARI, AHMAD R TESTING THE SOMATIC MUTATION THEORY OF AGING	12-01-96/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1K02AG00754-01A1	JANOWSKY, JERI S FMRI OF HORMONE EFFECTS ON COGNITION IN AGING	07-01-97/	OREGON HEALTH SCIENCES UNIVERSITY	
5K08AG00755-02	HAMEL, MARY E OUTCOMES AND COSTS OF INVASIVE THERAPIES FOR THE ELDERLY	09-01-97/08-31-98	BETH ISRAEL DEACONESS MEDICAL CENTER	101,106
1K02AG00756-01A1	FARAH, MARTHA J COGNITIVE NEUROSCIENCE OF DEMENTIA	09-15-97/08-31-98	UNIVERSITY OF PENNSYLVANIA	90,158
1K01AG00757-01	EISENHAUER, PATRICIA B AMYLOID PRECURSOR PROCESSING IN HUMAN BRAIN ENDOTHELIUM	12-01-96/	BOSTON UNIVERSITY	
1K08AG00758-01	DAVIDSON, MICHAEL A TRIAL OF CONJUGATE PNEUMOCOCCAL VACCINE IN THE ELDERLY	04-01-97/	JOHNS HOPKINS UNIVERSITY	
1K01AG00761-01	TOMPOROWSKI, PHILLIP D CONTROLLED CHALLENGE AND OLDER ADULTS' MENTAL HEALTH	04-01-97/	UNIVERSITY OF FLORIDA	
1K07AG00762-01	ERSHLER, WILLIAM B GERIATRIC LEADERSHIP AWARD	12-01-96/	EASTERN VIRGINIA MED SCH/MED COL HAM	
1K08AG00764-01	ADAMEC, EMIL CALPAINS AND AGING AND AD PATHOGENESIS	06-01-97/04-30-98	MC LEAN HOSPITAL (BELMONT, MA)	85,415

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1K08AG00765-01	DERFUS, BETH A PREVENTION OF THE CALCIUM CRYSTAL ARTHRITIDES OF AGING	07-01-97/	MEDICAL COLLEGE OF WISCONSIN	
1K01AG00766-01	TIMCHENKO, NIKOLAI A C/EBP ALPHA MEDIATED REGULATION OF P21/SDI-1	08-15-97/07-31-98	BAYLOR COLLEGE OF MEDICINE	81,696
1K01AG00767-01	CAWTHON, RICHARD M IDENTIFICATION OF GENES CONTRIBUTING TO HUMAN LONGEVITY	04-15-97/03-31-98	UNIVERSITY OF UTAH	93,420
1K08AG00771-01	PU, CHARLES TSUN ZHI STRENGTH TRAINING IN OLDER WOMEN WITH HEART FAILURE	04-01-97/	TUFTS UNIVERSITY BOSTON	
1K01AG00773-01	FONG, PEYING IODIDE CHANNELS IN THE THYROID	04-01-97/	YALE UNIVERSITY	
5K08AG00774-02	MONTINE, THOMAS J CROSSLINKING OF APOE AND TAU IN ALZHEIMERS DISEASE	07-15-97/06-30-98	VANDERBILT UNIVERSITY	100,591
1K08AG00775-01	JOHNSON, FREDERICK B WERNERS PROTEIN BIOCHEMISTRY AND RIBOSOMAL DNA IN AGING	09-01-97/08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	87,474
1K01AG00776-01	HELFAND, STEPHEN L GENE REGULATION DURING AGING	07-01-97/	UNIVERSITY OF CONNECTICUT HEALTH CEN	
1K01AG00777-01	DIJKSTRA, KATINKA COMPONENTS OF A COGNITIVE ASSESSMENT BATTERY	08-01-97/	FLORIDA STATE UNIVERSITY	
1K01AG00780-01	DE GRACIA, DONALD J EIF-2A KINASE/PHOSPHATASE ACTIVITY AFTER BRAIN ISCHEMIA	04-01-97/	WAYNE STATE UNIVERSITY	
1K01AG00782-01	MOHAN, ROYCE ROLE AND REGULATION OF GELATINASE B IN ANGIOGENESIS	07-01-97/	NEW ENGLAND MEDICAL CENTER	
1K08AG00784-01	MEGA, MICHAEL S PATHOLOGY OF BRAIN METABOLISM IN ALZHEIMERS DISEASE	09-15-97/07-31-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	99,360
1K01AG00786-01	UNLAP, M TINO EXCESSIVE GLUCOCORTICOID LEVELS IMPAIR NF-KB SIGNALING	07-01-97/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1K01AG00787-01	FORMBY, CHARLES C INVESTIGATION OF THE AGING VESTIBULAR OCULAR REFLEX	07-01-97/	UNIVERSITY OF MARYLAND BALT PROF SCH	
1K01AG00788-01	FRANKEL, STEWART A FUNCTIONAL ANALYSIS OF A NOVEL HETEROCHROMATIN PROTEIN	07-01-97/	YALE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1K08AG00789-01	SITES, CYNTHIA K HORMONE REPLACEMENT AND METABOLIC CARDIOVASCULAR RISK	07-01-97/	UNIVERSITY OF VERMONT & ST AGRIC COL	
1K08AG00790-01	MARCINIAK, ROBERT A MOLECULAR ANALYSIS OF THE WERNERS GENE PRODUCT	09-01-97/08-31-98	MASSACHUSETTS GENERAL HOSPITAL	102,805
1K01AG00791-01	BILLINGTON, LYNN GDNF: NERVE REGENERATION, MUSCLE FUNCTION, AND AGING	07-01-97/	UNIVERSITY OF PITTSBURGH AT PITTSBUR	
1K08AG00792-01	DOLBER, PAUL C SIGNALING AND MYOCYTE HYPERTROPHY IN AGING HEARTS	07-01-97/	DUKE UNIVERSITY	
1K08AG00793-01	IRIZARRY, MICHAEL C TRANSGENIC MODELS OF ALZHEIMERS DISEASE	08-01-97/05-31-98	MASSACHUSETTS GENERAL HOSPITAL	103,378
1K01AG00794-01	PETERS, JOHN H FIBRONECTIN ALTERNATE SPLICE ISOFORMS IN OSTEOARTHRITIS	07-01-97/	UNIVERSITY OF CALIFORNIA LOS ANGELES	
1K02AG00796-01	GRANHOLM, ANN-CHARLOTTE E CNS NORADRENERGIC NEURONS--TROPHIC FACTORS	08-15-97/07-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	84,228
1K01AG00818-01	ROSAL, MILAGROS C ADHERENCE TO DIETARY MODIFICATION	09-30-97/08-31-98	UNIVERSITY OF MASSACHUSETTS MEDICAL	85,683
1K08AG00822-01	MOUTON, CHARLES P IMPACT OF DOMESTIC VIOLOENCE ON HEALTH OF OLDER WOMEN	09-30-97/08-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	88,458
1K08AG00838-01	FANG, FANG STROMAL CELLS IN PATHOGENESIS OF BPH AND PROSTATE CANCER	07-01-97/	SALK INSTITUTE FOR BIOLOGICAL STUDIE	
1K01AG00843-01	BURNETT, CAROLINE B CANCER SCREENING GUIDELINE ADHERENCE--UNDERSERVED ELDERS	09-30-97/08-31-98	GEORGETOWN UNIVERSITY	80,737
5R01AG00947-20	STEIN, GRETCHEN H GROWTH REGULATION--SENESCENT VS NONSENESCENT CELLS	07-15-97/06-30-99	UNIVERSITY OF COLORADO AT BOULDER	286,046
7R37AG01136-21	YEN, SHU-HUI C AGING BRAIN--IMMUNOHISTOLOGY AND BIOCHEMISTRY	05-15-98/06-30-99	MAYO CLINIC JACKSONVILLE	316,350
5R01AG01159-21	MANTON, KENNETH G DEMOGRAPHIC STUDY OF MULTIPLE CAUSES OF DEATH	12-01-96/11-30-97	DUKE UNIVERSITY	190,848
5R01AG01548-14	RICHARDSON, ARLAN G EFFECT OF DIETARY RESTRICTION ON GENE EXPRESSION	04-01-97/03-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	180,095

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5P01AG01743-19	KLINMAN, NORMAN R IMMUNOBIOLOGY OF AGING	09-30-97/08-31-98	SCRIPPS RESEARCH INSTITUTE	851,447
5P01AG01751-19	MARTIN, GEORGE M GENE ACTION IN THE PATHOBIOLOGY OF AGING	08-15-97/07-31-98	UNIVERSITY OF WASHINGTON	894,717
3P01AG01751-19S1	MARTIN, GEORGE M GENE ACTION IN THE PATHOBIOLOGY OF AGING	08-01-97/	UNIVERSITY OF WASHINGTON	
5R01AG01760-17	KLAG, MICHAEL J PRECURSORS OF PREMATURE DISEASE AND DEATH	07-01-97/06-30-98	JOHNS HOPKINS UNIVERSITY	406,273
5R37AG02049-18	GARRY, PHILIP J PROSPECTIVE STUDY OF NUTRITION IN THE ELDERLY	02-01-97/01-31-98	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	394,581
3R37AG02049-18S1	GARRY, PHILIP J PROSPECTIVE STUDY OF NUTRITION IN THE ELDERLY	04-15-97/01-31-98	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	5,000
5R01AG02128-17	FESSLER, JOHN H BASEMENT MEMBRANE BIOSYNTHESIS	06-15-97/04-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	375,586
5P01AG02132-17	PRUSINER, STANLEY B DEGENERATIVE AND DEMENTING DISEASES OF AGING	04-01-97/12-31-97	UNIVERSITY OF CALIFORNIA SAN FRANCIS	1,790,749
3P01AG02132-17S1	PRUSINER, STANLEY B DEGENERATIVE AND DEMENTING DISEASES OF AGING	06-15-97/12-31-97	UNIVERSITY OF CALIFORNIA SAN FRANCIS	112,529
2R37AG02163-15	MADDEN, DAVID J AGE AND SELECTIVE ATTENTION IN VISUAL SEARCH	04-15-97/02-28-98	DUKE UNIVERSITY	233,691
5P01AG02219-17	MOHS, RICHARD C CLINICAL AND BIOLOGIC STUDIES IN EARLY ALZHEIMERS	04-25-97/03-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	1,524,539
3P01AG02219-17S1	MOHS, RICHARD C CLINICAL AND BIOLOGIC STUDIES IN EARLY ALZHEIMERS	04-25-97/03-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	4,238
5R01AG02224-18	WISE, PHYLLIS M NEUROENDOCRINE AND NEUROCHEMICAL FUNCTION DURING AGING	08-01-97/06-30-98	UNIVERSITY OF KENTUCKY	285,722
5R37AG02452-18	LIGHT, LEAH L DIRECT AND INDIRECT MEASURES OF MEMORY IN OLD AGE	09-01-97/08-31-98	PITZER COLLEGE	198,528
3R37AG02452-18S1	LIGHT, LEAH L DIRECT AND INDIRECT MEASURES OF MEMORY IN OLD AGE	09-30-97/08-31-98	PITZER COLLEGE	5,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG02467-16	KUSHNER, IRVING INDUCTION OF ACUTE PHASE PROTEIN BIOSYNTHESIS	03-01-97/02-28-98	CASE WESTERN RESERVE UNIVERSITY	221,198
3R37AG02577-14S1	NIMNI, MARCEL E OSTEOGENESIS--DEVELOPMENT, MODULATION, AND AGING	03-25-97/11-30-97	CHILDREN'S HOSPITAL OF LOS ANGELES	48,731
5R01AG02711-19	ANCOLI-ISRAEL, SONIA PREVALENCE OF SLEEP APNEA IN AN AGED POPULATION	04-04-97/03-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	224,853
5R37AG02751-16	HOWARD, DARLENE V AGING, SEMANTIC PROCESSING AND MEMORY	05-15-97/04-30-99	GEORGETOWN UNIVERSITY	106,547
5R01AG02822-16	STOCKDALE, FRANK E DEVELOPMENTAL AGE AND CHANGES IN MYOSIN ISOZYMES	12-01-96/11-30-97	STANFORD UNIVERSITY	285,573
2R01AG03051-14	REISBERG, BARRY AGING AND DEMENTIA--LONGITUDINAL COURSE OF SUBGROUPS	08-01-97/06-30-98	NEW YORK UNIVERSITY MEDICAL CENTER	274,670
5R37AG03055-16	ELIAS, MERRILL F AGE HYPERTENSION AND INTELLECTIVE PERFORMANCE	07-01-97/06-30-98	UNIVERSITY OF MAINE ORONO	297,930
5R37AG03188-16	WOODBURY, MAX A LONGITUDINAL MODELS OF CORRELATES OF AGING AND LONGEVITY	06-01-97/05-31-99	DUKE UNIVERSITY	229,405
5R01AG03362-11	HARTLEY, JOELLEN T AGING AND PROSE MEMORY--BEHAVIORAL AND EEG PREDICTORS	06-15-97/05-31-98	CALIFORNIA STATE UNIVERSITY LONG BEA	165,929
5R37AG03501-16	LEVENTHAL, HOWARD SYMPTOM AND EMOTION STIMULI TO HEALTH ACTION IN ELDERLY	07-01-97/06-30-98	RUTGERS THE STATE UNIV NEW BRUNSWICK	632,770
3R37AG03501-16S1	LEVENTHAL, HOWARD SYMPTOM AND EMOTION STIMULI TO HEALTH ACTION IN ELDERLY	07-01-97/06-30-98	RUTGERS THE STATE UNIV NEW BRUNSWICK	5,000
2R01AG03763-11	WHISLER, RONALD L CELLULAR MECHANISMS OF HUMAN IMMUNOSENESCENCE	01-01-97/12-31-97	OHIO STATE UNIVERSITY	202,825
2P01AG03934-15	ABRUTYN, ELIAS TEACHING NURSING HOME	05-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
5R01AG03978-14	MILLER, RICHARD A T CELL SUBSETS DEFINED BY P-GLYCOPROTEIN	12-01-96/11-30-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	219,816
5P01AG03991-14	MORRIS, JOHN C HEALTHY AGING AND SENILE DEMENTIA	01-01-97/12-31-97	WASHINGTON UNIVERSITY	1,531,697

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG04058-13	WERNER, JOHN S OPTICAL AND NEURAL CHANGES IN AGING VISUAL SYSTEMS	03-01-97/02-28-98	UNIVERSITY OF COLORADO AT BOULDER	164,023
5R01AG04085-13	MURPHY, CLAIRE L CHEMOSENSORY PERCEPTION AND PSYCHOPHYSICS IN THE AGED	06-15-97/05-31-98	SAN DIEGO STATE UNIVERSITY	178,285
7R01AG04145-16	YEN, SHU-HUI C AGING AND ALZHEIMER DEMENTIA--ROLE OF FIBROUS PROTEINS	05-01-98/11-30-98	MAYO CLINIC JACKSONVILLE	238,825
5R01AG04146-11	BOOTH, ALAN MARITAL INSTABILITY OVER THE LIFE COURSE	01-17-97/12-31-97	PENNSYLVANIA STATE UNIVERSITY-UNIV P	245,826
5R01AG04212-14	OWSLEY, CYNTHIA SPATIAL VISION AND AGING--UNDERLYING MECHANISMS	04-01-97/03-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	203,860
2P01AG04220-10A2	WISNIEWSKI, HENRYK M AGING AND SENILE DEMENTIA OF THE ALZHEIMER TYPE	08-01-97/05-31-98	INSTITUTE FOR BASIC RES IN DEV DISAB	737,494
2R37AG04306-12	HASHER, LYNN A AGE, INHIBITION, AND THE CONTENTS OF WORKING MEMORY	09-30-97/07-31-98	DUKE UNIVERSITY	320,765
5R37AG04307-15	CHASE, MICHAEL H STATE-DEPENDENT SOMATOMOTOR PROCESSES IN OLD AGE	08-15-97/07-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	337,465
3R37AG04307-15S1	CHASE, MICHAEL H STATE DEPENDENT SOMATOMOTOR PROCESSES IN OLD AGE	09-30-97/07-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	5,000
5P01AG04342-14	OLDSTONE, MICHAEL B AGING DISEASE--TRANSGENIC/VIROLOGIC/IMMUNOLOGY STUDIES	12-01-96/11-30-97	SCRIPPS RESEARCH INSTITUTE	872,922
5R01AG04360-15	FARR, ANDREW G AGE DEPENDENT MODULATION OF T CELL FUNCTION	08-15-97/07-31-98	UNIVERSITY OF WASHINGTON	224,960
3P01AG04390-14S1	LIPSITZ, LEWIS A IRESEARCH NURSING HOME	10-01-96/	HEBREW REHABILITATION CENTER FOR AGE	
5P01AG04390-15	LIPSITZ, LEWIS A RESEARCH NURSING HOME	09-01-97/08-31-99	HEBREW REHABILITATION CENTER FOR AGE	704,745
5P01AG04418-14	BICKFORD, PAULA C AMINERGIC FUNCTION IN AGING AND ALZHEIMERS DISEASE	04-01-97/03-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	931,046
3P01AG04418-14S1	BICKFORD, PAULA C AMINERGIC FUNCTION IN AGING AND ALZHEIMERS DISEASE	04-15-97/03-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	34,784

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
2R37AG04517-14	WINGFIELD, ARTHUR AGE AND DECISION STRATEGIES IN RUNNING MEMORY FOR SPEECH	04-15-97	03-31-98	BRANDEIS UNIVERSITY	158,356
5P30AG04590-13	ROCKWELL, RICHARD C FACTORS IN AGING--DEVELOPMENT RESEARCH RESOURCES	05-01-97	04-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	641,735
5R01AG04736-14	THONAR, EUGENE J AGE RELATED DIFFERENCES IN CARTILAGE PROTEOGLYCANS	04-01-97	03-31-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	199,368
3R37AG04810-13S1	LU, JOHN K HORMONE SECRETION AND PREGNANCY DURING AGING	09-15-97	03-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	10,000
2R01AG04821-15	OZER, HARVEY L IMMORTALIZATION OF SV40 TRANSFORMED HUMAN CELLS	08-01-97	07-31-98	UNIVERSITY OF MEDICINE & DENTISTRY O	334,219
5P01AG04875-14	RIGGS, BYRON L PHYSIOLOGY OF BONE METABOLISM IN AN AGING POPULATION	07-01-97	06-30-98	MAYO FOUNDATION	1,294,549
2P01AG04953-14	ALBERT, MARILYN S AGE-RELATED CHANGES OF COGNITION IN HEALTH AND DISEASE	09-15-97	07-31-98	MASSACHUSETTS GENERAL HOSPITAL	1,424,636
5R01AG04980-34	THORBECKE, GEERTRUIDA J GERMINAL CENTERS, ANTIBODY PRODUCTION, AND LYMPHOMA	08-01-97	06-30-98	NEW YORK UNIVERSITY MEDICAL CENTER	317,843
5P01AG05119-11	MARKESBERY, WILLIAM R BRAIN OXIDATION IN THE PATHOGENESIS OF AD	05-15-97	04-30-98	UNIVERSITY OF KENTUCKY	734,384
5P50AG05128-14	SCHMECHEL, DONALD E ALZHEIMERS DISEASE RESEARCH CENTER	05-01-97	04-30-98	DUKE UNIVERSITY	1,983,878
5P50AG05131-14	THAL, LEON J ALZHEIMERS DISEASE	04-01-97	03-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	2,075,194
3P50AG05131-14S1	THAL, LEON J ADRC SUPPLEMENT (MASLIAH--PROJECT 4)	04-15-97	03-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	100,717
3P50AG05131-14S2A1	THAL, LEON J ALZHEIMERS DISEASE	09-30-97	03-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	47,000
3P50AG05131-14S3A1	THAL, LEON J ADRC SUPPLEMENT (HEINEMANN--PROJECT 1)	09-30-97	03-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	124,131
5P50AG05133-14	DE KOSKY, STEVEN T ALZHEIMERS DISEASE RESEARCH CENTER	05-01-97	04-30-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	1,509,552

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5P50AG05134-14	GROWDON, JOHN H ALZHEIMERS DISEASE	04-01-97	03-31-98	HARVARD UNIVERSITY	1,751,623
5P50AG05136-14	MARTIN, GEORGE M ALZHEIMERS DISEASE RESEARCH CENTER	05-01-97	04-30-98	UNIVERSITY OF WASHINGTON	2,297,701
3P50AG05136-14S1	MARTIN, GEORGE M ALZHEIMERS DISEASE RESEARCH CENTER	07-01-97	04-30-98	UNIVERSITY OF WASHINGTON	31,570
5P50AG05138-14	DAVIS, KENNETH L ALZHEIMERS DISEASE	05-01-97	03-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	1,941,889
3P50AG05138-14S1	DAVIS, KENNETH L ALZHEIMERS DISEASE	05-15-97	03-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	58,759
3P50AG05138-14S2	DAVIS, KENNETH L ALZHEIMERS DISEASE RESEARCH CENTER	09-30-97	03-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	111,494
5P50AG05142-14	FINCH, CALEB E ADRC CONSORTIUM	04-15-97	03-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	2,562,741
3P50AG05142-14S2	FINCH, CALEB E ADRC CONSORTIUM	04-10-97	03-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	82,292
5P50AG05144-14	MARKESBERY, WILLIAM R ALZHEIMER'S DISEASE RESEARCH CENTER	05-15-97	04-30-98	UNIVERSITY OF KENTUCKY	1,311,928
5P50AG05146-15	PRICE, DONALD L AGING, NEURODEGENERATIVE DISEASE, AND ANIMAL MODELS	07-15-97	03-31-98	JOHNS HOPKINS UNIVERSITY	1,428,372
3P50AG05146-15S1	PRICE, DONALD L AGING, NEURODEGENERATIVE DISEASE, AND ANIMAL MODELS	04-01-97/		JOHNS HOPKINS UNIVERSITY	
2R01AG05213-11A2	FRIEDMAN, DAVID AGE EFFECTS ON THE COGNITIVE ERPD/CARDIAC HAVE EFFECT	08-01-97	05-31-98	NEW YORK STATE PSYCHIATRIC INSTITUTE	269,295
5R01AG05214-13	ELLIS, JOHN RESPONSES OF SUBPOPULATIONS OF MUSCARINIC RECEPTORS	04-01-97	03-31-99	PENNSYLVANIA STATE UNIV HERSHEY MED	239,896
5R37AG05233-10	FREEDMAN, ROBERT R BEHAVIORAL TREATMENT OF MENOPAUSAL HOT FLASHES	05-01-97	04-30-98	WAYNE STATE UNIVERSITY	274,794
3R37AG05233-10S1	FREEDMAN, ROBERT R BEHAVIORAL TREATMENT OF MENOPAUSAL HOT FLASHES	09-15-97	04-30-98	WAYNE STATE UNIVERSITY	5,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R37AG05284-12	DAVIS, MARADEE A LIVING ARRANGEMENTS HEALTH AND SURVIVAL--OLDER US ADULTS	02-01-97/01-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	229,636
5R01AG05317-10	WOOLLACOTT, MARJORIE H AGE RELATED CHANGES IN POSTURE AND MOVEMENT	08-01-97/07-31-98	UNIVERSITY OF OREGON	165,311
2R01AG05324-08A3	REISER, KAREN M AGE-ASSOCIATED CHANGES IN COLLAGEN	01-01-97/	UNIVERSITY OF CALIFORNIA DAVIS	
5R37AG05333-13	PEREIRA-SMITH, OLIVIA M MOLECULAR AND CYTOGENETIC STUDIES OF HUMAN CELL AGING	06-01-97/04-30-98	BAYLOR COLLEGE OF MEDICINE	238,991
3R37AG05333-13S1	PEREIRA-SMITH, OLIVIA M MOLECULAR AND CYTOGENETIC STUDIES OF HUMAN CELL AGING	08-01-97/04-30-98	BAYLOR COLLEGE OF MEDICINE	50,000
2R01AG05374-07A2	SZAKAL, ANDRAS K ROLE OF ANTIGEN TRANSPORT BY DENDRITIC CELLS IN AGING	07-01-97/	VIRGINIA COMMONWEALTH UNIVERSITY	
5R01AG05394-13	ENSRUD, KRISTINE E FRACTURES IN OLDER WOMEN	09-01-97/08-31-98	UNIVERSITY OF MINNESOTA TWIN CITIES	638,842
2R01AG05407-12	CUMMINGS, STEVEN R OSTEOPOROTIC FRACTURES	07-01-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	1,426,849
2R01AG05552-10A2	HESS, THOMAS M SOCIAL COGNITION AND AGING	08-01-97/06-30-98	NORTH CAROLINA STATE UNIVERSITY RALE	127,464
5R01AG05601-13	MONNIER, VINCENT M BROWNING OF HUMAN COLLAGEN IN DIABETES AND AGING	04-04-97/03-31-99	CASE WESTERN RESERVE UNIVERSITY	181,665
2R01AG05627-12A1	BLASCHKE, TERRENCE F AGING AND IN VIVO VASCULAR RESPONSIVENESS IN MAN	04-01-97/	STANFORD UNIVERSITY	
5R37AG05628-13	GOOD, ROBERT A CELLULAR ENGINEERING TO TREAT/PREVENT DISEASES OF AGING	04-04-97/03-31-98	UNIVERSITY OF SOUTH FLORIDA	168,608
2R01AG05633-11A2	GOOD, ROBERT A REDUCED CALORIES, PROLIFERATION, IMMUNITY, CANCER, AGING	04-01-97/03-31-98	UNIVERSITY OF SOUTH FLORIDA	151,770
7F32AG05662-04	BERG, MARGARET M NUCLEAR TAU--IMPLICATIONS IN ALZHEIMERS DISEASE	04-01-97/03-31-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	31,200
5F32AG05673-02	CLASEY, JODY L AGING, BODY COMPOSITION AND GROWTH HORMONE SECRETION	03-01-97/02-28-98	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	29,900

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5P50AG05681-14	JOHNSON, EUGENE M, JR ALZHEIMERS DISEASE RESEARCH CENTER	06-15-97/04-30-98	WASHINGTON UNIVERSITY	2,199,170
5R01AG05683-13	POWELL, HENRY C CEREBROVASCULAR AMYLOID PROTEIN IN ALZHEIMER'S DISEASE	09-01-97/08-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	311,804
5F32AG05684-03	VISICK, JONATHAN E REPAIR OF DAMAGED PROTEIN AND SURVIVAL OF AGING E COLI	02-01-97/01-31-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	32,500
5F32AG05689-03	SEEGER, MARY A ALZHEIMER AMYLOID PRECURSOR PROTEIN REGULATED CLEAVAGE	02-01-97/01-31-98	ROCKEFELLER UNIVERSITY	29,900
2F32AG05694-03	TIAN, GUOLING CHAPERONIN-MEDIATED FOLDING OF ALPHA AND BETA TUBULIN	09-01-97/	NEW YORK UNIVERSITY MEDICAL CENTER	
5F31AG05699-03	ABEYTA, MELANIE R MINORITY PREDOCTORAL FELLOWSHIP PROGRAM	12-16-96/12-15-97	UNIVERSITY OF ALABAMA AT BIRMINGHAM	15,744
5F31AG05700-03	CONYERS, JACQUELINE R ALZHEIMER PATIENT'S CAPACITIES AND CAREGIVER ASSESSMENTS	01-03-97/01-02-98	UNIVERSITY OF CALIFORNIA IRVINE	18,506
5F32AG05701-03	RYPMA, BART P SPATIAL COGNITION IN AGING AND ALZHEIMERS DISEASE	02-16-97/02-15-98	STANFORD UNIVERSITY	28,600
5F32AG05705-03	JONES, PAMELA P SYMPATHETIC NERVE ACTIVITY AND ADIPOSITY IN HUMAN AGING	10-01-97/05-15-98	UNIVERSITY OF COLORADO AT BOULDER	16,812
5F32AG05707-03	KU, PO-TSAN REGULATION AND ROLE OF REL/NF-KB PROTEINS IN APOPTOSIS	09-01-97/08-31-98	UNIVERSITY OF TEXAS AUSTIN	28,600
5F32AG05710-03	KIRCHMAN, PAUL A LAG1 HOMOLOG AND YEAST REPLICATIVE LIFE SPAN	09-15-97/08-31-98	LOUISIANA STATE UNIV MED CTR NEW ORL	31,200
5F32AG05711-03	MC ECHRON, MATTHEW D HIPPOCAMPAL CELLULAR MECHANISMS OF AGING AND LEARNING	08-15-97/08-14-98	NORTHWESTERN UNIVERSITY	28,600
5F32AG05717-02	TANAKA, HIROFUMI OBESE POSTMENOPAUSAL WOMEN--EFFECTS OF EXERCISE	02-01-97/01-31-98	UNIVERSITY OF COLORADO AT BOULDER	24,420
5R01AG05717-10	KRISHNARAJ, RAJABATHER AGE-ASSOCIATED ALTERATIONS IN HUMAN NK CELL SYSTEM	07-01-97/06-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	239,594
5F32AG05723-02	CHEN, QIN MOL MECHANISM OF H202 INDUCED REPLICATIVE SENESC	12-01-96/11-30-97	UNIVERSITY OF CALIFORNIA BERKELEY	32,500

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5F32AG05728-02	KECK, B JANE SEROTONERGIC NEUROPHARMACOLOGY OF THE AGING BRAIN	04-01-97/03-31-98	PENNSYLVANIA STATE UNIV HERSHEY MED	28,600
5R01AG05731-08	BONDADA, SUBBARAO AGE ASSOCIATED CHANGES IN B LYMPHOCYTE FUNCTION	08-15-97/07-31-98	UNIVERSITY OF KENTUCKY	218,310
5F32AG05733-03	LI, HONG L REGULATION OF APOPTOSIS BY ICH1S	05-01-97/04-30-98	HARVARD UNIVERSITY	28,600
5F33AG05735-03	FIELDS, JEREMY Z CONVENTIONAL AND ALTERNATIVE HEALTH PROMOTION	10-01-97/09-30-98	MAHARISHI UNIVERSITY OF MANAGEMENT	35,500
2F32AG05739-03	REENSTRA, WENDE R THREONINE PHOSPHORYLATION AND EGFR SIGNALING	01-15-97/01-14-98	BOSTON UNIVERSITY	30,900
5R37AG05739-12	BALL, KARLENE K IMPROVEMENT OF VISUAL PROCESSING IN OLDER ADULTS	02-01-97/01-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	204,136
5F32AG05740-03	FREUDENREICH, CATHERINE H PIF1 HELICASE AND TELOMERE REPLICATION CONTROL	09-15-97/08-31-98	PRINCETON UNIVERSITY	29,900
5F32AG05742-02	WANG, SUYUE MECHANISM AND FUNCTION OF ICH3--ICE/CED3 FAMILY	03-01-97/02-28-98	HARVARD UNIVERSITY	29,900
5F32AG05745-02	CHESHIRE, JEANETTE L NF KB AND THE DEVELOPMENT OF ALZHEIMERS DISEASE	04-01-97/06-30-97	UNIVERSITY OF NORTH CAROLINA CHAPEL	6,725
5F32AG05746-02	KIM, TAE-WAN SYNAPTIC APOE RECEPTORS IN ALZHEIMER AND CONTROL	03-01-97/02-28-98	MASSACHUSETTS GENERAL HOSPITAL	28,600
5F32AG05747-02	HOLT, SHAWN E LINEAGE SPECIFIC ROLE FOR PRB IN AGING AND CANCER	02-20-97/02-19-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	28,600
5F32AG05749-02	MIER, CONSTANCE M EXERCISE, ESTROGEN, AGING--ARTERIAL STIFFNESS IN WOMEN	05-01-97/04-30-98	WASHINGTON UNIVERSITY	28,600
5F32AG05750-02	PRULL, MATTHEW W FUNCTIONAL MR IMAGING OF MEMORY AND AGING	09-30-97/09-08-98	STANFORD UNIVERSITY	24,420
5F31AG05752-02	FAIRCLOTH, CHRISTOPHER A PREDOCTORAL FELLOWSHIP PROGRAM (DISABILITY)	08-19-97/08-18-98	UNIVERSITY OF FLORIDA	14,496
5F32AG05754-02	CHEN, JICHUN AGING IN HEMOPOIETIC STEM CELLS AND ITS GENETIC CONTROL	06-28-97/06-27-98	JACKSON LABORATORY	31,200

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5F32AG05755-02	KRAJNAK, KRISTINE M REPRODUCTIVE AGING AND CIRCADIAN RHYTHMICITY	08-15-97/07-31-98	UNIVERSITY OF KENTUCKY	29,900
5F32AG05758-02	EIPERS, PETER G ACCESSORY CELLS AND BONE PRECURSOR CELL DEVELOPMENT	09-30-97/08-04-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	32,500
5F32AG05759-02	AMEND, DIANE L MRI AND MRS FOR THE DIAGNOSIS OF ALZHEIMERS DISEASE	05-01-97/04-30-98	NORTHERN CALIFORNIA INSTITUTE RES &	28,600
1F32AG05761-01	AHMED, SHAWN C GENETICS OF GERMLINE IMMORTALITY IN C ELEGANS	09-01-96/	MEDICAL RESEARCH COUNCIL	
1F32AG05763-01	POWERS, DAVID V STRESS, COPING AND INTERVENTION FOR MALE CAREGIVERS	12-01-96/	STANFORD UNIVERSITY	
1F32AG05764-01	CHAI, SONGHAI IMPROVING COGNITIVE PERFORMANCE IN OLDER ADULTS	08-05-96/	CLEVELAND STATE UNIVERSITY	
3F32AG05766-01S1	STONE, DAVID J APOLIPOPROTEIN RESPONSE TO STEROIDS--SYNAPTIC REMODELING	12-01-96/11-30-97	UNIVERSITY OF SOUTHERN CALIFORNIA	1,092
1F32AG05767-01	GREENWOOD, ANDERS C CA & VULNERABILITY OF CHOLINERGIC BASAL FOREBRAIN	09-01-96/	LOVELACE RESPIRATORY RESEARCH INSTIT	
1F32AG05775-01	TISSENBAUM, HEIDI A FUNCTION OF YEAST UTH4 IN SILENCING AND AGING	02-12-97/02-13-97	MASSACHUSETTS INSTITUTE OF TECHNOLOG	24,292
1F32AG05776-01	HUANG, SHURONG REGULATION OF REPLICATIVE SENESCENCE BY THE WRN GENE	03-01-97/02-28-98	UNIVERSITY OF CALIF-LAWRENC BERKELEY	29,600
1F32AG05777-01	ZHOU, JIANHUA PRESENILIN 1 (PS1) AND ALZHEIMER'S DISEASE	01-01-97/	BRIGHAM AND WOMEN'S HOSPITAL	
1F32AG05778-01	WAGNER, ANTHONY D MEMORY ILLUSIONS AND DISTORTIONS IN AGING	09-01-97/08-30-98	HARVARD UNIVERSITY	24,292
1F32AG05779-01	CONNER, JAMES M NGF GENE THERAPY IN PRIMATE MODELS OF AGING	03-01-97/02-28-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	30,900
5F32AG05781-02	EPSTEIN, CHARLES B IDENTIFICATION OF COMPONENTS OF YEAST TELOMERASE	10-01-97/09-30-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	31,200
1F31AG05783-01	HILLS, ALEXANDER C MINORITY PREDOCTORAL FELLOWSHIP PROGRAM	09-01-97/08-31-99	CASE WESTERN RESERVE UNIVERSITY	24,556

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1F32AG05786-01	SMEAL, TOD R ANALYSIS OF THE MECHANISMS OF REPLICATIVE SENESCENCE	07-01-97/	MASSACHUSETTS INSTITUTE OF TECHNOLOG	
1F32AG05787-01	HUSSEY, JON M NEIGHBORHOOD EFFECTS ON ADULT MORTALITY	07-01-97/06-30-98	UNIVERSITY OF PENNSYLVANIA	29,600
1F32AG05788-01	ROSS, LYLE O IDENTIFICATION OF MUTATIONS THAT ENHANCE ESTL-SENESCENCE	05-01-96/	BAYLOR COLLEGE OF MEDICINE	
1F32AG05789-01	SWANSON, XIN A HUMAN CELLULAR SENESCENCE GENE(S)	05-01-97/	BAYLOR COLLEGE OF MEDICINE	
1F32AG05790-01	OGG, SCOTT A MOLECULAR CHARACTERIZATION OF AGING IN C ELEGANS	08-01-97/07-31-98	MASSACHUSETTS GENERAL HOSPITAL	25,420
1F32AG05791-01	STARLING, RAYMOND D INTERACTION OF GENETICS AND AGING ON ENERGY METABOLISM	07-15-97/07-14-98	UNIVERSITY OF VERMONT & ST AGRIC COL	25,420
1F32AG05792-01	GOTTLOB, LAWRENCE R AGE AND TIME COURSE OF VISUAL SELECTIVE ATTENTION	05-01-97/	DUKE UNIVERSITY	
1F32AG05793-01	SPEAR, NATHAN H PEROXYNITRITE, CELL SIGNALING AND APOPTOSIS	05-01-97/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	29,600
5P01AG05793-13	JOHNSTON, C CONRAD, JR SOME DETERMINANTS OF BONE MASS IN THE ELDERLY	09-15-97/08-31-98	INDIANA UNIV-PURDUE UNIV AT INDIANAP	1,401,825
1F32AG05794-01	RINKER, MARTHA A CHANGES IN HAPTIC AND TACTILE PERCEPTION WITH AGE	05-01-97/	JOHN B. PIERCE LABORATORY, INC.	
1F32AG05798-01	FRIEDLANDER, ANNE L IGF-I, ERT & EXERCISE EFFECTS ON FAT USE & MUSCLE MRNA	11-01-97/10-31-98	STANFORD UNIVERSITY	23,292
1F32AG05799-01	WOMACK, CHRISTOPHER J EXERCISE IN ELDERLY WITH PERIPHAL VASCULAR DISEASE	03-31-98/03-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	31,200
1F32AG05804-01	NICOLLE, MICHELLE M PHOSPHOINOSITIDE HYDROLYSIS AND MEMORY DECLINE IN AGING	11-01-97/10-31-98	MAYO CLINIC JACKSONVILLE	24,420
1F32AG05805-01	REDISH, AARON D AGING AND MULTIPLE MAPS IN THE HIPPOCAMPUS	11-01-97/10-31-98	UNIVERSITY OF ARIZONA	23,292
1F32AG05810-01	COTRELL, VICTORIA C SELF PERCEPTIONS IN INDIVIDUALS WITH ALZHEIMERS DISEASE	11-01-97/10-31-98	OREGON STATE UNIVERSITY	35,300

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1F31AG05811-01	JARRETT, NICOLE C MINORITY PREDOCTORAL FELLOWSHIP PROGRAM	09-30-97/	JOHNS HOPKINS UNIVERSITY	27,316
1F32AG05813-01	DEVERAUX, QUINN L UBIQUITIN/PROTEASOME PATHWAY IN PROGRAMMED CELL DEATH	04-01-97/	BURNHAM INSTITUTE	
3P01AG05842-11S2	WISE, DAVID A ECONOMICS OF AGING	12-15-96/12-31-96	NATIONAL BUREAU OF ECONOMIC RESEARCH	40,000
5P01AG05842-12	WISE, DAVID A ECONOMICS OF AGING	02-01-97/12-31-97	NATIONAL BUREAU OF ECONOMIC RESEARCH	961,954
3P01AG05842-12S1	WISE, DAVID A ECONOMICS OF AGING	09-30-97/12-31-97	NATIONAL BUREAU OF ECONOMIC RESEARCH	42,723
2R37AG05891-12	FRANGIONE, BLAS AMYLOIDOSIS AND ALZHEIMERS DISEASE	08-01-97/06-30-98	NEW YORK UNIVERSITY MEDICAL CENTER	378,838
5R01AG05892-15	IQBAL, KHALID ALZHEIMER'S NEUROFIBRILLARY TANGLES--BIOCHEMICAL STUDIES	12-01-96/11-30-97	NEW YORK STATE OFFICE OF MENTAL HEAL	256,081
5R01AG05893-17	HERSH, LOUIS B CHOLINE ACETYLTRANSFERASE	04-01-97/03-31-98	UNIVERSITY OF KENTUCKY	243,569
5R37AG05894-25	FINE, RICHARD E NEURONAL CA++ SEQUESTERING COMPARTMENTS PROTECTING ROLE	05-01-97/04-30-98	BOSTON UNIVERSITY	331,464
5R01AG05917-12	ROTUNDO, RICHARD L REGULATION OF ACETYLCHOLINESTERASE SYNTHESIS & ASSEMBLY	08-01-97/06-30-98	UNIVERSITY OF MIAMI	268,827
2R01AG05980-04A4	QUADRI, S KALEEM NEUROENDOCRINOLOGY OF REPRODUCTIVE AGING	04-15-97/02-28-98	KANSAS STATE UNIVERSITY	139,800
5R01AG06036-12	ARNSTEN, AMY F COGNITIVE LOSS WITH AGE--ROLE OF CORTICAL CATECHOLAMINES	07-01-97/06-30-98	YALE UNIVERSITY	226,037
2R01AG06088-11A1	GAGE, FRED H CHARACTERIZATION & UTILIZATION OF ADULT PROGENITOR CELLS	03-15-97/02-28-98	SALK INSTITUTE FOR BIOLOGICAL STUDIE	365,985
5R01AG06093-25	NAKAJIMA, YASUKO ULTRASTRUCTURE AND FUNCTION OF NERVE AND MUSCLE	02-01-97/01-31-98	UNIVERSITY OF ILLINOIS AT CHICAGO	205,010
5R37AG06116-13	DICE, JAMES F, JR PROTEIN DEGRADATION IN AGING HUMAN FIBROBLASTS	04-01-97/03-31-98	TUFTS UNIVERSITY BOSTON	288,073

NATIONAL INSTITUTE ON AGING - ACTIVE GRANTS FOR FY 1997 - 1998

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R37AG06127-11	GILDEN, DONALD H NEUROBIOLOGY OF VARICELLA ZOSTER VIRUS	09-01-97/06-30-98	UNIVERSITY OF COLORADO HLTH SCIENCES	367,754
5R01AG06157-11	FAULKNER, JOHN A EXERCISE, INJURY & REPAIR OF MUSCLE FIBERS IN AGED MICE	07-01-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	172,798
3R01AG06157-11S1	FAULKNER, JOHN A EXERCISE, INJURY AND REPAIR OF MUSCLE FIBERS	09-30-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	30,357
5R37AG06168-12	JAZWINSKI, S MICHAL CELLULAR AGING IN A YEAST MODEL SYSTEM	09-15-97/08-31-98	LOUISIANA STATE UNIV MED CTR NEW ORL	245,698
5R01AG06170-12	POTTER, LINCOLN T CHOLINERGIC MECHANISMS IN AGING AND AD	05-15-97/04-30-98	UNIVERSITY OF MIAMI	283,948
5R37AG06173-12	SELKOE, DENNIS J AGING IN THE BRAIN--ROLE OF THE FIBROUS PROTEINS	02-01-97/01-31-98	BRIGHAM AND WOMEN'S HOSPITAL	372,275
5R01AG06246-12	KELLEY, KEITH W HORMONAL RESTORATION OF A FUNCTIONAL THYMUS DURING AGING	09-15-97/08-31-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	308,055
5R01AG06265-12	PARK, DENISE C CONTEXT EFFECTS ON THE AGING MEMORY	08-01-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	248,200
2R01AG06278-08A3	ALBRIGHT, JULIA W AGING OF IMMUNITY TO PARASITES	07-01-97/	GEORGE WASHINGTON UNIVERSITY	
5R01AG06348-10	GASKIN, FELICIA AUTOANTIBODIES IN ALZHEIMERS DISEASE AND NORMAL AGING	12-01-96/11-30-97	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	223,920
7R01AG06457-13	HORAK, FAY B PERIPHERAL AND CENTRAL POSTURAL DISORDERS IN THE ELDERLY	05-01-98/08-31-99	OREGON HEALTH SCIENCES UNIVERSITY	158,985
5R01AG06528-12	DAVIDSON, JEFFREY M ELASTIN AND COLLAGEN IN THE AGING PROCESS	09-01-97/08-31-98	VANDERBILT UNIVERSITY	211,425
5R01AG06537-11	SEALS, DOUGLAS R SYMPATHETIC NERVOUS SYSTEM ACTIVITY AND HUMAN AGING	04-01-97/03-31-98	UNIVERSITY OF COLORADO AT BOULDER	308,657
5P01AG06569-10	WYSS, J MICHAEL ALZHEIMERS DISEASE--A MULTIDISCIPLINARY APPROACH	05-01-97/04-30-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	995,874
3P01AG06569-10S1	WYSS, J MICHAEL ALZHEIMERS DISEASE--A MULTIDISCIPLINARY APPROACH	08-01-97/04-30-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	66,709

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG06601-11	KOSIK, KENNETH S PATHOBIOLOGY OF TAU PROTEIN	08-01-97/07-31-98	BRIGHAM AND WOMEN'S HOSPITAL	299,314
3R01AG06601-11S1	KOSIK, KENNETH S PATHOBIOLOGY OF TAU PROTEIN	09-30-97/07-31-98	BRIGHAM AND WOMEN'S HOSPITAL	20,103
2R01AG06605-11	CORKIN, SUZANNE THEORETICAL ANALYSIS OF LEARNING IN AGE RELATED DISEASE	02-01-97/01-31-98	MASSACHUSETTS INSTITUTE OF TECHNOLOG	339,500
2R01AG06633-09A3	SAPOLSKY, ROBERT M AGING AND HIPPOCAMPAL LOSS, ROLE OF GLUCOCORTICOIDS	12-15-96/	STANFORD UNIVERSITY	
5R01AG06647-10	MORRISON, JOHN H CORTICO-CORTICAL LOSS IN ALZHEIMERS DISEASE IN THE AGED	04-01-97/03-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	311,858
5R01AG06656-11	YOUNKIN, STEVEN G ACHE, CHAT AND CHOLINERGIC NEURONS IN AGING AND AD	09-01-97/08-31-99	MAYO FOUNDATION	219,196
4R37AG06665-10	HORWITZ, BARBARA A AGING AND GENDER EFFECTS ON RESPONSES TO COLD IN RATS	09-01-97/07-31-98	UNIVERSITY OF CALIFORNIA DAVIS	244,651
3R37AG06665-10S1	HORWITZ, BARBARA A AGING AND GENDER EFFECTS ON RESPONSES TO COLD IN RATS	09-30-97/07-31-98	UNIVERSITY OF CALIFORNIA DAVIS	5,000
5U01AG06781-11	LARSON, ERIC B ALZHEIMER'S DISEASE PATIENT REGISTRY	08-01-97/06-30-98	UNIVERSITY OF WASHINGTON	707,849
3U01AG06786-11S1A1	KOKMEN, EMRE SUPPLEMENT TO ALZHEIMERS DISEASE PATIENT REGISTRY	12-15-96/08-31-97	MAYO FOUNDATION	136,095
5U01AG06786-12	KOKMEN, EMRE ALZHEIMERS DISEASE PATIENT REGISTRY	09-01-97/08-31-98	MAYO FOUNDATION	1,047,160
5P01AG06803-10	DAVIES, PETER FUNDAMENTAL STUDIES ON ALZHEIMERS DISEASE	06-15-97/04-30-98	YESHIVA UNIVERSITY	1,224,266
5R37AG06826-12	SALTHOUSE, TIMOTHY A ADULT AGE DIFFERENCES IN REASONING AND SPATIAL ABILITIES	09-01-97/08-31-98	GEORGIA INSTITUTE OF TECHNOLOGY	201,371
3R37AG06826-12S1	SALTHOUSE, TIMOTHY A ADULT AGE DIFFERENCES IN REASONING	09-30-96/08-31-98	GEORGIA INSTITUTE OF TECHNOLOGY	5,000
5R01AG06849-10	OSTERGAARD, ARNE L PRIMING DEFICITS & BRAIN SYSTEMS IN DEMENTIA & AMNESIA	08-01-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	96,266

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
2P01AG06872-10	BOWMAN, BARBARA H MOLECULAR GENETIC MECHANISMS OF AGING	05-01-96/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
5R01AG06945-11	BLAIR, STEVEN N IMPACT OF PHYSICAL FITNESS AND EXERCISE ON HEALTH	04-01-97/03-31-98	COOPER INSTITUTE FOR AEROBICS RESEAR	395,033
2R01AG06946-10	ORME, IAN M AGING AND IMMUNITY IN TUBERCULOSIS	01-01-97/12-31-97	COLORADO STATE UNIVERSITY	230,417
5R01AG07004-09	KENNEY, WILLIAM L, JR AGE AND CONTROL OF HUMAN SKIN BLOOD FLOW	08-01-97/07-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	259,719
2R37AG07025-11	MANTON, KENNETH G FORECASTING LIFE AND ACTIVE LIFE EXPECTANCY	09-30-97/07-31-98	DUKE UNIVERSITY	246,787
5R01AG07137-11	MC ARDLE, J JACK GROWTH CURVE OF ADULT INTELLIGENCE FROM CONVERGENCE DATA	06-15-97/05-31-98	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	229,750
2R01AG07198-11	MANTON, KENNETH G FUNCTIONAL AND HEALTH CHANGES OF THE ELDERLY	09-30-97/03-31-98	DUKE UNIVERSITY	1,343,244
5P01AG07232-09	MAYEUX, RICHARD P EPIDEMIOLOGY OF DEMENTIA	02-01-97/01-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	1,679,805
3P01AG07232-09S1	MAYEUX, RICHARD P EPIDEMIOLOGY OF DEMENTIA	02-01-97/01-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	294,206
3P01AG07232-09S2	MAYEUX, RICHARD P EPIDEMIOLOGY OF DEMENTIA	07-01-97/01-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	37,687
2R01AG07367-10	ROGERS, JOSEPH INFLAMMATORY MECHANISMS IN ALZHEIMERS DISEASE	09-30-97/08-31-98	SUN HEALTH RESEARCH INSTITUTE	340,000
5R01AG07369-07	CAI, KANG PROTEIN DEAMIDATION IN PROTEIN TURNOVER AND AGING	12-01-96/11-30-98	VIRGINIA COMMONWEALTH UNIVERSITY	134,905
5R01AG07370-09	STERN, YAAKOV PREDICTORS OF SEVERITY IN ALZHEIMERS DISEASE	07-01-97/06-30-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	606,550
5R01AG07424-10	ECKENSTEIN, FELIX P NEUROTROPHIC SUPPORT IN AGING AND ALZHEIMER'S DISEASE	08-01-97/06-30-99	OREGON HEALTH SCIENCES UNIVERSITY	270,762
1T32AG07434-01	LEVINE, RICHARD B PREDOCTORAL TRAINING PROGRAM IN NEUROSCIENCE	09-30-97/06-30-98	UNIVERSITY OF ARIZONA	103,217

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R37AG07444-10	WANG, EUGENIA GROWTH CONTROL IN AGING FIBROBLASTS	05-15-97/04-30-98	MC GILL UNIVERSITY	203,116
5R01AG07467-09	OOKHTENS, MURAD EFFECT OF AGING ON INTERORGAN GLUTATHIONE HOMEOSTASIS	05-01-97/04-30-98	UNIVERSITY OF SOUTHERN CALIFORNIA	252,885
5R01AG07469-10	MANTON, KENNETH G ACTIVE LIFE EXPECTANCY IN OLD AND OLDEST-OLD POPULATIONS	09-01-97/08-31-98	DUKE UNIVERSITY	173,496
2R01AG07547-05A4	PERETZ, BERTRAM NEURON VIABILITY IN THE ADULT NERVOUS SYSTEM	12-01-96/	UNIVERSITY OF KENTUCKY	
5R37AG07554-10	WILLOTT, JAMES F AGING AND CENTRAL AUDITORY SYSTEM MORPHOLOGY	05-01-97/04-30-98	NORTHERN ILLINOIS UNIVERSITY	99,976
2R01AG07562-10	GANGULI, MARY EPIDEMIOLOGY OF DEMENTIA: A PROSPECTIVE COMMUNITY STUDY	08-15-97/07-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	825,573
5R01AG07569-09	PARASURAMAN, RAJA ATTENTION IN AGING AND EARLY ALZHEIMERS DEMENTIA	04-04-97/03-31-98	CATHOLIC UNIVERSITY OF AMERICA	229,569
2R01AG07584-09A2	KUKULL, WALTER A GENETIC DIFFERENCES IN ALZHEIMERS CASES AND CONTROLS	08-01-97/07-31-98	UNIVERSITY OF WASHINGTON	252,590
2R01AG07591-08A1	KOZIKOWSKI, ALAN P AGENTS FOR THE TREATMENT OF MEMORY AND LEARNING DISORDER	07-01-97/	GEORGETOWN UNIVERSITY	
5R01AG07592-09	BARNARD, ROY J MECHANISM OF AGING INDUCED INSULIN RESISTANCE	03-01-97/02-28-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	169,815
5R01AG07607-07	BLANCHARD-FIELDS, FREDDA H ATTRIBUTIONAL PROCESSES IN ADULTHOOD AND AGING	07-01-97/06-30-99	GEORGIA INSTITUTE OF TECHNOLOGY	146,872
5R01AG07631-08	BRATER, DONALD C CLINICAL PHARMACOLOGY OF LOOP DIURETICS	09-01-97/08-31-98	INDIANA UNIV-PURDUE UNIV AT INDIANAP	326,654
5R37AG07637-09	HERMALIN, ALBERT I RAPID DEMOGRAPHIC CHANGE AND WELFARE	04-01-97/03-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	368,413
3R01AG07648-07S1	GOLD, PAUL E AGING AND MEMORY	02-01-97/06-30-97	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	41,099
5R01AG07648-08	GOLD, PAUL E AGING AND MEMORY	08-01-97/06-30-98	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	234,523

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG07654-09	FISK, ARTHUR D AUTOMATIC AND CONTROLLED PROCESSING AND AGING	09-01-97/08-31-98	GEORGIA INSTITUTE OF TECHNOLOGY	151,178
5R01AG07657-09	SOHAL, RAJINDAR S CELLULAR AGING AND OXYGEN FREE RADICALS	04-01-97/03-31-98	SOUTHERN METHODIST UNIVERSITY	159,760
5R01AG07695-10	LAL, HARBANS NEUROBEHAVIORAL AND IMMUNOLOGICAL MARKERS OF AGING	04-01-97/03-31-99	UNIVERSITY OF NORTH TEXAS HLTH SCI C	243,894
5R01AG07700-10	FRIEDMAN, EITAN AGING, PROTEIN KINASE C, AND SEROTONIN RELEASE	04-01-97/03-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	247,950
5R01AG07719-10	MURASKO, DONNA M IMMUNE PARAMETERS AS BIOMARKERS OF AGING	04-04-97/03-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	366,295
3R01AG07719-10S1	MURASKO, DONNA M IMMUNE PARAMETERS AS BIOMARKERS OF AGING	09-15-97/03-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	99,250
5R01AG07724-10	WOLF, NORMAN S BIOMARKERS OF AGING--CELLULAR PROLIFERATION AND TURNOVER	04-01-97/03-31-99	UNIVERSITY OF WASHINGTON	211,945
5R01AG07735-10	MARKOWSKA, ALICJA L BEHAVIORAL AND PHYSIOLOGICAL BIOMAKERS OF AGING	04-01-97/03-31-99	JOHNS HOPKINS UNIVERSITY	195,060
5R01AG07747-10	BRONSON, RODERICK T AGE-RELATED LESIONS AS BIOMARKERS OF AGING	04-01-97/03-31-99	TUFTS UNIVERSITY BOSTON	224,879
5R01AG07752-10	SONNTAG, WILLIAM E GROWTH HORMONE (GH) AND GH-DEPENDENT BIOMARKERS OF AGING	04-01-97/03-31-98	WAKE FOREST UNIVERSITY	188,304
5R01AG07767-10	LANDFIELD, PHILIP W BIOMARKERS OF BRAIN AGING	04-01-97/03-31-99	UNIVERSITY OF KENTUCKY	251,504
3R01AG07805-07S1	GRIFFITH, WILLIAM H, III PHYSIOLOGY OF CHOLINERGIC BASAL FOREBRAIN NEURONS	04-01-97/12-31-97	TEXAS A&M UNIVERSITY HEALTH SCIENCE	56,939
5R37AG07823-09	KAHANA, EVA F ADAPTATION TO FRAILTY AMONG DISPERSED ELDERLY	07-01-97/06-30-98	CASE WESTERN RESERVE UNIVERSITY	191,147
5R37AG07977-15	BENGTSON, VERN L LONGITUDINAL STUDY OF GENERATIONS AND MENTAL HEALTH	04-09-97/06-30-98	UNIVERSITY OF SOUTHERN CALIFORNIA	690,936
5R01AG07988-08	BODEN, GUENTHER ETHANOL & FAT INDUCED INSULIN RESISTANCE IN THE ELDERLY	08-01-97/07-31-98	TEMPLE UNIVERSITY	239,620

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FY: 97				
5R01AG07991-07	MC DOWD, JOAN M ATTENTION AND AGING--UNDERSTANDING NEGATIVE PRIMING	05-01-97/04-30-98	UNIVERSITY OF KANSAS MEDICAL CENTER	166,197
5R01AG07992-08	WRIGHT, WOODRING E MECHANISMS OF CELLULAR IMMORTALIZATION	01-01-97/12-31-97	UNIVERSITY OF TEXAS SW MED CTR/DALLA	310,857
2P01AG07996-07A1	LOTZ, MARTIN K JOINT AGING AND OSTEOARTHRITIS	07-01-97/03-31-98	SCRIPPS RESEARCH INSTITUTE	1,239,693
5R01AG07998-08	DIVENYI, PIERRE L SPEECH PERCEPTION UNDER NONOPTIMAL CONDITIONS IN AGING	01-16-97/12-31-97	EAST BAY INSTITUTE FOR RESEARCH AND	154,120
5R01AG08010-09	BURGIO, KATHRYN L BIOFEEDBACK AND TREATMENT OF URINARY INCONTINENCE	04-01-97/03-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	407,328
5P50AG08012-10	HERRUP, KARL UHC/CWRU ADRC COMPETITIVE RENEWAL	06-15-97/05-31-98	CASE WESTERN RESERVE UNIVERSITY	1,804,543
3P30AG08017-07S1	KAYE, JEFFREY ALZHEIMER DISEASE CENTER	01-01-97/03-31-97	OREGON HEALTH SCIENCES UNIVERSITY	28,779
5P30AG08017-08	KAYE, JEFFREY ALZHEIMER DISEASE CENTER	04-07-97/03-31-98	OREGON HEALTH SCIENCES UNIVERSITY	855,614
5P30AG08031-08	PETERSEN, RONALD C ALZHEIMERS DISEASE CENTER	05-01-97/04-30-98	MAYO FOUNDATION	932,995
5P30AG08051-08	FERRIS, STEVEN H ALZHEIMERS DISEASE CENTER CORE GRANT	07-15-97/04-30-98	NEW YORK UNIVERSITY MEDICAL CENTER	1,122,859
5R37AG08055-09	SCHAIE, K WARNER LONGITUDINAL STUDIES OF ADULT COGNITIVE DEVELOPMENT	12-01-96/11-30-97	PENNSYLVANIA STATE UNIVERSITY-UNIV P	975,367
5R01AG08076-07	IQBAL, KHALID NEURONAL CYTOSKELETAL ALTERATIONS IN ALZHEIMERS DISEASE	02-01-97/01-31-98	INSTITUTE FOR BASIC RES IN DEV DISAB	230,770
2R01AG08084-09A1	POTTER, HUNTINGTON AMYLOID DEPOSITION IN AGING AND ALZHEIMER'S DISEASE	07-01-97/	HARVARD UNIVERSITY	
2R01AG08099-07A1	TORAN-ALLERAND, C DOMINIQUE INTERACTIONS OF NGF/ESTROGEN IN CNS DEVELOPMENT & AGING	12-01-96/	COLUMBIA UNIVERSITY HEALTH SCIENCES	
5R01AG08109-12	O'CONNOR, CLARE M METHYLATION OF ATYPICAL PROTEIN ASPARTYL RESIDUES	07-01-97/06-30-98	BOSTON COLLEGE	256,229

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG08122-09	WOLF, PHILIP A EPIDEMIOLOGY OF DEMENTIA IN THE FRAMINGHAM STUDY	07-01-97/06-30-98	BOSTON UNIVERSITY	272,533
5R37AG08146-09	WISE, DAVID A PENSION PLAN PROVISIONS AND EARLY RETIREMENT EXTENSION	01-15-97/12-31-97	NATIONAL BUREAU OF ECONOMIC RESEARCH	155,094
5R37AG08155-09	GAMBETTI, PIERLUIGI PRION DISEASES	04-01-97/03-31-98	CASE WESTERN RESERVE UNIVERSITY	357,824
5R37AG08174-10	SIMPSON, EVAN R AROMATASE IN ADIPOSE--RELATIONSHIP TO AGING AND CANCER	07-01-97/06-30-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	375,824
5R01AG08179-08	ZAUDERER, MAURICE VARIABLE GENE UTILIZATION IN SPECIFIC T CELL RESPONSES	07-15-97/06-30-98	UNIVERSITY OF ROCHESTER	131,960
2R01AG08193-09	CERNY, JAN REPERTOIRE OF ANTIBODY RESPONSES IN AGING	12-01-96/	UNIVERSITY OF MARYLAND BALT PROF SCH	
5R01AG08200-10	ROBAKIS, NIKOLAOS K PRODUCTION OF CYTOPLASMIC DOMAIN CONTAINING SOLUBLE APP	09-01-97/08-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	249,512
5R01AG08203-10	MURPHY, CLAIRE L OLFACTORY DYSFUNCTION IN ALZHEIMER'S DISEASE	08-01-97/07-31-99	SAN DIEGO STATE UNIVERSITY	204,622
5R01AG08211-07	MAGAZINER, JAY EPIDEMIOLOGY OF DEMENTIA IN AGED NURSING HOME ADMISSIONS	08-01-97/07-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	579,749
5R01AG08226-07	ABERNETHY, DARRELL R CALCIUM, AGING, AND HYPERTENSION	07-01-97/06-30-98	GEORGETOWN UNIVERSITY	188,609
5R01AG08235-07	HULTSCH, DAVID INDIVIDUAL DIFFERENCES IN MEMORY CHANGE IN THE AGED	08-15-97/11-30-97	UNIVERSITY OF VICTORIA	136,028
5P01AG08291-08	LILLARD, LEE A SOCIAL AND ECONOMIC FUNCTIONING IN OLDER POPULATIONS	09-30-97/08-31-98	RAND CORPORATION	624,786
5R01AG08293-07	HUMES, LARRY E SPEECH RECOGNITION BY THE HEARING IMPAIRED ELDERLY	07-01-97/06-30-98	INDIANA UNIVERSITY BLOOMINGTON	222,969
3R37AG08303-08S1	MARTIN, GEORGE M HOMOZYGOSITY MAPPING OF THE WERNER SYNDROME LOCUS	09-15-97/04-30-98	UNIVERSITY OF WASHINGTON	5,000
2R01AG08313-06A2	KUTAS, MARTA BRAIN POTENTIALS (ERPS)--LANGUAGE, MEMORY, AND AGING	04-01-97/02-28-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	315,970

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
2P01AG08321-07	ZIRKIN, BARRY R AGING AND MALE REPRODUCTIVE TRACT STRUCTURE/FUNCTION	05-15-97	03-31-98	JOHNS HOPKINS UNIVERSITY	782,379
5R01AG08324-07	STRUMPF, NEVILLE E MAINTAINING RESTRAINT REDUCTION IN NURSING HOMES	04-01-97	03-31-99	UNIVERSITY OF PENNSYLVANIA	314,385
5R01AG08325-08	KAWAS, CLAUDIA H RISK FACTORS AND EARLY SIGNS IN ALZHEIMERS DISEASE/BLSA	06-01-97	04-30-98	JOHNS HOPKINS UNIVERSITY	637,460
5R37AG08346-07	LILLARD, LEE A INTERGENRATIONAL TRANSFERS	05-01-97	01-31-98	RAND CORPORATION	139,130
3R01AG08415-07S1A1	ANCOLI-ISRAEL, SONIA SLEEP CONSOLIDATION IN A NURSING HOME POPULATION	04-15-97	06-30-97	UNIVERSITY OF CALIFORNIA SAN DIEGO	36,645
5R01AG08415-08	ANCOLI-ISRAEL, SONIA SLEEP CONSOLIDATION IN A NURSING HOME POPULATION	08-01-97	06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	309,360
3R01AG08415-08S1	ANCOLI-ISRAEL, SONIA SLEEP CONSOLIDATION IN A NURSING HOME POPULATION	08-15-97	06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	3,276
5R01AG08419-08	RASKIND, MURRAY A PSYCHOPATHOLOGY OF ALZHEIMER'S--PSYCHONEUROENDOCRINOLOGY	04-01-97	03-31-98	UNIVERSITY OF WASHINGTON	244,221
5R01AG08441-08	SCHACTER, DANIEL L AGING MEMORY	01-01-97	12-31-97	HARVARD UNIVERSITY	223,116
2R01AG08444-08A1	KAY, MARGUERITE M B MEMBRANE CHANGES IN NEUROLOGIC AND AGING DISEASES	07-01-97		UNIVERSITY OF ARIZONA	
5R01AG08470-09	LANSBURY, PETER T, JR AMYLOID DEPOSITION IN ALZHEIMER'S DISEASE	07-15-97	06-30-98	BRIGHAM AND WOMEN'S HOSPITAL	227,803
5R01AG08479-06	SONSALLA, PATRICIA K DOPAMINERGIC NEUROTOXINS AND AGING	08-01-97	07-31-98	UNIV OF MED/DENT NJ-R W JOHNSON MED	210,143
5R01AG08487-08	HYMAN, BRADLEY T NEUROPATHOLOGICAL ALTERATIONS IN ALZHEIMERS DISEASE	12-01-96	11-30-97	MASSACHUSETTS GENERAL HOSPITAL	419,373
5R37AG08511-07	DIOKNO, ANANIAS C MESA PROJECT--PREVENTION OF URINARY INCONTINENCE	07-01-97	06-30-98	WILLIAM BEAUMONT HOSPITAL	349,269
5R37AG08514-10	GAGE, FRED H GRAFTING GENETICALLY MODIFIED CELLS TO THE BRAIN	08-01-97	06-30-98	SALK INSTITUTE FOR BIOLOGICAL STUDIE	345,068

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG08538-06	BLUM, MARIANN M GROWTH FACTORS IN THE ADULT AND AGING BRAIN	05-15-97/04-30-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	212,500
5R01AG08549-07	BREITNER, JOHN C GENETIC EPIDEMIOLOGY OF ALZHEIMER DISEASE IN TWINS	06-01-97/05-31-99	DUKE UNIVERSITY	939,313
3R37AG08557-06S2	HAUG, MARIE R STRESSES STRAINS AND ELDERLY PHYSICAL HEALTH	01-15-97/02-28-97	CASE WESTERN RESERVE UNIVERSITY	5,000
5R37AG08557-07	HAUG, MARIE R STRESSES STRAINS AND ELDERLY PHYSICAL HEALTH	03-01-97/02-28-98	CASE WESTERN RESERVE UNIVERSITY	174,260
5R01AG08573-15	BANDMAN, EVERETT IMMUNOBIOCHEMICAL STUDY OF MUSCLE MYOSIN ISOFORMS	07-15-97/06-30-98	UNIVERSITY OF CALIFORNIA DAVIS	228,752
5R01AG08575-05	ARIEFF, ALLEN I HYPONATREMIC ENCEPHALOPATHY--ROLE OF AGE	02-01-97/12-31-97	UNIVERSITY OF CALIFORNIA SAN FRANCIS	215,998
5P50AG08664-08	APPEL, STANLEY H ALZHEIMERS DISEASE RESEARCH CENTER	06-15-97/05-31-98	BAYLOR COLLEGE OF MEDICINE	957,922
5P30AG08665-08	COLEMAN, PAUL D ALZHEIMERS DISEASE CENTER	05-15-97/04-30-98	UNIVERSITY OF ROCHESTER	895,891
5P50AG08671-09	GILMAN, SID MICHIGAN ALZHEIMERS DISEASE RESEARCH CENTER	07-01-97/05-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	1,821,008
3P50AG08671-09S1	GILMAN, SID MICHIGAN ALZHEIMERS DISEASE RESEARCH CENTER	07-15-97/05-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	134,766
7R37AG08678-08	OUSLANDER, JOSEPH G TREATMENT OF INCONTINENCE IN NURSING HOMES	01-24-97/12-31-97	EMORY UNIVERSITY	386,235
5P50AG08702-09	SHELANSKI, MICHAEL L ALZHEIMERS DISEASE RESEARCH CENTER	06-15-97/05-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	1,342,487
3P50AG08702-09S1	SHELANSKI, MICHAEL L ALZHEIMERS DISEASE RESEARCH CENTER SUPPLEMENT	07-01-97/05-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	133,527
5R37AG08707-07	WEKSLER, MARC E AUTOIMMUNE REACTIONS IN AGING	12-01-96/11-30-97	WEILL MEDICAL COLLEGE OF CORNELL UNI	181,570
5R01AG08710-08	ROBERTS, EUGENE L, JR AGE RELATED CHANGES IN BRAIN METABOLIC NEUROPHYSIOLOGY	08-01-97/07-31-98	UNIVERSITY OF MIAMI	103,664

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
2R01AG08714-06A1	OKEN, BARRY S AGE-RELATED CHANGES IN ALERTNESS AND VISUAL PROCESSING	12-01-96/		OREGON HEALTH SCIENCES UNIVERSITY	
5R01AG08721-08	FRANGIONE, BLAS AMYLOID ANGIOPATHY EARLY PLAQUES AND AGING	09-01-97/	08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	250,753
2R01AG08724-08	GATZ, MARGARET J DEMENTIA IN SWEDISH TWINS	08-15-97/	07-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	1,358,191
5P01AG08761-08	VAUPEL, JAMES W OLDEST-OLD MORTALITY--DEMOGRAPHIC MODELS AND ANALYSIS	01-01-97/	12-31-97	DUKE UNIVERSITY	918,154
3P01AG08761-08S1	VAUPEL, JAMES W OLDEST OLD MORTALITY--DEMOGRAPHIC MODELS AND ANALYSIS	05-15-97/	12-31-97	DUKE UNIVERSITY	119,773
3P01AG08761-08S2	VAUPEL, JAMES W OLDEST OLD MORTALITY--DEMOGRAPHIC MODELS AND ANALYSIS	06-01-97/	12-31-97	DUKE UNIVERSITY	32,390
3P01AG08761-08S3	VAUPEL, JAMES W OLDEST-OLD MORTALITY - DEMOGRAPHIC MODELS AND ANALYSIS	07-01-97/	12-31-97	DUKE UNIVERSITY	
3P01AG08761-08S4	VAUPEL, JAMES W OLDEST-OLD MORTALITY--DEMOGRAPHIC MODELS AND ANALYSIS	09-30-97/	12-31-97	DUKE UNIVERSITY	228,000
5R01AG08768-08	SELTZER, MARSHA M AGING MOTHERS OF RETARDED ADULTS--IMPACTS OF CAREGIVING	09-01-97/	08-31-98	UNIVERSITY OF WISCONSIN MADISON	391,943
5R01AG08796-07	DISTERHOFT, JOHN F CALCIUM REGULATION OF LEARNING IN AGING HIPPOCAMPUS	08-01-97/	06-30-98	NORTHWESTERN UNIVERSITY	214,516
3R01AG08796-07S1	DISTERHOFT, JOHN F CALCIUM REGULATION OF LEARNING IN AGING HIPPOCAMPUS	08-01-97/	06-30-98	NORTHWESTERN UNIVERSITY	37,000
3P60AG08808-08S1	HALTER, JEFFREY B SPECIFIC EDUCATION, EXERCISE, AND STRESS INCONTINENCE	09-01-97/	08-31-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
3P60AG08808-08S3	HALTER, JEFFREY B CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-01-97/	08-31-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
5P60AG08808-09	HALTER, JEFFREY B CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-01-97/	08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	946,649
3P60AG08808-09S1	HALTER, JEFFREY B TASK SPECIFIC RESISTANCE TRAINING TO IMPROVE TRANSFERS	09-15-97/	08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	96,861

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
3P60AG08808-09S2	HALTER, JEFFREY B CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-30-97/08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	157,235
3P60AG08808-09S3	HALTER, JEFFREY B CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-01-97/08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	25,000
5P60AG08812-08	WEI, JEANNE Y HARVARD OLDER AMERICANS INDEPENDENCE CENTER	09-30-97/02-28-98	HARVARD UNIVERSITY	841,550
3P60AG08812-08S1	WEI, JEANNE Y HARVARD OLDER AMERICANS INDEPENDENCE CENTER	09-30-97/02-28-98	HARVARD UNIVERSITY	25,000
5R01AG08816-07	CARSTENSEN, LAURA L SOCIAL INTERACTION IN OLD AGE	01-01-97/12-31-97	STANFORD UNIVERSITY	175,387
5R01AG08825-07	FRIEDMAN, HOWARD S PREDICTORS OF HEALTH AND LONGEVITY	07-01-97/06-30-99	UNIVERSITY OF CALIFORNIA RIVERSIDE	93,581
5R01AG08835-08	BURKE, DEBORAH M MEMORY AND LANGUAGE IN OLD AGE	12-01-96/11-30-97	POMONA COLLEGE	200,241
2R01AG08849-06A1	DALTON, ARTHUR J DEMENTIA IN DOWN SYNDROME: LONGITUDINAL STUDIES	04-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
5R37AG08861-08	MC CLEARN, GERALD E ORIGINS OF VARIANCE IN THE OLD-OLD--OCTOGENARIAN TWINS	09-01-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	274,952
5R01AG08932-15	CAPLAN, ARNOLD I PROTEOGLYCAN SYNTHESIS DURING DEVELOPMENT AND AGING	12-01-96/11-30-97	CASE WESTERN RESERVE UNIVERSITY	233,365
5R37AG08937-07	HEYMAN, ALBERT RACE DIFFERENCES IN PREVALENCE AND INCIDENCE OF DEMENTIA	02-01-97/01-31-98	DUKE UNIVERSITY	364,523
3R37AG08937-07S1	HEYMAN, ALBERT RACE DIFFERENCES IN PREVALENCE AND INCIDENCE OF DEMENTIA	09-30-97/01-31-98	DUKE UNIVERSITY	21,446
5P01AG08938-13	EPSTEIN, CHARLES J BIOLOGY OF DOWN SYNDROME	08-01-97/07-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	1,013,078
5R35AG08974-07	PETTEGREW, JAY W MOLECULAR STUDIES IN ALZHEIMERS DISEASE	04-01-97/03-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	658,641
5R35AG08992-07	GAMBETTI, PIERLUIGI CELLULAR AND MOLECULAR PATHOLOGY OF ALZHEIMER DISEASE	07-15-97/06-30-99	CASE WESTERN RESERVE UNIVERSITY	756,912

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG09000-07	ENOKA, ROGER M AGING AND TRAINING EFFECTS ON MOTOR UNITS	07-15-97	06-30-99	UNIVERSITY OF COLORADO AT BOULDER	175,561
1R01AG09004-01A2	WEN, G Y BIONDI RING TANGLES IN CHOROID PLEXUS OF AGING/AD BRAINS	04-01-97/		INSTITUTE FOR BASIC RES IN DEV DISAB	
5R01AG09006-07	SIPE, JEAN D CELLULAR METABOLISM OF AMYLOID PROTEINS IN AGING	01-01-97	12-31-97	BOSTON UNIVERSITY	216,460
5R35AG09014-07	BLASS, JOHN P CELL BIOLOGICAL STUDIES IN ALZHEIMERS DISEASE	06-15-97	04-30-99	WINIFRED MASTERSON BURKE MED RES INS	504,993
5R01AG09029-07	FARRER, LINDSAY A GENETIC EPIDEMIOLOGICAL STUDIES OF ALZHEIMERS DISEASE	05-01-97	04-30-98	BOSTON UNIVERSITY	772,733
5R01AG09140-06	MEYDANI, SIMIN N VITAMIN E AND THE AGING IMMUNE RESPONSE	06-01-97	05-31-98	TUFTS UNIVERSITY BOSTON	171,634
2R01AG09191-06A1	GORDON-SALANT, SANDRA M AUDITORY TEMPORAL PROCESSES, SPEECH PERCEPTION AND AGING	01-15-97	11-30-97	UNIVERSITY OF MARYLAND COLLEGE PK CA	223,820
5R01AG09202-06	GANGULI, MARY INDO-US CROSS NATIONAL DEMENTIA EPIDEMIOLOGY STUDY	02-01-97	01-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	629,580
2R01AG09203-06A1	LABOUVIE-VIEF, GISELA COGNITIVE AND EMOTIONAL MATURITY IN ADULTHOOD AND AGING	09-30-97	06-30-98	WAYNE STATE UNIVERSITY	356,129
2R01AG09214-06A2	RANCE, NAOMI E REPRODUCTIVE AGING AND THE HUMAN HYPOTHALAMUS	08-01-97	05-31-98	UNIVERSITY OF ARIZONA	313,290
5P01AG09215-08	TROJANOWSKI, JOHN Q MOLECULAR SUBSTRATES OF AGING AND NEURON DEATH	05-15-97	04-30-98	UNIVERSITY OF PENNSYLVANIA	1,204,591
5R01AG09219-07	BARNES, CAROL A TRANSCRIPTION FACTOR GENES, NEURONAL PLASTICITY & AGING	06-01-97	05-31-98	UNIVERSITY OF ARIZONA	280,987
5R01AG09221-05	KRAUSE, NEAL M WELL BEING AMONG AGED--PERSONAL CONTROL & SELF ESTEEM	04-01-97	03-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	242,981
5R01AG09235-08	NEBERT, DANIEL W OXIDATIVE STRESS, CELL DEATH AND THE (AH) GENE BATTERY	08-01-97	07-31-98	UNIVERSITY OF CINCINNATI	303,918
5R01AG09253-07	JOHNSON, MARCIA K AGING EFFECTS ON MEMORY FOR SOURCE OF INFORMATION	09-01-97	08-31-98	PRINCETON UNIVERSITY	263,134

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG09258-05	KAY, MARGUERITE M IMMUNOCHEMISTRY OF AN AGING ANTIGEN	06-15-97	08-31-98	UNIVERSITY OF ARIZONA	186,801
5R01AG09278-07	WANG, EUGENIA FIBROBLAST AGING AND PROGRAMMED CELL DEATH	09-01-97	08-31-98	MC GILL UNIVERSITY	141,463
2R01AG09282-06	ALLEN, PHILIP A AGE DIFFERENCES IN EPISODIC AND SEMANTIC MEMORY	04-15-97	02-28-98	CLEVELAND STATE UNIVERSITY	179,697
2R01AG09287-06A2	PERRY, GEORGE NEUROFIBRILLARY PATHOLOGY IN ALZHEIMER DISEASE	12-15-96	11-30-97	CASE WESTERN RESERVE UNIVERSITY	179,524
2R01AG09299-04A1	MIZUMORI, SHERI J REORGANIZATION OF NEURAL REPRESENTATION IN OLD AGE	12-01-96		UNIVERSITY OF UTAH	
5R01AG09301-06	VOLICER, LADISLAV SENILE CHANGES IN CIRCADIAN RHYTHMS AND BEHAVIOR	01-01-97	12-31-97	MC LEAN HOSPITAL (BELMONT, MA)	251,865
5R01AG09341-10	SHAN, GARY E AMBULATORY BLOOD PRESSURE AND COGNITION IN THE ELDERLY	12-01-96	11-30-97	SRI INTERNATIONAL	505,970
3R01AG09341-10S1	SHAN, GARY E AMBULATORY BLOOD PRESSURE AND COGNITION IN THE ELDERLY	04-01-97	11-30-97	SRI INTERNATIONAL	171,001
7R37AG09383-08	GREIDER, CAROL W STRUCTURE AND FUNCTION OF TELOMERES IN MAMMALIAN AGING	02-15-98	07-31-98	JOHNS HOPKINS UNIVERSITY	259,120
5R01AG09388-05	SELTZER, MARSHA M CAREGIVING IMPACT--DURATION AND RELATIONSHIP EFFECTS	03-01-97	02-28-99	UNIVERSITY OF WISCONSIN MADISON	175,961
2R01AG09399-06A2	GROSSMAN, MURRAY COGNITIVE PROFILES IN ALZHEIMER'S DISEASE AND AGING	12-01-96		UNIVERSITY OF PENNSYLVANIA	
2R01AG09413-06	SHMOOKLER-REIS, ROBERT J POLYMORPHIC GENES MODULATING LIFESPAN IN C ELEGANS	12-15-96	11-30-97	UNIVERSITY OF ARKANSAS MED SCIS LTL	222,431
2R01AG09433-06A2	HUMMERT, MARY L STEREOTYPES OF OLDER ADULTS AND COMMUNICATION	07-01-97		UNIVERSITY OF KANSAS LAWRENCE	
2R01AG09439-06A1	SILVERMAN, WAYNE P AGING AND MENTAL RETARDATION: CHANGES IN PROCESSING RATE	07-01-97		NEW YORK STATE OFFICE OF MENTAL HEAL	
2R01AG09453-07A1	VLASSARA, HELEN AGING AND VASCULAR DISEASE--ROLE OF GLYCATION	08-01-97	06-30-98	PICOWER INSTITUTE FOR MEDICAL RESEAR	241,105

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
2R01AG09461-05A1	PRINEAS, RONALD J EPIDEMIOLOGY OF ALZHEIMER'S DISEASE IN ETHNIC GROUPS	04-01-97/	UNIVERSITY OF MIAMI	
5P01AG09464-07	GREENGARD, PAUL SIGNAL TRANSDUCTION AND ALZHEIMERS DISEASE	09-30-97/06-30-98	ROCKEFELLER UNIVERSITY	893,417
5P01AG09466-07	DE TOLEDO-MORRELL, LEYLA ANATOMIC, PHYSIOLOGIC, AND COGNITIVE PATHOLOGY OF AD	04-01-97/03-31-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	1,082,480
3P01AG09466-07S1	DE TOLEDO-MORRELL, LEYLA ANATOMIC, PHYSIOLOGIC, AND COGNITIVE PATHOLOGY OF AD	06-01-97/03-31-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	65,000
5R01AG09468-05	SLOAN, FRANK A PUBLIC SUBSIDIES EFFECTS ON USE OF LONGTERM CARE	09-01-97/08-31-98	DUKE UNIVERSITY	94,042
5R01AG09488-06	MEANEY, MICHAEL J GLUCOCORTICOIDS, STRESS, AND HIPPOCAMPAL AGING	09-01-97/08-31-98	MC GILL UNIVERSITY	123,129
5R37AG09521-11	BLAU, HELEN M ACTIVATORS OF HUMAN MUSCLE GENES	04-19-97/03-31-98	STANFORD UNIVERSITY	358,784
3R37AG09521-11S1	BLAU, HELEN M ACTIVATORS OF HUMAN MUSCLE GENES	07-01-97/03-31-98	STANFORD UNIVERSITY	35,554
3R37AG09521-11S2	BLAU, HELEN M ACTIVATORS OF HUMAN MUSCLE GENES	08-15-97/03-31-98	STANFORD UNIVERSITY	5,000
3R37AG09521-11S4	BLAU, HELEN M ACTIVATORS OF HUMAN MUSCLE GENES	09-01-97/03-31-98	STANFORD UNIVERSITY	46,000
3P01AG09524-05S1	FRISINA, D ROBERT AGING AUDITORY SYSTEM--PRESBYCUSIS AND ITS NEURAL BASES	06-15-97/03-31-98	ROCHESTER INSTITUTE OF TECHNOLOGY	99,781
5P01AG09525-06	BLUSZTAJN, JAN K AGING OF BRAIN--EFFECTS OF PERINATAL CHOLINE EXPOSURE	12-01-96/11-30-97	BOSTON UNIVERSITY	998,008
3P01AG09525-06S1	BLUSZTAJN, JAN K AGING OF BRAIN--EFFECTS OF PERINATAL CHOLINE EXPOSURE	06-15-97/11-30-97	BOSTON UNIVERSITY	5,925
5R01AG09531-06	NAIR, SREEKUMARAN K MECHANISM OF MUSCLE WASTING IN AGING MAN	04-01-97/03-31-99	MAYO FOUNDATION	414,313
3R01AG09531-06S1	NAIR, SREEKUMARAN K MECHANISM OF MUSCLE WASTING IN AGING MAN	05-15-97/03-31-99	MAYO FOUNDATION	78,144

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG09556-04	PSATY, BRUCE M TRENDS IN THE USE OF CVD MEDICATIONS IN OLDER ADULTS	09-01-97/08-31-98	UNIVERSITY OF WASHINGTON	159,079
5R01AG09557-08	STRONG, RANDY MODULATION OF TH GENE EXPRESSION BY RESERPINE AND AGE	08-01-97/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	119,527
2R01AG09587-04A3	UNNERSTALL, JAMES R NEUROCHEMICAL PLASTICITY OF LOCUS COERULEUS IN AGING	02-01-97/	UNIVERSITY OF ILLINOIS AT CHICAGO	
5R01AG09663-07	REVES, JOSEPH G AGING AND COGNITION AFTER CARDIAC SURGERY	02-01-97/01-31-98	DUKE UNIVERSITY	373,948
5R01AG09665-12	POTTER, HUNTINGTON EXPRESSION STUDIES ON ALZHIEMERS DISEASE RELATED GENES	08-01-97/06-30-98	HARVARD UNIVERSITY	205,557
5U01AG09675-07	WOLFSON, LESLIE I TRAINING PHYSICAL PERFORMANCE TO IMPROVE FUNCTION	09-01-97/08-31-99	UNIVERSITY OF CONNECTICUT HEALTH CEN	520,148
3R01AG09681-03S1	TOKES, ZOLTAN A METALLOPROTEASES MP MP-130-100 IN ALZHEIMER BRA	09-01-97/06-01-98	UNIVERSITY OF SOUTHERN CALIFORNIA	35,970
2R01AG09681-04A2	TOKES, ZOLTAN A STUDY OF MATRIX METALLOPROTEINASES IN NEURODEGENERATION	07-01-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
5R01AG09686-07	BAKER, HARRIET D PLASTICITY IN THE AGING OLFACTORY SYSTEM	07-01-97/06-30-98	WINIFRED MASTERSON BURKE MED RES INS	311,165
2R01AG09690-06	FLOYD, ROBERT A AGE INFLUENCE ON ISCHEMIA REPERFUSION IN BRAIN	12-01-96/	OKLAHOMA MEDICAL RESEARCH FOUNDATION	
5R37AG09692-08	WOLINSKY, FREDRIC D PANEL ANALYSIS OF THE AGEDS USE OF HEALTH SERVICES	06-01-97/05-31-98	ST. LOUIS UNIVERSITY	154,957
5R01AG09693-07	BALOH, ROBERT H DIZZINESS IN OLDER PEOPLE	04-01-97/03-31-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	519,887
2R01AG09694-04	BOLTON, DAVID C DIFFERENTIAL GENE EXPRESSION IN PRION DISEASE	07-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
5R01AG09735-16	BRADSHAW, RALPH A STRUCTURE AND FUNCTION OF NERVE GROWTH FACTOR	09-01-97/08-31-98	UNIVERSITY OF CALIFORNIA IRVINE	204,303
5U01AG09740-08	WILLIS, ROBERT J HEALTH AND RETIREMENT STUDY	09-30-97/12-31-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	3,482,551

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
3U01AG09740-08S1	WILLIS, ROBERT J HEALTH AND RETIREMENT STUDY	09-15-97/12-31-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	130,000
2R01AG09752-05A2	WOODRUFF-PAK, DIANA S AGING CLASSICAL CONDITIONING AND MEMORY SYSTEMS	04-01-97/	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	
2R01AG09755-07	MACKAY, DONALD G ORGANIZATION OF COGNITIVE PROCESSES IN OLD AGE	09-01-97/04-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	394,406
5R01AG09761-07	GAFNI, ARI LASER SPECTROSCOPY OF TRIPLET STATES IN PROTEINS	12-01-96/11-30-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	289,710
5R01AG09769-07	LARSON, ERIC B EPIDEMIOLOGY OF DEMENTIA IN OLDER JAPANESE AMERICANS	05-01-97/04-30-98	UNIVERSITY OF WASHINGTON	959,452
5R01AG09775-06	HAUSER, ROBERT M WISCONSIN LONGITUDINAL STUDY	04-15-97/02-28-98	UNIVERSITY OF WISCONSIN MADISON	210,459
2R01AG09777-06	WALLSTEN, SHARON M ELDERLY CAREGIVERS, CARERECEIVERS AND THEIR INTERACTIONS	07-01-97/	DUKE UNIVERSITY	
5R13AG09787-07	SCHAIE, K WARNER CONFERENCE--STRUCTURE AND AGING	08-01-97/07-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	35,721
5P01AG09793-07	MCNEILL, THOMAS H DOPAMINERGIC AND BASAL GANGLIA PLASTICITY IN AGING	06-15-97/05-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	976,885
5R37AG09801-08	MILLER, RICHARD A ACTIVATION DEFECTS IN AGING T CELLS	08-15-97/07-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	273,166
5R01AG09822-06	HOBBS, MONTE V CYTOKINE GENE EXPRESSION BYCD4+ IN AGING MICE	08-15-97/07-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	247,636
3R01AG09825-05S1	LACROIX, ANDREA Z THIAZIDE DIURETICS AND RATE OF BONE LOSS IN THE ELDERLY	01-01-97/06-30-98	CENTER FOR HEALTH STUDIES	
3R01AG09825-05S2	LACROIX, ANDREA Z THIAZIDE DIURETICS AND RATE OF BONE LOSS IN THE ELDERLY	06-01-97/06-30-98	CENTER FOR HEALTH STUDIES	234,028
2R01AG09834-06A2	STABLER, SALLY P PREVALENCE AND SPECTRUM OF B12 DEFICIENCY IN THE AGED	09-01-97/08-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	193,952
5R01AG09862-07	SNOWDON, DAVID A INDEPENDENT AND DEPENDENT LIFE IN THE ELDERLY	05-01-97/04-30-98	UNIVERSITY OF KENTUCKY	901,010

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG09873-06	LONGO, FRANK M NOVEL LAR ISOFORMS--A NEW CLASS OF NEUTROPHIC AGENTS	04-07-97/12-31-98	NORTHERN CALIFORNIA INSTITUTE RES &	175,467
5R01AG09900-07	EBERWINE, JAMES H GENE EXPRESSION IN SINGLE AGING NEURONS AND GLIA	07-15-97/06-30-98	UNIVERSITY OF PENNSYLVANIA	275,875
4R37AG09901-05	MAGAZINER, JAY S DETERMINANTS OF RECOVERY FROM HIP FRACTURE (BONE/MUSCLE)	09-30-97/06-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	427,869
5R01AG09905-06	ABRAHAM, CARMELA R AMYLOIDOGENESIS ROLE OF REACTIVE ASTROCYTES	12-01-96/11-30-99	BOSTON UNIVERSITY	240,582
5R37AG09909-08	CAMPISI, JUDITH CELLULAR SENESCENCE AND CONTROL OF GENE EXPRESSION	09-01-97/08-31-98	UNIVERSITY OF CALIF-LAWRENC BERKELEY	296,915
5R01AG09931-06	STEWART, ANITA L INCREASING PHYSICAL ACTIVITY OF ELDERS IN THE COMMUNITY	02-01-97/01-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	343,516
2R01AG09945-04A2	STERN, JUDITH S OBESITY/AGING/RENAL DISEASE PROGRESSION IN ZUCKER RATS	04-01-97/	UNIVERSITY OF CALIFORNIA DAVIS	
7R01AG09948-05	THOMAN, MARILYN L T CELL MATURATION AND THYMIC ACTIVITY IN THE AGED	09-30-97/08-31-98	SIDNEY KIMMEL CANCER CENTER	273,231
5R01AG09952-04	KEMPER, SUSAN SPEECH ACCOMMODATIONS BY AND TO OLDER ADULTS	12-01-96/11-30-97	UNIVERSITY OF KANSAS LAWRENCE	147,237
5R01AG09956-06	HENDRIE, HUGH C INDIANAPOLIS/IBADAN DEMENTIA PROJECT	01-01-97/12-31-97	INDIANA UNIV-PURDUE UNIV AT INDIANAP	930,924
5R01AG09957-04	MEYER, BONNIE J F MINIMIZING AGE DIFFERENCES IN READING--HOW AND WHY	01-01-97/12-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	173,110
2P01AG09970-05A1	ROSE, MICHAEL R POSTPONED AGING IN DROSOPHILA	07-01-97/	UNIVERSITY OF CALIFORNIA IRVINE	
5P01AG09973-07	GALLAGHER, MICHELA COGNITION AND HIPPOCAMPAL/CORTICAL SYSTEMS IN AGING	09-01-97/08-31-98	JOHNS HOPKINS UNIVERSITY	1,194,292
3P01AG09973-07S1	GALLAGHER, MICHELA COGNITION AND HIPPOCAMPAL/CORTICAL SYSTEMS IN AGING	09-15-97/08-31-98	JOHNS HOPKINS UNIVERSITY	49,225
2R01AG09976-06	JOHNSON, MITZI M AGE DIFFERENCES IN DECISION-MAKING PERFORMANCE	02-01-97/	UNIVERSITY OF KENTUCKY	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
2R01AG09978-03	HOUSE, JAMES S SOCIAL STRATIFICATION OF HEALTH AND AGING	07-01-97/		UNIVERSITY OF MICHIGAN AT ANN ARBOR	
5R01AG09988-06	FRIEDMAN, DAVID AGE-RELATED ERP MEASURES IN ALZHEIMERS DISEASE	08-01-97/	07-31-98	NEW YORK STATE PSYCHIATRIC INSTITUTE	275,600
2R01AG10009-06A1	FURMAN, JOSEPH M VESTIBULO/OCULAR FUNCTION IN THE ELDERLY	04-01-97/	03-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	126,414
2R01AG10030-04A2	KALARIA, RAJESH N AMYLOID PROTEINS OF CEREBRAL VESSELS IN AD	12-01-96/		CASE WESTERN RESERVE UNIVERSITY	
5R01AG10034-06	DUBINSKY, JANET M INTERACTION OF HYPOXIC AND EXCITOTOXIC NEURONAL	01-01-97/	08-31-97	UNIVERSITY OF MINNESOTA TWIN CITIES	158,437
3R01AG10034-06S1	DUBINSKY, JANET M INTERACTION OF HYPOXIC AND EXCITOTOXIC NEURONAL	06-15-97/	08-31-97	UNIVERSITY OF MINNESOTA TWIN CITIES	4,350
5R01AG10057-02	MBAWUIKE, INNOCENT N INFLUENZA NUCLEOPROTEIN AS A PROBE FOR LOW CTL IN AGING	09-01-97/	08-31-98	BAYLOR COLLEGE OF MEDICINE	210,015
5R01AG10102-07	GORELICK, PHILIP B DEMENTIA IN THE BLACK AGED--AD AND VAD	07-01-97/	06-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	364,951
2P01AG10120-06	FOGEL, ROBERT W EARLY INDICATORS OF LATER WORK LEVELS, DISEASE, & DEATH	09-30-97/	05-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	833,469
5P30AG10123-07	CUMMINGS, JEFFREY L UCLA ALZHEIMERS DISEASE CENTER	08-01-97/	06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	862,669
3P30AG10123-07S1	CUMMINGS, JEFFREY L UCLA ALZHEIMERS DISEASE CENTER	09-30-97/	06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	30,000
5P30AG10124-07	TROJANOWSKI, JOHN Q ALZHEIMERS DISEASE CENTER CORE	07-15-97/	06-30-98	UNIVERSITY OF PENNSYLVANIA	959,312
5P30AG10129-07	JAGUST, WILLIAM J UC DAVIS ALZHEIMERS DISEASE CENTER CORE	07-15-97/	06-30-98	UNIVERSITY OF CALIFORNIA DAVIS	911,254
5P30AG10130-07	DE LONG, MAHLON EMORY ALZHEIMERS DISEASE CENTER	07-15-97/	06-30-98	EMORY UNIVERSITY	1,073,163
5P30AG10133-07	GHETTI, BERNARDINO INDIANA ALZHEIMERS DISEASE CENTER	07-15-97/	06-30-98	INDIANA UNIV-PURDUE UNIV AT INDIANAP	1,134,506

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG10135-06	TAYLOR, ROBERT J RELIGION, STRESS AND PHYSICAL MENTAL HEALTH IN BLACKS	09-01-97/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	233,580
5R37AG10143-15	CLARK, RICHARD A FIBRONECTIN AND CELL RECRUITMENT	09-01-97/08-31-98	STATE UNIVERSITY NEW YORK STONY BROO	235,418
5R01AG10147-04	KOEPSELL, THOMAS D CASE CONTROL STUDY OF OLDER PEDESTRIAN INJURY SITES	08-01-97/07-31-98	UNIVERSITY OF WASHINGTON	263,098
5R01AG10149-05	BAUMGARTNER, RICHARD N BODY COMPOSITION CHANGES IN THE ELDERLY	08-01-97/07-31-98	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	308,756
5R01AG10154-09	GREENOUGH, WILLIAM T PHYSICAL EXERCISE, MENTAL ACTIVITY, AND BRAIN PLASTICITY	07-15-97/06-30-99	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	109,960
5P30AG10161-07	EVANS, DENIS A ALZHEIMERS DISEASE CORE CENTER	08-15-97/06-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	1,193,504
3P30AG10161-07S1	EVANS, DENIS A ALZHEIMERS DISEASE CORE CENTER	09-30-97/06-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	100,000
3P30AG10163-05S1	HARRELL, LINDY E ALZHEIMERS DISEASE CENTER CORE	09-30-97/06-30-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	173,296
4R37AG10168-06	PRESTON, SAMUEL H RACIAL AND ETHNIC MORTALITY DIFFERENCES AT OLDER AGES	02-01-97/01-31-98	UNIVERSITY OF PENNSYLVANIA	356,871
5R01AG10173-06	SARTER, MARTIN F AGING, ATTENTION AND BENZODIAZEPINE RECEPTOR LIGANDS	04-01-97/03-31-99	OHIO STATE UNIVERSITY	131,584
3P30AG10182-05S1	DECARLI, CHARLES ALZHEIMERS DISEASE CENTER CORE GRANT	09-30-97/06-30-99	UNIVERSITY OF KANSAS MEDICAL CENTER	173,297
3P01AG10184-05S2	WEST, SHEILA K VISUAL IMPAIRMENT AND FUNCTIONAL STATUS IN OLDER PERSONS	09-01-97/07-31-99	JOHNS HOPKINS UNIVERSITY	190,685
3P01AG10207-05S2	KELSOE, GARNETT H MECHANISMS OF IMMUNOSENESCENCE	08-01-97/08-31-97	UNIVERSITY OF MARYLAND BALT PROF SCH	74,750
2P01AG10208-06	AZMITIA, EFRAIN C S-100B AND 5-HT1A: A NEURONAL-GLIAL LINK TO ALZHEIMER'S	07-01-97/	NEW YORK UNIVERSITY	
2R01AG10210-06	LEE, VIRGINIA M BIOLOGY OF ALZHEIMER PAIRED HELICAL FILAMENTS	06-01-97/05-31-98	UNIVERSITY OF PENNSYLVANIA	228,541

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
2R01AG10220-04A2	MUNOAS, DAN M ENGLISH AND SPANISH ASSESSMENT OF COGNITION IN ELDERLY	04-01-97/03-31-98	UNIVERSITY OF CALIFORNIA DAVIS	166,960
5R29AG10250-05	LA VEIST, THOMAS A NATIONAL AFRICAN-AMERICAN MORTALITY ANALYSIS	05-01-97/04-30-99	JOHNS HOPKINS UNIVERSITY	123,588
5R01AG10251-05	KLINE, JENNIE K EPIDEMIOLOGY OF TRISOMY AND AGING	01-01-97/12-31-98	NEW YORK STATE PSYCHIATRIC INSTITUTE	268,253
5R29AG10264-04	GLICKSMAN, ALLEN CULTURAL AND SOCIAL SOURCES OF WELL-BEING IN NORMAL AGED	01-01-97/12-31-97	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	123,739
2R01AG10280-04A2	SCHNEIDER, JAY S DEGENERATION, REPAIR AND AGING IN THE CNS	04-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
2R01AG10297-04A2	LAHIRI, DEBOMOY K REGULATION OF THE BETA-AMYLOID GENE PROMOTER IN CELL TYP	12-01-96/	INDIANA UNIV-PURDUE UNIV AT INDIANAP	
2R01AG10299-06	SCHMIDT, ROBERT E NEUROPATHOLOGY OF THE AGING SYMPATHETIC NERVOUS SYSTEM	05-01-97/04-30-98	WASHINGTON UNIVERSITY	265,978
3U01AG10317-05S5	LEON, JOEL NATIONAL EVALUATION OF SPECIAL CARE UNITS	07-15-97/06-30-99	PEOPLE-TO-PEOPLE HEALTH FOUNDATION,	98,900
5U01AG10330-05	HOLMES, DOUGLAS COORDINATING CENTER CONTINUATION	12-01-96/06-30-98	HEBREW HOME FOR THE AGED AT RIVERDAL	221,172
5U01AG10353-07	DAWSON-HUGHES, B F CALCIUM AND VITAMIN D EFFECTS ON BONE LOSS	01-15-98/08-31-98	TUFTS UNIVERSITY BOSTON	327,783
5U01AG10373-07	GALLAGHER, JOHN C TREATMENT FOR OSTEOPOROSIS OF THE HIP	09-30-97/08-31-98	CREIGHTON UNIVERSITY	739,664
3U01AG10382-05S2	DALSKY, GAIL P EXERCISE EFFECT ON FEMORAL BONE MASS IN OLDER ADULTS	09-01-97/08-31-98	UNIVERSITY OF CONNECTICUT HEALTH CEN	188,623
2R01AG10412-06A1	ROSS, PHILIP D FALLS AND FRACTURES AMONG ELDERLY JAPANESE AMERICANS	06-01-97/03-31-98	HAWAII OSTEOPOROSIS FOUNDATION	444,089
3P60AG10415-06S1	REUBEN, DAVID B OLDER AMERICANS INDEPENDENT CENTER	01-15-97/06-30-97	UNIVERSITY OF CALIFORNIA LOS ANGELES	14,580
5P60AG10415-07	REUBEN, DAVID B UCLA OLDER AMERICANS INDEPENDENT CENTER	09-01-97/06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	811,907

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
3P60AG10415-07S1	REUBEN, DAVID B UCLA OLDER AMERICANS INDEPENDENT CENTER	09-30-97/06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	25,000
5P60AG10418-05	KOWAL, JEROME CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	12-01-96/11-30-99	CASE WESTERN RESERVE UNIVERSITY	991,097
5R01AG10425-05	TUCKER, KATHERINE L NUTRITION AND FRAILTY AMONG ELDERLY HISPANIC GROUPS	12-01-96/11-30-97	TUFTS UNIVERSITY BOSTON	279,946
2P01AG10435-07	GAGE, FRED H GENE THERAPY FOR ALZHEIMERS DISEASE	04-01-97/02-28-98	SALK INSTITUTE FOR BIOLOGICAL STUDIE	1,228,151
5P60AG10463-07	ABRAHAM, GEORGE N ROCHESTER AREA PEPPER CENTER	09-01-97/06-30-98	UNIVERSITY OF ROCHESTER	742,681
3P60AG10463-07S1	ABRAHAM, GEORGE N ROCHESTER AREA PEPPER CENTER	09-30-97/06-30-98	UNIVERSITY OF ROCHESTER	25,000
2P60AG10469-06	TINETTI, MARY E CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-30-97/07-31-98	YALE UNIVERSITY	1,286,961
5U01AG10483-07	THAL, LEON J ALZHEIMERS DISEASE COOPERATIVE STUDY	07-01-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	3,932,656
3U01AG10483-07S1	THAL, LEON J ALZHEIMERS DISEASE COOPERATIVE STUDY	08-15-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	1,662,501
2P60AG10484-06A1	ETTINGER, WALTER H, JR CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTERS	09-30-97/06-30-98	WAKE FOREST UNIVERSITY	1,516,130
3P01AG10485-06S1	SIMPKINS, JAMES W DISCOVERY OF NOVEL DRUGS FOR ALZHEIMERS DISEASE	07-16-97/07-31-97	UNIVERSITY OF FLORIDA	2,683
5P01AG10485-07	SIMPKINS, JAMES W DISCOVERY OF NOVEL DRUGS TO ALZHEIMER'S DISEASE	08-15-97/07-31-98	UNIVERSITY OF FLORIDA	889,163
3P01AG10485-07S1	SIMPKINS, JAMES W DISCOVERY OF NOVEL DRUGS TO ALZHEIMER'S DISEASE	08-01-97/	UNIVERSITY OF FLORIDA	
5R01AG10486-05	ROY, ARUN K AGING AND ANDROGEN RECEPTOR GENE REGULATION	01-01-97/12-31-97	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	188,381
2P01AG10514-06	PAPACONSTANTINOU, JOHN AGING EFFECTS ON MOLECULAR RESPONSES TO STRESS	12-15-97/05-31-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	859,201

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG10520-03	GORDON, JON W AGE RELATED NEURODEGENERATION AND TRANSGENIC MOUSE	01-01-97/12-31-97	MOUNT SINAI SCHOOL OF MEDICINE OF CU	248,390
5R01AG10528-04	VATASSERY, GOVIND N NEURONAL MEMBRANE LIPID OXIDATION IN PARKINSONS DISEASE	08-15-97/07-31-99	UNIVERSITY OF MINNESOTA TWIN CITIES	147,586
3P01AG10542-04S1	SCHULTZ, ALBERT B FUNDAMENTAL ASPECTS OF MOBILITY IN OLD ADULTS	06-01-97/03-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	317,590
5R01AG10557-03	GRABINER, MARK D BIOMECHANICS OF STEPPING RESPONSES--EFFECTS OF AGING	09-01-97/08-31-99	CLEVELAND CLINIC FOUNDATION	139,854
2R55AG10565-04	HEINRICH, GERHARD AGING AND NEUROTROPHINS	09-30-97/09-29-99	EAST BAY INSTITUTE FOR RESEARCH AND	100,000
5R01AG10569-05	ZELINSKI, ELIZABETH M LONGITUDINAL ASSESSMENT OF COGNITION IN ADULTS	09-15-97/08-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	193,862
3R01AG10569-05S1	ZELINSKI, ELIZABETH M LONGITUDINAL ASSESSMENT OF COGNITION IN ADULTS	09-30-97/08-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	37,950
5R01AG10599-07	COOPERMAN, BARRY S ANTICHYMOTRYPSIN INTERACTION WITH SERINE PROTEASES	09-01-97/08-31-98	UNIVERSITY OF PENNSYLVANIA	258,787
2R01AG10604-06A1	POLICH, JOHN M ASSESSMENT OF ALZHEIMER'S DISEASE WITH P300	04-01-97/	SCRIPPS RESEARCH INSTITUTE	
3R01AG10606-06S1	RAPP, PETER R COGNITIVE FUNCTION IN THE AGED	09-15-97/01-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	124,758
2R01AG10608-06	BENSON, MERRILL D AMYLOID PRECURSOR PROTEIN (APP) IN ALZHEIMER'S DISEASE	07-01-97/	INDIANA UNIV-PURDUE UNIV AT INDIANAP	
5R29AG10620-05	LAPOLT, PHILIP S REGULATION OF GENE EXPRESSION IN THE AGING OVARY	09-01-97/08-31-98	CALIFORNIA STATE UNIVERSITY LOS ANGE	99,011
5R01AG10629-02	ALMON, RICHARD R AGING MUSCLE--DISUSE, GLUCOCORTICOIDS, AND IGF 1	09-30-97/06-30-98	STATE UNIVERSITY OF NEW YORK AT BUFF	229,099
2R01AG10634-06A1	SANES, JEROME N NEURAL CONTROL OF HUMAN VOLUNTARY MOVEMENTS	04-01-97/03-31-98	BROWN UNIVERSITY	294,982
5R01AG10643-06	BLIWISE, DONALD L SUNDOWN SYNDROME IN A SKILLED NURSING FACILITY	07-01-97/06-30-98	EMORY UNIVERSITY	216,138

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG10668-06	MUFSON, ELLIOTT J GALANIN IN ALZHEIMER'S DISEASE	04-01-97/03-31-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	254,539
5R01AG10669-07	AIKEN, JUDD M PRION PROTEIN IN MINK ENCEPHALOPATHY	07-15-97/06-30-98	UNIVERSITY OF WISCONSIN MADISON	155,538
2R01AG10670-06A1	OTVOS, LASZLO POST-TRANSLATIONALLY MODIFIED ALZHEIMER PEPTIDE MODELS	04-01-97/	WISTAR INSTITUTE	
2R01AG10675-07A1	MALTER, JAMES S APP MRNA DYSREGULATION AND ALZHEIMERS DISEASE	08-01-97/05-31-98	UNIVERSITY OF WISCONSIN MADISON	166,729
2R01AG10676-06A1	SALTON, STEPHEN R REGULATION OF VGF BY NEUROTROPHIC GROWTH FACTORS	08-01-97/05-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	222,062
3R01AG10681-05S1	CARLSON, GEORGE A TRANSGENIC MODELS FOR ALZHEIMERS DISEASE	09-01-97/06-30-98	MC LAUGHLIN RESEARCH INS FOR BIOMED	90,159
2R01AG10684-06A2	SIMONS, ELIZABETH R PLATELET-ENDOTHELIAL CELL INTERACTIONS IN ALZHEIMERS	07-01-97/	BOSTON UNIVERSITY	
5R01AG10685-07	FRAUTSCHY, SALLY A B PROTEIN DEPOSITION AND TOXICITY IN THE BRAIN	04-01-97/03-31-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	90,735
5R01AG10686-05	KRUEGER, BRUCE K GLIAL NEURONAL INTERACTIONS IN NEURODEGENERATION	12-01-96/11-30-97	UNIVERSITY OF MARYLAND BALT PROF SCH	200,046
2R01AG10689-04A2	MASLIAH, ELIEZER BASIS OF SYNAPTIC PATHOLOGY IN ALZHEIMERS DISEASE	01-01-97/11-30-97	UNIVERSITY OF CALIFORNIA SAN DIEGO	150,212
5R01AG10738-06	KAHANA, EVA F BUFFERS OF IMPAIRMENT DISABILITY CASCADE AMONG OLD	07-01-97/06-30-98	CASE WESTERN RESERVE UNIVERSITY	219,021
3R01AG10738-06S1	KAHANA, EVA F BUFFERS OF IMPAIRMENT DISABILITY CASCADE AMONG OLD	07-01-97/06-30-98	CASE WESTERN RESERVE UNIVERSITY	69,945
2R01AG10765-05A1	FLEMING, SHARON E NUTRIENT UTILIZATION BY INTESTINAL CELLS OF AGED ANIMALS	06-01-97/	UNIVERSITY OF CALIFORNIA BERKELEY	
5P01AG10770-05	PRUSINER, STANLEY B MOLECULAR PATHOGENESIS OF AGE-DEPENDENT CNS DEGENERATION	07-01-97/03-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	1,608,463
5R01AG10785-05	STEWART, WALTER F AGE, LEAD EXPOSURE AND NEUROBEHAVIORAL DECLINE	09-01-97/12-31-98	JOHNS HOPKINS UNIVERSITY	463,434

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FY: 97				
2R01AG10791-04	STOLLER, ELEANOR P MEDICAL SELF CARE BY ELDERLY PERSONS: A PANEL STUDY	06-01-97/	UNIVERSITY OF FLORIDA	
7R29AG10816-06	CEFALU, WILLIAM T CALORIC RESTRICTION, AGING AND CARDIOVASCULAR DISEASE	02-15-98/08-31-99	UNIVERSITY OF VERMONT & ST AGRIC COL	67,160
5P01AG10821-05	CARLSON, BRUCE M AGE-RELATED INFLUENCES ON MUSCLE AND NERVE REGENERATION	01-01-97/09-29-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	758,662
2P01AG10821-06	CARLSON, BRUCE M MUSCLE DENERVATION AND REGENERATION--INFLUENCE OF AGING	09-30-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	968,512
1R01AG10822-01A2	POTTER, JOSEPH E LIVING ARRANGEMENTS AND TRANSFERS AMONG MEXICAN ELDERLY	12-01-96/	UNIVERSITY OF TEXAS AUSTIN	
3P01AG10829-04S1	WEI, JEANNE Y BASIC MECHANISMS OF AGING AND AGE RELATED DISEASES	09-15-97/06-30-99	BETH ISRAEL DEACONESS MEDICAL CENTER	417,500
3P01AG10836-05S1	LANDFIELD, PHILIP W CALCIUM REGULATION IN BRAIN AGING AND ALZHEIMERS DISEASE	09-01-97/07-31-98	UNIVERSITY OF KENTUCKY	80,000
3R01AG10845-04S1	TERI, LINDA AGING AND DEMENTIA--REDUCING DISABILITY IN ALZHEIMERS	04-15-97/06-30-97	UNIVERSITY OF WASHINGTON	44,144
5R01AG10845-05	TERI, LINDA AGING AND DEMENTIA--REDUCING DISABILITY IN ALZHEIMER'S	07-01-97/06-30-99	UNIVERSITY OF WASHINGTON	327,673
5R01AG10851-05	COLLIER, TIMOTHY J REGNERATION IN THE AGED AND INJURED DOPAMINE SYSTEM	12-01-96/11-30-97	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	232,771
2R01AG10853-06	CONLEY, KEVIN E AGE & EXERCISE: INTEGRATED MUSCLE FUNCTION & PERFORMANCE	07-01-97/	UNIVERSITY OF WASHINGTON	
5R01AG10868-05	SAHU, ABHIRAM HYPOTHALAMIC NEUROPEPTIDE Y AND REPRODUCTIVE AGING	03-01-97/02-28-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	197,887
5R29AG10871-04	ALWAY, STEPHEN E MECHANISMS FOR NEW FIBER FORMATION IN AGING MUSCLE	07-15-97/06-30-98	UNIVERSITY OF SOUTH FLORIDA	98,202
5R01AG10880-05	CRAFT, SUZANNE GLUCOSE REGULATION AND MEMORY IN ALZHEIMERS DISEASE	04-01-97/03-31-98	UNIVERSITY OF WASHINGTON	159,606
2R01AG10885-06	EVERS, BERNARD M SURGICAL STUDIES OF ONTOGENY, AGING AND THE GUT	06-01-97/05-31-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	249,651

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG10886-04	DE BEER, FREDERICK C SERUM AMYLOID A PROTEIN--ROLE IN ATHEROGENESIS	08-01-97/07-31-98	UNIVERSITY OF KENTUCKY	184,935
5R29AG10887-05	HURWICZ, MARGO L DECISIONS ABOUT HMO SERVICE USE FOR LATE LIFE ILLNESS	08-01-97/07-31-99	UNIVERSITY OF MISSOURI-ST. LOUIS	98,501
7R35AG10916-07	NIXON, RALPH A PROTEOLYSIS IN ALZHEIMERS DISEASE PATHOGENESIS	09-15-97/06-30-98	NATHAN S. KLINE INSTITUTE FOR PSYCH	297,149
5R35AG10917-06	MARTIN, GEORGE M LEADERSHIP AND EXCELLANCE IN ALZHEIMERS DISEASE AWARD	06-15-97/05-31-98	UNIVERSITY OF WASHINGTON	732,736
5R01AG10925-04	ARNAUD, CLAUDE D BUILDING BONE IN OSTEOPOROSIS WITH PTH AND ESTROGEN	07-15-97/05-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	211,242
3R01AG10939-05S1	MARKIDES, KYRIAKOS S LONGITUDINAL STUDY OF MEXICAN AMERICAN ELDERLY HEALTH	04-03-97/06-30-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	25,000
3R01AG10940-05S1	HAMMAN, RICHARD F HISPANIC HEALTH AND AGING IN SAN LUIS VALLEY, CO	09-30-97/06-30-98	UNIVERSITY OF COLORADO HLTH SCIENCES	73,990
3R01AG10942-04S2	MACLEAN, DAVID B GROWTH HORMONE AND/OR EXERCISE FOR THE FRAIL ELDERLY	09-15-97/06-30-98	RHODE ISLAND HOSPITAL (PROVIDENCE, R	36,000
3R01AG10943-05S1	SCHWARTZ, ROBERT S GROWTH FACTORS AND EXERCISE IN OLDER WOMEN	07-01-97/06-30-99	UNIVERSITY OF WASHINGTON	237,064
5R35AG10953-06	FRANGIONE, BLAS ALZHEIMERS DISEASE AND AMYLOID PROTEINS	09-01-97/08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	636,800
3R01AG10954-04S1	SNYDER, PETER J WILL TESTOSTERONE INCREASE MUSCLE STRENGTH IN OLDER MEN	07-15-97/06-30-99	UNIVERSITY OF PENNSYLVANIA	90,969
5R35AG10963-06	MAYEUX, RICHARD P GENE-ENVIRONMENT INTERACTIONS IN ALZHEIMERS DISEASE	07-15-97/05-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	712,501
3R01AG10997-05S1	HARTMAN, MARK L GROWTH HORMONE AND PHYSICAL TRAINING IN OLDER PERSONS	08-01-97/06-30-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	264,706
5R01AG10999-05	HOFFMAN, ANDREW R GH AND IGF-I TREATMENT OF ELDERLY WOMEN	09-01-97/08-31-98	STANFORD UNIVERSITY	183,875
1R01AG11000-01A4	URBAN, RANDALL J LONG TERM ADMINISTRATION OF TESTOSTERONE IN ELDERLY MEN	04-01-97/03-31-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	234,801

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG11020-03	MEYDANI, MOHSEN VITAMIN E REQUIREMENT OF ELDERLY W/HIGH (N-3) PUFA INTAK	09-30-97/08-31-99	TUFTS UNIVERSITY BOSTON	161,938
2R01AG11026-18	MC CORMICK, J JUSTIN CLONING OF GENES INVOLVED IN CELL IMMORTALIZATION	01-01-97/12-31-97	MICHIGAN STATE UNIVERSITY	244,255
5R01AG11032-04	WILLIS, SHERRY L ALZHEIMERS DISEASE AND EVERYDAY COMPETENCE	05-01-97/04-30-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	285,552
5R01AG11041-03	PRUCHNO, RACHEL A PSYCHOLOGICAL WELL BEING OF CORESIDENT GRANDPARENTS	01-01-97/12-31-97	BRADLEY UNIVERSITY	371,706
3R01AG11041-03S1	PRUCHNO, RACHEL A PSYCHOLOGICAL WELL BEING OF CORESIDENT GRANDPARENTS	09-15-97/12-31-97	BRADLEY UNIVERSITY	8,509
5R29AG11053-05	PERKINS, SHERRIE L VITAMIN D AND CSF-1 REGULATION OF OSTEOCLASTOGENESIS	01-01-97/12-31-98	UNIVERSITY OF UTAH	103,454
5R01AG11060-05	ROBERTS, JAY AGING BIOMARKER--CARDIAC NOREPINEPHRINE	04-01-97/03-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	238,508
5R01AG11067-05	MILLER, RICHARD A IMMUNE AND MUSCLE FUNCTION ASSAYS AS BIOMARKERS OF AGING	04-01-97/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	252,625
5R01AG11079-06	WITTEN, MATTHEW STATISTICAL ANALYSIS OF BIOMARKERS OF AGING	05-01-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	159,895
5R01AG11080-05	SELL, DAVID R PENTOSIDINE AS A BIOMARKER OF AGING	04-01-97/03-31-99	CASE WESTERN RESERVE UNIVERSITY	151,934
5P01AG11084-05	EDGAR, DALE CIRCADIAN AND HOMEOSTATIC DETERMINANTS OF SLEEP IN AGING	09-15-97/05-31-99	STANFORD UNIVERSITY	834,318
3P01AG11084-05S1A1	DEMENT, WILLIAM C CIRCADIAN AND HOMEOSTATIC DETERMINANTS OF SLEEP IN AGING	07-01-97/	STANFORD UNIVERSITY	
2R01AG11085-05	HARPER, J WADE CELL CYCLE GENES AND CELLULAR SENESCENCE AND AGING	04-01-97/03-31-98	BAYLOR COLLEGE OF MEDICINE	233,968
2R01AG11093-11	JOHNSON, LARRY AGE AND ALTERATION OF SERTOLI CELL NUMBER	04-01-97/	TEXAS A&M UNIVERSITY HEALTH SCIENCE	
5R01AG11098-04	LIU, JAMES H PROGESTOGEN EFFECT ON BONE AND COGNITION IN MENOPAUSE	03-01-97/02-28-98	UNIVERSITY OF CINCINNATI	371,312

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG11099-05	CRUICKSHANKS, KAREN J EPIDEMIOLOGY OF AGE-RELATED HEARING LOSS	03-01-97/02-28-98	UNIVERSITY OF WISCONSIN MADISON	445,551
5R01AG11101-05	EVANS, DENIS A RISK FACTORS FOR INCIDENT ALZHEIMERS DISEASE	07-15-97/02-28-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	1,623,494
2R01AG11119-05	GUARENTE, LEONARD P CELL SENESCENCE IN SACCHAROMYCES CEREVISIAE	03-03-97/02-28-98	MASSACHUSETTS INSTITUTE OF TECHNOLOG	347,600
2R01AG11121-04A1	GABRIELI, JOHN D DECOMPOSITION OF MEMORY FAILURE IN ALZHEIMERS DISEASE	02-01-97/01-31-98	STANFORD UNIVERSITY	346,839
5R01AG11130-03	PAPPOLLA, MIGUEL A MUTATIONS OXIDATIVE STRESS AND AMYLOIDOGENSIS	09-01-97/08-31-99	UNIVERSITY OF SOUTH ALABAMA	186,679
5R01AG11143-06	MC CORMICK, WAYNE C LONGTERM CARE UTILIZATION IN JAPANESE AMERICANS	07-01-97/06-30-98	UNIVERSITY OF WASHINGTON	244,066
5R37AG11144-05	BECKER, GAYLENE CULTURAL RESPONSES TO ILLNESS IN THE MINORITY AGED	09-01-97/08-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	254,368
2R01AG11152-05A1	CHAPLESKI, ELIZABETH LONG-TERM CARE-SOCIAL NETWORKS AND AMERICAN INDIAN AGE	04-01-97/	WAYNE STATE UNIVERSITY	
8R01AG11155-02	PHILLIPS, LINDA R INTERVENTION FOR ABUSE OF AGING CAREGIVERS	09-01-97/08-31-98	UNIVERSITY OF ARIZONA	314,976
2R01AG11183-05	COWARD, RAYMOND T RACE/RESIDENCE EFFECTS ON LTC, A CONTINUING PANEL STUDY	07-01-97/	UNIVERSITY OF FLORIDA	
5R25AG11197-06	RANKIN, ERIC D THREE-TIERED ALZHEIMERS TRAINING FOR WV PROFESSIONALS	07-01-97/06-30-98	WEST VIRGINIA UNIVERSITY	108,000
5R25AG11213-06	POTTER, JANE F REACHING RURAL COMMUNITIES WITH ALZHEIMERS EDUCATION	07-01-97/06-30-98	UNIVERSITY OF NEBRASKA MEDICAL CENTE	108,000
5R25AG11216-07	LOMBARDO, NANCY E BOSTON MINORITY DEMENTIA OUTREACH AND EDUCATION PROGRAM	09-30-97/06-30-99	WELLESLEY COLLEGE	104,350
5R25AG11219-06	CONNELL, CATHLEEN M MICHIGAN ALZHEIMERS DISEASE COMMUNITY EDUCATION	07-01-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	103,656
3R01AG11220-03S1	FIELD, DOROTHY RELATIONSHIP PRECURSORS OF WELL BEING IN OLD AGE	08-01-97/08-31-97	PUBLIC HEALTH INSTITUTE	29,165

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG11220-04	FIELD, DOROTHY RELATIONSHIP PRECURSORS OF WELL BEING IN OLD AGE	09-30-97	08-31-99	PUBLIC HEALTH INSTITUTE	92,845
3R01AG11227-03S2	NESTLER, JOHN E INSULIN REGULATION OF HUMAN ADRENAL ANDROGEN METABOLISM	05-15-97	12-31-97	VIRGINIA COMMONWEALTH UNIVERSITY	3,560
2R01AG11227-04A2	NESTLER, JOHN E INSULIN REGULATION OF HUMAN ADRENAL ANDROGEN METABOLISM	12-01-96	/	VIRGINIA COMMONWEALTH UNIVERSITY	
5R01AG11233-04	RUBINSTEIN, ROBERT L CHRONIC POVERTY AND THE SELF IN LATER LIFE	09-01-97	08-31-98	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	50,939
5R01AG11234-05	KATZ, IRA R DELIRUM RECONSIDERED--ACUTE COGNITIVE IN THE AGED	03-01-97	02-28-98	UNIVERSITY OF PENNSYLVANIA	109,094
2R01AG11234-06A1	KATZ, IRA R RECONSIDERING TOXIC/METABOLIC BRAIN DISORDER IN THE AGED	07-01-97	/	UNIVERSITY OF PENNSYLVANIA	
5R01AG11235-04	CRIMMINS, EILEEN M ACTIVE LIFE EXPECTANCY IN THE OLDER POPULATION	06-01-97	05-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	148,178
5R29AG11241-05	FISHER, JANE E CLASSIFICATION OF AGITATION IN ALZHEIMER'S DISEASE	09-30-97	08-31-99	UNIVERSITY OF NEVADA RENO	97,254
5R01AG11249-05	BURKE, DAVID T AGING-RELATED REACTIVATION OF X CHROMOSOME GENES	01-01-97	12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	188,487
5R01AG11255-04	KREBS, DAVID E VESTIBULAR REHAB & STABILITY MODELING FOR OLDER PATIENTS	09-01-97	08-31-98	MASSACHUSETTS GENERAL HOSPITAL	218,241
5R01AG11290-04	MEHTA, PANKAJ D CYTOKINES IN DOWN SYNDROME--LINK TO AD NEUROPATHOLOGY	09-01-97	08-31-98	INSTITUTE FOR BASIC RES IN DEV DISAB	194,760
3R01AG11290-04S1	MEHTA, PANKAJ D CYTOKINES IN DOWN SYNDROME--LINK TO AD NEUROPATHOLOGY	09-01-97	08-31-98	INSTITUTE FOR BASIC RES IN DEV DISAB	33,454
5R25AG11325-06	CUMMINGS, JEFFREY L LOS ANGELES AREA ALZHEIMER'S OUTREACH PROGRAM (LAAAOP)	07-15-97	06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	105,787
5P01AG11337-04	YOUNG, ANNE B METABOLIC & EXCITOTOXIC CASCADE IN AGING & ALZHEIMERS	04-15-97	03-31-98	MASSACHUSETTS GENERAL HOSPITAL	818,831
3P01AG11337-04S1	YOUNG, ANNE B METABOLIC & EXCITOTOXIC CASCADE IN AGING & ALZHEIMERS	09-01-97	03-31-98	MASSACHUSETTS GENERAL HOSPITAL	54,039

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R01AG11344-01A1	MAZZEO, ROBERT S IMMUNE FUNCTION IN RESPONSE TO EXERCISE AGE & TRAINING	12-01-96/		UNIVERSITY OF COLORADO AT BOULDER	
5R29AG11351-05	SKINNER, MICHAEL H COGNITIVE EFFECTS OF ANTIHYPERTENSIVE DRUGS IN AGED RATS	06-01-97/	09-30-97	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	12,794
5P01AG11355-03	OLNEY, JOHN W EXCITATORY TRANSMITTERS, MEMORY, AGING AND DEMENTIA	03-15-97/	01-31-98	WASHINGTON UNIVERSITY	757,140
5P01AG11370-03	SONNTAG, WILLIAM E GROWTH HORMONE & IGF-1 IN CNS & CEREBROVASCULAR AGING	04-11-97/	03-31-98	WAKE FOREST UNIVERSITY	437,104
5R01AG11378-05	JACK, CLIFFORD R MR HIPPOCAMPAL CHANGES IN ALZHEIMER'S DISEASE AND AGING	06-01-97/	05-31-98	MAYO FOUNDATION	182,661
3R01AG11380-03S1	BREITNER, JOHN C EPID OF ALZHEIMER'S DEMENTIA IN CACHE COUNTY, UT	12-01-96/		DUKE UNIVERSITY	
3R01AG11380-03S3	BREITNER, JOHN C S EPIDEMIOLOGY OF ALZHEIMERS DEMENTIA IN CACHE COUNTY,UT	09-30-96/	08-31-97	DUKE UNIVERSITY	28,000
3R01AG11380-03S4	BREITNER, JOHN C S EPIDEMIOLOGY OF ALZHEIMERS DEMENTIA	04-25-97/	08-31-97	DUKE UNIVERSITY	65,610
7R01AG11380-04	BREITNER, JOHN C S EPIDEMIOLOGY OF ALZHEIMERS DEMENTIA IN CACHE COUNTY UT	09-30-97/	08-31-98	JOHNS HOPKINS UNIVERSITY	1,754,127
2R01AG11383-04A2	SCHUBERT, DAVID R IDENTIFICATION OF GENES REGULATING AMYLOID TOXICITY	12-01-96/		SALK INSTITUTE FOR BIOLOGICAL STUDIE	
5R01AG11386-05	MONTEIRO, MERVYN J NEUROFILAMENT KINASES	09-15-97/	08-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	212,174
1R01AG11392-01A2	CRYSTAL, STEPHEN LATER-LIFE ECONOMIC OUTCOMES IN LONGITUDINAL PERSPECTIVE	01-01-97/		RUTGERS THE STATE UNIV NEW BRUNSWICK	
5R29AG11403-04	FERRARIS, RONALDO P DIETARY REGULATION OF NUTRIENT ABSORPTION IN AGING	03-01-97/	02-28-98	UNIVERSITY OF MEDICINE & DENTISTRY O	105,478
2P01AG11412-03	VAN CAUTER, EVE Y ALTERATIONS OF CIRCADIAN TIMING IN AGING	02-01-97/	11-30-97	UNIVERSITY OF CHICAGO	1,092,542
1R01AG11414-01A4	WHITE-MEANS, SHELLEY I CAREGIVING AND COSTS OF CARE FOR OLDER BLACK WOMEN	04-01-97/		UNIVERSITY OF MEMPHIS	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG11427-06	PFEFFERBAUM, ADOLF MR SPECTROSCOPIC BRAIN IMAGING IN AGING AND DEMENTIA	07-01-97/06-30-99	SRI INTERNATIONAL	211,530
5R01AG11441-05	WRONSKI, THOMAS J NOVEL HORMONE DELIVERY SYSTEM FOR TREATING OSTEOPENIA	08-15-97/07-31-99	UNIVERSITY OF FLORIDA	133,261
5R01AG11451-05	HOYER, WILLIAM J AGING OF VISUAL/COGNITIVE MECHANISMS	07-01-97/06-30-98	SYRACUSE UNIVERSITY	137,383
5R01AG11465-04	SCARPACE, PHILIP J BROWN FAT THERMOGENESIS RESPONSE TO COLD AND AGE	12-01-96/11-30-97	UNIVERSITY OF FLORIDA	127,832
5R01AG11472-04	THORPE, SUZANNE R LIPOPROTEIN OXIDATION IN ATHEROSCLEROSIS AND AGING	01-01-97/12-31-98	UNIVERSITY OF SOUTH CAROLINA AT COLU	191,673
5R01AG11491-05	DOBSON, JAMES G, JR MECHANISMS OF AGING--ENHANCED HEART ADENOSINE	05-01-97/04-30-99	UNIVERSITY OF MASSACHUSETTS MEDICAL	211,824
2R44AG11500-02	STERNS, RONNI S CARRIER LIFT TO ENHANCE DAILY ACTIVITIES	05-15-97/04-30-98	LIFESPAN ASSOCIATES	408,613
2R01AG11501-04A2	ALGASE, DONNA L WANDERING AND ITS SEQUELAE--COGNITION AND AGITATION	04-01-97/03-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	249,359
5R01AG11525-05	ANDERSON, STEPHEN STRUCTURAL ASPECTS OF APP FUNCTION AND PATHOLOGY	08-01-97/06-30-98	RUTGERS THE STATE UNIV NEW BRUNSWICK	229,965
2R01AG11536-08	WEITZMAN, SIGMUND A OXYGEN RADICAL INDUCED MALIGNANT TRANSFORMATION	07-01-97/	NORTHWESTERN UNIVERSITY	
1R01AG11541-01A4	NELSON, DOROTHY A ETHNIC DIFFERENCES IN PROXIMAL FEMORAL MORPHOLOGY	01-16-97/11-30-97	WAYNE STATE UNIVERSITY	221,961
5P01AG11542-05	LEE, VIRGINIA M IN VITRO AND IN VIVO MODELS OF ALZHEIMER'S DISEASE	09-01-97/08-31-98	UNIVERSITY OF PENNSYLVANIA	888,774
5R01AG11549-04	GILMORE, GROVER C CONTRAST ENHANCEMENT AND READING IN ALZHEIMERS DISEASE	07-01-97/06-30-98	CASE WESTERN RESERVE UNIVERSITY	175,385
5R01AG11552-05	WILMOTH, JOHN R MEASUREMENT AND ANALYSIS OF OLDEST-OLD MORTALITY	07-01-97/06-30-98	UNIVERSITY OF CALIFORNIA BERKELEY	160,017
5R01AG11561-04	VOOGT, JAMES L AGING AND CHANGES IN DOPAMINE NEURONS	09-01-97/08-31-99	UNIVERSITY OF KANSAS MEDICAL CENTER	156,402

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FY: 97				
5R29AG11564-04	PAVALKO, ELIZA K WORK AND HEALTH AMONG WOMEN IN MIDLIFE AND BEYOND	04-01-97/03-31-98	INDIANA UNIVERSITY BLOOMINGTON	107,943
3R29AG11564-04S1	PAVALKO, ELIZA K WORK AND HEALTH AMONG WOMEN IN MIDLIFE AND BEYOND	08-15-97/03-31-98	INDIANA UNIVERSITY BLOOMINGTON	18,816
5R13AG11570-05	WISE, DAVID A SUMMER INSTITUTE WORKSHOP IN AGING AND HEALTH CARE	07-01-97/06-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	30,000
5R01AG11577-03	PERLMUTTER, DAVID H SEC RECEPTOR AND ALZHEIMERS DISEASE	12-01-96/11-30-97	WASHINGTON UNIVERSITY	157,774
5P01AG11585-04	GLASER, RONALD M STRESS, AGING, AND NEUROENDOCRINE/IMMUNE CHANGES	08-15-97/07-31-99	OHIO STATE UNIVERSITY	883,104
5R29AG11602-04	WU, GE AGE, SENSATION AND FALLS--BIOMECHANICS AND PREVENTION	09-30-97/07-31-98	UNIVERSITY OF VERMONT & ST AGRIC COL	103,553
5R29AG11605-04	SHARPS, MATTHEW J AGING AND MEMORY FOR RELATIONAL AND IMAGERIC INFORMATION	07-01-97/06-30-98	CALIFORNIA STATE UNIVERSITY FRESNO	90,660
5R01AG11622-05	MADDEN, DAVID J NEUROIMAGING OF AGE RELATED COGNITIVE CHANGES	09-01-97/08-31-98	DUKE UNIVERSITY	452,996
5R01AG11623-03	YEUNG, CHO-YAU BRIAN SPECIFIC AMYLOID PLAQUE FORMATION	12-01-96/11-30-97	UNIVERSITY OF ILLINOIS AT CHICAGO	242,506
5R37AG11624-04	MOR, VINCENT DO GOOD NURSING HOMES ACHIEVE GOOD OUTCOMES?	07-01-97/06-30-98	BROWN UNIVERSITY	290,787
5R01AG11628-04	VER HOEVE, JAMES NEURAL BASES OF VISUAL DEFICITS DURING AGING	05-01-97/04-30-98	UNIVERSITY OF WISCONSIN MADISON	345,592
5R01AG11636-05	SCHULTZ, STEVE C THREE-DIMENSIONAL STRUCTURE OF THE ENDS OF CHROMOSOMES	09-15-97/05-31-99	UNIVERSITY OF COLORADO AT BOULDER	195,615
5R29AG11638-05	SMITH, GLENN E PREDICTORS OF INSTITUTIONALIZATION IN DEMENTIA PATIENTS	09-01-97/08-31-99	MAYO FOUNDATION	101,425
5R01AG11643-05	HARRISON, DAVID E SELECTING AND IDENTIFYING GENES IMPORTANT IN LONGEVITY	09-01-97/08-31-99	JACKSON LABORATORY	413,136
5R01AG11644-05	TOWER, JOHN G DROSOPHILA LONGEVITY ASSURANCE GENES	09-15-97/03-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	219,105

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG11653-05	MOUNTZ, JOHN D CORRECTION OF T-CELL AGING IN TRANSGENIC MICE	08-15-97	03-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	190,070
5R01AG11658-05	CAMPISI, JUDITH SENESCENCE AND LONGEVITY-MODULATING GENES	09-15-97	08-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	282,627
5R01AG11659-05	HARD, SAMUEL LIFESPAN ENHANCING MUTATIONS IN C ELEGANS	08-15-97	03-31-99	UNIVERSITY OF ARIZONA	189,269
3R01AG11660-04S1	JAZWINSKI, S MICHAL YEAST--A SOURCE AND A TEST SYSTEM FOR MAMMALIAN LAGS	07-15-97	08-31-97	LOUISIANA STATE UNIV MED CTR NEW ORL	50,000
5R01AG11660-05	JAZWINSKI, S MICHAL YEAST--A SOURCE AND A TEST SYSTEM FOR MAMMALIAN LAGS	09-15-97	08-31-99	LOUISIANA STATE UNIV MED CTR NEW ORL	289,335
5P50AG11669-05	JETTE, ALAN M RESEARCH CENTER ON APPLIED GERONTOLOGY	09-15-97	07-31-98	BOSTON UNIVERSITY	433,539
3P50AG11669-05S1	JETTE, ALAN M RESEARCH CENTER ON APPLIED GERONTOLOGY	09-30-97	07-31-98	BOSTON UNIVERSITY	11,437
5P50AG11684-06	BALL, KARLENE K ENHANCING MOBILITY IN THE ELDERLY	07-15-97	08-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	375,217
5R01AG11687-05	MILLER, RICHARD A GENETIC CONTROL OF LONGEVITY IN MICE	09-01-97	03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	309,884
5R01AG11703-04	FRIED, LINDA P RISK FACTORS FOR PHYSICAL DISABILITY IN AGING WOMEN	07-15-97	05-31-98	JOHNS HOPKINS UNIVERSITY	403,671
2R01AG11705-03A1	FERRARO, KENNETH F AGING AND HEALTH STATUS AMONG BLACK AND WHITE ADULTS	05-15-97	04-30-98	PURDUE UNIVERSITY WEST LAFAYETTE	146,090
5R29AG11706-05	MC CLELLAN, MARK B HEALTH TECHNOLOGIES' COSTS AND OUTCOMES IN THE ELDERLY	08-15-97	05-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	113,956
5P50AG11711-05	PILLEMER, KARL A CORNELL CENTER ON APPLIED GERONTOLOGY	09-15-97	01-31-99	CORNELL UNIVERSITY ITHACA	466,140
5P50AG11715-05	PARK, DENISE C CENTER FOR APPLIED COGNITIVE RESEARCH ON AGING	08-15-97	07-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	465,330
3P50AG11715-05S1	PARK, DENISE C CENTER FOR APPLIED COGNITIVE RESEARCH ON AGING	08-15-97	07-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	42,577

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5P50AG11719-05	MORRIS, JOHN N CENTER OF RESEARCH ON APPLIED GERONTOLOGY	09-15-97	08-31-99	HEBREW REHABILITATION CENTER FOR AGE	510,296
5R01AG11722-05	CURTSINGER, JAMES W QTL-MAPPING OF LONGEVITY GENES IN DROSOPHILA	09-01-97	03-31-99	UNIVERSITY OF MINNESOTA TWIN CITIES	225,090
5R01AG11725-03	BEHRMAN, JERE R INTRAFAMILY RESOURCE ALLOCATIONS AND THEIR CONSEQUENCES	09-01-97	08-31-99	UNIVERSITY OF PENNSYLVANIA	222,984
2R01AG11728-05	LUNDBLAD, VICTORIA J TELOMERE REPLICATION AND SENESCENCE IN YEAST	09-01-97	08-31-98	BAYLOR COLLEGE OF MEDICINE	244,114
3P50AG11748-04S1	CZAJA, SARA J CENTER ON HUMAN FACTORS AND AGING RESEARCH	05-01-97	07-31-97	UNIVERSITY OF MIAMI CORAL GABLES	49,448
5P50AG11748-05	CZAJA, SARA J MIAMI CENTER ON HUMAN FACTORS AND AGING RESEARCH	09-15-97	07-31-99	UNIVERSITY OF MIAMI CORAL GABLES	310,154
5R01AG11755-05	GREENAMYRE, JOHN T ELECTRON TRANSPORT ENZYMES IN ALZHEIMERS DISEASE	05-15-97	04-30-99	EMORY UNIVERSITY	218,753
5R01AG11758-04	HAYWARD, MARK D ACTIVE LIFE EXPECTANCY IN THE OLDER POPULATION	08-01-97	07-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	97,495
5R37AG11761-04	LEE, RONALD D ECONOMIC DEMOGRAPHY OF INTER-AGE TRANSFER	04-01-97	03-31-98	UNIVERSITY OF CALIFORNIA BERKELEY	208,489
5R01AG11762-04	SCHELLENBERG, GERARD D CLONING OF THE CHROMOSOME 14 ALZHEIMERS DISEASE GENE	05-15-97	04-30-98	UNIVERSITY OF WASHINGTON	233,485
5R29AG11805-05	BABB, TONY G NORMAL AGING AND VENTILATORY LIMITS TO PERFORMANCE	04-01-97	03-31-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	97,504
7R01AG11811-07	EVANS, WILLIAM J PROTEIN, ENERGY & EXERCISE: EFFECTS ON SENESCENT MUSCLE	12-01-97	08-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	80,924
5R01AG11812-05	FIATARONE, MARIA A EXERCISE TRAINING IN FUNCTIONALLY IMPAIRED OLDER WOMEN	05-01-97	04-30-99	TUFTS UNIVERSITY BOSTON	292,270
5R01AG11815-04	WOLF, DOUGLAS A DYNAMIC MICROSIMULATION OF ELDERS' HEALTH AND WELL-BEING	07-01-97	06-30-98	SYRACUSE UNIVERSITY	317,009
5R01AG11816-04	KENYON, CYNTHIA J GENETIC ANALYSIS OF AGING IN C ELEGANS	04-15-97	03-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	239,116

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG11833-04	TOWER, JOHN G AGING-SPECIFIC GENE EXPRESSION IN DROSOPHILA	12-01-96/11-30-97	UNIVERSITY OF SOUTHERN CALIFORNIA	183,812
2R01AG11836-04	GALE, WILLIAM G PUBLIC POLICIES EFFECTS ON SAVING FOR RETIREMENT	09-30-97/08-31-98	BROOKINGS INSTITUTION	121,459
5R01AG11840-03	HSIAO, KAREN K MOLECULAR PATHOPHYSIOLOGY OF PRP AND APP MUTANTS	09-01-97/08-31-98	UNIVERSITY OF MINNESOTA TWIN CITIES	165,116
5R01AG11850-03	GREENWOOD, MICHAEL J ELDERLY US IMMIGRANTS	02-01-97/01-31-99	UNIVERSITY OF COLORADO AT BOULDER	211,105
5R01AG11851-03	KIRSH, DAVID COMPUTATIONAL STUDY OF COMPENSATION	04-04-97/03-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	149,011
5R29AG11862-04	HEBERT, LIESI E EPIDEMIOLOGY OF A D IN WOMEN--RISK AND IMPACT	08-15-97/06-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	101,637
5R01AG11874-04	WISE, DAVID A FIRM HEALTH INSURANCE PLANS	07-01-97/06-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	180,926
5R01AG11875-04	LI, CHRISTINE BETA-AMYLOID PRECURSOR-LIKE GENE IN C. ELEGANS	09-01-97/08-31-99	BOSTON UNIVERSITY	121,114
5R29AG11876-04	POWERS, DOUGLAS C AGE AND VACCINE MODULATION OF INFLUENZA IMMUNITY	04-01-97/03-31-98	EASTERN VIRGINIA MED SCH/MED COL HAM	92,157
5R01AG11913-03	KRISHNAN, K RANGA ALZHEIMERS DISEASE--ANTEMORTEM MARKERS	04-03-97/03-31-99	DUKE UNIVERSITY	256,419
5P01AG11915-04	WEINDRUCH, RICHARD H DIETARY RESTRICTION AND AGING	03-01-97/02-28-98	UNIVERSITY OF WISCONSIN MADISON	839,239
1R01AG11916-01A2	SHEA, THOMAS B ASSEMBLY DYNAMICS OF NEURONAL INTERMEDIATE FILAMENTS	04-01-97/	UNIVERSITY OF MASSACHUSETTS LOWELL	
5R01AG11921-02	GIBSON, GARY E SIGNAL TRANSDUCTION SYSTEMS IN ALZHEIMERS DISEASE	02-01-97/01-31-98	WINIFRED MASTERSON BURKE MED RES INS	202,459
5R01AG11925-04	ROHER, ALEX E CHEMISTRY AND BIOLOGY OF ALZHEIMER'S AMYLOID PROTEINS	12-01-96/11-30-97	SUN HEALTH RESEARCH INSTITUTE	190,599
7R01AG11930-04	HUGHES, SUSAN L IMPACT OF TEAM MANAGED/HOSPITAL LINKED HOME CARE	05-15-97/03-31-98	UNIVERSITY OF ILLINOIS AT CHICAGO	283,118

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
2R01AG11932-04	SINGH, TOOLSEE J TAU PHOSPHORYLATION IN ALZHEIMER DISEASE	07-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
5P01AG11952-04	RAHMAN, OMAR DETERMINANTS OF HEALTHY AGING IN RURAL POPULATIONS	09-15-97/07-31-98	RAND CORPORATION	385,606
3R25AG11953-04S1	JONES, JAMES M PREDOCTORAL RESEARCH SCIENTIST PROGRAM IN PSYCHOLOGY	09-01-96/08-31-99	AMERICAN PSYCHOLOGICAL ASSOCIATION	59,443
5R01AG11957-04	DEATON, ANGUS S AGING AND SAVING IN DEVELOPED AND DEVELOPING COUNTRIES	08-15-97/07-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	27,810
5R01AG11958-04	WYSS, J MICHAEL MECHANISMS OF AGE RELATED PLASTICITY IN THE CORTEX	05-01-97/04-30-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	186,496
5R29AG11966-06	SANDS, LAURA P DETECTING ACUTE COGNITIVE CHANGES IN ALZHEIMERS PATIENTS	09-01-97/08-31-98	GOLDMAN INSTITUTE ON AGING	97,950
2R01AG11967-06	CORTOPASSI, GINO A MITOCHONDRIAL MUTAGENESIS & AGE-RELATED PATHOPHYSIOLOGY	08-15-97/06-30-98	UNIVERSITY OF CALIFORNIA DAVIS	168,000
5R01AG11970-03	KELLER, EVAN T INTERLEUKIN 6 AND OSTEOPOROSIS	06-15-97/04-30-98	EASTERN VIRGINIA MED SCH/MED COL HAM	340,264
5R01AG11979-02	CHELLURI, LAKSHMIPATHI QUALITY OF LIFE AFTER MECHANICAL VENTILATION IN THE AGED	07-01-97/06-30-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	301,278
3R01AG11979-02S1	CHELLURI, LAKSHMIPATHI QUALITY OF LIFE AFTER MECHANICAL VENTILATION IN THE AGED	07-15-97/06-30-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	63,855
5R29AG11985-05	MYERS, ELIZABETH R BIOMECHANICS OF VERTEBRAL FRACTURE RISK	08-01-97/07-31-98	BETH ISRAEL DEACONESS MEDICAL CENTER	122,795
5R01AG11995-03	LAWTON, M POWELL QUALITY OF LIFE, HEALTH, AND VALUATION OF LIFE BY ELDERS	01-01-97/12-31-97	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	323,798
5R01AG12019-04	SCHELLENBERG, GERARD D CLONING OF THE CHROMOSOME 8 WERNERS SYNDROME GENE	09-01-97/08-31-98	UNIVERSITY OF WASHINGTON	200,839
3P20AG12059-03S2	ALLEN, WALTER R FAMILY AND THE HEALTH OF AFRICAN-AMERICAN ELDERLY	09-30-95/08-31-98	RAND CORPORATION	72,559
3P20AG12072-03S3	LEVENTHAL, HOWARD PROMOTING HEALTH IN ELDERLY AFRICAN AMERICANS	12-15-96/08-31-98	RUTGERS THE STATE UNIV NEW BRUNSWICK	38,528

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
2R44AG12080-02A2	EVANS, MARI-LYNN C DEVELOPING VIDEO AND PRINT LIBRARY OF HEALTHY AGING PROG	11-01-96/	EVENING STAR PRODUCTIONS, LTD	
5R44AG12081-03	GERTMAN, PAUL M INTERACTIVE HOME HEALTH COMPUTER SYSTEM FOR THE AGED	02-01-97/05-31-98	U.S. CARELINK	372,498
5R44AG12090-03	RAGER, ROBERT CD-I IMPROVES OLDER PERSONS INTENTIONAL MEMORY SKILLS	05-01-97/04-30-98	COMPACT DISC, INC.	532,958
5R01AG12101-05	DE LEON, MONY J PREDICTORS OF COGNITIVE DECLINE IN NORMAL AGING	09-01-97/08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	296,886
5R01AG12112-03	CAMPBELL, SCOTT S HOMEOSTATIC FACTORS IN AGE RELATED SLEEP DISTURBANCE	12-01-96/11-30-97	WEILL MEDICAL COLLEGE OF CORNELL UNI	213,116
5R01AG12113-03	MC AULEY, EDWARD EXERCISE, AGING, AND PSYCHOLOGICAL FUNCTION	09-01-97/08-31-99	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	314,708
5R01AG12119-02	MAUDSLEY, ANDREW A DATA PROCESSING FOR MR SPECTROSCOPIC IMAGING	02-01-97/01-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	141,590
5R01AG12122-04	GRANHOLM, ANN-CHARLOTTE E AGED FOREBRAIN CHOLINERGIC NEURONS AND NGF DELIVERY	04-01-97/03-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	146,261
5R01AG12136-03	LICHSTEIN, KENNETH L BIOBEHAVIORAL APPROACH TO INSOMNIA TREATMENT	05-15-97/04-30-98	UNIVERSITY OF MEMPHIS	176,039
5R37AG12138-03	SCHEFF, STEPHEN W AGE-RELATED CHANGES IN SYNAPTIC DENSITY	01-01-97/12-31-97	UNIVERSITY OF KENTUCKY	152,146
5R29AG12141-04	ANDERSEN, JULIE MODELS FOR EXPLORING FREE RADICAL DAMAGE	04-01-97/03-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	118,804
5R01AG12142-03	PARKER, CHARLES R, JR ADRENAL ANDROGEN PRODUCTION IN AGING	05-01-97/04-30-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	177,551
1R01AG12156-01A2	MC LAUGHLIN, MARGARET K AGING EFFECTS ON VASCULAR FUNCTION	12-01-96/	MAGEE-WOMEN'S HOSPITAL	
5R29AG12160-03	GOTTSCHALL, PAUL E PROTEASES, AGING, AND NEURODEGENERATIVE DISEASES	06-01-97/04-30-98	UNIVERSITY OF SOUTH FLORIDA	96,538
5R29AG12161-04	SHAPSES, SUE A NUTRITIONAL REGULATION OF BONE TURNOVER	09-01-97/08-31-98	RUTGERS THE STATE UNIV NEW BRUNSWICK	129,628

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG12163-05	MORROW, DANIEL DESIGNING REMINDER MESSAGES FOR OLDER ADULTS	09-01-97/08-31-99	UNIVERSITY OF NEW HAMPSHIRE	126,455
5R01AG12165-02	MC ILROY, WILLIAM E AGING AND PLANTER MECHANORECEPTORS IN POSTURAL CONTROL	07-01-97/06-30-98	SUNNYBROOK HEALTH SCIENCES CENTER	40,938
5R29AG12168-02	BROWN, SUSAN H FACILITATION OF MOTOR FUNCTION THROUGH SENSORY CUEING	09-01-97/08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	103,568
5R01AG12179-03	BAVISTER, BARRY D MATERNAL AGE-RELATED OOCYTE/EMBRYO DEFECTS	02-01-97/01-31-99	UNIVERSITY OF WISCONSIN MADISON	207,725
1R15AG12209-01A3	CRAIG, BRUCE W THE INFLUENCE OF IGF I ON INSULIN RESPONSIVENESS	05-01-97/	BALL STATE UNIVERSITY	
5R01AG12210-05	DUTHIE, EDMUND H, JR CAUSES OF LEAN BODY MASS ATROPHY IN AGING MEN & WOMEN	09-15-97/08-31-99	MEDICAL COLLEGE OF WISCONSIN	285,816
5R01AG12222-04	SANTORO, NANETTE F REPRODUCTIVE PHYSIOLOGY OF OVARIAN FAILURE	08-01-97/07-31-99	UNIVERSITY OF MEDICINE & DENTISTRY O	255,053
5R01AG12227-03	SINOWAY, LAWRENCE I LIMB CONGESTION AND EXERCISE REFLEXES IN HEART FAILURE	01-01-97/12-31-97	PENNSYLVANIA STATE UNIV HERSHEY MED	179,523
3R01AG12227-03S1	SINOWAY, LAWRENCE I LIMB CONGESTION AND EXERCISE REFLEXES IN HEART FAILURE	07-15-97/12-31-97	PENNSYLVANIA STATE UNIV HERSHEY MED	35,129
5R01AG12249-04	KASS, DAVID A VENTRICULAR VASCULAR STIFFENING IN ELDERLY HUMANS	07-01-97/06-30-99	JOHNS HOPKINS UNIVERSITY	208,717
2R01AG12257-04	KITZMAN, DALANE W EXERCISE TRAINING/DIASTOLIC HEART FAILURE IN THE ELDERLY	08-01-97/06-30-98	WAKE FOREST UNIVERSITY	279,931
5R01AG12262-03	TOSTESON, ANNA N EVALUATION OF OSTEOPOROSIS PREVENTION IN ELDERLY WOMEN	01-01-97/12-31-98	DARTMOUTH COLLEGE	169,573
5R01AG12264-03	SIDNEY, STEPHEN LOW CHOLESTEROL AND DISEASE IN A LARGE AGING COHORT	01-01-97/12-31-98	KAISER FOUNDATION RESEARCH INSTITUTE	295,404
5R01AG12268-03	DILWORTH-ANDERSON, PEGGYE STRUCTURE AND OUTCOMES OF CAREGIVING TO BLACK ELDERLY	05-01-97/04-30-98	UNIVERSITY OF NORTH CAROLINA GREENSB	304,010
5R01AG12275-04	BIGELOW, DIANA J OXIDATION AND AGING IN CARDIAC AND SKELETAL MUSCLE	06-01-97/05-31-99	UNIVERSITY OF KANSAS LAWRENCE	141,470

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG12279-04	TILLY, JONATHAN L APOPTOSIS AND REPRODUCTIVE AGING OF THE FEMALE	01-01-97/12-31-97	MASSACHUSETTS GENERAL HOSPITAL	157,975
2R01AG12282-04A1	BREDESEN, DALE E MECHANISM OF INHIBITION OF NEURODEGENERATION AND AGING	08-01-97/06-30-98	BURNHAM INSTITUTE	245,984
5R01AG12287-04	HORNSBY, PETER J TYPE II 3BETA HSD GENE REGULATION OF DHEAS SYNTHESIS	09-15-97/08-31-98	BAYLOR COLLEGE OF MEDICINE	164,730
5R01AG12288-04	SIMON, MELVIN I ANIMAL MODELS OF AGING IN RETINAL DEGENERATION	01-01-97/12-31-97	CALIFORNIA INSTITUTE OF TECHNOLOGY	368,877
5R01AG12289-04	BENZER, SEYMOUR GENES MAINTAINING NERVOUS SYSTEM INTEGRITY DURING AGING	01-01-97/12-31-97	CALIFORNIA INSTITUTE OF TECHNOLOGY	223,264
5R01AG12293-03	HEINECKE, JAY W MYELOPEROXIDASE-MEDIATED VASCULAR INJURY	01-01-97/12-31-97	WASHINGTON UNIVERSITY	244,658
5R01AG12297-03	DIAZ-ARRASTIA, RAMON R STRESS AND THE NEUROPATHOLOGY OF ALZHEIMERS DISEASE	01-01-97/12-31-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	205,198
5P30AG12300-04	ROSENBERG, ROGER N NEUROBIOLOGY OF ALZHIMERS DISEASE AND AGING	04-01-97/03-31-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	1,175,942
2R44AG12305-02A2	LOWRIMORE, GENE R SUPPORT ENVIRONMENT FOR GRADE MEMBERSHIP MODEL	05-01-97/04-30-98	DECISION SYSTEMS, INC.	366,588
2R44AG12308-02A2	SCHWARTZ, MARK H COMPUTER TOOLS FOR OUTCOMES ANALYSIS OF HIP REPLACEMENT	09-30-97/08-31-98	MANDALA SCIENCES	377,142
5R44AG12311-03	CALKINS, MARGARET P ENVIRONMENTAL ASSESSMENT PROTOCOL FOR SPECIAL CARE UNITS	01-01-97/09-30-98	INNOVATIVE DESIGNS/ENVIRONMENT/AGING	347,352
5R01AG12316-05	ROSENTHAL, NADIA A TRANSGENIC MOUSE MODELS OF LONGEVITY	09-15-97/03-31-99	MASSACHUSETTS GENERAL HOSPITAL	265,510
5R44AG12322-03	ERB, JUDITH L FIBER OPTIC SENSOR FOR FEMALE REPRODUCTIVE HORMONES	06-01-97/05-31-98	IA, INC.	328,553
5R44AG12341-03	AVIS, NANCY E MEDIA TRAINING ON MENOPAUSE FOR HEALTH PROFESSIONALS	05-01-97/04-30-99	NEW ENGLAND RESEARCH INSTITUTES, INC	429,812
5R29AG12350-05	KREGEL, KEVIN C SYMPATHETIC NERVOUS SYSTEM ACTIVITY AND AGING IN THE RAT	09-01-97/08-31-98	UNIVERSITY OF IOWA	99,403

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG12358-03	KING, ABBY C EXERCISE, FUNCTIONING, AND STRESS IN WOMEN CAREGIVERS	07-01-97/06-30-98	STANFORD UNIVERSITY	398,072
5R01AG12364-04	KRIPKE, DANIEL F ILLUMINATION IN HUMAN AGING--SLEEP AND MOOD EFFECTS	08-01-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	372,070
1R01AG12368-01A3	BOBICH, JOSEPH A STUDIES OF THE NEUROTRANSMITTER RELEASE MECHANISM	04-01-97/	TEXAS CHRISTIAN UNIVERSITY	
1R01AG12371-01A3	SPARKS, DAVID L INDUCTION & REVERSAL OF B-AMYLOID DEPOSITION IN RABBIT B	12-01-96/	UNIVERSITY OF KENTUCKY	
5R01AG12387-04	GREENWOOD, PAMELA M SPATIALLY CUED VISUAL PROCESSING OVER THE ADULT LIFESPAN	08-01-97/06-30-98	CATHOLIC UNIVERSITY OF AMERICA	129,379
5R01AG12393-04	MIROWSKY, JOHN I AGING, STATUS, AND THE SENSE OF CONTROL	01-01-97/12-31-99	OHIO STATE UNIVERSITY	211,266
5R37AG12394-03	SMITH, JAMES P WEALTH DISPARITITES AMONG MATURE & OLDER ADULTS	05-01-97/03-31-98	RAND CORPORATION	136,885
5R01AG12396-04	JOHNSON, GAIL V CALCIUM EFFECTS ON TAU PROTEOLYSIS AND CROSSLINKING	09-01-97/08-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	144,730
5R29AG12401-03	DELACALLE, SONSOLES CHOLINERGIC DENERVATION AND REINNERVATION IN AGING	08-01-97/06-30-98	BETH ISRAEL DEACONESS MEDICAL CENTER	113,096
5R01AG12406-04	HYMAN, BRADLEY T APOLIPOPROTEIN E AND ALZHEIMERS DISEASE	07-01-97/06-30-98	MASSACHUSETTS GENERAL HOSPITAL	251,656
5P01AG12411-03	GRIFFIN, WILMA S EARLY EVENTS IN ALZHEIMERS PATHOGENESIS	08-01-97/05-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	729,591
5R01AG12420-03	LILLARD, LEE A ELDERLY HEALTH AND HEALTH CARE UTILIZATION	05-01-97/08-31-98	RAND CORPORATION	139,229
5R01AG12423-02	LINK, CHRISTOPHER D TRANSGENIC C ELEGANS AS AMYLOID DISEASE MODEL	09-01-97/08-31-98	UNIVERSITY OF COLORADO AT BOULDER	205,254
1R01AG12432-01A3	SIHAG, RAM K BRAIN SPECTRIN ABNORMALITIES IN ALZHEIMER'S DISEASE	12-01-96/	MC LEAN HOSPITAL (BELMONT, MA)	
5P01AG12435-04	CHUI, HELENA CHANG AGING BRAIN--VASCULATURE, ISCHEMIA AND BEHAVIOR	09-15-97/08-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	1,396,428

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
3R01AG12437-02S1	MC KINLAY, JOHN B VARIABILITY IN MEDICAL DECISIONS WITH OLDER PATIENTS	06-15-97/06-30-97	NEW ENGLAND RESEARCH INSTITUTES, INC	65,326
5R01AG12437-03	MC KINLAY, JOHN B VARIABILITY IN MEDICAL DECISIONS WITH OLDER PATIENTS	09-01-97/06-30-99	NEW ENGLAND RESEARCH INSTITUTES, INC	298,241
5R01AG12442-03	WILSON, GLENN L AGING EFFECTS ON DNA REPAIR	03-01-97/02-28-98	UNIVERSITY OF SOUTH ALABAMA	209,174
5R29AG12444-03	LEE, DAVID J SENSORY IMPAIRMENT, FUNCTIONAL STATUS AND AGING	04-01-97/03-31-98	UNIVERSITY OF MIAMI	104,424
2R01AG12447-04	LESNEFSKY, EDWARD J MITOCHONDRIAL FOCUS OF REPERFUSION INJURY IN AGING HEART	08-01-97/07-31-98	CASE WESTERN RESERVE UNIVERSITY	161,172
5R29AG12448-04	SLIWINSKI, MARTIN J AGE-ASSOCIATED CHANGES IN THE SPEED OF COGNITIVE PROCESS	08-01-97/06-30-98	YESHIVA UNIVERSITY	126,615
5R29AG12449-04	ALLEN, SUSAN MARITAL GENDER ROLES AND DYNAMICS OF SPOUSAL CARE	09-01-97/08-31-98	BROWN UNIVERSITY	115,112
5R01AG12458-03	SIEGLER, ILENE C MODELS OF PERSONALITY, HEALTH, AND DISEASE IN ADULTHOOD	08-01-97/07-31-98	DUKE UNIVERSITY	222,430
5R01AG12466-03	ABRAMS, JOHN M MOLECULAR AND GENETIC CONTROL OF PROGRAMMED CELL DEATH	05-01-97/04-30-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	219,283
3R01AG12466-03S1	ABRAMS, JOHN M MOLECULAR AND GENETIC CONTROL OF PROGRAMMED CELL DEATH	09-01-97/04-30-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	31,251
5R29AG12467-03	OBEID, LINA M CERAMIDE AND CELL SENESCENCE	05-01-97/04-30-98	DUKE UNIVERSITY	107,800
1R29AG12478-01A3	BOERRIGTER, MICHAEL E DNA REPAIR AND MUTATIONS IN RELATION TO AGING	12-01-96/	BETH ISRAEL DEACONESS MEDICAL CENTER	
5U01AG12495-04	MIDGLEY, A REES, JR MENOPAUSE AND HEALTH IN AGING WOMEN	08-15-97/05-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	1,075,464
5U01AG12505-04	POWELL, LYNDA H POPULATION STUDY OF MENOPAUSE IN AFRICAN AMERICAN WOMEN	08-15-97/05-31-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	611,465
5R01AG12527-03	SMITH, DOUGLAS H BRAIN INJURY EFFECTS--AGE RELATED COGNITIVE DYSFUNCTION	05-15-97/04-30-98	UNIVERSITY OF PENNSYLVANIA	205,477

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5U01AG12531-04	NEER, ROBERT M MENOPAUSAL TRANSITION IN BLACK AND WHITE WOMEN	08-01-97/05-31-98	MASSACHUSETTS GENERAL HOSPITAL	429,805
5U01AG12535-04	WEISS, GERSON GYNECOLOGIC IMPACT OF THE MENOPAUSAL TRANSITION	08-01-97/05-31-98	UNIVERSITY OF MEDICINE & DENTISTRY O	590,672
5U01AG12539-04	GREENDALE, GAIL A EPIDEMIOLOGY AND BIOLOGY OF THE MENOPAUSAL TRANSITION	08-01-97/05-31-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	526,209
5R01AG12544-03	RUDKIN, LAURA L SOCIAL CHANGE AND INTERGENERATIONAL EXCHANGE	09-01-97/08-31-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	68,892
5U01AG12546-04	MATTHEWS, KAREN A MENOPAUSAL TRANSITION IN BLACK/WHITE WOMEN	08-01-97/05-31-98	UNIVERSITY OF PITTSBUROH AT PITTSBUR	513,343
5R01AG12548-02	GIULIAN, DANA J GLIA MEDIATED BRAIN INJURY IN ALZHEIMERS DISEASE	05-15-97/04-30-98	BAYLOR COLLEGE OF MEDICINE	262,682
5R01AG12551-03	INOUYE, SHARON K INTERVENTION TRIAL TO PREVENT DELIRIUM IN THE ELDERLY	07-01-97/06-30-98	YALE UNIVERSITY	420,168
3U01AG12553-03S2	MC KINLAY, SONJA M MENOPAUSE AND HEALTH IN AGING WOMEN	04-30-97/05-31-97	NEW ENGLAND RESEARCH INSTITUTES, INC	50,000
5U01AG12553-04	MC KINLAY, SONJA M MENOPAUSE AND HEALTH IN AGING WOMEN	08-15-97/05-31-98	NEW ENGLAND RESEARCH INSTITUTES, INC	1,193,319
3U01AG12553-04S1	MC KINLAY, SONJA M MENOPAUSE AND HEALTH IN AGING WOMEN	09-30-97/05-31-98	NEW ENGLAND RESEARCH INSTITUTES, INC	62,800
5U01AG12554-04	GOLD, ELLEN B LIFESTYLE AND OVARIAN FUNCTION IN MID-LIFE WOMEN	12-15-97/05-31-98	UNIVERSITY OF CALIFORNIA DAVIS	521,880
3U01AG12554-04S1	GOLD, ELLEN B LIFESTYLE AND OVARIAN FUNCTION IN MID-LIFE WOMEN	09-01-97/05-31-98	UNIVERSITY OF CALIFORNIA DAVIS	24,166
5R29AG12556-03	RAAB-CULLEN, DIANE M IN VIVO SKELETAL RESPONSE TO MECHANICAL STIMULATION	04-01-97/03-31-98	CREIGHTON UNIVERSITY	108,538
5R01AG12557-03	COLE, KELLY J AGING EFFECTS ON GRASP FORCE CONTROL	05-01-97/04-30-98	UNIVERSITY OF IOWA	134,121
5R01AG12559-02	WEINBERG, RICHARD B NUTRIENT ANTIOXIDANT DEFENSE OF HIGH DENSITY LIPOPROTEIN	07-01-97/06-30-98	WAKE FOREST UNIVERSITY	178,692

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG12561-04	KREBS, DAVID E DOES EXERCISE IMPROVE LOCOMOTION IN DISABLED ELDERS?	07-01-97/06-30-99	MASSACHUSETTS GENERAL HOSPITAL	92,833
2R42AG12573-02	PARL, STEEN A LOW COST PATIENT LOCATOR SYSTEM FOR GERIATRIC WANDERING	08-15-97/07-31-98	SIGNATRON TECHNOLOGY CORPORATION	363,999
5R42AG12576-03	SAH, DINAH W HUMAN NEURONS IN VITRO--CHARACTERIZATION OF RECEPTORS	04-01-97/02-28-98	SIGNAL PHARMACEUTICALS, INC.	148,315
3P60AG12583-03S1	GOLDBERG, ANDREW P CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	01-15-97/06-30-97	UNIVERSITY OF MARYLAND BALT PROF SCH	61,321
5P60AG12583-04	GOLDBERG, ANDREW P CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-15-97/06-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	1,192,766
3P60AG12583-04S1	GOLDBERG, ANDREW P CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-30-97/06-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	25,000
5R01AG12587-04	ARMBRECHT, HARVEY J INTESTINAL CALCIUM ABSORPTION--EFFECT OF AGE	09-01-97/08-31-98	ST. LOUIS UNIVERSITY	184,253
5R01AG12609-04	BARNES, CAROL A CELL ASSEMBLIES, PATTERN COMPLETION, AND THE AGING BRAIN	04-01-97/03-31-98	UNIVERSITY OF ARIZONA	204,790
5U01AG12642-03	CZEISLER, CHARLES A CLINICAL TRIAL/MELATONIN AS HYPNOTIC FOR NEUROLAB CREW	08-01-97/07-31-98	BRIGHAM AND WOMEN'S HOSPITAL	270,424
5R44AG12644-03	TOMKINS, EDWARD L MD ACCESS TO DRUG PROFILES TO REDUCE ADVERSE REACTIONS	09-15-97/08-31-99	PROVIDER ADVANTAGE NW, INC.	363,958
5U01AG12646-03	BRADY, SCOTT T SPACE FLIGHT, STRESS, AND NEURONAL PLASTICITY	08-01-97/07-31-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	244,229
1R01AG12651-01A2	COLVIN, ROBERT A MOLECULAR/GENETIC BASIS OF AGE-RELATED COGNITIVE DECLINE	12-01-96/	OHIO UNIVERSITY ATHENS	
5R01AG12653-03	MC KINNEY, MICHAEL GENE EXPRESSION IN AGING CENTRAL CHOLINERGIC NEURONS	08-15-97/07-31-98	MAYO FOUNDATION	221,956
5R29AG12658-02	COSTA, DORA L HEALTH OF YOUNG ADULTS--EVIDENCE CAUSES AND OUTCOMES	08-01-97/07-31-98	MASSACHUSETTS INSTITUTE OF TECHNOLOG	100,538
5R01AG12663-03	COTMAN, CARL W GENETIC AND BIOCHEMICAL EVENTS IN AB-INDUCED APOPTOSIS	01-01-97/12-31-97	UNIVERSITY OF CALIFORNIA IRVINE	157,164

NATIONAL INSTITUTE ON AGING - ACTIVE GRANTS FOR FY 1997 - 1998

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG12673-04	NEUNDORFER, MARCIA M DEPRESSION AND AGITATION IN AD--EFFECTS ON CAREGIVERS	09-01-97	08-31-98	CASE WESTERN RESERVE UNIVERSITY	113,240
5R29AG12674-04	BONDI, MARK W COGNITIVE ABILITIES OF AT RISK ELDERLY FOR DEMENTIA	04-01-97	03-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	82,429
5R01AG12675-03	SCHACTER, DANIEL L IMAGERY PROCESSING IN OLD AGE	01-01-97	12-31-98	HARVARD UNIVERSITY	165,380
5R29AG12679-03	WALSH, JOHN P SENESCENCE AND STRIATAL SYNAPTIC PLASTICITY	08-01-97	07-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	112,946
5R01AG12685-05	YOUNKIN, STEVEN G FACTORS GOVERNING ALZHEIMERS ABETA PROTEIN	04-01-97	03-31-98	MAYO FOUNDATION	266,255
5R29AG12686-03	BUSH, ASHLEY ZINC AND ALZHEIMERS DISEASE PATHOPHYSIOLOGY	09-01-97	08-31-98	MASSACHUSETTS GENERAL HOSPITAL	119,958
5R01AG12689-03	RIDDLE, DONALD L GENES WITH MAJOR EFFECTS ON LIFE SPAN IN C ELEGANS	01-01-97	03-31-99	UNIVERSITY OF MISSOURI COLUMBIA	257,991
5R29AG12690-03	BRUZDZINSKI, CAROLYN J REGULATION OF PAI I AND LIVER PATHOLOGY IN THE AGED	07-15-97	06-30-98	UNIVERSITY OF ILLINOIS AT CHICAGO	103,386
5R01AG12694-03	COTMAN, CARL W ANIMAL MODEL OF HUMAN AGING AND DEMENTIA	09-01-97	08-31-98	UNIVERSITY OF CALIFORNIA IRVINE	211,774
5R01AG12701-03	SLADEK, CELIA D REGULATION OF VASOPRESSIN MESSENGER RNA DURING AGING	12-01-96	11-30-98	FINCH UNIV OF HLTH SCI/CHICAGO MED S	188,274
1R01AG12709-01A2	JACOB, JANE M AXONAL OUTGROWTH AFTER INJURY DURING AGING	12-01-96		UNIVERSITY OF OKLAHOMA HLTH SCIENCES	
5R44AG12711-03	OWENS, BOONE B LONG LIFE, RECHARGEABLE HEARING AID	06-01-97	04-30-99	RESEARCH INTERNATIONAL, INC.	392,180
5R01AG12712-02	MC CAFFREY, TIMOTHY A TGF-B1 RECEPTORS IN RESTENOSIS AND AGING	03-01-97	02-28-98	WEILL MEDICAL COLLEGE OF CORNELL UNI	252,533
5R01AG12713-03	YESAVAGE, JEROME A AGE RELATED LONGITUDINAL CHANGES IN AVIATOR PERFORMANCE	09-01-97	08-31-98	STANFORD UNIVERSITY	171,817
5R01AG12717-03	ZANNIS, VASSILIS I APOE STRUCTURE FUNCTION AND ALZHEIMERS DISEASE	08-01-97	07-31-99	BOSTON UNIVERSITY	242,862

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R29AG12718-03	SHAPIRO, I PAUL FUNCTION OF AN APP CYTOPLASMIC DOMAIN BINDING PROTEIN	01-01-97/12-31-97	OREGON HEALTH SCIENCES UNIVERSITY	101,393
1R01AG12726-01A1	FAROOQUI, AKHLAQ A PLASMALOGEN HYDROLYZING ENZYMES IN ALZHEIMER DIS	12-01-96/	OHIO STATE UNIVERSITY	
1R01AG12727-01	SLOANE, PHILIP D MANAGEMENT OF DISRUPTIVE VOCALIZATION IN DEMENTIA	01-01-97/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
5R29AG12731-03	MARKS, NADINE F SOCIOECONOMIC INEQUALITIES, GENDER, AND MIDLIFE HEALTH	08-01-97/07-31-98	UNIVERSITY OF WISCONSIN MADISON	96,087
5R01AG12738-02	FLYNN, DONNA D NEURON/GLIA COMMUNICATION RELEVANCE FOR AD	05-15-97/04-30-98	UNIVERSITY OF MIAMI	200,638
5R01AG12745-02	FREEMAN, ELLEN W EPIDEMIOLOGIC STUDY OF THE LATE REPRODUCTIVE YEARS	02-01-97/01-31-98	UNIVERSITY OF PENNSYLVANIA	540,759
5R01AG12749-03	SELKOE, DENNIS J PROTEIN/PROTEIN INTERACTIONS IN THE BIOLOGY OF BETA APP	12-01-96/11-30-97	BRIGHAM AND WOMEN'S HOSPITAL	405,362
5R01AG12753-03	HASHER, LYNN A AGE, OPTIMAL TIME OF DAY, AND COGNITION	09-01-97/08-31-98	DUKE UNIVERSITY	234,275
5R01AG12765-03	BLAZER, DAN G, II PHSE TEN YEAR FOLLOW-UP	09-01-97/08-31-98	DUKE UNIVERSITY	408,350
5R01AG12806-03	COLDITZ, GRAHAM A IMPACT OF WORK ON WOMEN'S HEALTH AND QUALITY OF LIFE	09-01-97/08-31-98	BRIGHAM AND WOMEN'S HOSPITAL	313,176
5P20AG12810-04	WISE, DAVID A NBER CENTER FOR AGING AND HEALTH RESEARCH	08-01-97/06-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	413,612
3P20AG12810-04S1	WISE, DAVID A NBER CENTER FOR AGING AND HEALTH RESEARCH	09-30-97/06-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	25,000
5P20AG12815-04	LILLARD, LEE A RAND CENTER FOR THE STUDY OF AGING	08-15-97/06-30-98	RAND CORPORATION	280,348
5R29AG12819-03	KENT-BRAUN, JANE A SKELETAL MUSCLE FUNCTION IN AGING	09-01-97/08-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	86,024
5R01AG12822-02	EHSANI, ALI A ADAPTATIONS TO EXERCISE IN OLDER HYPERTENSIVE SUBJECTS	08-01-97/07-31-98	WASHINGTON UNIVERSITY	264,519

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG12829-03	ROBERTS, SUSAN B DIETARY ENERGY RESTRICTION AND METABOLIC AGING IN WOMEN	08-01-97/07-31-99	TUFTS UNIVERSITY BOSTON	48,985
5R29AG12834-03	KIRWAN, JOHN P AGE, EXERCISE, DIET--EFFECTS ON GLUCOSE/FATTY ACID CYCLE	09-01-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	104,250
5P20AG12836-04	PRESTON, SAMUEL H CENTER ON THE DEMOGRAPHY OF AGING	08-15-97/06-30-98	UNIVERSITY OF PENNSYLVANIA	178,019
5P20AG12837-04	WOLF, DOUGLAS A CENTER FOR DEMOGRAPHY AND ECONOMICS OF AGING	08-15-97/06-30-98	SYRACUSE UNIVERSITY	268,707
5P20AG12839-04	LEE, RONALD D CENTER ON THE DEMOGRAPHY AND ECONOMICS OF AGING	07-01-97/06-30-98	UNIVERSITY OF CALIFORNIA BERKELEY	167,778
5P20AG12844-04	NATHANSON, CONSTANCE A HOPKINS CENTER ON THE DEMOGRAPHY OF AGING	07-01-97/06-30-98	JOHNS HOPKINS UNIVERSITY	126,028
1R01AG12845-01A2	ROSENBERG, GARY A PATHOGENESIS OF VASCULAR DEMENTIA	04-01-97/	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	
5P20AG12846-04	HERMALIN, ALBERT I MICHIGAN EXPLORATORY CENTER ON DEMOGRAPHY OF AGING	08-15-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	374,953
3P20AG12846-04S1	HERMALIN, ALBERT I MICHIGAN EXPLORATORY CENTER ON DEMOGRAPHY OF AGING	09-30-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	40,000
5R01AG12850-05	FUKUCHI, KEN-ICHIRO EXPRESSION OF PERLECAN & BETA AMYLOID PRECURSOR PROTEIN	09-01-97/08-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	220,385
5P20AG12852-04	MANTON, KENNETH G CENTER FOR LONGITUDINAL ANALYSIS IN MEDICAL DEMOGRAPHY	08-15-97/06-30-98	DUKE UNIVERSITY	354,718
7R01AG12853-04	MAGGIO, JOHN AMYLOID PEPTIDE CONFORMATION AND AMYLOIDOSIS	12-01-97/12-31-97	UNIVERSITY OF CINCINNATI	272,052
5R01AG12855-03	RUSSO, CARLO OLIGOCLONAL CD8 T CELL EXPANSIONS IN AGING	08-01-97/06-30-98	WEILL MEDICAL COLLEGE OF CORNELL UNI	269,738
5R01AG12856-03	SAPER, CLIFFORD B MECHANISMS OF NEUROFIBRILLARY DEGENERATION	01-01-97/12-31-98	BETH ISRAEL DEACONESS MEDICAL CENTER	294,872
5P20AG12857-04	WAITE, LINDA J CENTER ON DEMOGRAPHY AND ECONOMICS OF AGING (COA)	08-15-97/06-30-98	NATIONAL OPINION RESEARCH CENTER	211,902

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
2R01AG12859-04	YUAN, JUNYING MECHANISM & FUNCTIONS OF ICH-3 IN APOPTOSIS/INFLAMMATION	09-01-97/08-31-98	HARVARD UNIVERSITY	326,673
2R44AG12881-02A1	KENNEDY, GEMMA T UNIQUE PROTECTIVE BARRIER FOR INCONTINENCE	04-24-97/03-31-98	BIOMEDICAL DEVELOPMENT CORPORATION	375,000
7R01AG12908-04	THOMAN, MARILYN L HORMONE AND CYTOKINE INFLUENCES ON THYMIC INVOLUTION	09-15-97/08-31-99	SIDNEY KIMMEL CANCER CENTER	259,627
5R01AG12910-08	MULLAN, JOSEPH T STRESS AND COPING AMONG AIDS CAREGIVERS	09-01-97/08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	373,922
3R01AG12910-08S1	MULLAN, JOSEPH T STRESS AND COPING AMONG AIDS CAREGIVERS	09-30-97/08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	27,000
5R13AG12917-03	MILLER, RICHARD A SUMMER TRAINING COURSES IN EXPERIMENTAL AGING RESEARCH	04-01-97/03-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	31,537
5R01AG12921-02	HURD, MICHAEL D USING SUBJECTIVE INFORMATION TO EXPLAIN SAVING DECISIONS	08-15-97/03-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	44,513
5R01AG12925-03	HARRIS, DAVID A PROPERTIES OF CELLULAR PRION PROTEINS	05-15-97/04-30-98	WASHINGTON UNIVERSITY	205,142
5R01AG12926-03	GUNDERSEN, GREGG G PHOSPHATASE TARGETING AND ALZHEIMERS DISEASE TAU	05-15-97/04-30-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	222,119
5R01AG12928-09	MALENKA, ROBERT C MECHANISMS OF SYNAPTIC PLASTICITY IN THE HIPPOCAMPUS	09-01-97/08-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	261,084
5R01AG12945-03	LE BOEUF, RENEE C MODELING ALZHEIMERS DISEASE--BY AMYLOID AND APOE	09-01-97/08-31-98	UNIVERSITY OF WASHINGTON	268,041
3R37AG12947-02S1	JOHNSON, EUGENE M, JR MECHANISM OF PROGRAMMED NEURONAL DEATH	03-01-97/04-30-97	WASHINGTON UNIVERSITY	5,000
5R37AG12947-03	JOHNSON, EUGENE M, JR MECHANISM OF PROGRAMMED NEURONAL DEATH	05-01-97/04-30-98	WASHINGTON UNIVERSITY	216,266
5R01AG12954-07	NEVE, RACHAEL L MOLECULAR BIOLOGY OF ALZHEIMER DISEASE NEURODEGENERATION	08-01-97/06-30-98	MC LEAN HOSPITAL (BELMONT, MA)	188,694
5R01AG12959-03	CHAPMAN, HAROLD A CATHEPSIN S AND ALZHEIMERS DISEASE	08-01-97/07-31-98	BRIGHAM AND WOMEN'S HOSPITAL	217,699

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG12962-02	HERMAN, JAMES P GLUCOCORTICOID RECEPTOR MECHANISMS	05-15-97	04-30-98	UNIVERSITY OF KENTUCKY STRESS AND AGING	155,817
5R01AG12963-04	SALMON, DAVID P COGNITIVE STUDIES OF THE LEWY BODY	07-01-97	06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO VARIANT OF AD	187,621
3R01AG12963-04S1	SALMON, DAVID P COGNITIVE STUDIES OF THE LEWY BODY	09-24-97	06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO VARIANT OF AD	23,808
2R44AG12964-02	STATES, JEFFREY D TWO POSITIONAL DEVICES FOR UPPER TORSO ELEVATION	09-01-97	08-31-98	DESIGN ABLE, INC.	242,826
1R01AG12975-01A2	HAAN, MARY N EPIDEMIOLOGY OF FUNCTIONAL STATUS IN ELDERLY HISPANICS	06-15-97	03-31-98	UNIVERSITY OF CALIFORNIA DAVIS	543,387
5R01AG12976-03	POTTER, LINCOLN T DISCOVERY AND EXPRESSION OF NEW ANTICHOLINERGIC TOXINS	09-01-97	08-31-99	UNIVERSITY OF MIAMI	195,545
5R01AG12978-02	GARNER, CRAIG C BRAIN GUANYLATE KINASES--SYNAPTIC STABILITY MODULATORS	06-15-97	05-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	178,484
5U01AG12980-03	WILLIS, ROBERT J ASSET AND HEALTH DYNAMICS AMONG THE OLDEST OLD	01-01-97	12-31-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	2,196,343
7R01AG12985-04	RUST, JOHN P ANALYSIS OF DYNAMIC MODELS OF RETIREMENT/SAVINGS	11-01-97	02-28-99	YALE UNIVERSITY	67,637
5R01AG12986-02	SCHEFF, STEPHEN W QUANTIFICATION OF SYNAPSE DENSITY IN ALZHEIMERS DISEASE	08-01-97	07-31-98	UNIVERSITY OF KENTUCKY	177,518
5R29AG12987-03	CLARK, DANIEL O FUNCTIONAL STATUS, EXERCISE, SES, & RACE AMONG THE AGED	09-01-97	08-31-98	INDIANA UNIV-PURDUE UNIV AT INDIANAP	110,445
5P01AG12992-03	BROWN, ROBERT H, JR SUPEROXIDE DISMUTASE IN AGING AND NEURODEGENERATION	04-01-97	03-31-98	MASSACHUSETTS GENERAL HOSPITAL	821,856
3P01AG12993-02S2	MICHAELIS, ELIAS K REACTIVE OXYGEN SPECIES AND AGING	09-01-97	07-31-98	UNIVERSITY OF KANSAS LAWRENCE	
5P01AG12993-03	MICHAELIS, ELIAS K REACTIVE OXYGEN SPECIES AND AGING	08-15-97	07-31-98	UNIVERSITY OF KANSAS LAWRENCE	778,540
3P01AG12993-03S1	MICHAELIS, ELIAS K REACTIVE OXYGEN SPECIES AND AGING	/		UNIVERSITY OF KANSAS LAWRENCE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG12995-03	GABRIELI, JOHN D FUNCTIONAL MRI ANALYSIS OF MEMORY IN AGING AND AMNESIA	05-15-97/04-30-98	STANFORD UNIVERSITY	310,592
5R01AG12996-03	HALE, SANDRA S PROCESSING SPEED, WORKING MEMORY AND COGNITION IN DAT	08-01-97/06-30-98	WASHINGTON UNIVERSITY	94,327
5R01AG13006-02	ALDWIN, CAROLYN M MENTAL AND PHYSICAL HEALTH TRAJECTORIES IN ADULTHOOD	09-01-97/08-31-99	UNIVERSITY OF CALIFORNIA DAVIS	126,517
5R01AG13007-03	COTMAN, CARL W MECHANISMS AND MOLECULAR PROFILES OF DEGENERATION IN AD	05-15-97/04-30-98	UNIVERSITY OF CALIFORNIA IRVINE	215,369
5R01AG13008-03	BOURGEOIS, MICHELLE S INCREASING EFFECTIVE COMMUNICATION IN NURSING HOMES	04-01-97/03-31-98	FLORIDA STATE UNIVERSITY	332,748
5R01AG13009-02	PETERSON, CHARLOTTE A MYOBLAST GROWTH AND DIFFERENTIATION DURING MUSCLE AGING	03-12-97/01-31-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	102,675
5R01AG13013-03	SCHNELLE, JOHN F MOBILITY AND INCONTINENCE MANAGEMENT EFFECTS ON SICKNESS	09-01-97/08-31-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	433,450
1R01AG13017-01A1	HERRON, PAUL EFFECTS OF ACH LOSS ON CORTICAL FUNCTIONING IN AGED RATS	07-01-97/	UNIVERSITY OF TENNESSEE AT MEMPHIS	
5R29AG13018-03	FLEISCHMAN, DEBRA A AGING AND IMPLICIT MEMORY--EVIDENCE FROM LESION STUDIES	08-15-97/04-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	115,128
5R29AG13019-03	CORCORAN, MARY A CAREGIVING STYLES OF SPOUSES WHO PROVIDE DEMENTIA CARE	08-01-97/07-31-98	GEORGE WASHINGTON UNIVERSITY	117,328
5R29AG13020-02	MADRIAN, BRIGITTE C HEALTH INSURANCE AND THE LABOR MARKET--REVISED	08-01-97/06-30-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	111,281
1R01AG13022-01A2	MUTRAN, ELIZABETH J THE HOMEMAKER ROLE AND HEALTH IN MIDLIFE	12-01-96/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
5R01AG13027-03	JONIDES, JOHN AGE & WORKING MEMORY--NEUROIMAGING & BEHAVIORAL STUDIES	08-01-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	272,931
5R01AG13036-02	AMICK, BENJAMIN C, III WORKING LIVES AND MORTALITY IN AGING	08-01-97/04-30-98	NEW ENGLAND MEDICAL CENTER	277,934
3R01AG13036-02S1	AMICK, BENJAMIN C, III WORKING LIVES AND MORTALITY IN AGING	08-01-97/04-30-98	NEW ENGLAND MEDICAL CENTER	19,215

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG13037-02	COX, DONALD DEMONSTRATION EFFECT IN INTERGENERATIONAL TRANSFERS	02-01-97	01-31-98	BOSTON COLLEGE	222,928
3R01AG13038-01S1	SEALS, DOUGLAS R EXERCISE IN HYPERTENSIVE POSTMENOPAUSAL WOMEN	04-01-97	06-30-97	UNIVERSITY OF COLORADO AT BOULDER	12,813
5R01AG13038-02	SEALS, DOUGLAS R EXERCISE IN HYPERTENSIVE POSTMENOPAUSAL WOMEN	07-01-97	06-30-98	UNIVERSITY OF COLORADO AT BOULDER	362,189
5R01AG13059-04	HASLAM, SANDRA Z HORMONAL RESPONSIVENESS OF POSTMENOPAUSAL MAMMARY GLAND	09-01-97	08-31-99	MICHIGAN STATE UNIVERSITY	177,776
5R01AG13069-03	GREENSPAN, SUSAN L FEMORAL OSTEOPOROSIS IN ELDERLY WOMEN	05-01-97	04-30-98	BETH ISRAEL DEACONESS MEDICAL CENTER	442,847
5R01AG13070-02	WELLE, STEPHEN L NUTRITION AND MYOFIBRILLAR PROTEIN METABOLISM IN OLD AGE	02-01-97	01-31-98	UNIVERSITY OF ROCHESTER	182,489
5R01AG13071-02	GALILI, URI MOLECULAR CHANGES IN ANTIBODY AFFINITY IN THE ELDERLY	03-23-97	01-31-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	229,699
2R01AG13078-10	FINK, PAMELA J SELECTION OF THE T CELL RECEPTOR REPERTOIRE	09-15-97	08-31-98	UNIVERSITY OF WASHINGTON	221,682
5R01AG13081-02	PONNAPPAN, USHA TRANSCRIPTION FACTOR NFKB AND IMMUNE SENESCENCE	08-15-97	07-31-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	120,185
1R43AG13084-01A1	SEIDEL, MICHAEL C PRODUCTION OF NOVEL ANTIOXIDANT AGENT	09-01-96		MATREYA, INC.	
3R01AG13087-03S1	DONAHUE, HENRY J GAP JUNCTIONS AND BONE CELL RESPONSE TO PHYSICAL SIGNALS	07-15-97	08-31-97	PENNSYLVANIA STATE UNIV HERSHEY MED	11,000
5R01AG13087-04	DONAHUE, HENRY J GAP JUNCTIONS AND BONE CELL RESPONSE TO PHYSICAL SIGNALS	09-01-97	08-31-98	PENNSYLVANIA STATE UNIV HERSHEY MED	188,529
5P20AG13094-04	WICHA, MAX S BREAST CANCER IN ELDERLY WOMEN	09-01-97	02-28-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	139,080
3P20AG13095-03S1	GANZ, PATRICIA A BREAST CANCER PREVENTION AND CONTROL IN OLDER WOMEN	03-15-97	08-31-97	UNIVERSITY OF CALIFORNIA LOS ANGELES	43,193
5P20AG13095-04	GANZ, PATRICIA A BREAST CANCER PREVENTION AND CONTROL IN OLDER WOMEN	09-01-97	08-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	213,139

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG13108-13	ROTHENBERG, ELLEN V ANALYSIS OF FUNCTION IN THYMOCYTE DIFFERENTIATION	01-26-97/12-31-97	CALIFORNIA INSTITUTE OF TECHNOLOGY	272,829
7R01AG13132-04	DORSHKIND, KENNETH A LYMPHOPOIESIS DURING THYMIC INVOLUTION AND REGENERATION	08-15-97/04-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	200,172
1R01AG13138-01A1	VANBROCKLIN, HENRY F PET AND SPECT PROBES FOR AGING AND NEURODEGENERATION	12-01-96/	UNIVERSITY OF CALIF-LAWRENC BERKELEY	
5R01AG13148-03	HERTZOG, CHRISTOPHER K AGING METAMEMORY AND STRATEGY USE DURING LEARNING	07-01-97/06-30-99	GEORGIA INSTITUTE OF TECHNOLOGY	136,011
1R01AG13151-01A2	KAGAN, BRUCE L B-AMYLOID CHANNELS IN NEUROTOXICITY OF ALZHEIMER DISEASE	07-01-97/	UNIVERSITY OF CALIFORNIA LOS ANGELES	
5R01AG13153-02	KELNER, MICHAEL J ALTERATION OF ERCC GENE EXPRESSION IN VITRO AND IN VIVO	08-01-97/07-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	243,627
5R01AG13154-03	WALLACE, DOUGLAS C MITOCHONDRIAL GENETICS AND AGING	07-15-97/06-30-98	EMORY UNIVERSITY	210,389
1R01AG13155-01A2	ROGERS, JOSEPH INTERACTIONS OF INFLAMMATION WITH ALZHEIMER'S PATHOLOGY	12-01-96/	SUN HEALTH RESEARCH INSTITUTE	
1R01AG13157-01A1	SEGAL, NANCY L TWIN RESEARCH PERSPECTIVE ON BEREAVEMENT	02-01-97/	CALIFORNIA STATE UNIVERSITY FULLERTO	
5R01AG13159-02	KOTLIKOFF, LAURENCE J ADEQUACY OF SAVING AND INSURANCE OF AMERICANS APPROACH	09-30-97/08-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	172,508
5R01AG13165-03	TURNER, DENNIS A NEURONAL AND POST LESION PLASTICITY IN AGING HIPPOCAMPUS	08-01-97/07-31-98	DUKE UNIVERSITY	212,107
5R01AG13170-02	MORRIS, MARTHA C VITAMINS E/C & INCIDENT AD-BIRACIAL COMMUNITY STUDY	08-15-97/04-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	381,860
1R01AG13180-01A2	SZINOVACZ, MAXIMILIANE E MARRIAGE, FAMILIES, AND RETIREMENT	07-15-97/06-30-98	OLD DOMINION UNIVERSITY	98,521
5R01AG13185-03	LIEM, RONALD K NEUROFILAMENT KINASES AND ALZHEIMERS DISEASE TAU	08-01-97/07-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	340,161
5R01AG13194-03	FROST, J JAMES DOPAMINE TRANSPORTER IMAGING BY PET IN AGING AND DISEASE	07-01-97/06-30-99	JOHNS HOPKINS UNIVERSITY	390,666

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R29AG13195-01A1	TUCKER, JOAN S MARRIAGE AND DIVORCE AS PREDICTORS OF HEALTH	12-01-96/		BRANDEIS UNIVERSITY	
5R01AG13196-02	MARMOT, MICHAEL G CHANGES IN HEALTH--SOCIOECONOMIC STATUS AND PATHWAYS	05-01-97/	03-31-98	U OF L UNIVERSITY COLLEGE LONDON	281,244
7R01AG13199-02	KAPLAN, GEORGE A EPIDEMIOLOGY OF QUALITY OF LIFE AND AGING	12-15-97/	07-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	238,692
1R01AG13200-01A2	FORTINSKY, RICHARD H DEMENTIA MANAGEMENT BY FAMILY CAREGIVERS	07-01-97/		CASE WESTERN RESERVE UNIVERSITY	
1R29AG13201-01A2	PATRICK, JULIE M ELDERS' DECISION-MAKING PROCESSES AND OUTCOMES	04-01-97/		BRADLEY UNIVERSITY	
5R29AG13204-02	VOYTKO, MARY L COGNITION AND ESTROGEN IN MENOPAUSE	05-01-97/	04-30-98	WAKE FOREST UNIVERSITY	92,183
5R29AG13208-03	BOWSER, ROBERT NOVEL ANTIGEN IN DEVELOPING BRAIN AND ALZHEIMERS DISEASE	08-01-97/	07-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	104,469
1R01AG13210-01A1	DE LA TORRE, JACK C CHRONIC BRAIN ISCHEMIA AND AGED HIPPOCAMPAL NEURONS	07-01-96/		UNIVERSITY OF NEW MEXICO ALBUQUERQUE	
1R29AG13213-01A2	LECKA-CZERNIK, BEATA A STUDY OF NOVEL GENES OVEREXPRESSED IN SENESCENT CELLS	12-01-96/		UNIVERSITY OF ARKANSAS MED SCIS LTL	
1R29AG13218-01A2	MAGUIRE-ZEISS, KATHLEEN A CALCIUM BINDING PROTEIN GENE EXPRESSION IN AGING AND AD	12-01-96/		UNIVERSITY OF ROCHESTER	
3R01AG13228-01A1S1	DWYER, JEFFREY W RECIPROCITY, FAMILY LONG TERM CARE AND ELDER WELL BEING	03-15-97/	08-31-97	WAYNE STATE UNIVERSITY	25,069
5R01AG13228-02	DWYER, JEFFREY W RECIPROCITY, FAMILY LONG TERM CARE AND ELDER WELL BEING	09-30-97/	08-31-98	WAYNE STATE UNIVERSITY	178,050
5R29AG13237-03	SILVERSTEIN, MERRIL GRANDPARENT/ADULT GRANDCHILD RELATIONS & PSYCHOLOGICAL	09-01-97/	08-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	96,212
1R01AG13239-01A1	SCHWARTZ, JANICE B OLDER PERSONS AND DRUGS	04-01-97/		NORTHWESTERN UNIVERSITY	
5R01AG13241-03	HALL, JANET E AGING AND THE HYPOTHALAMIC-PITUITARY REPRODUCTIVE AXIS	08-15-97/	07-31-98	MASSACHUSETTS GENERAL HOSPITAL	289,326

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG13242-01A2	IAKOUBOV, LEONID Z ANTI-NUCLEAR AUTOANTIBODIES OF THE AGED	12-01-96/	MASSACHUSETTS GENERAL HOSPITAL	
5R01AG13243-04	LOTZ, MARTIN K NITRIC OXIDE AND CELLULAR AGING	07-15-97/06-30-99	SCRIPPS RESEARCH INSTITUTE	215,428
5R01AG13251-03	TAFFET, GEORGE E LIPID MODIFICATION OF THE SENESCENT HEART	01-01-97/12-31-97	BAYLOR COLLEGE OF MEDICINE	172,854
5R01AG13254-02	MANTON, KENNETH G POPULATION EFFECT OF CHRONIC DISEASE AND MORTALITY	05-01-97/04-30-98	DUKE UNIVERSITY	77,602
7U01AG13255-04	MAHONEY, DIANE M TLC TELEPHONE SYSTEM FOR ALZHEIMERS FAMILY CAREGIVERS	09-30-98/12-31-98	HEBREW REHABILITATION CENTER FOR AGE	206,304
5U01AG13265-02	GITLIN, LAURA N HOME ENVIRONMENTAL SKILL BUILDING PROGRAM FOR CAREGIVERS	09-01-97/08-31-98	THOMAS JEFFERSON UNIVERSITY	395,221
1R01AG13268-01A2	LINDEMAN, DAVID A INTERVENTION STUDY: AGGRESSIVE BEHAVIOR IN AD	04-01-97/	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R01AG13277-01A2	MITTELMAN, MARY S ADULT CHILD CAREGIVERS AND MILD AD:COMPREHENSIVE SUPPORT	12-01-96/	NEW YORK UNIVERSITY MEDICAL CENTER	
5P30AG13280-03	RABINOVITCH, PETER S BASIC BIOLOGY OF AGING	07-15-97/06-30-98	UNIVERSITY OF WASHINGTON	468,908
3P30AG13282-01S1	CRISTOFALO, VINCENT J DYSREGULATION DURING AGING--MOLECULES, CELLS AND TISSUES	05-15-97/06-30-97	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	4,710
5P30AG13282-02	CRISTOFALO, VINCENT J DYSREGULATION DURING AGING--MOLECULES, CELLS AND TISSUES	07-15-97/06-30-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	447,821
5P30AG13283-03	FAULKNER, JOHN A BIOLOGY OF AGING	07-15-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	405,385
3P30AG13283-03S1	FAULKNER, JOHN A BIOLOGY OF AGING	08-15-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	30,000
1R01AG13285-01A2	LAWTON, M POWELL COUNSELING AND ACTIVITY ENHANCEMENT: CAREGIVER BENEFITS	04-01-97/	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	
5U01AG13289-03	GALLAGHER-THOMPSON, DOLORES E TREATMENT OF DISTRESS IN HISPANIC AND ANGLO CAREGIVERS	09-01-97/08-31-98	PALO ALTO INSTITUTE FOR RES & EDU	375,828

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5U01AG13297-03	EISDORFER, CARL FAMILY-BASED INTERVENTIONS FOR CAREGIVERS	09-15-97/08-31-98	UNIVERSITY OF MIAMI	441,313
3U01AG13297-03S1	EISDORFER, CARL FAMILY-BASED INTERVENTIONS FOR CAREGIVERS	09-30-97/08-31-98	UNIVERSITY OF MIAMI	65,989
5R29AG13300-02	DOU, QUING-PING FUNCTIONS OF RB PROTEASE(S) IN APOPTOSIS	03-01-97/02-28-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	101,498
1R01AG13303-01A2	BOURGEOIS, MICHELLE S SKILLS TRAINING FOR ADRD CAREGIVERS	12-01-96/	UNIVERSITY OF PITTSBURGH AT PITTSBUR	
5U01AG13305-03	SCHULZ, RICHARD COORDINATING CENTER FOR ENHANCING ADRD CAREGIVING	09-01-97/08-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	411,277
5R01AG13308-03	SMALL, GARY W FUNCTIONAL MRI FOR EARLY DIAGNOSIS OF ALZHEIMER DISEASE	07-01-97/06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	294,931
5R01AG13309-03	KALU, DIKE N ESTROGEN AND AGE RELATED DECLINE IN CALCIUM ABSORPTION	07-01-97/06-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	225,907
5U01AG13313-03	BURNS, ROBERT PROVIDERS AND ALZHEIMERS CAREGIVERS TOGETHER (PACT)	09-01-97/08-31-98	UNIVERSITY OF TENNESSEE AT MEMPHIS	424,952
3P30AG13314-01S1	VIJG, JAN A CENTER IN BASIC BIOLOGY OF AGING	04-01-97/06-30-97	HARVARD UNIVERSITY	80,000
5P30AG13314-02	VIJG, JAN A HARVARD NATHAN SHOCK CENTER IN BASIC BIOLOGY OF AGING	07-15-97/06-30-98	HARVARD UNIVERSITY	458,639
5R29AG13318-03	NIEMINEN, ANNA-LIISA MITOCHONDRIAL FUNCTION IN OXIDATIVE INJURY	01-01-97/12-31-97	CASE WESTERN RESERVE UNIVERSITY	107,100
3P30AG13319-02S1	RICHARDSON, ARLAN G NATHAN SHOCK AGING CENTER	04-15-97/06-30-97	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	45,000
5P30AG13319-03	RICHARDSON, ARLAN G NATHAN SHOCK AGING CENTER	07-15-97/06-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	499,173
5P01AG13329-03	ROSENTHAL, NADIA A MECHANISMS OF MUSCLE AGING--ANALYSIS AND INTERVENTION	08-01-97/06-30-98	MASSACHUSETTS GENERAL HOSPITAL	852,836
1R01AG13332-01A2	MILLS, PAUL J HORMONE REPLACEMENT THERAPY AND ADRENERGIC PHYSIOLOGY	09-15-97/08-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	202,968

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG13333-09	HAYES, WILSON C HIP FRACTURE RISK PREDICTION BY QDR	05-01-97/04-30-98	BETH ISRAEL DEACONESS MEDICAL CENTER	220,682
3R01AG13333-09S1	HAYES, WILSON C HIP FRACTURE RISK PREDICTION BY QDR	09-30-97/04-30-98	BETH ISRAEL DEACONESS MEDICAL CENTER	89,103
5R01AG13338-03	OBLINGER, MONICA M ESTROGENIC REGULATION OF GENE EXPRESSION DURING NEURONAL	06-01-97/01-31-99	FINCH UNIV OF HLTH SCI/CHICAGO MED S	161,175
1R43AG13354-01A2	HSU, YING W MINIATURE GYRO TO STUDY FALLS IN THE ELDERLY	01-01-97/	IRVINE SENSORS CORPORATION	
2R44AG13362-02	SOKOLOFF, SHARON M AGEWISE: COURSEWARE TO TEACH ABOUT POPULATION AGING	03-01-97/	MIKALIX AND COMPANY	
2R44AG13363-02	SEARS, JAMES T GERIATRIC INDEPENDENT READING DEVICE	05-15-97/04-30-98	ASCENT TECHNOLOGY	400,387
7R01AG13379-03	SIEGEL, KAROLYNN LATE MIDDLE AGE AND OLDER ADULTS LIVING WITH HIV/AIDS	08-15-98/12-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	223,500
1R01AG13384-01A1	ROY, MARTIN SELENIUM AND IMMUNOCOMPETENCE IN AGED HUMANS	12-01-96/	NEW YORK UNIVERSITY	
1R01AG13386-01A2	HILL, ROBERT D INDIVIDUAL DIFFERENCES IN MEMORY TRAINING IN THE ELDERLY	04-01-97/	UNIVERSITY OF UTAH	
1R01AG13390-01A1	CLARK, DANIEL O HRQOL IN OLDER MEXICAN-AFRICAN, AND WHITE AMERICANS	12-01-96/	INDIANA UNIV-PURDUE UNIV AT INDIANAP	
1R01AG13394-01A1	QUADRI, S KALEEM CAN ELEVATIONS IN BRAIN NEUROTRANSMITTERS INHIBIT AGING?	12-01-96/	KANSAS STATE UNIVERSITY	
5R01AG13396-02	MONK, TIMOTHY H PHASE SHIFT TOLERANCE IN OLDER PEOPLE	02-01-97/01-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	153,362
1R01AG13397-01A1	BARTKE, ANDRZEJ GROWTH HORMONE EXCESS AND REPRODUCTIVE AGING	04-01-97/	SOUTHERN ILLINOIS UNIVERSITY CARBOND	
7R01AG13398-02	DE-BLAS, ANGEL L GABAA RECEPTORS IN AGING	07-15-97/05-31-98	UNIVERSITY OF CONNECTICUT STORRS	131,110
1R01AG13399-01A1	LIVSHITS, GREGORY GENETIC DETERMINANTS OF BONE AGING IN HUMAN POPULATION	01-01-97/	TEL AVIV UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG13404-01A1	NITZKE, SUSAN A NUTRITION, HEALTH AND QUALITY OF LIFE	09-01-96/	UNIVERSITY OF WISCONSIN MADISON	
5R01AG13406-03	BLAU, DAVID M HEALTH INSURANCE, HEALTH, AND RETIREMENT DYNAMICS	09-01-97/08-31-98	UNIVERSITY OF NORTH CAROLINA CHAPEL	125,757
5R01AG13408-03	PEACOCK, MUNRO COMPARISON OF BONE STRENGTH AND MUSCLE STRENGTH AT HIP	09-15-97/08-31-98	INDIANA UNIV-PURDUE UNIV AT INDIANAP	260,246
7R29AG13409-03	CAMPBELL, WAYNE W WEIGHT LOSS AND RESISTANCE TRAINING IN OLDER WOMEN	12-15-97/06-30-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	102,947
5R01AG13411-02	COTMAN, CARL W ACTIVITY DEPENDENT PLASTICITY IN THE AGING BRAIN	07-15-97/06-30-98	UNIVERSITY OF CALIFORNIA IRVINE	211,996
5R01AG13418-02	DUNCAN, MARILYN J NEURAL MECHANISMS RESETTING THE AGED CIRCADIAN PACEMAKER	06-15-97/05-31-98	UNIVERSITY OF KENTUCKY	174,314
5R01AG13419-02	ANDERSEN, GEORGE J AGING AND PERFORMANCE OF COGNITIVE AND PERCEPTUAL TASKS	06-15-97/05-31-98	UNIVERSITY OF CALIFORNIA RIVERSIDE	115,806
5R01AG13425-02	WISE, PHYLLIS M NEUROPEPTIDES AND CARCADIAN RHYTHMS DURING AGING	06-15-97/05-31-98	UNIVERSITY OF KENTUCKY	182,282
5R01AG13426-02	MC MAHON, DOUGLAS G CELLULAR MECHANISMS OF CIRCADIAN PACEMAKER AGING	07-01-97/05-31-98	UNIVERSITY OF KENTUCKY	118,648
1R29AG13427-01A1	ADAMI, GUY R P21 AND PERMANENT ARREST IN MORTAL FIBROBLASTS	12-01-96/	UNIVERSITY OF ILLINOIS AT CHICAGO	
1R01AG13435-01A2	BREWER, GREGORY J AGE DEPENDENT RESPONSE OF HIPPOCAMPAL NEURONS TO STRESS	04-01-97/03-31-98	SOUTHERN ILLINOIS UNIVERSITY SCH OF	168,612
5R01AG13444-02	JENNES, LOTHAR M GNRH AND ITS CNS RECEPTORS AND REPRODUCTIVE AGING	06-15-97/05-31-98	UNIVERSITY OF KENTUCKY	147,131
5R01AG13445-02	MONTEIRO, MERVYN J ALZHEIMER PHF-ASSOCIATED KINASES	09-15-97/08-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	184,102
1R01AG13448-01A1	DICKSON, DENNIS PATHOGENESIS OF SENILE PLAQUES	12-01-96/	YESHIVA UNIVERSITY	
1R01AG13449-01A2	EVANS, WILLIAM J EXERCISE, WEIGHT LOSS, AND AGE: METABOLIC EFFECTS	04-01-97/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG13454-02	LEGAN, SANDRA J NEURAL CONTROL OF LUTEINIZING HORMONE SECRETION IN AGING	08-01-97/06-30-98	UNIVERSITY OF KENTUCKY	196,306
5R01AG13457-02	FIATARONE, MARIA A EXERCISE EFFECTS ON PROTEIN NUTRITION IN RENAL FAILURE	08-01-97/07-31-98	TUFTS UNIVERSITY BOSTON	316,425
5R01AG13459-02	ORR, WILLIAM C REGULATION OF ANTIOXIDATIVE GENES AND AGING	08-15-97/07-31-98	SOUTHERN METHODIST UNIVERSITY	155,885
1R01AG13467-01A1	LIANG, JERSEY PHYSICAL HEALTH, MENTAL HEALTH, AND LABOR MARKET BEHAVIO	09-01-96/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
5R01AG13469-02	QUANDT, SARA A UNDER NUTRITION IN RURAL ELDERLY--PREDICTORS AND PROCESS	09-01-97/08-31-98	WAKE FOREST UNIVERSITY	216,965
1R01AG13470-01A2	BALIN, BRIAN J TRANSGLUTAMINASE IN AGING AND ALZHEIMER'S DISEASE	04-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
5R01AG13474-02	BATES, ELIZABETH A AGING AND BILINGUALISM	07-01-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	186,660
1R29AG13475-01A1	SULLIVAN, MICHAEL P SELECTIVE ATTENTION IN AGING AND ALZHEIMER'S DISEASE	12-01-96/	OREGON HEALTH SCIENCES UNIVERSITY	
5R01AG13478-02	SMITH, KEN R KINSHIP AND SOCIO-DEMOGRAPHIC DETERMINANTS OF MORTALITY	09-01-97/08-31-98	UNIVERSITY OF UTAH	260,832
1R01AG13481-01A1	SHAPIRO, JAY R OSTEOBLAST PROGENITOR CELLS: EFFECTS OF AGE/OSTEOPOROSIS	12-01-96/	JOHNS HOPKINS UNIVERSITY	
5R29AG13482-02	GRODSTEIN, FRANCINE PROSPECTIVE STUDY OF COGNITIVE FUNCTION IN WOMEN	07-01-97/06-30-98	BRIGHAM AND WOMEN'S HOSPITAL	114,209
3R01AG13483-01A1S1	D'ESPOSITO, MARK WORKING MEMORY IN PARKINSONS DISEASE AND AGING	04-15-97/06-30-97	UNIVERSITY OF PENNSYLVANIA	18,285
3R01AG13483-01A1S2	D'ESPOSITO, MARK WORKING MEMORY IN PARKINSONS DISEASE AND AGING	04-25-97/06-30-97	UNIVERSITY OF PENNSYLVANIA	10,249
5R01AG13483-02	D'ESPOSITO, MARK WORKING MEMORY IN PARKINSONS DISEASE AND AGING	08-15-97/06-30-98	UNIVERSITY OF PENNSYLVANIA	250,032
1R29AG13486-01A1	SZWEDA, LUKE I AGING LIPID PEROXIDATION AND CARDIAC REPERFUSION INJURY	04-01-97/	CASE WESTERN RESERVE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG13487-02	ALNEMRI, EMAD S CYSTEINE PROTEASES IN APOPTOSIS AND CANCER	08-01-97/07-31-98	THOMAS JEFFERSON UNIVERSITY	226,785
5R01AG13490-02	ANTONUCCI, TONI C CONVOYS OF SUPPORT IN OLD AGE--A CROSS NATIONAL STUDY	08-01-97/07-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	134,458
1R01AG13491-01A2	ALBERT, STEVEN M PREDICTION OF OPTIMAL FUNCTION IN OLDER ADULTS	04-01-97/	COLUMBIA UNIVERSITY HEALTH SCIENCES	
1R01AG13492-01A1	WESTERINK, MARIA A THE ELDERLY IMMUNE RESPONSE TO T-INDEPENDENT ANTIGENS	12-01-96/	MEDICAL COLLEGE OF OHIO AT TOLEDO	
1P01AG13494-01A1	GASH, DON M AGING OF CENTRAL DOPAMINERGIC SYSTEMS IN PRIMATES	02-18-97/01-31-98	UNIVERSITY OF KENTUCKY	745,276
3P01AG13494-01A1S1	GASH, DON M AGING OF CENTRAL DOPAMINERGIC SYSTEMS IN PRIMATES	07-01-97/01-31-98	UNIVERSITY OF KENTUCKY	60,000
7R01AG13496-02	KRAFFT, GRANT A STRUCTURE/FUNCTION OF ALZHEIMERS AMYLOID-B AGGREGATES	09-15-97/08-31-98	EVANSTON NORTHWESTERN HEALTHCARE	223,723
5R01AG13499-02	FINCH, CALEB E APOJ (CLUSTERIN) IN ALZHEIMER DISEASE AND AGING	04-01-97/03-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	450,828
5R01AG13501-02	GOTTLIEB, ROBERTA A MECHANISMS OF APOPTOSIS IN BLOOD CELLS	02-01-97/01-31-98	SCRIPPS RESEARCH INSTITUTE	190,769
1R01AG13503-01A1	MEHTA, PANKAJ D AMYLOID-ASSOCIATED PROTEINS IN BRAIN AND CSF FROM AD	04-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
5R01AG13508-02	BERRY, JANE M MEMORY SELF EFFICACY AND MEMORY PERFORMANCE IN ADULTHOOD	09-01-97/08-31-98	UNIVERSITY OF RICHMOND	55,308
2R44AG13515-02	GIBIAN, GARY L IMPROVED MULTI MICROPHONE DIRECTIONAL HEARING AID	03-01-97/02-28-98	PLANNING SYSTEMS, INC.	448,198
5R01AG13519-03	GLOWACKI, JULIANNE AGE AND HORMONES ON BONE MARROW BIOLOGY	09-01-97/08-31-98	BRIGHAM AND WOMEN'S HOSPITAL	269,775
5R01AG13523-03	LONG, MICHAEL W AGE RELATED CHANGES IN HUMAN OSTEOPROGENITOR CELLS	04-24-97/03-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	197,233
5R01AG13527-02	GAY, CAROL V EVALUATION OF BONE CELL FUNCTION BY CONFOCAL IMAGING	09-01-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	159,977

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG13534-03	PACIFICI, ROBERTO MENOPAUSE AND HUMAN OSTEOCLASTOGENESIS	06-01-97/05-31-98	BARNES-JEWISH HOSPITAL	219,275
5R01AG13541-02	STOLLAR, BERNARD D MECHANISMS OF AUTOANITBODY FORMATION IN HUMAN AGING	08-15-97/07-31-98	TUFTS UNIVERSITY BOSTON	211,042
1R01AG13542-01A1	MURASKO, DONNA M ENHANCEMENT OF NON-SPECIFIC IMMUNITY IN AGED MICE	12-15-96/11-30-97	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	254,883
1R01AG13544-01A1	ROSS, BRIAN D MODIFYING INOSITOLS IN ALZHEIMER DISEASE	04-01-97/	HUNTINGTON MEDICAL RESEARCH INSTITUT	
1R29AG13552-01A2	LAWLER, JOHN M EFFECT OF OXIDATIVE STRESS ON THE AGING DIAPHRAGM	04-01-97/	TEXAS AGRICULTURAL & MECHANICAL UNIV	
1R01AG13557-01A2	KRISTAL, BRUCE S UBIQUINOL PROTECTS MITOCHONDRIAL TRANSCRIPTION	04-01-97/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
5R01AG13560-03	HALTER, CHRISTI A DNA REPAIR PROTEINS TARGETED TO THE MITOCHONDRIAL MATRIX	07-01-97/06-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	268,444
5R01AG13563-02	SOHAL, RAJINDAR S DIETARY MODULATION OF CELLULAR OXIDATIVE STRESS IN AGING	04-04-97/03-31-98	SOUTHERN METHODIST UNIVERSITY	170,702
5R01AG13566-03	NAPOLI, JOSEPH L RETINAL DEHYDROGENASES	07-01-97/06-30-98	STATE UNIVERSITY OF NEW YORK AT BUFF	169,381
1R43AG13572-01A1	SERBINOVA, ELENA A TOPICAL VITAMIN D TREATMENT FOR SKIN DISEASE AND AGING	05-15-97/11-30-97	PENEDERM, INC.	100,000
2R44AG13575-02	MC KUSICK, DAVID LONG RANGE POPULATION PROJECTION BY DISABILITY STATUS II	09-15-97/08-31-98	ACTUARIAL RESEARCH CORPORATION	347,430
1R41AG13582-01A2	BERNHEIM, B D RESEARCH ON NEW METHODS OF RETIREMENT PLANNING	09-30-97/08-31-98	ECONOMIC SECURITY PLANNING, INC.	95,417
3R01AG13586-02S1	SHAY, NEIL F ZINC DEFICIENCY AND HYPOTHALAMIC DYSFUNTION	03-01-97/07-31-97	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	29,647
5R01AG13586-03	SHAY, NEIL F ZINC DEFICIENCY AND HYPOTHALAMIC DYSFUNTION	08-01-97/07-31-99	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	238,328
1R43AG13594-01A1	STROMBECK, RITA D HIV/AIDS PREVENTION AND OLDER PATIENTS	03-15-97/08-31-97	HEALTHCARE EDUCATION ASSOCIATES	85,131

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R43AG13608-01A1	SHIH, CHIU-YANG RECOMBINANT NKEF PROTEINS AND THEIR SPECIFIC MABS	11-01-96/	PHARMINGEN	
5R01AG13612-03	MAJUMDAR, SHARMILA NON-INVASIVE ASSESSMENT OF TRABECULAR ARCHITECTURE	09-01-97/08-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	241,993
5R01AG13613-03	RYFF, CAROL D LIFE HISTORIES AND MENTAL HEALTH IN MIDLIFE	09-01-97/08-31-99	UNIVERSITY OF WISCONSIN MADISON	187,364
3R01AG13613-03S1	RYFF, CAROL D LIFE HISTORIES AND MENTAL HEALTH IN MIDLIFE	09-30-97/08-31-99	UNIVERSITY OF WISCONSIN MADISON	22,000
5R29AG13614-02	TUN, PATRICIA A AGING AND SPEECH COMPREHENSION IN DISTRACTING CONDITIONS	02-01-97/01-31-98	BRANDEIS UNIVERSITY	98,358
1R01AG13615-01A1	MULLAN, JOSEPH T SOURCES & CONSEQUENCES OF MASTERY IN OLDER PEOPLE	07-01-97/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
5R01AG13616-10	DE LEON, MONY J CLINICAL CORRELATES OF LONGITUDINAL PET CHANGES IN AD	09-01-97/08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	283,798
3R01AG13616-10S1	DE LEON, MONY J CLINICAL CORRELATES OF LONGITUDINAL PET CHANGES IN AD	09-15-97/08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	4,125
5R01AG13617-03	YOUNG, ANNE B METABOTROPIC GLUTAMATE RECEPTORS IN NEURODEGENERATION	08-01-97/07-31-98	MASSACHUSETTS GENERAL HOSPITAL	222,942
5R01AG13619-03	PITAS, ROBERT E APOE3 AND APOE4 EFFECTS ON CELLULAR PATHOBIOLOGY	08-01-97/06-30-98	J. DAVID GLADSTONE INSTITUTES	312,681
5R01AG13620-11	ZIFF, EDWARD B DYNAMICS OF C-FOS PROTEIN INTERACTIONS	08-15-97/07-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	163,257
5R01AG13621-06	EFANGE, SIMON M NEW RADIOTRACERS FOR MAPPING CHOLINERGIC INNERVATION	07-01-97/06-30-99	UNIVERSITY OF MINNESOTA TWIN CITIES	229,589
5R29AG13623-04	LIPPA, CAROL F	09-01-97/08-31-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	109,000
5R01AG13625-11	ROODMAN, GARSON D DEVELOPMENTAL ASPECTS OF OSTEOCLAST FORMATION IN VITRO	08-01-97/07-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	175,301
1P60AG13626-01A1	ROTH, JESSE HOPKINS OLDER AMERICANS INDEPENDENCE CENTER	07-01-97/	JOHNS HOPKINS UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5P60AG13629-03	HOLLOSZY, JOHN O WASHINGTON UNIVERSITY CLAUDE D PEPPER OAIC	09-15-97/08-31-98	WASHINGTON UNIVERSITY	1,198,842
5P60AG13631-02	BESDINE, RICHARD W CLAUDE PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-15-97/08-31-98	UNIVERSITY OF CONNECTICUT HEALTH CEN	1,130,165
1R01AG13636-01A1	KAUFMAN, SHARON R ELDERLY AND THE EXPERIENCE OF DYING IN THE HOSPITAL	01-10-97/12-31-97	UNIVERSITY OF CALIFORNIA SAN FRANCIS	139,593
1R01AG13642-01A1	LI, GUOHUA PILOT AGING AND AVIATION SAFETY	09-15-97/08-31-98	JOHNS HOPKINS UNIVERSITY	244,226
1R01AG13643-01A1	REED, DWAYNE M NUTRITION AND HEALTH IN THE ELDERLY	01-01-97/	BUCK CENTER FOR RESEARCH IN AGING	
1R01AG13644-01A1	AMIRKHANIAN, JOHN D AGE-RELATED CHANGES IN LUNG SURFACTANT AND ANTIOXIDANTS	12-01-96/	UNIVERSITY OF CALIFORNIA DAVIS	
1R01AG13660-01A1	KOCEJA, DAVID SPINAL CONTROL OF BALANCE IN THE ELDERLY	11-01-96/	INDIANA UNIVERSITY BLOOMINGTON	
5R29AG13660-02	KOCEJA, DAVID SPINAL CONTROL OF BALANCE IN THE ELDERLY	07-01-97/06-30-98	INDIANA UNIVERSITY BLOOMINGTON	97,559
1R01AG13662-01A2	WHITFIELD, KEITH E HEALTH AND PSYCHOSOCIAL FACTORS IN OLDER BLACK TWINS	09-30-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	270,806
3P01AG13663-01S1	SMITH, JAMES R CONTROL OF GENE EXPRESSION IN CELLULAR SENESCENCE	03-10-97/03-31-97	BAYLOR COLLEGE OF MEDICINE	75,754
5P01AG13663-02	SMITH, JAMES R CONTROL OF GENE EXPRESSION IN CELLULAR SENESCENCE	04-01-97/03-31-98	BAYLOR COLLEGE OF MEDICINE	1,130,659
5R01AG13667-02	WURTMAN, RICHARD J AGING AND SLEEP--ROLE OF MELATONIN	05-15-97/04-30-98	MASSACHUSETTS INSTITUTE OF TECHNOLOG	319,089
3R01AG13667-02S1	WURTMAN, RICHARD J AGING AND SLEEP--ROLE OF MELATONIN	09-15-97/04-30-98	MASSACHUSETTS INSTITUTE OF TECHNOLOG	35,000
5R01AG13669-02	BECKER, JAMES T FUNCTIONAL NEUROIMAGING OF SEMANTIC MEMORY IN AD	04-01-97/03-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	181,896
5R01AG13671-02	DIXIT, VISHVA M FAS ASSOCIATED DEATH DOMAIN (FADD)	03-01-97/02-28-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	180,617

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG13672-02	KAMBOH, M ILYAS RISK GENES IN ALZHEIMERS DISEASE	05-15-97/04-30-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	363,390
1R01AG13673-01A1	SCHWAB, RISE ALTERED T CELL REPERTOIRE AND INFLUENZA VACCINE IN AGING	12-01-96/	WEILL MEDICAL COLLEGE OF CORNELL UNI	
1R01AG13678-01	ZOHOORI, NAMVAR THE ROLE OF NUTRITIONAL FACTORS IN HEALTHY AGING	10-01-96/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
1R01AG13680-01A1	MILLER, BRUCE L DIAGNOSIS OF FRONTO-TEMPORAL DEMENTIA	12-01-96/	HARBOR-UCLA RESEARCH & EDUC INST	
1R01AG13681-01A1	HERTZOG, CHRISTOPHER K AGING AND COGNITION: A PROSPECTIVE LONGITUDINAL STUDY	12-01-96/	GEORGIA INSTITUTE OF TECHNOLOGY	
1R29AG13685-01A1	SINHA-HIKIM, AMIYA P GERM CELL APOPTOSIS IN THE ADULT AND DURING AGING	12-01-96/	HARBOR-UCLA RESEARCH & EDUC INST	
1R01AG13691-01A1	YUREK, DAVID M NEUROTROPHIC FACTORS AND THE AGING DOPAMINE SYSTEM	04-01-97/	UNIVERSITY OF KENTUCKY	
1R01AG13693-01A1	FERNANDES, GABRIEL CALORIE RESTRICTION AGING AND PROGRAMMED CELL DEATH	07-01-97/06-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	195,166
1R01AG13697-01A1	BOAZ, RACHEL F ECONOMIC VULNERABILITY DUE TO HEALTH CARE COSTS	01-01-97/	CUNY GRADUATE SCH AND UNIV CTR	
1R01AG13702-01A1	TYLAVSKY, FRANCES A SMOKING PEAK BONE MASS, AND RISK FOR FUTURE FRACTURE	06-01-97/	UNIVERSITY OF TENNESSEE AT MEMPHIS	
1R01AG13703-01A1	LEVIN, JEFFREY S RELIGION AND PSYCHOLOGICAL WELL-BEING IN OLDER ADULTS	12-01-96/	EASTERN VIRGINIA MED SCH/MED COL HAM	
5R01AG13705-02	LEVY, EFRAT CEREBRAL AMYLOID ANGIOPATHY--CYSTATIN C DEPOSITION	09-01-97/08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	241,203
5R01AG13706-02	GOLDGABER, DMITRY Y INHIBITION OF AMYLOID FORMATION BY TRANSTHYRETIN & APOE	04-15-97/03-31-98	STATE UNIVERSITY NEW YORK STONY BROO	240,842
1R01AG13708-01A1	JOHN, ROBERT CAREGIVER BURDEN AMONG THREE MINORITY POPULATIONS	12-01-96/	UNIVERSITY OF NORTH TEXAS	
5R01AG13711-02	MILLER, RICHARD A WILD DERIVED MOUSE STOCKS--NEW MODELS FOR AGING RESEARCH	09-01-97/08-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	169,533

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R29AG13713-01A1	BORAWSKI-CLARK, ELAINE A MIDDLE GENERATION STRESS: MULTIPLE ROSS/RESPONSIBILITIES	12-01-96/	CASE WESTERN RESERVE UNIVERSITY	
1R29AG13714-01A1	JACOBS, DIANE M CULTURAL INFLUENCES ON COGNITIVE TEST PERFORMANCE	12-01-96/	COLUMBIA UNIVERSITY HEALTH SCIENCES	
1R29AG13715-01A1	LECHNER, VIOLA EMPLOYMENT, ELDER CARE AND STRESS: ETHNIC VARIATIONS	01-01-97/	ST. JOHN'S UNIVERSITY	
5R01AG13718-02	HALL, STEPHEN D AGING EFFECT ON DRUG BIOAVAILABILITY	07-01-97/06-30-98	INDIANA UNIV-PURDUE UNIV AT INDIANAP	252,905
1R01AG13719-01A2	ASCH, DAVID PHYSICIANS' PRACTICES IN EUTHANASIA AND ASSISTED SUICIDE	07-01-97/	UNIVERSITY OF PENNSYLVANIA	
1R01AG13720-01A1	GUST, DEBORAH A AGING AND STRESS IN FEMALES	12-15-96/11-30-97	EMORY UNIVERSITY	223,820
7R01AG13726-02	HIEBERT, SCOTT W E2F AND DIFFERENTIATION, APOPTOSIS, AND LEUKEMIA	02-15-97/01-31-98	VANDERBILT UNIVERSITY	193,816
5R01AG13729-02	JOHNSON, EUGENE M, JR BIOLOGY AND PHARMACOLOGY OF THE GDNF HOMOLOG NEURTURIN	04-01-97/03-31-98	WASHINGTON UNIVERSITY	332,472
5R01AG13730-02	MILBRANDT, JEFFREY D PHYSIOLOGY AND GENETICS OF THE GDNF HOMOLOG NEURTURIN	06-15-97/05-31-98	WASHINGTON UNIVERSITY	339,152
2R44AG13731-02	CUTLER, NEAL E DECISION SUPPORT SOFTWARE FOR FINANCING LONG TERM CARE	09-30-97/08-31-98	NATIONAL COUNCIL ON AGING DEVELOP CO	415,226
1R29AG13735-01A1	LEE, JONATHAN P ENERGETICS/FOLDING/AMYLOIDOGENESIS--ALZHEIMERS DISEASE	04-01-97/03-31-98	BOSTON UNIVERSITY	117,248
5R01AG13736-03	ROTHMAN, JOEL H REGULATION OF PROGRAMMED CELL DEATH IN C ELEGANS	04-11-97/03-31-98	UNIVERSITY OF CALIFORNIA SANTA BARBA	161,446
1R01AG13738-01A1	INGRAM, VERNON M PROTEIN PHOSPHORYLATION IN ALZHEIMER'S DISEASE	12-01-96/	MASSACHUSETTS INSTITUTE OF TECHNOLOG	
5R01AG13743-03	HERSKOVITS, EDWARD SPATIALLY ORIENTED DATABASE FOR DIGITAL BRAIN IMAGES	08-15-97/06-30-99	JOHNS HOPKINS UNIVERSITY	249,658
1R01AG13744-01A1	YOUNG, ROSALIE F SUBJECTIVE RESPONSE- FAMILY INTERPRETATION IN EARLY ALZH	12-01-96/	WAYNE STATE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R29AG13757-01A1	LOGSDON, REBECCA G QUALITY OF LIFE IN ALZHEIMERS DISEASE	07-01-97/06-30-98	UNIVERSITY OF WASHINGTON	113,250
1R15AG13759-01A1	THELEN, DARRYL G BALANCE RECOVERY BIOMECHANICS DURING FALLS IN OLD ADULTS	08-01-97/07-31-00	HOPE COLLEGE	105,564
1R01AG13762-01A1	CLAYTON, DAVID F FUNCTION OF AN ALZHEIMER DISEASE-RELATED PROTEIN	01-15-97/11-30-97	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	204,608
1R15AG13763-01	ALLEN, JANICE G AFRICAN-AMERICAN CAREGIVERS: AN ETHNOGRAPHIC APPROACH	01-06-97/	FLORIDA INTERNATIONAL UNIVERSITY	
1R15AG13765-01A1	RUSS, ROY D PULMONARY VASCULAR DERANGEMENTS IN AGED, DIABETIC RATS	08-01-97/06-30-00	MERCER UNIVERSITY MACON	91,410
7R01AG13769-02	EKERDT, DAVID J CHANGING DECISIONS AND PLANS FOR RETIREMENT	05-01-98/08-31-98	UNIVERSITY OF KANSAS LAWRENCE	130,763
7R29AG13773-03	BRUGGE, KAREN L DETECTION OF EARLY DEMENTIA IN ADULTS WITH DOWN SYNDROME	09-30-97/08-31-98	OHIO STATE UNIVERSITY	121,662
1R43AG13774-01A2	IRVINE, A B INTERACTIVE VIDEO--EDUCATION FOR DEMENTIA CAREGIVERS	05-01-97/10-31-98	OREGON CENTER FOR APPLIED SCIENCE	100,000
1R15AG13776-01A1	TOBIN, BRIAN W INTERACTIONS OF AGING AND INSULIN THERAPY ON BODY FAT	08-01-97/06-30-00	MERCER UNIVERSITY MACON	86,013
1R01AG13777-01A1	ROGERS, RICHARD G FACTORS AFFECTING ETHNIC DIFFERENCES IN ADULT MORTALITY	12-01-96/	UNIVERSITY OF COLORADO AT BOULDER	
5R01AG13779-03	ROTTENBERG, HAGAI MITOCHONDRIAL DYSFUNCTION IN IMMUNOSENESCENCE	08-15-97/07-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	186,973
5R01AG13780-02	GANDY, SAMUEL E REGULATED CLEAVAGE OF AMYLOID PRECURSOR--MOLECULAR BASIS	04-01-97/03-31-98	WEILL MEDICAL COLLEGE OF CORNELL UNI	253,531
1R01AG13781-01A1	LITVIN, SANDRA DYADIC CAREGIVING CONFLICT:ADULT DAUGHTERS, AGED MOTHERS	01-01-97/	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	
1R01AG13782-01A1	FRIEDMAN, EITAN ADENOSINE AND THE AGING HEART	12-01-96/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG13783-01A1	BIRKEN, STEVEN FORMS OF GONADOTROPINS AS MARKERS OF MENOPAUSE	09-30-97/08-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	278,116

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
5R01AG13784-03	SASSOON, DAVID MOLECULAR BASIS OF UTERINE CELLULAR INTERACTIONS	08-01-97/	07-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	255,100
1R43AG13785-01A1	SALTZ, BRUCE L EDUCATIONAL MATERIALS FOR GERIATRIC PSYCHOPHARMACOLOGY	06-01-97/	11-30-99	MENTAL HEALTH ADVOCATES, INC.	100,000
5R13AG13786-02	WILKING, SPENCER V SUMMER INSTITUTES IN GERIATRIC MEDICINE	07-01-97/	06-30-98	BOSTON UNIVERSITY	40,874
5R01AG13789-02	KELSOE, GARNETT H SOMATIC GENETICS OF T CELL IMMUNITY	03-11-97/	01-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	223,370
1R01AG13793-01A1	WOLF, MARSHA E CASE CONTROL STUDY OF FOOTWEAR AND FALLS IN OLDER ADULTS	09-15-97/	08-31-98	UNIVERSITY OF WASHINGTON	302,269
5R01AG13798-08	YABLONKA-REUVENI, ZIPORA SATELLITE CELL DYNAMICS--A ROLE FOR THE MYOFIBER	09-01-97/	08-31-98	UNIVERSITY OF WASHINGTON	269,480
5R01AG13799-03	PASINETTI, GUILIO M COMPLEMENT AND NEUROPROTECTION--A MODEL FOR ALZHEIMERS	09-01-97/	08-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	191,379
1R43AG13803-01A1	NEWMAN, MARK J OPTIVAX ADJUVANT--IMPROVE INFLUENZA VIRUS VACCINE	07-01-97/	06-30-98	VAXCEL, INC.	99,802
5R01AG13807-03	SONNENSCHEIN, CARLOS BREAST CANCER & AGING--A SOMATIC CELL GENETICS APPROACH	09-01-97/	08-31-98	TUFTS UNIVERSITY BOSTON	268,839
1R43AG13813-01A1	UMAN, GWEN C COMMUNICATION ENHANCEMENT PROGRAM	03-01-96/		VITAL RESEARCH	
1R43AG13827-01A1	LAPPI, DOUGLAS A TARGETING TRK RECEPTOR-BEARING CELLS	11-01-96/		ADVANCED TARGETING SYSTEMS, INC.	
1R43AG13828-01A2	TENNSTEDT, SHARON L DEVELOPING A BRIEF, MULTI-MODE COGNITIVE INSTRUMENT	08-15-97/	12-31-98	NEW ENGLAND RESEARCH INSTITUTES, INC	93,392
5R44AG13831-03	LOUIE, MING H SCHEDULING AND PLANNING SYSTEM FOR HOME CARE SERVICES	01-01-97/	12-31-97	ATLAS DATA SYSTEMS	291,442
5R01AG13837-03	GENTER, MARY B IMPACT OF ENVIROMENTAL TOXICANTS ON THE OLFACTORY SYSTEM	09-01-97/	08-31-99	UNIVERSITY OF CINCINNATI	78,120
5R01AG13839-03	VITEK, MICHAEL P ADVANCED GLYCOSYLATION ENDPRODUCTS AND AD AMYLOIDOSIS	09-01-97/	08-31-98	DUKE UNIVERSITY	251,443

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R43AG13842-01A1	KENNEDY, GEMMA T NOVEL EXTERNAL URINARY COLLECTION SYSTEM	07-15-97/12-31-98	BIOMEDICAL DEVELOPMENT CORPORATION	100,000
5R01AG13843-03	OOI, WEE L IMPACT OF NURSING HOME ENVIRONMENT ON MORBID OUTCOMES	09-01-97/08-31-98	HEBREW REHABILITATION CENTER FOR AGE	244,187
5R01AG13844-02	HIRSHFIELD, ANNE N PRIMORDIAL FOLLICLE ENDOWMENT AND REPRODUCTIVE AGING	02-01-97/01-31-00	UNIVERSITY OF MARYLAND BALT PROF SCH	171,886
5R01AG13845-03	JACOBY, LARRY L AGE EFFECTS IN ATTENTION & MEMORY--PROCESS DISSOCIATION	08-15-97/07-31-98	NEW YORK UNIVERSITY	243,498
5P30AG13846-02	KOWALL, NEIL W BOSTON UNIVERSITY ALZHEIMERS DISEASE CORE CENTER	07-15-97/06-30-98	BOSTON UNIVERSITY	754,377
5R01AG13847-09	RILEY, RICHARD L B CELL REPERTOIRE OF NORMAL AND AUTOIMMUNE MICE	09-01-97/08-31-99	UNIVERSITY OF MIAMI	282,773
5R01AG13853-02	SCHWINN, DEBRA A TRANSCRIPTIONAL REGULATION OF HUMAN 1A-ADRENOCEPTORS	03-01-97/02-28-98	DUKE UNIVERSITY	162,065
5P30AG13854-02	MESULAM, MAREK-MARSEL ALZHEIMERS DISEASE CORE CENTER	07-15-97/06-30-98	NORTHWESTERN UNIVERSITY	780,852
5R01AG13856-02	HERING, THOMAS M REGULATION OF CARTILAGE REPAIR-SPECIFIC GENE EXPRESSION	03-01-97/02-28-98	CASE WESTERN RESERVE UNIVERSITY	198,666
5R01AG13857-02	POOLE, A ROBIN TYPE II COLLAGEN DENATURATION IN AGING & OSTEOARTHRITIS	06-15-97/05-31-98	MC GILL UNIVERSITY	127,950
5R01AG13860-02	HODIS, HOWARD N VITAMIN E ATHEROSCLEROSIS PREVENTION STUDY	04-01-97/03-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	468,796
3R01AG13860-02S1	HODIS, HOWARD N VITAMIN E ATHEROSCLEROSIS PREVENTION STUDY	04-01-97/03-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	33,759
1R01AG13861-01A1	SMITH, GREGORY C A MULTIDIMENSIONAL STUDY OF GREAT-GRANDPARENTHOOD	07-01-97/	UNIVERSITY OF MARYLAND COLLEGE PK CA	
5R01AG13863-02	SLOANE, PHILIP D ALTERNATIVES TO NURSING HOMES FOR ALZHEIMERS DISEASE	09-01-97/08-31-98	UNIVERSITY OF NORTH CAROLINA CHAPEL	451,996
1R01AG13864-01A1	CHERRY, KATIE E PROSPECTIVE MEMORY AGING: EFFECTS OF ABILITY AND CUE	03-01-97/	LOUISIANA STATE UNIV A&M COL BATON R	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG13868-01A1	EINSTEIN, GILLIAN VULNERABLE NEURONS IN AGING AND ALZHEIMER'S DISEASE	04-01-97/	DUKE UNIVERSITY	
1R01AG13874-01A1	WITTE, PAMELA L MECHANISMS OF AGE RELATED CHANGES IN B LYMPHOPOIESIS	09-30-97/07-31-98	LOYOLA UNIVERSITY MEDICAL CENTER	209,250
1R01AG13876-01	TAM, CHICK F EATING AND NUTRITIONAL ASSESSMENTS IN ALZHEIMER'S DISEAS	10-01-96/	CALIFORNIA STATE UNIVERSITY LOS ANGE	
1R01AG13880-01A1	KESSLAK, JAMES P AGING AND NEUROTROPHIN EXPRESSION	04-15-97/02-28-98	UNIVERSITY OF CALIFORNIA IRVINE	166,655
1R01AG13884-01A1	BUXBAUM, JOEL N CARDIAC AMYLOID AND AGING: A STUDY IN AFRICAN-AMERICANS	04-01-97/	NEW YORK UNIVERSITY MEDICAL CENTER	
1R29AG13886-01A1	ORTMEYER, HEIDI K DIETARY RESTRICTION, AGING AND ISULIN ACTION	07-01-97/	UNIVERSITY OF MARYLAND BALT PROF SCH	
5R13AG13888-02	SCHOENI, ROBERT F SUMMER INSTITUTE OF AGING STUDIES	07-01-97/06-30-98	RAND CORPORATION	43,110
1R01AG13893-01A1	LUSARDI, ANNAMARIA SAVING AND WEALTH NEAR RETIREMENT	09-30-97/08-31-98	DARTMOUTH COLLEGE	15,000
1R01AG13898-01A1	HEDREEN, JOHN C PATHOLOGY OF A BETA SPECIES IN ALZHEIMER DISEASE AND AGI	07-01-97/	NEW ENGLAND MEDICAL CENTER	
1R01AG13900-01A1	HOLMAN, HALSTED R A PROGRAM FOR THE MANAGEMENT OF CHRONIC DISEASE	04-01-97/	STANFORD UNIVERSITY	
1R01AG13902-01A1	SIERRA, LUIS F PROTEOLYSIS AND AGING--EFFECTS ON MAP KINASE ACTIVITY	08-15-97/07-31-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	166,457
1R01AG13906-01A1	KANT, ASHIMA K DIETARY CORRELATES OF FUNCTION AND HOSPITALIZATION	07-01-97/	QUEENS COLLEGE	
1R01AG13909-01	TAM, CHICK F LYMPHOCYTE IMMUNOCHEMISTRY OF S LATERALIS LIFE CYCLE	10-01-96/	CALIFORNIA STATE UNIVERSITY LOS ANGE	
1R01AG13910-01A1	CASALI, PAOLO AGING--ANTIBODY RESPONSE TO BACTERIAL AND VIRAL AGS	08-15-97/07-31-98	WEILL MEDICAL COLLEGE OF CORNELL UNI	334,172
7R29AG13912-03	WOODARD, JOHN L FUNCTIONAL NEUROANATOMY OF MEMORY IN ALZHEIMERS DISEASE	02-01-98/06-30-98	EMORY UNIVERSITY	90,750

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG13913-01A1	GUSTMAN, ALAN L RETIREMENT BEHAVIOR IN THE HEALTH AND RETIREMENT SURVEY	09-30-97/08-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	81,853
1R01AG13917-01A1	TUCKER, KATHERINE L NUTRITION AND FRAILTY AMONG ELDERS IN PUERTO RICO	07-01-97/	TUFTS UNIVERSITY BOSTON	
5P01AG13918-02	MANOLAGAS, STAVROS C MOLECULAR AND CELLULAR MECHANISMS OF OSTEOPOROSIS	06-01-97/05-31-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	834,882
1R01AG13920-01A1	SHROFF, SANJEEV G VASCULAR STIFFNESS & CARDIOVASCULAR FUNCTION IN ELDERLY	06-01-97/05-31-98	UNIVERSITY OF CHICAGO	241,905
5R01AG13922-02	MACH, ROBERT H PET IMAGING STUDIES OF A RHESUS MONKEY MODEL OF AGING	09-01-97/08-31-98	WAKE FOREST UNIVERSITY	330,437
1R01AG13925-01A1	KIRKLAND, JAMES L AGING EFFECT ON PREADIPOCYTE DIFFERENTIATION	05-15-97/03-31-98	BOSTON MEDICAL CENTER	247,909
1R29AG13928-01A1	WOODS, JEFFREY A EXERCISE AS A MEANS OF ENHANCING IMMUNITY IN THE AGED	04-04-97/02-28-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	115,861
1R01AG13930-01A1	COURTNEY, AMY C DIABETES & THE MECHANICS, DENSITY & MORPH OF HUMAN BONE	01-01-97/	CLEVELAND CLINIC FOUNDATION	
1R01AG13931-01	POWERS, SCOTT K BETA-2 AGONIST RESTORATION OF MUSCLE MASS IN AGED RATS	07-01-97/	UNIVERSITY OF FLORIDA	
1R29AG13934-01A1	DELBONO, OSVALDO SINGLE SKETETAL MUSCLE FIBER IMPAIRMENT WITH AGING	04-01-97/03-31-98	WAKE FOREST UNIVERSITY	95,865
5R01AG13935-02	STINE-MORROW, ELIZABETH A AGE DIFFERENCES IN RESOURCE ALLOCATION DURING READING	07-01-97/06-30-98	UNIVERSITY OF NEW HAMPSHIRE	141,113
5R01AG13936-02	MORROW, DANIEL G EXPERTISE AND AGE DIFFERENCES IN PILOT COMMUNICATION	07-01-97/06-30-98	UNIVERSITY OF NEW HAMPSHIRE	137,408
1R01AG13937-01	LIPPIELLO, LOUIS ESSENTIAL FATTY ACIDS PROTECTION OF CARTILAGE IN OA	07-01-97/	HARRINGTON ARTHRITIS RESEARCH CENTER	
5R01AG13939-02	VAN ELDIK, LINDA J SUPRAMOLECULAR A/BETA--GLIAL INTERACTIONS & CELL RESPONS	07-01-97/06-30-98	NORTHWESTERN UNIVERSITY	181,379
1R29AG13941-01A1	MARKUS, ETAN J AGING CHANGES IN BEHAVIOR AND HIPPOCAMPAL UNIT ACTIVITY	05-01-97/04-30-98	UNIVERSITY OF CONNECTICUT STORRS	67,631

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R29AG13945-01A1	TAGLIALATELA, GIULIO APOPTOTIC NEURAL SIGNALING PATHWAYS--AGING RELEVANCE	04-01-97/03-31-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	104,767
1R01AG13951-01A1	MAGNUSSON, KATHY R SUBUNIT SUBSTITUTIONS IN THE AGING NMDA RECEPTOR COMPLEX	07-01-97/	COLORADO STATE UNIVERSITY	
1R29AG13955-01A1	EFTHIMIOPOULOS, SPIROS RELEASE AND BIOLOGICAL FUNCTIONS OF SOLUBLE APP SPECIES	04-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
5R01AG13956-02	HOLTZMAN, DAVID M APOE EFFECT ON CNS NEURONS--ROLE OF LRP	09-01-97/08-31-98	WASHINGTON UNIVERSITY	224,291
1R01AG13958-01A1	KNUSEL, BEAT NEUROTROPHIN IMPROVEMENT OF GLUCOSE UTILIZATION IN AD	04-01-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R43AG13959-01	GIPSON, GENEVIEVE TRAINING EXPERIENCED NURSE ASSISTANTS IN LONG TERM CARE	08-15-97/03-31-98	LONG TERM CARE EDUCATION (LTC EDUCAT	93,080
5R29AG13961-02	DORSEY, CYNTHIA M INSOMNIA IN ELDERLY--PASSIVE BODY HEATING VS ZOLPIDEM	09-01-97/08-31-98	MC LEAN HOSPITAL (BELMONT, MA)	98,109
1R29AG13963-01A1	BROOKS, ELLEN R AUGMENTATION OF BONE DENSITY USING RESISTANCE TRAINING	07-01-97/	WOMAN'S HEALTH FOUNDATION	
1R01AG13964-01A1	EMERSON, JANE F PERFUSION AND COGNITIVE FUNCTION IN AGING AND DEMENTIA	04-01-97/	UNIVERSITY OF CALIFORNIA IRVINE	
1R01AG13965-01A1	HO, SHUK-MEI TOXICANT OR AGING INDUCED OXIDATIVE STRESS IN PROSTATE	03-20-97/02-28-98	TUFTS UNIVERSITY MEDFORD	219,039
5R01AG13967-02	DICK, MALCOLM B STRENGTHS & DEFICITS IN THE MOTOR SYSTEM OF AD PATIENTS	06-01-97/05-31-98	UNIVERSITY OF CALIFORNIA IRVINE	172,108
1R29AG13968-01A1	UCHINO, BERT N SOCIAL RELATIONS, AGING, AND CARDIOVASCULAR CHANGES	04-01-97/	UNIVERSITY OF UTAH	
5R01AG13969-02	CHARNESS, NEIL H LIFE-SPAN EXPERTISE	05-01-97/04-30-98	FLORIDA STATE UNIVERSITY	204,491
1R01AG13970-01A1	JENSEN, GORDON L SCREENING FOR MALNUTRITION IN OLDER PERSONS	04-01-97/	WEIS CENTER FOR RESEARCH-GEISINGER C	
5R01AG13973-07	MC EVOY, CATHY L PRIOR KNOWLEDGE EFFECTS IN COGNITIVE AGING	07-01-97/04-30-98	UNIVERSITY OF SOUTH FLORIDA	88,823

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG13974-01A1	LEUNG, JACQUELINE M AGING AND ANESTHETIC TECHNIQUES	04-01-97/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R01AG13975-01A1	MEYDANI, SIMIN N VITAMIN E AND INFECTION IN THE ELDERLY	05-15-97/04-30-98	TUFTS UNIVERSITY BOSTON	377,744
1R01AG13978-01A1	POEHLMAN, ERIC T ENERGETIC ADAPTATION TO THE MENOPAUSE TRANSITION	09-15-97/08-31-98	UNIVERSITY OF VERMONT & ST AGRIC COL	275,384
1P01AG13980-01A1	BINDER, LESTER I FUNCTION OF TAU POLYMERIZATION IN ALZHEIMER'S DISEASE	04-01-97/	NORTHWESTERN UNIVERSITY	
5R01AG13983-13	CAMBIER, JOHN C SIGNAL TRANSDUCTION IN B CELL ACTIVATION	06-15-97/05-31-98	NATIONAL JEWISH MEDICINE & RES CTR	225,140
5R01AG13987-02	FENNELL, MARY L RURAL HOSPITAL LINKAGES TO LONG TERM CARE PROVIDERS	07-15-97/06-30-98	BROWN UNIVERSITY	278,230
7R37AG13993-03	RUBINSTEIN, ROBERT L BEREAVEMENT IN LONG TERM CARE	07-01-98/08-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	183,032
1R41AG14000-01A1	ALEXANDER, NEIL B SIT-TO-STAND TRAINING DEVICE FOR OLDER ADULTS	09-30-97/11-30-98	BIODEX MEDICAL SYSTEMS	99,944
1R43AG14002-01A1	MILLER, JOHN D NOVEL COMPOUNDS TO TREAT ALZHEIMER'S DISEASE	01-03-97/	C-P TECHNOLOGY, L.P.	
1R43AG14007-01	WALKER, BONNIE L IMPROVING STAFF ATTITUDES TOWARD EXPRESSION OF ELDERLY	03-15-97/08-31-97	BONNIE WALKER AND ASSOCIATES	99,787
1R43AG14008-01A1	GERTMAN, PAUL M ELECTRONIC COMMUNITY FOR ALZHEIMERS CAREGIVERS	09-30-97/02-28-98	U.S. CARELINK	63,775
1R43AG14014-01A1	RAFTOPOULOS, DEMETRIOS D DEVELOPMENT OF AN INTRAVAGINAL PERINEAL EXERCISE DEVICE	07-01-97/	TECHNOFLEX, LTD	
2R44AG14015-02	GRITZ, ROBERT M DEVELOPING PUBLIC-USE MEDICARE CLAIMS DATA FOR AHEAD	09-30-97/08-31-98	UNICON RESEARCH CORPORATION	428,631
1R43AG14021-01A1	TAUB, FLOYD E ALTERED 'AGING' OF NORMAL AND DISEASED FIBROBLASTS	10-01-96/	SYNCHROCELL, INC./DOVETAIL TECH, INC	
1R01AG14023-01	WACHTER, KENNETH W GRADE OF MEMBERSHIP MODELS IN AGING STUDIES	01-10-97/12-31-97	UNIVERSITY OF CALIFORNIA BERKELEY	43,181

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14024-01	RYBASH, JOHN M AGING AND FEATURE-SPECIFIC PRIMING	12-01-96/	HAMILTON COLLEGE	
1R29AG14027-01	PROMISLOW, DANIEL E DEMOGRAPHY OF AGING--GENETIC AND COMPARATIVE ANALYSES	01-15-97/11-30-97	UNIVERSITY OF GEORGIA	101,361
1R01AG14028-01	LAKEY, BRIAN SOCIAL SUPPORT AND WELL-BEING AMONG CAREGIVERS	09-01-96/	WAYNE STATE UNIVERSITY	
1R01AG14035-01	HIKIDA, ROBERT S MUSCULAR NUCLEOCYTOPLASMIC PLASTICITY: EFFECT OF AGING	12-01-96/	OHIO UNIVERSITY ATHENS	
1R01AG14036-01	HUNT-MC COOL, JANET THE SUBSTITUTION OF HOME HEALTH FOR OTHER MEDICAL CARE	10-01-96/	GEORGETOWN UNIVERSITY	
1R01AG14037-01	WEINSTEIN, MAXINE A BIODEMOGRAPHY OF STRESS SOCIAL ENVIRONMENT AND HEALTH	01-01-97/	GEORGETOWN UNIVERSITY	
1R01AG14038-01	LI, XIAOHUA APOE EFFECTS ON ALZHEIMERS DISEASE CHOLINERGIC SIGNALING	12-01-96/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1R01AG14039-01	MUDUMBI, RAMAGOPAL V AGING AND MYOCARDIAL PRECONDITIONING	12-01-96/	ST. LUKE'S REGIONAL MED CTR (BOISE,	
1R01AG14040-01A1	GORE, MAUVIS ANN NORMAL AND PERIMENOPAUSAL OVARIAN FOLLICLE DYNAMICS	08-01-97/	GERMAN PRIMATE CENTER	
1R29AG14041-01	CRAWFORD, FIONA C EARLY ONSET ALZHEIMER GENES AND FREE RADICAL PRODUCTION	12-01-96/	UNIVERSITY OF SOUTH FLORIDA	
1R01AG14043-01	RITCHEY, PHILLIP N GRANDPARENT INFLUENCES ON ADOLESCENTS' ATTITUDES	08-01-96/	UNIVERSITY OF CINCINNATI	
1R01AG14044-01	YOUNG, JOHN K AGING OF THE BRAIN AND GOMORI+ ASTROCYTES	12-01-96/	HOWARD UNIVERSITY	
1R01AG14045-01	CHOPRA, INDER J THYROID HORMONE METABOLISM IN AGING AND STRESS	12-01-96/	UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R01AG14046-01	SHENK, DENA THRIVING OLDER WOMEN IN THE AFRICAN-AMERICAN COMMUNITY	05-15-97/	UNIVERSITY OF NORTH CAROLINA CHARLOT	
1R13AG14048-01	JOHNSON, THOMAS E 1997 GORDON CONFERENCE ON THE BIOLOGY OF AGING	12-01-96/11-30-97	GORDON RESEARCH CONFERENCES	50,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R29AG14049-01	LEE, CHUNG J IMPACT OF MEAL PROGRAMS ON WELL-BEING OF RURAL ELDERS	10-01-96/		KENTUCKY STATE UNIVERSITY	
1R01AG14050-01	ALMY, GARY HDL AND VITAMIN C IN THE ELDERLY	04-01-96/		CHICAGO ASSN FOR RESEARCH & EDUC IN	
1R01AG14051-01	NEBES, ROBERT D AGING, WHITE MATTER HYPERINTENSITIES & COGNITIVE DECLINE	04-15-97/	02-28-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	259,784
1R01AG14052-01	ANGELO, JENNIFER K MICROWAVE OVENS: A VIHICLE IMPROVING ELDERLY NUTRITION	01-01-97/		UNIVERSITY OF PITTSBURGH AT PITTSBUR	
1R01AG14053-01A1	GOLDMAN, STEVEN BETA-ADRENERGIC CONTROL OF VASCULAR STIFFNESS IN AGING	07-01-97/		UNIVERSITY OF ARIZONA	
1R01AG14055-01	LAPOLT, PHILIP S REGULATION OF ESTRADIOL PRODUCTION IN AGING FEMALE RATS	12-01-96/		UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R43AG14060-01A1	CHIAMORI, NEIL Y BLOOD SPOT SCREENING TESTS FOR DISEASES IN THE ELDERLY:	07-01-97/		PANTEX	
1P01AG14063-01A1	ALBIN, ROGER L BASAL GANGLIA FUNCTION AND AGING	07-01-97/		UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R01AG14064-01	BROWN, DAN L CANAVANINE-INDUCED RESISTANCE TO AGING	12-01-96/		CORNELL UNIVERSITY ITHACA	
1R01AG14065-01	JETTE, ALAN M FOOT DISORDERS, PAIN, AND DISABILITY AMONG THE ELDERLY	12-01-96/		NEW ENGLAND RESEARCH INSTITUTES, INC	
5R29AG14066-02	NICKLAS, BARBARA J OBESITY, EXERCISE, & FAT CELL METABOLISM IN OLDER WOMEN	08-01-97/	07-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	84,937
1R29AG14067-01A1	NIEVES, JERI VITAMIN D SUPPLEMENTATION IN POSTMENOPAUSAL BLACK WOMEN	09-01-97/	08-31-98	HELEN HAYES HOSPITAL	100,510
1R01AG14068-01	WEINTRAUB, SANDRA VISUAL SPATIAL ATTENTION IN ALZHEIMERS DISEASE	09-01-97/	08-31-98	NORTHWESTERN UNIVERSITY	193,362
1R01AG14069-01	LIU, XIAN DYNAMICS OF EDUCATIONAL DIFFERENCES IN OLD-AGE MORTALITY	09-01-96/		UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R01AG14071-01A1	TYLER, KENNETH L MECHANISM OF VIRUS INDUCED CNS APOPTOSIS	08-15-97/	05-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	213,062

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14072-01	BEATTY, WILLIAM W PROSPECTIVE STUDY OF BRIDGE PLAYING IN THE ELDERLY	12-01-96/	UNIVERSITY OF OKLAHOMA HLTH SCIENCES	
1R01AG14073-01	CAVANAGH, PETER R STAIR DESCENT BY THE ELDERLY--SAFETY AND BIOMECHANICS	03-01-97/02-28-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	332,766
1R01AG14074-01	HUBBARD-SMITH, KAREN POST-TRANSCIPTIONAL PROCESSING AND CELLULAR DEVELOPMENT	12-01-96/	CITY COLLEGE OF NEW YORK	
1R01AG14075-01	COLBERT, CHARLES EVALUATING EFFICACY OF TREATMENTS FOR OSTEOPOROSIS	12-01-96/	WRIGHT STATE UNIVERSITY	
1R01AG14076-01	SHIEH, SHEU-JANE BONE QUALITY IN THE AGING SPINE WITH IN VITRO ULTRASOUND	12-01-96/	WAYNE STATE UNIVERSITY	
1R01AG14077-01	MC CORD, JOE M THE ROLE OF SOD1 MUTATIONS IN ALS	12-01-96/	UNIVERSITY OF COLORADO HLTH SCIENCES	
1R01AG14078-01	CLEARY, JAMES P EFFECTS OF AGGREGATED BETA-AMYLOID IN MATURE RATS	12-01-96/	UNIVERSITY OF MINNESOTA TWIN CITIES	
1R01AG14080-01A1	MILLEN, BARBARA E CAUSES/CONSEQUENCES OF MALNUTRITION IN HOMEBOUND ELDERLY	09-01-97/08-31-98	BOSTON UNIVERSITY	825,175
1R01AG14081-01	SINGER, BURTON H BIODEMOGRAPHY OF STRESS, SOCIAL ENVIRONMENT, AND HEALTH	01-01-97/	PRINCETON UNIVERSITY	
1R01AG14082-01	FARAH, MARTHA J SEMANTIC AND VISUAL COGNITION IN ALZHEIMERS DISEASE	09-30-97/08-31-98	UNIVERSITY OF PENNSYLVANIA	199,920
1R01AG14083-01	RITBLATT, SHULAMIT N ELDERLY'S IMAGES IN CHILDREN'S BOOKS - MULTICULTURAL STU	07-01-96/	SAN DIEGO STATE UNIVERSITY	
1R01AG14085-01	HINDS, THOMAS R REACTIVE OXYGEN SPECIES IN ALZHEIMER'S CASES & CONTROLS	10-01-96/	UNIVERSITY OF WASHINGTON	
1R01AG14086-01A1	CONN, CAROLE A ANOREXIA, LOW BODY WEIGHT AND INFECTION	07-01-97/	LOVELACE RESPIRATORY RESEARCH INSTIT	
1R01AG14087-01A1	WARD, WALTER F AGE, FOOD RESTRICTION AND PROTEASOME FUNCTION	07-01-97/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R01AG14088-01A1	PAHLAVANI, MOHAMMAD A TRANSCRIPTION FACTOR NFAT AND AGING IMMUNE SYSTEM	09-01-97/06-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	61,837

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14089-01A1	BENDER, BRADLEY S ENHANCING INFLUENZA VACCINE EFFECTIVENESS	07-01-97/	UNIVERSITY OF FLORIDA	
1R01AG14090-01	SHAPIRO, JAY R SKELETAL EFFECTS OF 1500MG CALCIUM INTAKE IN OLDER MEN	12-01-96/	JOHNS HOPKINS UNIVERSITY	
1R01AG14092-01	OLSHANSKY, STUART J HAS THE HUMAN LIFESPAN BEEN EXTENDED?	12-01-96/	UNIVERSITY OF CHICAGO	
1R01AG14093-01A1	SON, JIN H NEUROTROPHIC REGULATION OF NIGRAL DOPAMINE NEURONS	09-30-97/08-31-98	WINIFRED MASTERSON BURKE MED RES INS	263,154
1R01AG14095-01	HELFAND, STEPHEN L GENETIC CONTROL OF AGING	12-01-96/	UNIVERSITY OF CONNECTICUT HEALTH CEN	
1R01AG14098-01A1	STEIN, THOMAS P BEDREST AND PROTEIN LOSS IN THE ELDERLY	09-01-97/08-31-98	UNIV OF MED/DENT NJ-SCH OSTEOPATHIC	384,801
1R29AG14100-01A1	HAUSDORFF, JEFFREY M GAIT INSTABILITY IN THE ELDERLY WITH INCREASED FALL RISK	09-01-97/08-31-98	BETH ISRAEL DEACONESS MEDICAL CENTER	114,028
1R01AG14101-01	MYKLEBUST, BARBARA M THE EFFECT OF DYNAMIC BALANCE TRAINING IN THE ELDERLY	12-01-96/	MEDICAL COLLEGE OF WISCONSIN	
1R01AG14102-01	RICHIE, JOHN P, JR GLUTATHIONE AND AGING--METABOLISM AND LIFE SPAN STUDIES	02-06-97/01-31-98	AMERICAN HEALTH FOUNDATION	178,454
1R01AG14103-01A1	YAN, SHI DU RAGE--A RECEPTOR FOR AMYLOID BETA PEPTIDE	08-15-97/07-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	140,466
1R01AG14104-01	ALTERMAN, MICHAIL AGEING, CALORIE RESTRICTION, AND CYTOCHROME P450	09-30-96/	UNIVERSITY OF KANSAS LAWRENCE	
1R29AG14105-01A1	SCARBROUGH, KATHRYN AGING OF SUPRACHIASMATIC NUCLEUS FUNCTION	07-01-97/	NORTHWESTERN UNIVERSITY	
1R01AG14106-01A1	YOUNG, M RITA THE ROLE OF MICROGLIA IN ALZHEIMER'S DISEASE	07-01-97/	LOYOLA UNIVERSITY MEDICAL CENTER	
1R01AG14107-01	TATE, BARBARA A CELLULAR IMMUNE RESPONSE TO ALZHEIMER B-AMYLOID	12-01-96/	MIRIAM HOSPITAL	
1R01AG14109-01	CARNES, BRUCE A A BIOLOGICALLY MOTIVATED PARTITIONING OF TOTAL MORTALITY	12-01-96/	UNIVERSITY OF CHICAGO	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R01AG14111-01	SCHWARZ, NORBERT AGING, COGNITION AND CONTEXT EFFECTS IN SELF REPORTS	01-01-97	12-31-97	UNIVERSITY OF MICHIGAN AT ANN ARBOR	235,690
1R01AG14114-01	CHARNESS, NEIL H EFFECTS OF AGE AND PRACTICE ON EXPERT MEDICAL DIAGNOSIS	01-01-97	/	FLORIDA STATE UNIVERSITY	
1R01AG14116-01	REDFERN, MARK S POSTURAL CONTROL IN THE ELDERLY--THE ROLE OF ATTENTION	01-01-97	12-31-97	UNIVERSITY OF PITTSBURGH AT PITTSBUR	140,503
1R01AG14117-01	RYAN, JOHN G USING TAI CHI TO PREVENT FALLS AMONG ELDERLY	06-01-96	/	STATE UNIVERSITY NEW YORK STONY BROO	
1R01AG14119-01	POPE, MALCOLM H REHAB OF ELDERLY PATIENTS WITH CHRONIC LOW BACK PAIN	12-01-96	/	UNIVERSITY OF IOWA	
1R01AG14122-01	YANG, FUNMEI IRON-ASSOCIATED ANTIOXIDANTS & LUNG DEFENSE DURING AGING	10-01-96	/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1P01AG14123-01	BOVE, ALFRED A HEART FAILURE IN ELDERLY	12-01-96	/	TEMPLE UNIVERSITY	
1R01AG14124-01	YOUNG, TERRY MENOPAUSE AND MIDLIFE AGING EFFECTS ON SLEEP DISORDERS	01-15-97	12-31-97	UNIVERSITY OF WISCONSIN MADISON	287,968
3R01AG14124-01S1	YOUNG, TERRY MENOPAUSE AND MIDLIFE AGING EFFECTS ON SLEEP DISORDERS	06-01-97	12-31-97	UNIVERSITY OF WISCONSIN MADISON	21,567
3R01AG14124-01S2	YOUNG, TERRY MENOPAUSE AND MIDLIFE AGING EFFECTS ON SLEEP DISORDERS	07-15-97	12-31-97	UNIVERSITY OF WISCONSIN MADISON	4,608
3R01AG14124-01S3	YOUNG, TERRY MENOPAUSE AND MIDLIFE AGING EFFECTS ON SLEEP DISORDERS	09-30-97	12-31-97	UNIVERSITY OF WISCONSIN MADISON	11,064
1R01AG14125-01A1	SHEIKH, JAVAID I INTERVENTION FOR AGITATION IN ALZHEIMER'S DISEASE	07-01-97	/	STANFORD UNIVERSITY	
1R01AG14126-01A1	BOOYSE, FRANCOIS M AGE, RACE, SEX AND AORTIC STIFFNESS--GENETIC MARKERS	09-30-97	08-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	567,926
1R01AG14127-01A1	BAUMGARTEN, MONA PRESSURE ULCERS IN ELDERLY EMERGENCY DEPARTMENT PATIENTS	09-30-97	02-28-99	UNIVERSITY OF PENNSYLVANIA	489,992
1R01AG14131-01A1	MILLER, MICHAEL E DISCRETE OUTCOME MODELS FOR EPIDEMIOLOGICAL SURVEYS	09-30-97	08-31-98	WAKE FOREST UNIVERSITY	141,178

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14132-01	ALLEN, ROBERT G AGING IN DERMAL FIBROBLASTS	12-01-96/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG14134-01	BACHEVALIER, JOCELYNE MEDIAL TEMPORAL LOBE MEMORY FUNCTIONS	12-01-96/	UNIVERSITY OF TEXAS HLTH SCI CTR HOU	
1R01AG14135-01	BOONE, KYLE B ETIOLOGY AND EFFECT OF WHITE MATTER HYPERINTENSITIES	12-01-96/	HARBOR-UCLA RESEARCH & EDUC INST	
1R01AG14136-01	RICHARDSON, BRUCE C SEQUENCE-SPECIFIC DNA METHYLATION CHANGES IN AGING.	12-01-96/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R01AG14137-01	MC GEE, DANIEL L AGING, BODY WEIGHT, AND MORTALITY IN THE U.S. POPULATION	12-01-96/	LOYOLA UNIVERSITY MEDICAL CENTER	
1R01AG14138-01	FUKUCHI, KEN-ICHIRO ALZHEIMER'S DISEASE: THERAPEUTIC PEPTIDES BY RANDOM SEQU	12-01-96/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1R01AG14139-01	PONNAPPAN, USHA S SIGNAL TRANSDUCTION AND AGING:ROLE OF P56-LCK	10-01-96/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
1R01AG14140-01	SHAPIRO, ROBERT BIODYNAMICS OF HIP FRACTURES IN ELDERLY FEMALES	12-01-96/	UNIVERSITY OF KENTUCKY	
1R29AG14141-01A1	SATIN, JONATHAN MOLECULAR BASIS OF MOTONEURON EXCITABILITY	07-01-97/	UNIVERSITY OF KENTUCKY	
1R01AG14144-01	RITTER, ARTHUR B REDUCTION OF AGE ASSOCIATED VASCULAR STIFFNESS	09-01-96/	UNIVERSITY OF MEDICINE & DENTISTRY O	
1R01AG14145-01	TENNISWOOD, MARTIN ANTI-INFLAMMATORY TREATMENT OF NEURODEGENERATION	12-01-96/	ADIRONDACK BIOMEDICAL RESEARCH INSTI	
1R01AG14146-01	HAYSLIP, BERT, JR ETHNIC AND FAMILY VARIATIONS IN CUSTODIAL GRANDPARENTING	12-01-96/	UNIVERSITY OF NORTH TEXAS	
1R01AG14147-01	COHEN-MANSFIELD, JISKA MELATONIN TREATMENT FOR SUNDOWNING IN THE ELDERLY	12-01-96/	HEBREW HOME OF GREATER WASHINGTON	
1R01AG14148-01	HENDEL, IGAL THE DETERMINANTS OF HEALTH CARE CHOICES OF THE ELDERLY	12-01-96/	NATIONAL BUREAU OF ECONOMIC RESEARCH	
1R01AG14149-01A1	SHEU, PHILLIP AUTOMATED IMAGE ANALYSIS OF HUMAN BRAIN CELLS	08-15-97/05-31-98	UNIVERSITY OF CALIFORNIA IRVINE	210,166

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14151-01	ANDERSEN, JULIE ROLE OF MAO-B IN AGE-RELATED NEURODEGENERATION AND PD	12-01-96/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG14152-01	BECKER, GAYLENE MEANINGS OF CHRONICITY AND AGE FOR ETHNIC MINORITIES	08-01-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	184,197
1R01AG14153-01	KELTNER, NORMAN L EFFICACY OF RISPERIDONE IN ELDERLY DISTURBED PATIENTS	08-01-96/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1R01AG14154-01	CLARK, FLORENCE A EFFECTS OF OCCUPATION ON HEALTH IN THE ELDERLY	01-01-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG14155-01	PACK, ALLAN I CASE CONTROL STUDY OF INSOMNIA IN NONDEPRESSED ELDERLY	04-15-97/02-28-98	UNIVERSITY OF PENNSYLVANIA	367,037
1R01AG14156-01A1	KINDY, MARK S THE ROLE OF APOLIPROTEIN E IN AMYLOID FORMATION	07-01-97/	UNIVERSITY OF KENTUCKY	
1R29AG14157-01	KAYYALI, USAMAH S ALZHIEMER CYTOSKELETAL CHANGES IN CALCINEURIN NULL MICE	12-01-96/	HARVARD UNIVERSITY	
5R01AG14158-02	SCHMADER, KENNETH E IMPACT OF GERIATRIC CARE ON DRUG RELATED PROBLEMS	08-01-97/07-31-98	DUKE UNIVERSITY	257,994
5R01AG14161-02	RUVKUN, GARY B INOSITOL SIGNALING IN C ELEGANS SENESCENCE AND DIAPAUSE	06-01-97/04-30-98	MASSACHUSETTS GENERAL HOSPITAL	272,019
1R03AG14182-01A1	ROWE, WILLIAM A AGE-RELATED FOREARM NUTRIENT FLUX IN HEALTHY SUBJECTS	05-01-97/	PENNSYLVANIA STATE UNIV HERSHEY MED	
1R01AG14183-01A1	ROBAKIS, NIKOLAOS K EFFECTS OF PS MUTATIONS AND EXPRESSION ON NEURONAL SURVI	08-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R03AG14189-01A1	LANGUB, M CHRIS, JR VDR/RXR NEUROANATOMICAL EXPRESSION IN AGING BRAIN	09-30-97/02-28-99	UNIVERSITY OF KENTUCKY	70,108
1R03AG14190-01A1	EDWARDS, IRIS J AGING, ARTERIAL PROTEOGLYCANS AND CALORIC RESTRICTION	09-30-97/08-31-99	WAKE FOREST UNIVERSITY	72,500
1R03AG14233-01A1	JANOWSKY, JERI S FMRI MEASURES OF ATTENTION IN THE OLDEST OLD	07-15-97/06-30-98	OREGON HEALTH SCIENCES UNIVERSITY	72,221
1R03AG14241-01A1	CHAUHAN, ABHA FIBRILLOGENESIS OF AMYLOID BETA-PROTEIN IN CELL CULTURES	05-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1P01AG14248-01	SISODIA, SANGRAM PRESENILINS IN MODELS OF FAMILIAL ALZHEIMERS DISEASE	03-12-97/02-28-98	JOHNS HOPKINS UNIVERSITY	988,264
1R01AG14249-01A1	SAYRE, LAWRENCE M CYTOSKELETAL OXIDATIVE MODIFICATIONS	08-15-97/07-31-98	CASE WESTERN RESERVE UNIVERSITY	211,042
1R29AG14250-01	DROR, ITIEL E COGNITIVE NEUROSCIENCE OF AGING AND COGNITIVE PLASTICITY	01-02-97/	MIAMI UNIVERSITY OXFORD	
1R01AG14257-01A1	GETCHELL, THOMAS V GENE EXPRESSION IN THE HUMAN OLFACTORY SYSTEM	07-01-97/	UNIVERSITY OF KENTUCKY	
5U01AG14260-02	REBOK, GEORGE W TRIAL OF A COGNITIVE INTERVENTION FOR OLDER ADULTS	09-30-97/06-30-98	JOHNS HOPKINS UNIVERSITY	472,180
5U01AG14263-02	WILLIS, SHERRY L FLUID ABILITY TRAINING AMONG ELDERLY	09-30-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	452,903
3U01AG14263-02S1	WILLIS, SHERRY L FLUID ABILITY TRAINING AMONG ELDERLY	09-30-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	32,157
5U01AG14276-02	MARSISKE, MICHAEL FLUID REASONING TRAINING FOR URBAN ELDERS	09-30-97/06-30-98	WAYNE STATE UNIVERSITY	387,027
5U01AG14282-02	TENNSTEDT, SHARON E TRIAL OF A COGNITIVE INTERVENTION FOR OLDER ADULTS--CC	09-30-97/06-30-98	NEW ENGLAND RESEARCH INSTITUTES, INC	345,248
1R01AG14286-01A1	YESAVAGE, JEROME A TRIAL OF A COGNITIVE INTERVENTION FOR OLDER ADULTS	07-01-97/	STANFORD UNIVERSITY	
5U01AG14289-02	BALL, KARLENE K COGNITIVE TRAINING & EVERYDAY COMPETENCE IN THE ELDERLY	09-30-97/06-30-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	386,834
5R01AG14290-02	PETTEGREW, JAY W IN VIVO MR STUDIES OF METABOLISM IN ALZHEIMERS DISEASE	04-01-97/03-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	356,817
5R01AG14291-02	CALIGIURI, MICHAEL P EPS AND PREDICTORS OF PSYCHOSIS IN ALZHEIMERS DISEASE	09-01-97/08-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	155,519
1R41AG14292-01A1	MC INTYRE, KEVIN M LINKING TECHNOLOGY AND PRESERVED MEMORIES FOR DEMENTIA	09-30-97/03-31-98	SIMPRES, INC.	99,910
1R41AG14294-01	CARISE, DENI EMPLOYEE ENHANCEMENT SYSTEM: IMPROVING NURSING CARE	11-01-96/	ST. CATHERINE'S HEALTHCARE CENTERS	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R41AG14295-01	REDDITT, RICHARD S REACH AND BALANCE TESTS FOR A TUB/SHOWER FOR THE AGING	01-01-97/		AQUABATH, INC.	
1R01AG14298-01	FULMER, TERRY T ELDER ABUSE DETECTION IN OLDER WOMEN	10-01-96/		NEW YORK UNIVERSITY	
1R01AG14299-01	LACHS, MARK S FUNCTIONAL DECLINE IN VICTIMIZED OLDER WOMEN	09-30-97/	12-31-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	100,000
1R03AG14300-01	MONROE, PAMELA A ELDER ABUSE IN NURSING HOMES: DEVELOPMENT OF A MODEL	01-01-97/		LOUISIANA STATE UNIV A&M COL BATON R	
1R01AG14301-01A1	HUDSON, MARGARET F ELDER ABUSE--A SCREENING PROTOCOL	09-30-97/	08-31-98	UNIVERSITY OF NORTH CAROLINA CHAPEL	138,193
1R01AG14302-01	RIDLEY, CARL A DOMESTIC VIOLENCE AND ELDER ABUSE: A TEST OF A RELATIONA	10-01-96/		UNIVERSITY OF ARIZONA	
5R01AG14304-02	LAWRENCE, VALERIE A MAXIMIZING POSTOPERATIVE FUNCTIONAL OUTCOMES IN ELDERS	08-01-97/	07-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	323,581
1R43AG14306-01	KUMAR, HARMESH TEST BATTERY FOR COGNITIVE SCREENING OF ELDERLY	02-15-97/	08-14-97	NEUROBEHAVIORAL AND INTEGRATIVE WELL	100,000
1R43AG14307-01A1	GREENSPAN, JEFFREY A A CANDIDATE PROTEIN FOR WOUND HEALING ENCHANCEMENT	07-01-97/		MUNIN CORPORATION	
1R43AG14308-01	ERWIN, JOSEPH M COMPARATIVE NEUROBIOLOGY OF AGING RESOURCE	02-01-97/	07-31-97	BIOQUAL, INC.	93,916
1R43AG14310-01	KELLEY, JAMES L ACYLOXYMETHYL PRODRUGS FOR DEMENTING DISORDERS	01-01-97/		KRENITSKY PHARMACEUTICAL, INC.	
1R43AG14312-01	COHEN, MARC A AUTOMATION OF LONG TERM CARE PROVIDER PROFILING TOOL	05-01-97/	10-31-97	LIFEPLANS, INC.	100,000
1R43AG14313-01	WILKIN, JOHN C LONG RANGE COST ESTIMATE MODEL FOR SOCIAL SECURITY	09-30-97/	05-31-98	ACTUARIAL RESEARCH CORPORATION	99,999
1R43AG14314-01	LAPKOFF, SHELLEY F WHERE TO RETIRE INTERACTIVE CD-ROM	12-01-96/		LAPKOFF AND GOBALET DEMOGRAPHIC RESE	
7R43AG14316-02	KENNEDY, ROBERT S PERCEPTUAL CORRELATES OF REAR-END COLLISIONS AND AGE	12-01-97/	06-30-98	STAR MOUNTAIN, INC.	99,894

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R43AG14317-01	STERNS, RONNI S INTERPRECARE SYSTEM--A LANGUAGE INTERVENTION PRODUCT	04-03-97/09-15-97	LIFESPAN ASSOCIATES	100,000
1R43AG14318-01A1	MUELLER, JAMES L SIMULATIONS FOR TEACHING DESIGNERS THE DYNAMICS OF AGING	07-01-97/	J.L. MUELLER, INC.	
1R43AG14319-01	TRAUNTMAN, EDWIN D PERSONALIZED INTERACTIVE EXERCISE SYSTEM	04-03-97/09-30-97	U.S. CARELINK	100,000
1R43AG14320-01	RAGER, ROBERT CD ROM MONITOR IMPROVES OLDER PERSONS MEMORY READINESS	04-09-97/09-30-97	COMPACT DISC, INC.	98,477
1R43AG14321-01	RABINOVICH, BETH A REMOVING BARRIERS TO PUBLIC TRANSIT FOR OLDER USERS	11-01-96/	COMSIS CORPORATION	
1R43AG14323-01A1	LAROSE, MARGARET COMMUNICATION AND DELEGATION OF CARE TASKS TRAINING	07-01-97/	SENIOR HOUSING RESEARCH GROUP	
1R43AG14324-01A1	SMART, WILSON H GENTLE METHOD OF PHLEBOTOMY AND ASSAY	09-15-97/02-28-98	KUMETRIX, INC.	100,000
1R43AG14325-01	SPEER, JOHN F A RAPID GERIATRIC ASSESSMENT TOOL FOR CLINICAL DECISIONS	11-01-96/	SENIOR HEALTH SOLUTIONS	
1R43AG14327-01	TRAPNELL, GORDON R PSO ACTUARIAL RATE MODEL FOR MEDICARE RISK CONTRACTS	09-30-97/09-30-98	ACTUARIAL RESEARCH CORPORATION	99,995
1R43AG14328-01A1	BYRD, CECILIA A IMPROVING INSURANCE USE: SENIORS HELPING THEMSELVES	07-01-97/	ELDER SOURCE, INC.	
1R43AG14329-01	SNYDER, BARBARA H HELPING OLDER ADULTS COMMUNICATE BETTER WITH PHYSICIANS	11-01-96/	MAKING CHANGE	
1R43AG14330-01A1	BROWN, ERIC W INFORMATION FOR IMPROVED CARE OF OLDER PATIENTS AT HOME	08-15-97/01-31-98	TECHNOVIEW, INC.	99,850
1R43AG14332-01A1	FRIEDMAN, MARK B MONITOR FOR RESTRAINT RELEASE & EXERCISE FOR THE ELDERLY	09-01-97/02-28-98	AUGMENTECH, INC.	100,000
1R43AG14333-01	LIAO, DEZHONG J DEVELOPMENT OF A SAFER POST-MENOPAUSAL ESTROGEN	11-01-96/	PHYTOSYN, INC.	
1R13AG14335-01	YANKNER, BRUCE A CONFERENCE ON MOLECULAR MECHANISMS IN ALZHEIMERS DISEASE	01-01-97/12-31-97	KEYSTONE CENTER	22,600

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R13AG14336-01	ROSEN, CLIFFORD J ASSESSMENT OF THE GROWTH HORMONE/IGF-I AXIS IN AGING	02-27-97/01-31-98	ST. JOSEPH HOSPITAL (BANGOR, ME)	35,980
1R01AG14338-01	SHANKLE, WILLIAM R KNOWLEDGE DISCOVERY IN HETEROGENEOUS DEMENTIA DATABASES	10-01-96/	UNIVERSITY OF CALIFORNIA IRVINE	
1R01AG14340-01	FUHR, JOSEPH E POST MENOPAUSAL BREAST CANCER AND HORMONE DEPENDENCE	04-01-97/	UNIVERSITY OF TENNESSEE KNOXVILLE	
5R01AG14342-02	MC DEVITT, CAHIR A DEGENERATION AND REPAIR OF THE MENISCUS	07-15-97/06-30-98	CLEVELAND CLINIC FOUNDATION	203,440
1R01AG14343-01	MAJUMDAR, ADHIP N AGING GUT--REGULATION OF CELL PROLIFERATION	09-01-97/08-31-98	WAYNE STATE UNIVERSITY	152,032
1R01AG14344-01	REILLY, FRANK D AGE-DEPENDENT BENEFITS OF RAPID SKIN EXPANSION	04-01-97/	WEST VIRGINIA UNIVERSITY	
1R01AG14345-01	ALBERT, MARTIN L LANGUAGE IN THE AGING BRAIN	04-15-97/02-28-98	BOSTON UNIVERSITY	271,765
1R01AG14347-01	ARMSTRONG, ROBERT B MUSCLE/BONE FUNCTION: AGING & BRIEF ESTROGEN DEFICIENCY	07-01-97/	TEXAS AGRICULTURAL & MECHANICAL UNIV	
1R13AG14348-01	PARKS, ARNOLD C THE HEALTH OF OLDER AFRICAN AMERICANS: A RESEARCH SYMPOS	04-01-97/	LINCOLN UNIVERSITY	
1R01AG14350-01	ONYEGBULA, ALOMA E FOUR NATURAL PRODUCTS FOR BREAST CANCER THERAPY	03-01-97/	MANKIND RESEARCH FOUNDATION	
1R01AG14351-01	MBAWUIKE, INNOCENT N TH1 CYTOKINES AND IMPAIRED CD8* CTLS IN ELDERLY	06-01-97/05-31-98	BAYLOR COLLEGE OF MEDICINE	181,296
3R01AG14351-01S1	MBAWUIKE, INNOCENT N TH1 CYTOKINES AND IMPAIRED CD8* CTLS IN ELDERLY	09-30-97/05-31-98	BAYLOR COLLEGE OF MEDICINE	38,234
1R01AG14352-01	BUCZEK, FRANK L, JR HIGH FIDELITY SLIP RESISTANCE MEASURES IN HUMAN GAIT	04-01-97/	SANTA ROSA HEALTH CARE CORPORATION	
1R29AG14353-01	CALINGASAN, NOEL Y AGING/GENETICS IN NEURONAL LOSS WITH OXIDATIVE DEFICITS	04-01-97/	WINIFRED MASTERSON BURKE MED RES INS	
1R01AG14355-01	VON EYE, ALEXANDER MODELING DEVELOPMENTAL CONCEPTS USING MANIFEST CAT VAR	06-01-97/	MICHIGAN STATE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R01AG14356-01	SCHMUCKER, DOUGLAS L AGE, SEX, NEUROPEPTIDES, CYTOKINES MODULATE GUT IMMUNITY	04-01-97/		NORTHERN CALIFORNIA INSTITUTE RES &	
1R29AG14358-01	HSU, LI METHODS FOR AGE AT ONSET DATA IN GENETIC EPIDEMIOLOGY	06-01-97/	05-31-98	FRED HUTCHINSON CANCER RESEARCH CENT	115,357
1P01AG14359-01	GAMBETTI, PIERLUIGI PATHOGENETIC MECHANISMS OF PRION DISEASES	06-15-97/	05-31-98	CASE WESTERN RESERVE UNIVERSITY	856,155
1R01AG14363-01	ZAGORSKI, MICHAEL G SOLUTION STRUCTURE OF THE AMYLOID BETA (1/42)	04-01-97/	03-31-98	CASE WESTERN RESERVE UNIVERSITY	170,185
1R01AG14364-01	WISE, JOHN A DESIGNING VOICE PROCESSING SYSTEMS FOR OLDER ADULTS	04-01-97/		EMBRY-RIDDLE AERONAUTICAL UNIVERSITY	
1R01AG14365-01	RUDBERG, MARK COGNITION, SOCIAL RELATIONSHIPS, AND FUNCTIONING	06-01-97/		UNIVERSITY OF CHICAGO	
1P01AG14366-01	LANSBURY, PETER T, JR ALZHEIMER AMYLOIDOGENESIS WITH NEW METHODS	06-01-97/	05-31-98	BRIGHAM AND WOMEN'S HOSPITAL	1,023,502
1R03AG14367-01	TURNER, ANTHONY S AGED OVARIECTOMIZED EME AS A MODEL FOR MENOPAUSE	04-01-97/	03-31-98	COLORADO STATE UNIVERSITY	72,458
1R01AG14369-01	BHASIN, SHALENDER SARCOPENIA--TESTOSTERONE DOSE RESPONSE IN OLDER MEN	05-01-97/	04-30-98	CHARLES R. DREW UNIVERSITY OF MED &	336,799
1R01AG14370-01	VIKRAM, BHADRASAIN A NOVEL TREATMENT FOR SMALL BREAST CANCERS	04-01-97/		MONTEFIORE MEDICAL CENTER (BRONX, NY	
1R01AG14372-01	RABINOVITCH, PETER S DOWNSTREAM EVENTS WERNER'S SYNDROME GENE ACTION	04-01-97/		UNIVERSITY OF WASHINGTON	
1R01AG14375-01	MATTHIASSON, HAUKUR MANAGING STRESS AND SATISFACTION AFTER CAREGIVING	07-01-97/		UNIVERSITY OF SOUTH FLORIDA	
1R29AG14376-01	TAYLOR, J ANDREW ARTERIAL STIFFNESS & AGE--EFFECTS ON CIRCULATORY CONTROL	06-01-97/	05-31-98	HEBREW REHABILITATION CENTER FOR AGE	123,014
1R15AG14377-01	KARLIN, NANCY J AD SUPPORT GROUPS: BARRIERS TO PARTICIPATION OVER TIME	01-01-97/		UNIVERSITY OF NORTHERN COLORADO	
5R01AG14379-02	KIMURA, JAMES H STRUCTURE AND FUNCTION OF CARTILAGE MACROMOLECULES	08-15-97/	07-31-98	CASE WESTERN RESERVE UNIV-HENRY FORD	210,444

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1P01AG14382-01	WIEDERHOLT, WIGBERT C AGE RELATED NEURODEGENERATIVE DISEASES IN MICRONESIA	03-01-97/02-28-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	1,732,410
1R01AG14388-01	STELMACH, GEORGE E AGE-RELATED CHANGES IN HUMAN MOTOR PERFORMANCE	01-01-97/	ARIZONA STATE UNIVERSITY	
1R01AG14390-01	AVIOLI, LOUIS V EFFECTS OF AGING ON MOUSE SKELETAL MASS AND DYNAMICS	04-01-97/	BARNES-JEWISH HOSPITAL	
1R01AG14392-01	ELDER, GREGORY A MURINE MODELS OF PRESENILIN I MUTATIONS	04-01-97/03-31-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	223,747
1R01AG14393-01	DORSA, DANIEL M IN VITRO MODELS OF ESTROGEN NEUROPROTECTION IN AGING	04-01-97/	UNIVERSITY OF WASHINGTON	
1R01AG14394-01	REGISTER, THOMAS C TISSUE SPECIFICITY OF HORMONE THERAPIES IN AGING FEMALES	04-01-97/	WAKE FOREST UNIVERSITY	
1R01AG14396-01	LAL, RATNESHWAR ABP-CHANNEL STRUCTURE & ACTIVITY IMAGED WITH AN AFM	04-01-97/	UNIVERSITY OF CALIFORNIA SANTA BARBA	
1R01AG14397-01	GAMBETTI, PIERLUIGI PRION DISEASES: PATHOGENESIS IN CELLS AND TISSUES	04-01-97/	CASE WESTERN RESERVE UNIVERSITY	
1R01AG14398-01	HOLLEMAN, DONALD R, JR EFFICACY OF OCCUPATIONAL THERAPY FOR PRIMARY CARE ELDERS	04-01-97/	UNIVERSITY OF KENTUCKY	
1R29AG14399-01	CHEN, QIAN STABILIZATION OF MATRIX STRUCTURE IN MATURE CARTILAGE	04-15-97/03-31-98	PENNSYLVANIA STATE UNIV HERSHEY MED	91,292
1R01AG14403-01	THIEMAN, ALICE A AGE-RELATED DIFFERENCES IN MENTAL PROCESSING	06-01-97/	IOWA STATE UNIVERSITY OF SCIENCE & T	
5R29AG14405-02	MORGANELLI, PETER M IGG FC RECEPTORS AND METABOLISM OF LDL IMMUNE COMPLEXES	08-15-97/07-31-98	DARTMOUTH COLLEGE	99,400
1R01AG14406-01	FLEISHER, LEE A EXERCISE TRAINING, HEART RATE VARIABILITY IN THE ELDERLY	04-01-97/	JOHNS HOPKINS UNIVERSITY	
1R29AG14409-01	BENNETT, STEFFANY A INFLAMMATORY AGENTS MEDIATE NEURODDEGENERATIVE MEMORY LOS	04-01-97/	ADIRONDACK BIOMEDICAL RESEARCH INSTI	
1R01AG14410-01	PARFITT, KAREN D CHANGES WITH AGING IN CAMP-MEDIATED SYNAPTIC PLASTICITY	04-01-97/	POMONA COLLEGE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R43AG14411-01	HOCHSCHILD, RICHARD OBJECTIVE TOOL FOR ASSESSING THE CARE NEEDS OF THE ELDER	12-15-96/	HOCH COMPANY	
1R01AG14412-01	PAVEZA, GREGORY J AGGRESSION AND VIOLENCE IN COMMUNITY BASED AD FAMILIES	08-15-97/07-31-98	UNIVERSITY OF SOUTH FLORIDA	232,224
1R01AG14414-01	FENNELL, VALERIE I VIETNAMESE AND RUSSIAN-JEWISH REFUGEE GRANDPARENTS	04-01-97/	GEORGIA STATE UNIVERSITY	
1R01AG14416-01	ZASSENHAUS, HANS P MITOCHONDRIAL DNA MUTATIONS AND AGING IN TRANSGENIC MICE	04-01-97/	ST. LOUIS UNIVERSITY	
1R01AG14417-01	BRONSON, RODERICK T GENETICS OF DISEASES OF AGED RATS	04-01-97/	TUFTS UNIVERSITY BOSTON	
1R01AG14418-01	KRITZ-SILVERSTEIN, DONNA C NUTRITION & COGNITIVE FUNCTION IN AN ELDERLY COHORT	04-01-97/	UNIVERSITY OF CALIFORNIA SAN DIEGO	
1R01AG14419-01	BURR, DAVID B HUMAN TIBIAL STRAIN IN VIVO:AGE, GENDER, FATIGUE EFFECTS	04-01-97/	INDIANA UNIV-PURDUE UNIV AT INDIANAP	
1R01AG14420-01	LIPSITZ, LEWIS A ESTROGEN AND BLOOD PRESSURE DYNAMICS IN AGING WOMEN	07-01-97/05-31-98	HEBREW REHABILITATION CENTER FOR AGE	136,176
1R01AG14421-01	RUBIN, ROBERT L SIGNIFICANCE OF EXTRACELLULAR OXIDATION BY NEUTROPHILS	04-01-97/	SCRIPPS RESEARCH INSTITUTE	
1R13AG14423-01	KRYSCIO, RICHARD J STATISTICAL METHODOLOGY IN ALZHEIMERS DISEASE RESEARCH	08-15-97/04-30-99	UNIVERSITY OF KENTUCKY	34,800
1R01AG14424-01	HIMES, CHRISTINE L BODY SIZE AND DISABILITY AT OLDER AGES	09-30-97/08-31-98	SYRACUSE UNIVERSITY	80,374
1R01AG14425-01	THOMPSON, PAUL D AGING, TESTOSTERONE, AND ATHEROSCLEROTIC RISK	04-01-97/	UNIVERSITY OF PITTSBURGH AT PITTSBUR	
1R01AG14426-01	BERLOWITZ, DAN R PRESSURE ULCERS AS A MEASURE OF NURSING HOME QUALITY	04-01-97/	BOSTON MEDICAL CENTER	
1R01AG14427-01	BERG, KATHERINE OUTCOMES FOLLOWING SNF POSTACUTE CARE	07-15-97/06-30-98	BROWN UNIVERSITY	146,905
1R01AG14430-01	FREIBERGER, WALTER ANALYSIS OF HEALTH-CARE-STATE TRANSITIONS IN THE ELDERLY	04-01-97/	BROWN UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R01AG14431-01	OLSON, MELODIE A CAREGIVER STRESS DEPRESSION ANXIETY AND IMMUNE STATUS	04-01-97/		MEDICAL UNIVERSITY OF SOUTH CAROLINA	
1R03AG14435-01	WOLD, BARBARA J MOLECULAR GENETICS OF MUSCLE DURING AGING	03-01-97/	02-28-99	CALIFORNIA INSTITUTE OF TECHNOLOGY	78,725
1R01AG14441-01	COLEMAN, PAUL D TAU PATHOLOGY AND SYNAPTIC MESSAGE IN ALZHEIMERS	05-01-97/	04-30-98	UNIVERSITY OF ROCHESTER	150,765
3R01AG14441-01S1	COLEMAN, PAUL D TAU PATHOLOGY AND SYNAPTIC MESSAGE IN ALZHEIMERS	09-15-97/	04-30-98	UNIVERSITY OF ROCHESTER	3,975
1R03AG14442-01	HAMERMAN, DAVID JOINT CHANGES IN THE OSTEOPETROTIC MOUSE	03-01-97/	08-31-98	YESHIVA UNIVERSITY	85,083
1R01AG14443-01	XU, XUEMIN AMYLOID PLAQUE FORMATION IN ALZHEIMER'S DISEASE: ROLE OF	07-01-97/		CASE WESTERN RESERVE UNIVERSITY	
1R29AG14444-01	RYAN, ALICE S OBESITY, GLUCOSE METABOLISM AND DIET IN OLDER WOMEN	02-01-97/		UNIVERSITY OF MARYLAND BALT PROF SCH	
1R13AG14445-01	MURPHY, CLAIRE L INNOVATIVE APPROACHES TO AGING AND CHEMOSENSORY SYSTEMS	05-01-97/	04-30-99	SAN DIEGO STATE UNIVERSITY	40,678
1R01AG14446-01	OSHIMA, JUNKO TARGETED MUTAGENESIS OF WERNER SYNDROME GENE	08-15-97/	06-30-98	UNIVERSITY OF WASHINGTON	188,750
1R29AG14447-01	KAREKEN, DAVID A OLFACTORY EVOKED RCBF IN ALZHEIMER DISEASE	04-01-97/		INDIANA UNIV-PURDUE UNIV AT INDIANAP	
1R01AG14448-01	TOUGER-DECKER, RIVA NUTRITION SCREENING OF NEW JERSEY ELDERLY	04-01-97/		UNIVERSITY OF MEDICINE & DENTISTRY O	
1P01AG14449-01	MUFSON, ELLIOTT J NEUROBIOLOGY OF MILD COGNITIVE IMPAIRMENT IN THE ELDERLY	09-01-97/	03-31-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	886,457
1R03AG14450-01	TATAR, MARC DEMOGRAPHY OF GENES IN NATURE AND THE LABORATORY	08-01-97/	07-31-99	BROWN UNIVERSITY	72,200
1R29AG14451-01	LAMB, BRUCE T TRANSGENIC MOUSE MODELS OF ALZHEIMERS DISEASE	04-15-97/	03-31-98	CASE WESTERN RESERVE UNIVERSITY	98,628
1R01AG14452-01	KURET, JEFFREY A STRUCTURE AND GENESIS OF TAU FILAMENTS	04-15-97/	03-31-98	NORTHWESTERN UNIVERSITY	217,573

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R37AG14453-01	BINDER, LESTER I ASSEMBLY AND POLARITY OF TAU FILAMENTS	04-01-97/03-31-98	NORTHWESTERN UNIVERSITY	202,394
1R01AG14455-01	WOLOSCHAK, MICHAEL GENE METHYLATION IN AGING RAT PITUITARY	04-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
5R01AG14456-02	TSENG, HUNG BIOLOGICAL FUNCTION OF BASONUCLIN	08-15-97/07-31-98	UNIVERSITY OF PENNSYLVANIA	185,956
1R15AG14458-01	HUANG, CHI-MING CELLULAR AND SYNAPTIC AGING IN THE CEREBELLUM	04-01-97/	UNIVERSITY OF MISSOURI KANSAS CITY	
1R01AG14459-01	ALEXANDER, CHARLES N REDUCING MORTALITY & COGNITIVE DECLINE IN BLACK ELDERLY	04-01-97/	MAHARISHI UNIVERSITY OF MANAGEMENT	
1R01AG14461-01	CHALFIE, MARTIN CATALASE GENES AND C ELEGANS	04-01-97/03-31-98	COLUMBIA UNIV NEW YORK MORNINGSIDE	199,703
1R15AG14462-01	TOPP, ROBERT STRENGTH VS AEROBIC EXERCISE ON FUNCTION OF THE ELDERLY	04-01-97/	MEDICAL COLLEGE OF OHIO AT TOLEDO	
1R15AG14463-01	VUKOVICH, MATTHEW D INHIBITION OF LIPOLYSIS BY INSULIN IN THE ELDERLY	06-01-97/	WICHITA STATE UNIVERSITY	
1R15AG14465-01	DAVIS, JOHN E EFFECT OF EXERCISE ON PHYSICAL FUNCTION IN FRAIL ELDERLY	06-01-97/	ALMA COLLEGE	
1R03AG14466-01	HENSLEY, KENNETH GLYCATION EFFECTS ON HISTONE STRUCTURE AND FUNCTION	01-01-97/	OKLAHOMA MEDICAL RESEARCH FOUNDATION	
1R01AG14467-01	MONNAT, RAYMOND J, JR MOLECULAR BASIS FOR WERNER SYNDROME GENETIC INSTABILITY	04-01-97/	UNIVERSITY OF WASHINGTON	
1R15AG14468-01	LEE, SANDRA L HUMAN INTERVERTEBRAL DISC AGING AND HERNIATION	04-01-97/	MIDWESTERN UNIVERSITY	
1R01AG14469-01	GARVIN, JEFFREY L RENAL RESPONSES TO ANGIOTENSIN CHANGE DURING MATURATION	07-01-97/	CASE WESTERN RESERVE UNIV-HENRY FORD	
1R29AG14470-01	SIH, RAHMAWATI EFFECTS OF PREGNENOLONE ADMINISTRATION ON MEMORY/AGING	04-01-97/	ST. LOUIS UNIVERSITY	
1R03AG14471-01	JONES, LESLIE S INTEGRIN AND FIBRONECTIN IN THE AGED HIPPOCAMPUS	01-01-97/	UNIVERSITY OF SOUTH CAROLINA AT COLU	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
5R01AG14472-02	GURWITZ, JERRY H PREVENTION OF ADVERSE DRUG EVENTS IN THE NURSING HOME	09-01-97/08-31-99	UNIVERSITY OF MASSACHUSETTS MEDICAL	452,450
5R29AG14473-02	REBECK, G WILLIAM APOE AND ITS RECEPTORS IN NORMAL AND ALZHEIMERS BRAIN	08-01-97/07-31-98	MASSACHUSETTS GENERAL HOSPITAL	111,494
1R01AG14474-01	SOUMERAI, STEPHEN B MEDICARE CAPITATION AND QUALITY OF CARE FOR ACUTE MI	03-15-97/02-28-98	HARVARD UNIVERSITY	279,998
1R15AG14475-01	LEVITT, MIRIAM ELDERCARE COORDINATION IN ILLINOIS	04-01-97/	NORTHERN ILLINOIS UNIVERSITY	
1R15AG14478-01	HORTOBAGYI, TIBOR ROLE OF STIFFNESS IN AGING	06-01-97/	EAST CAROLINA UNIVERSITY	
1R15AG14479-01	LUSARDI, MICHELLE M EXERCISE FOR MOBILITY PROBLEMS OF IMPAIRED ELDERS IN LTC	07-01-97/	UNIVERSITY OF CONNECTICUT STORRS	
1R15AG14481-01	BOOSALIS, MARIA G INTERACTION OF CYTOKINES AND ANOREXIA IN ELDERS	04-01-97/	UNIVERSITY OF KENTUCKY	
1R03AG14483-01	MONTINE, THOMAS J NEURON PROTEIN CHANGES IN AGING AND ALZHEIMER'S DISEASE	01-01-97/	VANDERBILT UNIVERSITY	
1R03AG14484-01	FINGERMAN, KAREN L ADULTS REASONING ABOUT PROBLEMS IN SOCIAL RELATIONSHIPS	04-01-97/03-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	66,597
1R29AG14487-01	MACKO, RICHARD F EXERCISE OF PATIENTS WITH HEMIPARETIC STROKE	05-01-97/04-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	104,475
1R01AG14489-01	LANGLAIS, PHILIP J AGE ENHANCED VULNERABILITY TO THIAMINE DEFICIENCY	04-01-97/	SAN DIEGO STATE UNIVERSITY	
1R03AG14490-01	KADISH, ALAN H AGING EFFECTS ON MYOCARDIAL REPOLARIZATION	02-15-97/07-31-98	NORTHWESTERN UNIVERSITY	74,000
1R03AG14491-01	ERIKSEN, K JEFFREY ELECTROPHYSIOLOGICAL MEASURES OF AGING	01-01-97/	OREGON HEALTH SCIENCES UNIVERSITY	
1R03AG14492-01	DAWSON, RALPH, JR TAURINE IN AGING SKELETAL MUSCLE	01-01-97/	UNIVERSITY OF FLORIDA	
1R03AG14493-01	CARLSON, NOEL G GLUTAMATE RECEPTOR PROCESSING IN AGING	03-01-97/02-28-99	UNIVERSITY OF UTAH	74,547

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14494-01	PIENTA, AMY M MARRIAGE, HEALTH AND RETIREMENT	01-01-97/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	
1R03AG14495-01	CAWTHON, RICHARD M SELECTION OF FAMILIES FOR GENETIC ANALYSES OF LONGEVITY	04-01-97/03-31-99	UNIVERSITY OF UTAH	67,837
1R03AG14496-01	WEBSTER, SCOTT D MECHANISM OF AB/CLQ BINDING IN ALZHEIMER'S DISEASE	01-01-97/	SUN HEALTH RESEARCH INSTITUTE	
1R03AG14497-01	BELLINGER, DENISE L SYMPATHETIC MODULATION OF T CELL PROLIFERATION IN AGING	09-01-96/	UNIVERSITY OF ROCHESTER	
1R03AG14498-01	CARP, RICHARD I MURINE LEUKEMIA VIRUS IN A MODEL OF ACCELERATED AGING	01-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R03AG14499-01	BRYSON, JAMES S PRETRANSPLANT CONDITIONING EFFECT ON AGED MICE	06-01-97/04-30-99	UNIVERSITY OF KENTUCKY	73,500
1R03AG14500-01	KANALEY, JILL A SKELETAL MUSCLE AND FAT OXIDATION IN MENOPAUSAL WOMEN	01-01-97/	SYRACUSE UNIVERSITY	
1R03AG14501-01	MACAULEY, JOHN B ANIMAL MODEL TO STUDY SOMATIC MUTATIONS IN AGING	03-01-97/02-28-99	JACKSON LABORATORY	81,050
1R03AG14502-01	THORNTON, CHARLES A PATHOGENESIS OF MYOTONIC DYSTROPHY	03-01-97/02-28-98	UNIVERSITY OF ROCHESTER	79,500
1R03AG14503-01	OTVOS, LASZLO CONFORMATION OF MODIFIED AMYLOID BETA PEPTIDES	01-01-97/	WISTAR INSTITUTE	
1R03AG14504-01	HARDY, MELISSA A RACIAL DIFFERENCES IN ACCUMULATING RETIREMENT BENEFITS	01-31-97/	FLORIDA STATE UNIVERSITY	
1R03AG14505-01	KELLER, EVAN T STEROID MODULATION OF INTERLEUKIN-6 RECEPTOR EXPRESSION	05-01-97/	EASTERN VIRGINIA MED SCH/MED COL HAM	
1R03AG14508-01	LA FERLA, FRANK M TRANSGENIC MOUSE MODEL OF INCLUSION BODY MYOSITIS	03-01-97/02-28-98	UNIVERSITY OF CALIFORNIA IRVINE	74,950
1R03AG14509-01	BOYD, MONICA POSTIMMIGRATION MOBILITY OF THE FOREIGN-BORN ELDERLY	09-30-97/12-30-98	FLORIDA STATE UNIVERSITY	49,999
1R03AG14510-01	WANG, HOAU-YAN AGE AND VASCULAR ALPHA-ADRENOCEPTOR FUNCTIONAL COUPLING	02-27-97/01-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	76,742

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R03AG14511-01	BRACHOVA, LIBUSE NEUROTOXICITY OF ACTIVATED GLIAL CELL INDUCED BY NEURONA	01-01-97/		SUN HEALTH RESEARCH INSTITUTE	
1R03AG14512-01	MILLER, ARNOLD L THE ROLE OF AMYLOID BETA PRECURSOR PROTEIN IN SYNAPTOGEN	01-01-97/		UNIVERSITY OF CALIFORNIA SAN DIEGO	
1R03AG14514-01	SALGAME, PADMINI EFFECT OF AGING ON T CELL RESPONSES TO M. TUBERCULOSIS	01-01-97/		TEMPLE UNIVERSITY	
1R03AG14515-01	KHARAZI, ALEXANDER I LYMPHOMA IN AGING C57BL/6 MICE: IMMUNOHISTOLOGICAL ANAL	01-01-97/		UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R03AG14516-01	TAM, CHICK F ZINC AND SIGNAL TRANSDUCTION IN AGED LYMPHOCYTE	01-01-97/		CALIFORNIA STATE UNIVERSITY LOS ANGE	
1R03AG14517-01	DREVETS, DOUGLAS A AGING AND THE ENDOTHELIAL INFLAMMATORY RESPONSE	01-01-97/		WEST VIRGINIA UNIVERSITY	
1R03AG14518-01	O'ROURKE, ANNE M AGE RELATED EFFECTS ON T LYMPHOCYTE ADHESION	03-01-97/	02-28-99	SCRIPPS RESEARCH INSTITUTE	87,500
1R03AG14519-01	BALIN, BRIAN J PLASMA TRANSGLUTAMINASE IN CEREBRAL AMYLOID ANGIOPATHY	01-01-97/		ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
7R03AG14520-02	DAVY, KEVIN P AGING/ENERGY/NUTRIENT BALANCE--ROLE OF SKELETAL MUSCLE	08-15-97/	01-31-00	COLORADO STATE UNIVERSITY	72,446
1R01AG14521-01	WEINSTEIN, MAXINE A BIODEMOGRAPHY OF STRESS AMONG THE ELDERLY	03-01-97/	02-28-99	GEORGETOWN UNIVERSITY	80,490
3R01AG14521-01S1	WEINSTEIN, MAXINE A BIODEMOGRAPHY OF STRESS AMONG THE ELDERLY	09-30-97/	02-28-99	GEORGETOWN UNIVERSITY	9,600
1R03AG14522-01	EBERHARDT, NORMAN L PILOT PROJECT RESEARCH GRANT PROGRAM FOR THE NIA	03-01-97/	02-28-98	MAYO FOUNDATION	71,506
1R03AG14524-01	MURDOCH, GEOFFREY H A MONOCLONAL ANTIBODY FOR 'DATING' SENILE PLAQUES	05-01-97/		OREGON HEALTH SCIENCES UNIVERSITY	
1R03AG14525-01	SELL, SUSAN M APOE ASSOCIATED EFFECTS ON INSULIN RESISTANCE DURING AGI	01-01-97/		UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1R03AG14526-01	ZLOKOVIC, BERISLAV AGING AND BLOOD BRAIN BARRIER AB TRASPORT IN PRIMATES	03-01-97/	02-28-98	UNIVERSITY OF SOUTHERN CALIFORNIA	82,414

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FY: 97				
1R03AG14527-01	JALONEN, TUULA O EFFECTS OF B-AMYLOID ON ASTROCYTE FUNCTION	01-01-97/	ALBANY MEDICAL COLLEGE OF UNION UNIV	
1R03AG14529-01	LORTON, DIANNE ROLE OF NEURAL-IMMUNE INTERACTIONS IN ARTHRITIS	01-01-97/	SUN HEALTH RESEARCH INSTITUTE	
1R03AG14530-01	TWOMBLY, DENNIS A AGE RELATED CHANGES IN CARDIAC CALCIUM CHANNELS	02-27-97/01-31-99	NORTHWESTERN UNIVERSITY	74,000
1R03AG14532-01	HELFAND, STEPHEN L GENE REGULATION IN DROSOPHILA--A MODEL TO STUDY AGING	03-01-97/02-28-99	UNIVERSITY OF CONNECTICUT HEALTH CEN	73,950
1R03AG14533-01	WEST, ROBIN L MEMORY BELIEFS IN RELATION TO GOALS AND TEST DIFFICULTY	05-15-97/04-30-99	UNIVERSITY OF FLORIDA	69,170
1R03AG14534-01	JOHNSON, MITZI M AGE AND THE EFFECTS OF SOCIAL CONTEXT IN PLANNING	01-15-97/	UNIVERSITY OF KENTUCKY	
1R03AG14535-01	BURGESS, MARIA L AGE DEPENDENT EXPRESSION OF THE CARIDAC MATRIX	03-01-97/12-31-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	73,421
1R03AG14536-01	LINDERMAN, JON MUSCLE FUNCITON AND NEUROMOTOR CONTROL IN AGING RATS	01-01-97/	OHIO STATE UNIVERSITY	
1R03AG14537-01	JEKA, JOHN J ADAPTATION AND POSTURAL CONTROL IN THE ELDERLY	06-01-97/	UNIVERSITY OF MARYLAND COLLEGE PK CA	
1R03AG14538-01	DE VILLIERS, WILLEM J S SCAVENGER RECEPTOR REGULATION BY PROTEOLYTIC RELEASE	01-01-97/	UNIVERSITY OF KENTUCKY	
1R03AG14539-01	PILCHER, JUNE J SLEEP AND HEALTH IN AN OLDER POPULATION	02-03-97/	BRADLEY UNIVERSITY	
1R03AG14540-01	WEBB, SUSAN R CD4+ T CELL FUNCTION IN AGING	03-01-97/01-31-98	SCRIPPS RESEARCH INSTITUTE	87,500
1R03AG14542-01	SCHUESSLER, RICHARD B AGE RELATED MECHANISMS OF ATRIAL FIBRILLATION	03-15-97/02-28-99	WASHINGTON UNIVERSITY	78,000
1R03AG14543-01	MOUNTZ, JOHN D AMYLOIDOSIS IN AGED CD2-FAS TRANSGENIC MICE	04-01-97/09-30-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	72,000
1R03AG14544-01	PAPASOZOMENOS, SOZOS C TAU PROTEIN PHOSPHORYLATION IN HEAT-SHOCKED RATS	01-01-97/	UNIVERSITY OF TEXAS HLTH SCI CTR HOU	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14545-01	ALBRIGHT, JOSEPH F SENESCENT CHANGES IN NK CELL MECHANISMS	04-01-97/03-31-99	GEORGE WASHINGTON UNIVERSITY	79,000
1R03AG14546-01	WOLF, GERALD L PARTICULATE DRUGS AND MONOCYTE ACTIVATION	01-01-97/	MASSACHUSETTS GENERAL HOSPITAL	
1R03AG14547-01	BOUND, JOHN MEASURING THE EFFECTS OF HEALTH ON RETIREMENT BEHAVIOR	03-01-97/02-28-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	69,337
1R03AG14548-01	PURE, ELLEN ACTIVATION OF SMOOTH MUSCLE CELLS IN EARLY ATHEROGENESIS	01-01-97/	WISTAR INSTITUTE	
1R03AG14549-01	HALPAIN, SHELLEY L AGING AND THE NEURONAL CYTOSKELETON	03-01-97/02-28-99	SCRIPPS RESEARCH INSTITUTE	87,500
1R03AG14550-01	HERMALIN, ALBERT I SOCIAL ENVIRONMENT AND HEALTH AMONG OLDER CHINESE	03-01-97/08-28-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	74,403
1R03AG14551-01	RADIC, MARKO Z SUPPRESSING MACROPHAGE FUNCTIONS IN ATHEROSCLEROSIS	03-01-97/02-28-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	75,536
1R03AG14552-01	STAFFORD, FRANK P THE WEALTH STATUS OF THE AGING POPULATION COHORTS	01-01-97/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R03AG14553-01	SWAIN, SUSAN L ANTIGEN--INDEPENDENT CHANGES IN AGED CD4 T CELLS	03-01-97/02-28-98	TRUDEAU INSTITUTE, INC.	84,000
5R01AG14554-06	MATTSON, MARK P B AMYLOID AND NEURONAL CALCIUM MISREGULATION	07-15-97/06-30-98	UNIVERSITY OF KENTUCKY	157,965
3R01AG14554-06S1	MATTSON, MARK P B AMYLOID AND NEURONAL CALCIUM MISREGULATION	07-15-97/06-30-98	UNIVERSITY OF KENTUCKY	3,675
1R03AG14555-01	TATE, BARBARA A MECHANISMS OF SLEEP DISRUPTION IN ALZHEIMERS DISEASE	03-01-97/02-28-98	MIRIAM HOSPITAL	78,209
1R03AG14556-01	BAMBRICK, LINDA L MOUSE TRISOMY 16: CALCIUM REGULATION AND CELL DEATH	01-01-97/	UNIVERSITY OF MARYLAND BALT PROF SCH	
1R03AG14557-01	KRAIG, ELLEN B AGING AND AUTOIMMUNE MYASTHENIA GRAVIS	03-01-97/02-28-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	72,500
1R03AG14558-01	LI, MIN AGE-RELATED MOLECULAR CHANGES IN MAMMALIAN BRAIN	01-01-97/	JOHNS HOPKINS UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14559-01	PENCKOFER, SUE M HOMOCYSTEINE & OXIDATIVE STRESS IN POSTMENOPAUSAL WOMEN	01-01-97/	LOYOLA UNIVERSITY MEDICAL CENTER	
1R01AG14561-01	PERCY, MAIRE E BIOLOGICAL ASPECTS OF DEMENTIA IN DOWN SYNDROME	04-01-97/	UNIVERSITY OF TORONTO	
1R03AG14562-01	POWERS, SCOTT K AGE-RELATED DECREASE IN DIAPHRAGMATIC FORCE PRODUCTION	05-01-97/	UNIVERSITY OF FLORIDA	
5R01AG14563-02	HUANG, XIN-YUN TYROSINE KINASES AND G PROTEIN SIGNALING	07-01-97/06-30-98	WEILL MEDICAL COLLEGE OF CORNELL UNI	138,406
1R03AG14564-01	CARLEY, DAVID W AGING EFFECTS ON SLEEP APNEA	03-01-97/02-28-99	UNIVERSITY OF ILLINOIS AT CHICAGO	74,426
1R15AG14565-01	SUMIDA, KENNETH D AGING AND TRAINING EFFECTS ON HEPATIC GLUCONEOGENESIS	07-15-97/06-30-00	CHAPMAN UNIVERSITY	93,741
1R03AG14566-01	SIROVER, MICHAEL A AGE RELATED ALTERATION IN NO INDUCED GAPDH MODIFICATION	04-01-97/03-31-99	TEMPLE UNIVERSITY	75,500
1R03AG14567-01	THADEPALLI, HARAGOPAL P-GLYCOPROTEIN IN AGING MACROPHAGES	01-01-97/	CHARLES R. DREW UNIVERSITY OF MED &	
1R03AG14568-01	SOMMERS, MITCHELL S AGING, AUDITORY SUPPRESSION AND FEQUENCY SELECTIVITY	03-01-97/08-31-98	WASHINGTON UNIVERSITY	46,253
1R03AG14569-01	SMITH, PRINCE C ETHNOGRAPHY-COMMUNITY ADVOCATES IN ENGAGING BLACK ELDERS	01-02-97/	UNIVERSITY OF MIAMI	
1R03AG14570-01	SCHILLING, MARGO L SERUM IG CONFOUNDS DIAGNOSIS OF INFLUENZA IN OLD PEOPLE	05-01-97/	EASTERN VIRGINIA MED SCH/MED COL HAM	
1R03AG14571-01	CORNWELL-JONES, CATHERINE A AGING & HOUSING EFFECTS ON OLFACTION & IMMUNE FUNCTION	01-01-97/	SYRACUSE UNIVERSITY	
1R03AG14572-01	MINGER, STEPHEN L NEURONAL STEM CELL REPLACEMENT IN A MODEL OF AGING	01-01-97/	UNIVERSITY OF KENTUCKY	
1R03AG14573-01	TAYLOR, WILLIAM R MOLECULAR MECHANISMS OF VASCULAR OXIDANT STRESS IN AGING	02-27-97/01-31-99	EMORY UNIVERSITY	76,405
1R03AG14574-01	SAMWICK, ANDREW A PENSIONS & SOCIAL SECURITY EFFECT ON RETIREMENT & SAVING	03-01-97/02-28-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	77,874

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R03AG14575-01	GOULD, KENNETH G THE CHIMPANZEE, A MODEL FOR PMS AND AGING	01-01-97/		EMORY UNIVERSITY	
1R03AG14576-01	KHAN-DAWOOD, FIRYAL S AGING FEMALE BABOON AND OVARIAN FUNCTION	04-01-97/	03-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR HOU	74,978
1R03AG14578-01	HARTMANN, HALI A NMDA LIKE NEUROTOXIN FROM AGING BRAIN	03-01-97/	02-28-99	BAYLOR COLLEGE OF MEDICINE	71,216
5R01AG14579-13	SOULES, MICHAEL R REPRODUCTIVE AGING IN NORMAL PREMENOPAUSAL WOMEN	09-01-97/	08-31-98	UNIVERSITY OF WASHINGTON	249,172
5R01AG14580-02	GALE, KAREN GLUTAMATE TRANSMISSION IN RHINAL CORTEX AND MEMORY	09-15-97/	06-30-98	GEORGETOWN UNIVERSITY	282,064
3R01AG14580-02S1	GALE, KAREN GLUTAMATE TRANSMISSION IN RHINAL CORTEX AND MEMORY	09-30-97/	06-30-98	GEORGETOWN UNIVERSITY	9,270
1R03AG14581-01	RUDNICK, WILLIAM M VISION AND AGING: AN INTEGRATE AND FIRE NEURAL MODEL	01-01-97/		OREGON HEALTH SCIENCES UNIVERSITY	
5R01AG14582-02	RANDALL, WILLIAM R MOLECULAR BASIS FOR ACHR STABILITY	09-01-97/	08-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	154,267
1R01AG14583-01	FORTINI, MARK E ACTIVITY OF THE ALZHEIMERS DISEASE PRESENILIN PROTEIN	05-01-97/	04-30-98	UNIVERSITY OF PENNSYLVANIA	211,473
5R01AG14584-02	CERNY, JAN REGULATION OF B CELL MEMORY	09-15-97/	08-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	236,906
5R01AG14585-07	SANZ, IGNACIO E GENETIC AND FUNCTIONAL STUDY OF HUMAN CDR3 REGIONS	09-30-97/	08-31-98	UNIVERSITY OF ROCHESTER	217,253
3R01AG14587-01S1	FRENKEL, KRYSTYNA AUTOANTIBODIES AS BIOMARKERS OF BREAST CANCER	03-15-97/	08-31-97	NEW YORK UNIVERSITY MEDICAL CENTER	37,559
5R01AG14587-02	FRENKEL, KRYSTYNA AUTOANTIBODIES AS BIOMARKERS OF BREAST CANCER	09-01-97/	08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	351,321
1R41AG14588-01	KAY, BRIAN K COMBINATORIAL RECOGNITION OF THE CELL DEATH DOMAIN	05-01-97/		NOVALON PHARMACEUTICAL CORPORATION	
1R41AG14589-01	ROMAN, LINDA L CASE-MANAGED INTERACTIVE VIDEO FOR CHF PATIENTS AT HOME	05-01-97/		H.E.L.P. INNOVATIONS, L.C.	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R43AG14590-01	ANDERSON, KRISTINE A I-CARE...AN INTERACTIVE CAREGIVER TRAINING PROGRAM	03-01-97/	ELDERCARE TRAINING NETWORK, INC.	
1R43AG14591-01	ARBAN, HOLLIS V DEVELOPING TELEPHONY SYSTEMS TO IMPROVE HEALTH CARE DELI	03-01-97/	TARGET TACTICS	
1R43AG14592-01	JOHNSON, DAVID C MOBILITY ASSIST FOR THE GERIATRIC & DEGENERATIVE PERSON	03-01-97/	JOHNSON KINETIC SYSTEMS CORPORATION	
1R43AG14593-01	NOELL, EUNICE D AN ENVIRONMENTAL APPROACH TO SLEEP DISORDERS	04-01-97/	SENIOR STYLE, LTD	
1R41AG14594-01	SAVAGE, HENRY C, JR BRIGHT LIGHT AUGMENTATION OF ANTIDEPRESSANTS IN AGING	03-01-97/	APOLLO LIGHT SYSTEMS, INC.	
1R03AG14595-01	SUN, WENN H ESTROGEN EFFECTS ON TRANSCRIPTIONAL FACTOR IKBA	04-01-97/03-31-98	CHILDREN'S MEMORIAL HOSPITAL (CHICAG	71,500
1R43AG14596-01	TORDELLA, STEPHEN J MATURE MARKET PROFILER--A NATIONAL AND LOCAL SYSTEM	09-15-97/09-14-99	DECISION DEMOGRAPHICS	99,984
1R43AG14597-01	KEYES, MARSHALL J HIP FRACTURE PREVENTION: AUTOMATIC AIRBAG FOR ELDERLY	03-01-97/	INDIVIDUAL AWARD--KEYES, MARSHALL J.	
1R43AG14598-01	GADBERRY, SHARON L VIDEO JOB INTERVIEW TRAINING FOR OLDER DISLOCATED WORKER	09-30-97/02-28-98	TRANSITIONS MANAGEMENT GROUP	100,000
1R43AG14599-01	ONGE, PAGE B TELESCOPING BATHING ASSEMBLY, HANDICAPPED BATHING DEVICE	06-15-97/	PAGE ONGE, ARCHITECT	
5R01AG14600-05	GIBSON, GARY E AGE/NUTRITION/GENES IN MODELS OF PSYCHIATIRC DISORDERS	09-01-97/08-31-98	WINIFRED MASTERSON BURKE REHAB HOSPI	248,548
1R01AG14601-01	STROM, BRIAN L EFFECTIVENESS OF RETROSPECTIVE DRUG UTILIZATION REVIEW	03-15-97/12-31-97	UNIVERSITY OF PENNSYLVANIA	279,384
1R43AG14602-01	GOYAL, RAVE DEVICE FOR AIDING MEMORY DYSFUNCTION IN ELDERLY	04-11-97/03-31-98	BIOMED AND NEURO-RESEARCH, INC.	100,000
1R43AG14603-01	WROBEL, JOSEPH STUDY OF MUSCLE STRENGTH LEVEL AND PHYSICAL CONDITION	01-01-97/	TWENTY FIRST CENTURY ENGINEERING	
1R43AG14604-01	ZUCKERMAN, BERT M EFFECTS OF NUTRITION ON MUSCLE DEGENERATION DURING AGING	03-01-97/	AMHERST BIOLOGICS	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R43AG14606-01	SPREHE, J TIMOTHY IMPACT OF PRERETIREMENT EDUCATION ON RETIREMENT BEHAVIOR	03-01-97/		NATIONAL COUNCIL ON AGING DEVELOP CO	
1R43AG14607-01	SWEARENGEN, JANNE P LONG TERM CARE QUALITY OF LIFE INDICATORS	03-01-97/		HEALTH INSIGHTS RESEARCH GROUP	
1R43AG14608-01	KITCHENS, ANNE L A COMPUTER WORKCENTER FOR INDEPENDENT LIVING	03-01-97/		SHARP SOLUTIONS, INC.	
1R43AG14609-01	SOKOLOFF, SHARON M PARAPROFESSIONAL TRAINING: EXERCISE FOR OLDER ADULTS	03-01-97/		MIKALIX AND COMPANY	
1R01AG14610-01	MAUK, DEBORAH L AGING AND GLOBAL VISUAL PERCEPTION	04-01-97/		VANDERBILT UNIVERSITY	
1R43AG14612-01	SPEER, JOHN F A GERIATRIC TRANSTELEPHONIC TRACKING SYSTEM	03-01-97/		SENIOR HEALTH SOLUTIONS	
1R43AG14613-01	MORRISON, JATONA L GERIATRIC SERVICE	04-09-97/	09-30-97	MULTUM INFORMATION SERVICES, INC.	96,969
1R43AG14615-01	THOMAS, RICHARD K ELDER SERVICES DECISION SUPPORT SYSTEM	05-01-97/	10-31-97	MEDICAL SERVICES RESEARCH GROUP	99,910
5R01AG14616-02	HARDY, JOHN A GENETIC STUDY INTO LRP RECEPTOR IN ALZHEIMERS DISEASE	09-01-97/	08-31-98	MAYO FOUNDATION	167,881
1R43AG14617-01	HYDE, JOAN J RESIDENT CENTERED INFORMATION SYSTEM FOR ASSISTED LIVING	05-01-97/	10-31-97	HEARTHSTONE ALZHEIMER CARE, LTD	99,941
1R43AG14618-01	HOBDAY, JOHN V CDROM/INTERNET ALZHEIMERS CAREGIVER EDUCATION PROGRAM	09-30-97/	07-31-98	PERCEPTUAL ENGINEERING, INC.	100,000
1R43AG14619-01	SOUTHAN, GARRY J A NOVEL SCAVENGER WITH A POTENTIAL TO INCREASE LIFE SPAN	03-01-97/		INOTEK, INC.	
1R43AG14620-01	BARBER, JACK R HAIRPIN RIBOZYME GENE THERAPY FOR ALZHEIMER'S DISEASE	07-01-96/		IMMUSOL, INC.	
1R43AG14621-01	DEE-CHIARELLO, EMILY WRITING TO COPE WITH CHANGE IN NORMAL AGING	03-01-97/		HADA RESEARCH AND COMMUNICATIONS	
1R43AG14622-01	COTTERMAN, ROBERT F UPDATING AND EXTENDING THE CPS ON CD	05-31-97/		UNICON RESEARCH CORPORATION	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 97					
1R43AG14623-01	HARRIST, RONALD S COMPUTER SOFTWARE APPLICATIONS FOR OLDER ADULTS	03-15-97/		SAGE SOFTWARE COMPANY	
1R43AG14624-01	LANDAU, AVI POC AUTOMATED MEDICATION DISPENSING FOR NURSING	03-01-97/		UI TECHNOLOGIES, INC.	
1R43AG14625-01	LANDAU, AVI AUTOMATION OF POC SYSTEMS IN LONG-TERM-CARE FACILITIES	03-01-97/		UI TECHNOLOGIES, INC.	
1R43AG14626-01	SCHAFER, MARK E PHYSIOLOGICAL CORRELATES OF ULTRASOUND EXPOSURE	03-01-97/		SONIC TECHNOLOGIES	
1R43AG14627-01	JOHNSON, CAROL L ASSESSING CAREGIVER STYLES WITH ELDERLY ILL	01-01-97/		SENIOR LIFE CONSULTANTS	
1R43AG14628-01	NORTON, JOHN W A NEW DEVICE FOR CLEAN UP OF FECAL INCONTINENCE	03-01-97/		STRIGIL COMPANY, LTD.	
1R43AG14629-01	DI BELLA, AARON L THE EMERGENCY HELP CENTER	03-01-97/		DIBELLA COMMUNICATIONS	
1R13AG14631-01	PARK, DENISE C MEDICAL INFORMATION PROCESSING AND AGING CONFERENCE	02-01-97/	07-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	49,950
1R01AG14632-01	KAUFMAN, STEPHEN J ALPHA 7 BETA1 INTEGRIN AND MUSCLE INTEGRITY	01-24-97/	12-31-97	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	237,612
5P01AG14633-02	HARDY, JOHN A PRESENILINS AND ALZHEIMERS DISEASE	09-01-97/	08-31-98	MAYO CLINIC JACKSONVILLE	1,050,359
5R01AG14634-11	MITTELMAN, MARY S AD CAREGIVER WELL BEING--COUNSELING/INSTITUTIONALIZATION	09-01-97/	08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	108,000
9R01AG14636-23	ZIRKIN, BARRY R REGULATION OF ANDROGEN SECRETION IN MAMMALS	04-01-97/		JOHNS HOPKINS UNIVERSITY	
1R01AG14637-01	ROGERS, TERRY B PHOSPHATASES IN EXCITATION/CONTRACTION COUPLING	12-01-96/	11-30-97	UNIVERSITY OF MARYLAND BALT PROF SCH	228,118
1P60AG14638-01	CASSEL, CHRISTINE K HEARTS, AGING & RATINAL PRESCRIBING	07-01-97/		MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1P60AG14641-01	LAVIZZO-MOUREY, RISA PENN OAIC	07-01-97/		UNIVERSITY OF PENNSYLVANIA	

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FY: 97					
1P60AG14642-01	CZAJA, SARA J MIAMI CENTER TO ENHANCE THE INDEPENDENCE OF OLDER ADULTS	07-01-97/		UNIVERSITY OF MIAMI CORAL GABLES	
1R13AG14643-01	GERSHON, ANNE A THIRD INTERNATIONAL CONFERENCE ON THE VIRUS	04-01-97/	03-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	22,800
1R13AG14644-01	MILLER, RICHARD A 1997 GSA MEETING--BIOLOGY OF AGING	09-01-97/	07-31-98	GERONTOLOGICAL SOCIETY OF AMERICA	29,300
1R01AG14646-01	ZHOU, XIAO-HUA A ANALYTIC METHODS FOR TWO-PHASE DESIGNS IN AGING STUDIES	08-01-97/		INDIANA UNIV-PURDUE UNIV AT INDIANAP	
1R13AG14647-01	CURB, JESS D HONOLULU PRECONGRESS: 1997 WORLD CONGRESS OF GERONTOLOGY	08-16-97/		STAUB PACIFIC HLTH FDN-HEALTH RES IN	
1R01AG14648-01	GREENAMYRE, JOHN T EXCITOTOXIC--BIOENERGETIC INTERACTIONS	08-01-97/	05-31-98	EMORY UNIVERSITY	222,380
1R01AG14649-01	HAWKINS, DAVID A AGING AND MUSCLE ENERGETICS AND PERFORMANCE	07-01-97/		UNIVERSITY OF CALIFORNIA DAVIS	
1R13AG14651-01	MEYDANI, MOHSEN PROLONGATION OF HEALTHY LIFE SPAN:PRACTICAL APPROACHES T	08-01-97/		INTERNTL ASSN OF BIOMEDICAL GERONTOL	
1R01AG14652-01	STOLLER, ELEANOR P MULTI-METHOD STUDY OF GRANDPARENTING BY RACE AND GENDER	09-01-97/		UNIVERSITY OF FLORIDA	
1R29AG14653-01	JOSHI, PRATIBHA C ENDOTOXIN AND AGE-RELATED CHANGES IN IMMUNE RESPONSE	07-01-97/		UNIVERSITY OF MISSISSIPPI MEDICAL CE	
1R01AG14656-01	BELSKY, JAY INTERGENERATIONAL RELATIONS IN ADULTHOOD	09-30-97/	08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	57,668
1R01AG14657-01	HUANG, TING-TING OXYGEN FREE RADICALS AND CARDIOMYOPATHY	07-01-97/		UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R01AG14659-01	HERMANN, JANICE R CR/CU:LIPID METAB POST MENOPUSAL HYPERCHOLESTEROLEMIN	08-01-97/		OKLAHOMA STATE UNIVERSITY STILLWATER	
1R01AG14661-01	SALTHOUSE, TIMOTHY A COMMON AND UNIQUE AGE-RELATED EFFECTS ON COGNITION	07-01-97/		GEORGIA INSTITUTE OF TECHNOLOGY	
1R13AG14662-01	FINK, ANTHONY L 1997 FASEB SUMMER RESEARCH CONFERENCE ON AMYLOID	08-01-97/	07-31-98	FEDERATION OF AMER SOC FOR EXPER BIO	15,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14663-01	GRADY, DEBORAH URINARY INCONTINENCE: ECONOMICS AND PATIENT PREFERENCE	07-01-97/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R01AG14664-01	KOEPSELL, THOMAS D SAFETY AND MOBILITY OF OLDER DRIVERS: CASE-CONTROL STUDY	07-01-97/	UNIVERSITY OF WASHINGTON	
1R01AG14666-01	WISNIEWSKI, HENRYK M REGULATION OF FIBRILLIZATION OF BETA-PROTEIN IN CULTURE	07-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R01AG14668-01	SRIVASTAVA, MEERA KNOCKOUT MOUSE AND REGULATION OF SYNEXIN (ANNEXIN VII)	07-01-97/	HENRY M. JACKSON FDN FOR THE ADV MIL	
1R01AG14670-01	PAPPAS, BRUCE A CHRONIC ISCHEMIA OF RETINA AND BRAIN	07-01-96/	CARLETON UNIVERSITY	
1R01AG14671-01	STERN, YAAKOV IMAGING COMPENSATION AND RESERVE IN ALZHEIMERS DISEASE	09-30-97/08-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	423,465
1R01AG14672-01	WALSH, MICHAEL J PRESENILIN 1 IN EARLY AND LATE ONSET ALZHEIMER'S DISEASE	07-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R01AG14675-01	REST, JAMES R FACTORS INFLUENCING DEVELOPMENTAL OUTCOMES IN MIDDLE AGE	07-01-97/	UNIVERSITY OF MINNESOTA TWIN CITIES	
1R01AG14676-01	STELMACH, GEORGE E ALTERED MOVEMENT STRUCTURE IN THE ELDERLY	09-01-97/08-31-98	ARIZONA STATE UNIVERSITY	152,640
1R01AG14677-01	URBANSKI, HENRYK F SEX STEROID AND AGING-ASSOCIATED NEUROPATHOLOGY	07-01-97/	OREGON REGIONAL PRIMATE RESEARCH CEN	
1R01AG14680-01	DURNER, MARTINA APOE AND MITOCHONDRIAL MUTATIONS IN ALZHIMERS DISEASE	07-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R01AG14684-01	OWSLEY, CYNTHIA VEHICLE CRASHES, INJURIES AND OLDER DRIVERS	09-30-97/08-31-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	184,109
1R01AG14688-01	DE BEER, FREDERICK C SPLA2--INFLUENCE ON LIPOPROTEIN METABOLISM	08-15-97/05-31-98	UNIVERSITY OF KENTUCKY	166,033
1R01AG14690-01	RORIE, DUANE K AGING AND ADRENAL MEDULLARY SECRETION IN RATS	07-01-97/	MAYO FOUNDATION	
1R01AG14691-01	LOEWENSTEIN, DAVID A ECOLOGICAL VALIDITY & FUNCTIONAL ASSESSMENT IN DEMENTIA	07-01-97/	UNIVERSITY OF MIAMI	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R29AG14692-01	GOSSELIN, LUC E COLLAGEN METABOLISM IN AGING MUSCLE AFTER INJURY	07-01-97/	STATE UNIVERSITY OF NEW YORK AT BUFF	
1R01AG14694-01	EPSTEIN, CHARLES J MITOCHONDRIAL FREE RADICALS AND AGING	08-01-97/07-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	206,013
1R01AG14695-01	FINE, RICHARD E APP & APOE DYNAMICS & INTERACTION IN CNS NEURONS IN VIVO	07-01-97/	BOSTON UNIVERSITY	
1R13AG14696-01	MOR, VINCENT INTERNATIONAL LONG-TERM CARE CONFERENCE: INTERRAI IN RI	04-25-97/	BROWN UNIVERSITY	
1R01AG14699-01	ANDERSON, SHARON PATHOPHYSIOLOGY OF THE AGING KIDNEY	09-30-97/08-31-98	OREGON HEALTH SCIENCES UNIVERSITY	254,269
9R01AG14701-12	GLIMCHER, MELVIN J NATURE OF BONE MINERAL--INCEPTION, MATURATION, AGING	03-11-97/11-30-97	CHILDREN'S HOSPITAL (BOSTON)	341,801
1R29AG14709-01	HARADA, NANCY D PHYSICAL ACTIVITY IN ASIAN PACIFIC ELDERS	09-01-97/	UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R29AG14710-01	RUBINSTEIN, DANIEL B AGING AND THE B CELL REPERTOIRE	07-01-97/	BOSTON MEDICAL CENTER	
1R01AG14711-01	WATSON, RONALD R CYTOKINE DYSREGULATION AND IMMUNE DYSFUNCTION IN AGING	06-01-97/	UNIVERSITY OF ARIZONA	
1P01AG14712-01	MORLEY, JOHN E MEMORY DEFICITS IN THE SAMP8 MOUSE	07-01-97/	ST. LOUIS UNIVERSITY	
1R01AG14713-01	TANZI, RUDOLPH E MECHANISM OF PRESENILIN 1--ASSOCIATED CELL DEATH	08-15-97/07-31-98	MASSACHUSETTS GENERAL HOSPITAL	291,438
1R29AG14714-01	HORTOBAGYI, TIBOR MUSCLE HYPERTROPHY AND AGING	07-01-97/	EAST CAROLINA UNIVERSITY	
1R29AG14715-01	GALLAGHER, DYMPNA SARCOPENIA--MUSCLE LOSS IN ELDERLY AFRICAN AMERICANS	09-01-97/08-31-98	ST. LUKE'S ROOSEVELT HOSP CTR (NEW Y	134,691
1R01AG14716-01	KANT, ASHIMA K CORRELATES OF DIET QUALITY, AND TRENDS IN OLDER ADULTS	07-01-97/	QUEENS COLLEGE	
1R01AG14717-01	SNYDER, PETER J WILL TESTOSTERONE IMPROVE RECONDITIONING IN ELDERLY MEN?	04-01-97/	UNIVERSITY OF PENNSYLVANIA	

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FY: 97				
1R01AG14718-01	FITZPATRICK, LORRAINE A CORONARY CALCIFICATION ASSOCIATED WITH ESTROGEN STATUS	10-01-96/	MAYO FOUNDATION	
1R01AG14720-01	VERNON, SALLY W DEVELOPING THE MAMMOGRAPHY HABIT	09-01-97/	UNIVERSITY OF TEXAS HLTH SCI CTR HOU	
1R01AG14721-01	ISACSON, OLE PRIMATE MODEL OF CHOLINERGIC CELL LOSS & COGNITIVE DEFIC	07-01-97/	MC LEAN HOSPITAL (BELMONT, MA)	
1R01AG14722-01	PAVLIK, EDWARD J AGING & BREAST CANCER SUSCEPTIBILITY IN THE HOME	07-01-97/	UNIVERSITY OF KENTUCKY	
1R01AG14723-01	DAWSON, VALINA L NEURO-CYTOKINE INTERACTIONS IN ALZHEIMER'S DISEASE	07-01-97/	JOHNS HOPKINS UNIVERSITY	
1R01AG14724-01	MALIK, MAZHAR N CASCADE EFFECT OF MULTIPLE PROTEASES IN PROCESSING OF AP	07-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R01AG14725-01	MC LAUGHLIN, MARGARET K FEMALE AGE, OVARIAN CYCLICITY AND VASCULAR BEHAVIOR	07-01-97/	MAGEE-WOMEN'S HOSPITAL	
7R29AG14726-02	CATALDO, ANNE M ENDOCYTIC PATHWAY IN ALZHEIMERS DISEASE	11-01-97/07-31-98	NATHAN S. KLINE INSTITUTE FOR PSYCH	60,900
1R01AG14727-01	CRYSTAL, STEPHEN HEALTH INEQUALITY, DISABLEMENT, AND CUMULATIVE ADVANTAGE	07-01-97/	RUTGERS THE STATE UNIV NEW BRUNSWICK	
1R01AG14728-01	KENNEY, WILLIAM L, JR AGE & INTEGRATED CARDIOVASCULAR RESPONSE TO HEAT STRESS	07-01-97/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	
1R01AG14729-01	HARRISON, DAVID E DEVELOPMENT OF PREMATURE AGING IN DOWN SYNDROME	07-01-97/	JACKSON LABORATORY	
1R01AG14730-01	SCHWARTZ, LAWRENCE M GENETIC & BIOCHEMICAL ANALYSIS OF PROGRAMMED CELL DEATH	12-01-96/11-30-97	UNIVERSITY OF MASSACHUSETTS AMHERST	159,267
1R01AG14732-01	BARIN, KAMRAN ADAPTATION OF POSTURAL CONTROL MECHANISMS IN THE ELDERLY	07-01-97/	OHIO STATE UNIVERSITY	
1R13AG14733-01	GERSTENBLITH, GARY VALUE OF INVASIVE CARDIOVASCULAR PROCEDURES IN THE AGED	09-01-97/	JOHNS HOPKINS UNIVERSITY	
1R01AG14735-01	QUINLAN, KATHLEEN M MIND/BODY PROJECT FOR ALZHEIMER'S AND PEDIATRIC PATIENTS	07-01-97/	UNIVERSITY OF NEVADA RENO	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14736-01	JOHNSON, COLLEEN L DEMOGRAPHIC SHIFTS AND CHANGING FAMILY RESPONSES TO OLDE	07-01-97/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R01AG14740-01	CASABURI, RICHARD THERAPIES FOR SARCOPENIA IN OBSTRUCTIVE LUNG DISEASE	07-01-97/	HARBOR-UCLA RESEARCH & EDUC INST	
1R01AG14741-01	RUDBERG, MARK OUTCOMES OF NURSING HOME RESIDENTS WITH DEMENTIA	07-01-97/	UNIVERSITY OF CHICAGO	
1R01AG14743-01	MENDELSON, JACK H AGING, BREAST CANCER AND ESTROGENS	07-01-97/	MC LEAN HOSPITAL (BELMONT, MA)	
1R01AG14744-01	HYMAN, BRADLEY T PRESENILINS AND ALZHEIMERS DISEASE	08-01-97/07-31-98	MASSACHUSETTS GENERAL HOSPITAL	210,710
1R01AG14746-01	SIERRA, LUIS F MECHANISM OF CELL GROWTH INHIBITION BY THIOSTATIN	09-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG14747-01	KALARIA, RAJESH N VASCULAR FACTORS IN ALZHEIMER'S DISEASE	07-01-97/	CASE WESTERN RESERVE UNIVERSITY	
1R01AG14748-01	SCHMIEDT, RICHARD A PHYSIOLOGICAL STUDIES OF AGE RELATED HEARING LOSS	09-01-97/08-31-98	MEDICAL UNIVERSITY OF SOUTH CAROLINA	166,072
1R01AG14749-01	KRAUSE, NEAL M RELIGION, AGING, AND HEALTH	09-30-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	292,642
1P01AG14751-01	FINCH, CALEB E MODELS OF ESTROGEN INTERACTIONS WITH ALZHEIMERS DISEASE	09-01-97/07-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	789,583
1R01AG14752-01	EARLY, CHRISTOPHER J GENETICS OF THE RESTLESS LEGS SYNDROME	07-01-97/	JOHNS HOPKINS UNIVERSITY	
1R13AG14754-01	TRIPP-REIMER, TONI VITALITY THROUGHOUT THE ADULT LIFECYCLE: INTERVENTIONS T	08-28-97/	UNIVERSITY OF IOWA	
1R01AG14756-01	PARR, JOYCE CULTURE-SENSITIVE INTERVENTIONS IN OLDER CANCER PATIENTS	07-01-97/	UNIVERSITY OF SOUTH FLORIDA	
1R01AG14760-01	KELLER, EVAN T INTERLEUKIN-6 AND AGE-RELATED OSTEOPOROSIS IN MEN	07-01-97/	EASTERN VIRGINIA MED SCH/MED COL HAM	
1R01AG14761-01	GALILI, URI ENHANCING INFLUENZA VACCINE IMMUNOGENICITY BY ANTI-GAL	07-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14762-01	SCHENKMAN, MARGARET EXERCISE FOR ELDERS: FUNCTIONAL, MUSCLE, JOINT CHANGES	07-01-97/	DUKE UNIVERSITY	
1R03AG14763-01	NEL, ANDRE E MAPK CASCADES AND FUNCTION DECLINE OF AGED T CELLS	08-01-97/07-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	75,321
1R01AG14764-01	FOSTER, WILLIAM M BRONCHIAL AIRWAY MUCOCILIARY FUNCTION IN THE AGING LUNG	07-01-97/	JOHNS HOPKINS UNIVERSITY	
1R01AG14765-01	MITCHELL, GARY F AGING, VENTRICULAR/VASCULAR COUPLING AND CARDIAC EVENTS	07-01-97/	BRIGHAM AND WOMEN'S HOSPITAL	
1R01AG14767-01	WOLF, STEVEN L INTENSE TAI CHI EXERCISE TRAINING IN OLDER ADULTS	09-15-97/08-31-98	EMORY UNIVERSITY	453,933
1R03AG14770-01	VELLEMAN, SANDRA G MUSCLE REGENERATION--SATELLITE CELL EXTRACELLULAR MATRIX	08-01-97/07-31-99	OHIO STATE UNIVERSITY	51,750
1R01AG14772-01	HIRSCH, BARRY T LABOR MARKET TRANSITIONS AMONG OLDER WORKERS	07-01-97/	FLORIDA STATE UNIVERSITY	
1R01AG14773-01	ISSA, JEAN-PIERRE J PROMOTER METHYLATION DURING AGING	07-01-97/	JOHNS HOPKINS UNIVERSITY	
1R01AG14774-01	KIYAK, H ASUMAN INTERGENERATIONAL RELATIONS: OLD AND NEW IMMIGRANTS	07-01-97/	UNIVERSITY OF WASHINGTON	
1R29AG14775-01	KAUFMAN, JAY RACIAL/ETHNIC VARIATION IN SES EFFECTS ON HEALTH	07-01-97/	LOYOLA UNIVERSITY MEDICAL CENTER	
1R03AG14776-01	SCARPACE, PHILIP J BETA 2-ADRENERGIC INDUCTION OF MYOSIN ISOFORMS WITH AGE	05-01-97/	UNIVERSITY OF FLORIDA	
1R03AG14778-01	TIMBERLAKE, MICHAEL F HEALTH AND SUPPORT OF THE ELDERLY IN ZIMBABWE	06-01-97/	KANSAS STATE UNIVERSITY	
1R03AG14779-01	POWERS, SCOTT K BETA 2 AGONIST RESTORATION OF MUSCLE MASS IN AGED RATS	07-15-97/06-30-99	UNIVERSITY OF FLORIDA	64,955
1R01AG14780-01	REICHEK, NATHANIEL VASCULAR STIFFNESS IN AGING: NEW METHODS	07-01-97/	ALLEGHENY-SINGER RESEARCH INSTITUTE	
1R01AG14781-01	MC KNIGHT, A JAMES INDEPENDENT TRANSPORTATION FOR THE ELDERLY	06-01-97/	NATIONAL PUBLIC SERVICES RESEARCH IN	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14782-01	WADE, WILLIAM F FUNCTION OF MHC CLASS II ON AGED MICE	08-01-97/07-31-98	DARTMOUTH COLLEGE	80,832
1R01AG14785-01	PIETRAS, RICHARD J NEW ENDOCRINE THERAPY IN OLDER WOMEN WITH BREAST CANCER	08-15-97/06-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	116,462
1R01AG14786-01	JOHNSON, LARRY DECLINING SPERMATOGENIC POTENTIAL IN YOUNG AND AGED MEN	07-01-97/	TEXAS A&M UNIVERSITY HEALTH SCIENCE	
1R29AG14787-01	WIARDA, DOROTHEA A EXPERIMENTS AND MODELING OF BREAST CELL AGING	07-01-97/	UNIVERSITY OF TENNESSEE KNOXVILLE	
1R29AG14788-01	STERN, AMY S DETERMINANTS OF FUNCTIONAL STATUS AND HEALTH CARE USE	08-01-97/	BOSTON COLLEGE	
1R01AG14789-01	SIMPSON, ROBERT U 1,25(OH)2D3, EXTRACELLULAR MATRIX AND THE AGING HEART	08-01-97/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R03AG14790-01	HACKSHAW, KEVIN V FUNCTIONAL CHARACTERIZATION OF THE NOVEL FGF-1 PROMOTER	05-01-97/	OHIO STATE UNIVERSITY	
1R01AG14791-01	KELLER, MIGNONETTE N GRANDPARENTING: ISSUES FOR AGING RESEARCH	07-01-97/	HOWARD UNIVERSITY	
1R01AG14792-01	VAN PETTEN, CYMA K COGNITIVE AND NEURAL BASES OF AGING AND MEMORY	08-15-97/07-31-98	UNIVERSITY OF ARIZONA	284,008
1R01AG14793-01	FEDARKO, NEAL S HUMAN OSTEOBLAST MODELS OF SKELETAL AGING	07-01-97/	JOHNS HOPKINS UNIVERSITY	
1R01AG14794-01	MUTRAN, ELIZABETH J HOMEMAKERS IN MIDLIFE AND THEIR MENTAL HEALTH	07-01-97/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
1R01AG14795-01	LASCH, KATHRYN E HEALTH AND RETIREMENT DYNAMICS	07-01-97/	NEW ENGLAND MEDICAL CENTER	
1R03AG14796-01	MC CONATHY, WALTER J REGULATION OF NEURONAL BETA-AMYLOID AND TAU PROTEINS	05-01-97/	UNIVERSITY OF NORTH TEXAS HLTH SCI C	
1R03AG14797-01	WESTERINK, MARIA A ELDERLY IMMUNE RESPONSE TO PNEUMOCOCCAL POLYSACCHARIDE	07-01-97/	MEDICAL COLLEGE OF OHIO AT TOLEDO	
1R01AG14798-01	POWELL, DONALD A EMOTIONAL CHANGES AND AGING	04-01-97/	UNIVERSITY OF SOUTH CAROLINA AT COLU	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14799-01	VELDHUIS, JOHANNES D AGING GH AXIS IN POSTMENOPAUSAL WOMEN	03-01-97/02-28-98	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	266,477
1R55AG14800-01	FRIEDBERG, LEORA PARTIAL RETIREMENT AND PART TIME WORK AMONG THE ELDERLY	09-30-97/09-29-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	50,000
7R03AG14801-02	GOULD, THOMAS J HYPEROXIA AND RESISTANT RATS--MODELS OF CEREBELLAR AGING	09-30-97/09-29-99	UNIVERSITY OF COLORADO AT BOULDER	72,542
1R03AG14803-01	WALSH, MICHAEL J TYROSINE NITROSYLATION, AGING AND NEUROLOGICAL DISEASE	05-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R03AG14804-01	CURRAN, TIMOTHY E EVOKED POTENTIALS OF A SENSORY UNDERLOAD SIMULATION	06-01-97/	CASE WESTERN RESERVE UNIVERSITY	
1R03AG14805-01	THOMPSON, ROBERT W SMOOTH MUSCLE CELL SENESCENCE IN AORTIC ANEURYSMS	07-15-97/06-30-99	WASHINGTON UNIVERSITY	76,949
1R03AG14806-01	AGREE, EMILY M INTERGENERATIONAL TRASFERS AND KIN NETWORKS AMONG OLDER	05-01-97/	JOHNS HOPKINS UNIVERSITY	
1R03AG14807-01	BELLINGER, DENISE L NEURAL-IMMUNE SIGNALING IN OLD TH1 AND TH2 DOMINANT MICE	01-01-97/	UNIVERSITY OF ROCHESTER	
1R03AG14808-01	BLOOM, DAVID E PENSION SYSTEM IN SOUTH AFRICA	09-30-97/09-29-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	54,007
1R03AG14809-01	MC CLELLAN, MARK B ECONOMIC CONSEQUENCES OF HEALTH EVENTS	08-15-97/08-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	74,804
1R03AG14810-01	SWEARER, JOAN M BEHAVIORAL SLOWING WITH AGE	05-01-97/	UNIVERSITY OF MASSACHUSETTS MEDICAL	
1R03AG14811-01	ROSENTHAL, NADIA A GENE EXPRESSION IN THE DEVELOPING AND AGING HEART	09-01-97/08-31-99	MASSACHUSETTS GENERAL HOSPITAL	71,750
1R03AG14812-01	KIRMAN, IRENA A NOVEL STRATEGY TO AUGMENT THE IMMUNE RESPONSE TO INFLU	07-01-97/	WEILL MEDICAL COLLEGE OF CORNELL UNI	
1R03AG14813-01	SHALLEN, KAREN C HEALTH, WEALTH AND WORK--IMMIGRANTS IN THE US	08-01-97/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	21,081
1R03AG14814-01	SHEA, THOMAS B IMPACT OF PHOSPHOLIPIDS ON TAU IN AGING AND AD	07-01-97/	UNIVERSITY OF MASSACHUSETTS LOWELL	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14815-01	STEVENS, ANN H EFFECTS OF JOB LOSS ON OLDER WORKERS	05-01-97/	RUTGERS THE STATE UNIV NEW BRUNSWICK	
1R03AG14816-01	WAITE, LINDA J FUNCTIONING COMMUNITY AND LIVING ARRANGEMENTS OF ELDERS	08-01-97/07-31-99	NATIONAL OPINION RESEARCH CENTER	55,719
1R03AG14817-01	CRYSTAL, STEPHEN WIDOWHOOD DIVORCE AND POVERTY AMONG WOMEN AT MIDLIFE	05-01-97/	RUTGERS THE STATE UNIV NEW BRUNSWICK	
1R03AG14818-01	GUSTMAN, ALAN L AGING IMMIGRANTS SOCIAL SECURITY AND TRANSFERS	05-01-97/	NATIONAL BUREAU OF ECONOMIC RESEARCH	
1R03AG14819-01	SRIVASTAVA, OM P AGE-RELATED GLYCATION OF LENS CRYSTALLINS FRAGMENTS	05-01-97/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1R03AG14820-01	CHAKRAVARTI, BULBUL MOLECULAR BASIS OF THE IMMUNE DEFICIENCY OF THE EDERLY	05-01-97/	UNIVERSITY OF ROCHESTER	
1R03AG14822-01	WEINDRUCH, RICHARD H MITOCHONDRIAL DYSFUNCTION IN AGING RAT MYOCARDIUM	05-01-97/	UNIVERSITY OF WISCONSIN MADISON	
1R03AG14823-01	BORGATTA, EDGAR F A FOLLOW-UP STUDY OF AGING IN ALASKA: PILOT PHASE	05-01-97/	UNIVERSITY OF WASHINGTON	
1R03AG14824-01	GERHARD, GLENN S SCREENING FOR MITOCHONDRIAL DNA DELETIONS	05-01-97/	PENNSYLVANIA STATE UNIV HERSHEY MED	
1R03AG14825-01	ADKINS, REBECCA D AGING, T CELLS, AND AUTOANTIBODIES	06-01-97/	UNIVERSITY OF MIAMI	
1R03AG14826-01	SAITO, HIROSHI ALTERED CARDIAC ACUTE PHASE RESPONSES IN AGED ANIMAL	07-15-97/06-30-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	
1R03AG14827-01	PRATICO, DOMENICO OXIDATIVE STRESS ISOPROSTANES AND ALZHEIMER'S DISEASE	05-01-97/	UNIVERSITY OF PENNSYLVANIA	
1R03AG14828-01	BRAZEAU, GAYLE A MECHANISNS OF THE MYOPROTECTIVE ACTION OF ESTROGEN	06-01-97/	UNIVERSITY OF FLORIDA	
1R03AG14829-01	ROSEN, GEARLD M IN VIVO DETECTION OF FREE RADICALS IN AGED MICE	07-15-97/06-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	74,000
1R03AG14831-01	ONODA, JAMES M ROLE OF ENDOTHELIUM IN IMMUNE DYSFUNCTION OF THE AGED	05-01-97/	WAYNE STATE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14832-01	ZASSENHAUS, HANS P TRANSGENIC MOUSE MODEL FOR MITOCHONDRIAL AGING	07-15-97/06-30-99	ST. LOUIS UNIVERSITY	73,500
1R03AG14833-01	KESSLER, DANIEL P PUBLIC POLICY TOWARD LIVING WILLS	08-15-97/08-14-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	74,804
1R03AG14834-01	COLLINS, KIM D OXIDATIVE DNA DAMAGE REPAIR IN CARDIOVASCULAR AGING	05-12-97/	UNIVERSITY OF MARYLAND BALT PROF SCH	
1R03AG14835-01	HOPTMAN, MATTHEW J AGING, WORKING MEMORY, AND INTERHEMISPHERIC INTERACTION	05-01-97/	NEW YORK UNIVERSITY MEDICAL CENTER	
1R03AG14837-01	RAMAKRISHNA, NARAYAN BETA-APP INDUCED CYTOSKELETON ALTERATIONS	06-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R03AG14838-01	FRIEDMAN, ALAN M CRYSTALLIZATION OF PROTEIN ISOASPARTYL METHYLTRANSFERASE	07-15-97/06-30-98	PURDUE UNIVERSITY WEST LAFAYETTE	71,800
1R03AG14839-01	LEVY, EFRAT TRANSGENIC MODELS FOR CEREBRAL AMYLOID ANGIOPATHY	05-01-97/	NEW YORK UNIVERSITY MEDICAL CENTER	
1R03AG14841-01	SASSLER, SHARON IMMIGRANTS, THE ELDERLY AND FAMILY SUPPORT STRATEGIES	07-01-97/	BROWN UNIVERSITY	
1R03AG14842-01	TAM, CHICK F ZINC AND SIGNAL TRANSDUCTION ENZYMES IN HIBERNATOR	03-01-97/	CALIFORNIA STATE UNIVERSITY LOS ANGE	
1R03AG14843-01	TIPNIS, ULKA R CONTRIBUTION OF POLYAMINE OXIDATION TO SENESCENCE	05-01-97/	UNIVERSITY OF TEXAS MEDICAL BR GALVE	
1R03AG14844-01	LI, JENNY J IMPACT OF AGING-MATRIX PROTEINS ON GLIAL CELL ACTIVITIES	05-01-97/	PICOWER INSTITUTE FOR MEDICAL RESEAR	
1R03AG14845-01	MILLER, DAVID L METHOD TO FIND SECRETASES RELATED TO ALZHEIMER DISEASE	07-15-97/06-30-98	INSTITUTE FOR BASIC RES IN DEV DISAB	76,633
1R03AG14847-01	BANERJEE, PROBAL PROTECTION OF AGING NEURONS BY THE SEROTONIN 1A RECEPTOR	05-01-97/	COLLEGE OF STATEN ISLD WILLOWBROOK C	
1R03AG14848-01	LEE, JONATHAN P FORMATION OF THE DIMMERS WITHIN ALZHEIMERS PLAQUES	05-01-97/	BOSTON UNIVERSITY	
1R03AG14849-01	QUADAGNO, JILL CAREER AND LIFE COURSE TRAJECTORIES OF DOWNSIZED WORKERS	07-01-97/	FLORIDA STATE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14850-01	MOBLEY, WILLIAM C STRUCTURAL STUDIES OF NGF BINDING TO TRKA RECEPTORS	05-01-97/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R03AG14852-01	YAO, JIBIN A PILOT STUDY OF O-GLYCOSYLATION IN ALZHEIMERS DISEASE	05-01-97/	UNIVERSITY OF ROCHESTER	
1R03AG14853-01	SHIDELER, SUSAN E ANIMAL MODEL FOR THE PERIMENOPAUSE	07-15-97/06-30-99	UNIVERSITY OF CALIFORNIA DAVIS	59,450
1R03AG14854-01	TOBIN, JOSEPH R CEREBRAL BLOOD FLOW/METABOLISM IN AGED RHESUS MONKEYS	05-01-97/	WAKE FOREST UNIVERSITY	
1R03AG14855-01	ARDELT, MONIKA EMPIRICAL ASSESSMENT OF A THREE-DIMENSIONAL WISDOM SCALE	08-01-97/07-31-99	UNIVERSITY OF FLORIDA	47,187
1R03AG14856-01	NUGENT, JEFFREY B THE ELDERLY IN A RAPIDLY CHANGING RURAL SOCIETY	05-15-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R03AG14857-01	VAN LANCKER, DIANA SAME RACE NAME AND FACE RECOGNITION IN AD	04-01-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R03AG14859-01	HOFFMAN, STANLEY R T LYMPHOCYTE/LAMININ INTERACTIONS IN AGING	08-01-97/07-31-99	MEDICAL UNIVERSITY OF SOUTH CAROLINA	72,000
1R03AG14860-01	MOALLI, MARIA R AGING EFFECTS ON BONE MATRIX BIOSYNTHESIS	05-01-97/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R03AG14861-01	MALIK, MAZHAR N ABERRANT INTERACTION OF PROTEINS IN ALZHEIMER AND AGING	05-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R03AG14863-01	STINEBRICKNER, TODD R DYNAMIC MODEL OF THE LABOR DECISIONS OF OLDER WORKERS	09-30-97/09-29-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	48,100
1R03AG14864-01	LA FERLA, FRANK M VIRAL COFACTOR AND SPORADIC ALZHEIMERS DISEASE	07-15-97/06-30-98	UNIVERSITY OF CALIFORNIA IRVINE	74,950
1R03AG14865-01	DIAMOND, ALAN M A TRANSGENIC ANTI-OXIDANT MOUSE MODEL FOR AGING	05-01-97/	UNIVERSITY OF CHICAGO	
1R03AG14866-01	CHAUHAN, VED P ROLE OF AMYLOID BETA-PROTEIN IN THE CYTOSKELETAL PROTEIN	05-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R03AG14867-01	LOONEY, RICHARD J ROLE OF CERAMIDE IN T CELL SENESCENCE	05-01-97/	UNIVERSITY OF ROCHESTER	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG014868-01	ROBINOVITCH, STEPHEN N PERCEPTION OF POSTURAL STABILITY IN ELDERLY FALLERS	07-15-97/06-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	71,594
1R03AG014869-01	WOLOZIN, BENJAMIN PROGRAMMED CELL DEATH IN NEURONS AND IMMUNE CELLS: ACTIO	05-01-97/	LOYOLA UNIVERSITY MEDICAL CENTER	
1R03AG014870-01	FROSCH, MATTHEW P PRESENILIN 1 TRANSGENIC MICE--ALZHEIMER DISEASE MODELS	07-15-97/06-30-99	BRIGHAM AND WOMEN'S HOSPITAL	63,136
1R03AG014871-01	LAUDERDALE, DIANE MORTALITY AMONG ASIAN AMERICAN ELDERLY	08-01-97/07-31-99	UNIVERSITY OF CHICAGO	76,500
1R55AG014872-01	SANDEFUR, GARY D WORK, FAMILY, & HEALTH--PRELIMINARY ANALYSES	09-30-97/09-29-99	UNIVERSITY OF WISCONSIN MADISON	50,000
1R03AG014873-01	VELDHUIS, JOHANNES D PILOT STUDY OF GH ANDROGEN SYNERGY IN AGING MEN	07-15-97/06-30-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	75,296
1R03AG014874-01	LIU, MING-CHEN STUDIES OF THE MOUSE DOPA/TYROSINE SULFOTRANSFERASE GENE	05-01-97/	UNIVERSITY OF TEXAS HLTH CTR AT TYLE	
1R03AG014875-01	GONG, CHENG-XIN PHOSPHATASE INHIBITION AND TAU PHOSPHORYLATION	09-30-97/08-31-99	INSTITUTE FOR BASIC RES IN DEV DISAB	61,652
1R03AG014877-01	OKEN, BARRY S AGING EYE--EFFECT ON SPATIAL AND TEMPORAL PROCESSING	07-15-97/06-30-99	OREGON HEALTH SCIENCES UNIVERSITY	72,386
1R03AG014888-01	INSEL, RICHARD A GENERATION OF B CELL MEMORY WITH AGING	08-01-97/07-31-99	UNIVERSITY OF ROCHESTER	79,500
1R03AG014881-01	GROSS, TED S VASOREGULATION IN AGED BONE	08-15-97/08-14-99	UNIVERSITY OF CINCINNATI	71,107
1R03AG014882-01	LAHIRI, DEBOMOY K NONCHOLINERGIC FUNCTIONS OF CHOLINESTERASE INHIBITORS	07-15-97/06-30-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	75,000
1R03AG014883-01	SAMBAMURTI, KUMAR NOVEL APPROACH FOR EXPRESSION CLONING OF APP SECRETASES	07-15-97/06-30-99	MAYO FOUNDATION	70,472
1R03AG014884-01	YAO, YUNG-MAE M GLYCATION AND NERVE GROWTH FACTOR IN DIABETIC NEUROPATHY	05-01-97/	SRI INTERNATIONAL	
1R03AG014885-01	ALBERT, STEVEN M REPORTING ADL AND IADL DEFICIT IN THE HRS--AHEAD	09-30-97/09-29-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	50,001

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14886-01	KNODEL, JOHN E VIETNAMESE ELDERLY IN A TIME OF CHANGE	08-01-97/07-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	73,157
1R03AG14887-01	RAO, KAMARSU V THE EFFECT OF IMMIGRANT FLOW ON POPULATION AGING IN THE	08-01-97/	BOWLING GREEN STATE UNIV BOWLING GRE	
1R03AG14888-01	ZHAI, QIHUI TUMOR NECROSIS FACTOR IN CEREBRAL ISCHEMIA IN AGED RAT	03-01-97/	MEDICAL COLLEGE OF OHIO AT TOLEDO	
1R03AG14889-01	STENNETT, DOUGLASS J DIFFERENTIAL DISPLAY OF GLIAL MRNA REGULATED BY ESTROGEN	08-01-97/	OREGON STATE UNIVERSITY	
1R03AG14890-01	DYER, CHERYL A ALZHEIMER'S DISEASE, APOLIPOPROTEIN E, AND ESTROGEN	05-01-97/	NORTHERN ARIZONA UNIVERSITY	
1R03AG14891-01	HICKNER, ROBERT NO-DEPENDENT REGULATION OF MUSCLE BLOOD FLOW IN AGING	07-01-97/	WASHINGTON UNIVERSITY	
1R03AG14892-01	BLOMBERG, BONNIE B REGULATION OF PREB LYMPHOCYTE REPERTOIRE IN AGED MICE	08-01-97/07-31-99	UNIVERSITY OF MIAMI	74,910
1R03AG14893-01	PEBLEY, ANNE R ADULT MORTALITY RESPONSES TO HEALTH INSURANCE	09-01-97/08-31-99	RAND CORPORATION	84,363
1R03AG14894-01	VAUPEL, JAMES W STUDIES OF YEAST MORTALITY	05-01-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R03AG14896-01	PERLS, THOMAS T CLINICAL-NEUROPATH DEFINITION OF ALZHEIMER'S	05-01-97/	HARVARD UNIVERSITY	
1R03AG14897-01	PHILIPSON, TOMAS J INFORMATION ON OLD AGE INSURANCE	08-01-97/07-31-99	NATIONAL OPINION RESEARCH CENTER	72,471
1R03AG14898-01	JUSTER, F THOMAS NET WORTH AT RETIREMENT AND THE BEHAVIOR OF THE ELDERLY	09-30-97/09-29-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	75,573
1R03AG14899-01	BURSZTAJN, SHERRY DNA DAMAGE IN ANIMAL MODELS OF AGING.	05-10-97/	MC LEAN HOSPITAL (BELMONT, MA)	
1R03AG14900-01	KOTULA, LESZEK FE65-RELATED PROTEINS AND ALZHEIMERS DISEASE B-PEPTIDE	07-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R03AG14901-01	XU, WEIJIAN CATALYTIC ABILITIES OF TRANSITION METALS IN AUTOXIDATION	05-01-97/	UNIVERSITY OF PITTSBURGH AT PITTSBUR	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14903-01	HURD, MICHAEL D VALUE OF MEDICARE	09-30-97/09-29-99	RAND CORPORATION	85,166
1R03AG14904-01	AHMAD, IQBAL CHARACTERIZATION OF STEM CELLS IN THE MAMMALIAN RETINA	05-01-97/	UNIVERSITY OF NEBRASKA MEDICAL CENTE	
1R03AG14905-01	HARDING, GARY W INDUCING NERVE FIBER REGENERATION FOR COCHLEAR IMPLANTS	07-15-97/06-30-99	WASHINGTON UNIVERSITY	78,000
1R01AG14906-01	SAPOLSKY, ROBERT M AGING AND HIPPOCAMPAL NEURON LOSS: ROLE OF GLUCOCORTICOI	07-01-97/	STANFORD UNIVERSITY	
1R03AG14907-01	THOMAS, JAMES A AGING EFFECT ON PROTEIN S THIOLATION/DETHIOLATION	07-15-97/06-30-99	IOWA STATE UNIVERSITY OF SCIENCE & T	70,856
1R03AG14908-01	CHANG, CHUNG-HO IDENTIFICATION OF FREE RADICAL RESISTANT GENES	07-15-97/06-30-99	CASE WESTERN RESERVE UNIVERSITY	76,453
1R03AG14909-01	SPANGENBERG, DOROTHY B ROLE OF THYROXINE IN APOPTOSIS AND AGING IN AURELIA	06-01-97/	EASTERN VIRGINIA MED SCH/MED COL HAM	
1R13AG14910-01	GRODZICKER, TERRI I PROGRAMMED CELL DEATH CONFERENCE	07-01-97/06-30-98	COLD SPRING HARBOR LABORATORY	19,273
1R03AG14915-01	MARGULIES, KENNETH B DETECTION OF ASYMPTOMATIC CARDIAC DYSFUNCTION IN THE ELD	05-01-97/	TEMPLE UNIVERSITY	
1R03AG14916-01	KANZ, MARY F MITOCHONDRIAL FUNCTION--AGE, GENDER, AND DISEASE EFFECTS	07-15-97/06-30-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	73,500
1R03AG14918-01	BALDWIN, ANGELA C ADAPTATIONS TO NOVEL EXERCISE IN OLDER INDIVIDUALS	07-01-97/	UNIVERSITY OF GEORGIA	
1R03AG14919-01	HOE, SONY PRIMING EFFECTS ON CHILDREN'S ATTITUDES TOWARD THE AGED	03-31-97/	LOYOLA UNIVERSITY OF CHICAGO	
1R03AG14920-01	BHAPPU, ANITA D BHAPPU'S DISSERTATION	03-01-97/	UNIVERSITY OF ARIZONA	
1R03AG14921-01	USITA, PAULA M LIFE COURSE OF JAPANESE AMERICAN MOTHER-DAUGHTER TIES	03-01-97/	VIRGINIA POLYTECHNIC INST AND ST UNI	
1R03AG14922-01	SIMMONS, FRED H AGING IN DROSOPHILA	03-01-97/	UNIVERSITY OF CALIFORNIA IRVINE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG14923-01	COUPET, SACHA M FAMILY STYLE, APPRAISAL AND ADJUSTMENT IN KINSHIP CARE	07-15-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	25,542
1R03AG14924-01	SON, GWI-RYUNG CAREGIVER OUTCOMES OF THE ELDERLY WITH DEMENTIA IN KOREA	04-01-97/	CASE WESTERN RESERVE UNIVERSITY	
1R03AG14925-01	ARMSTRONG, TRACY L PRIVATIZATION & ACCESS TO HEALTH SERVICES IN THE ELDERLY	08-15-97/07-31-98	UNIVERSITY OF MARYLAND COLLEGE PK CA	24,355
1R03AG14926-01	QUALLS, CONSTANCE D FIGURATIVE LANGUAGE IN OLDER AFRICAN AMERICANS	06-01-97/	UNIVERSITY OF MEMPHIS	
1R03AG14927-01	PEDRO, LELI W QUALITY OF LIFE FACTORS FOR LONG-TERM CANCER SURVIVORS	07-15-97/06-30-98	LOMA LINDA UNIVERSITY	9,963
1R01AG14929-01	KRITZ-SILVERSTEIN, DONNA C A PROSPECTIVE STUDY OF ESTROGEN & ALZHEIMER'S DISEASE	07-01-97/	UNIVERSITY OF CALIFORNIA SAN DIEGO	
1R43AG14931-01	PETERSON, DE LYVA ANN MULTIMEDIA NUTRITION EDUCATION FOR CAREGIVERS	09-30-97/02-28-98	CARETRENDS HEALTH EDUCATION & RES IN	100,000
1R01AG14932-01	NELSON, JAMES F MELATONIN, FREE RADICALS, IMMUNE FUNCTION AND AGING	08-15-97/07-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	180,454
1R43AG14934-01	PATEL, BIPIN DHEA DETECTION DEVICE - A HOME MONITORING TOOL	04-01-97/	JERSEY ANALYTICAL LABORATORY, INC.	
1R43AG14935-01	MULLINIX, CONNIE F 'IMPROVING ACCESS TO PRE-RETIREMENT PLANNING FOR SMALL B	08-01-97/	FLYNT MULLINIX HEALTH CARE CONSULTIN	
1R43AG14936-01	GIORDANO, ANTHONY NOVEL TARGETS FOR CONTROL OF APP EXPRESSION	08-15-97/02-14-98	BEARSDEN BIO, INC.	99,769
1R43AG14938-01	TORP, GEORGE POWER ASSISTED DEVICES TO ENHANCE NURSING CARE	07-01-97/	INVAQUEST	
1R43AG14939-01	WOODS, LARRY EFFECTS OF THERAPEUTIC VECTOR MASSAGE ON BLOOD FLOW	05-01-97/	PROMETHEUS OF OHIO, INC.	
1R43AG14940-01	IRVINE, A B CARE OF THE AGED--A MULTIMEDIA STAFF DEVELOPMENT PROGRAM	09-30-97/02-28-99	OREGON CENTER FOR APPLIED SCIENCE	99,962
1R43AG14941-01	BARKER, JOAN B ACCESSIBLE COSMETOLOGY FOR THE DISABLED AND ELDERLY	07-01-97/	NEW WAVE, INC.	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R43AG14942-01	BARNEY, HAROLD L RISK-POOLING LONGTERM CARE COST OF ALZHEIMER'S PATIENTS	08-01-97/	ACTUARIAL FORECASTING AND RESEARCH	
1R43AG14944-01	GLUCK, DAVID H COMPANIES THAT CARE: CORPORATE RETIREE VOLUNTEERISM	07-01-97/	PHOTOSYNTHESIS PRODUCTIONS, INC.	
1R43AG14945-01	LAWRENCE, RENEE H CONFUSING SYMPTOMS--A VIDEO FOR ELDERS & THEIR FAMILIES	08-15-97/12-31-98	NEW ENGLAND RESEARCH INSTITUTES, INC	93,540
1R43AG14947-01	SIMPSON, RICHARD C COMPUTER BASED ENVIRONMENTAL CONTROL SYSTEM	07-01-97/	METRICA, INC.	
1R43AG14948-01	WYATT, CATHERINE ASSISTIVE DINING TECHNOLOGY FOR THE ELDERLY	08-15-97/	WYATT ENTERPRISES	
1R43AG14950-01	HENNEN, JOHN A LONG TERM CARE DATA BY METROPOLITAN STATISTICAL AREA	04-01-97/	DELTA HEALTH CARE, INC.	
1R43AG14951-01	VERNON, SUSAN N STOVE REGULATOR TO PREVENT BURNING	06-01-97/	AMRON CORPORATION	
1R43AG14952-01	CRAINE, ERIC R A HOME-BASED RECORDING FALL MONITOR	07-01-97/	WESTERN RESEARCH COMPANY, INC.	
1R43AG14953-01	SHULL, DAVID L TECHNOLOGY ASSESSMENT OF ADULT DAY SERVICES	08-01-97/	KAREWARE, INC.	
1R43AG14954-01	HANSON, STUART P HIGH QUALITY RESIDENTIAL CARE PLACEMENT SOFTWARE	06-01-97/	INFOUSE	
1R43AG14956-01	BELLER, LAURA R CAREGIVER AUDIO CASSETTE SERIES	04-01-97/	ELDERCARE FINANCIAL MANAGEMENT, INC.	
1R43AG14957-01	MILBURY, PAUL E DIETARY RESTRICTION MARKERS FOR BREAST CANCER RISK	07-01-97/	ESA, INC.	
1R43AG14958-01	VANDENBURGH, HERMAN H ATTENUATION OF MUSCLE WASTING WITH GROWTH HORMONE	09-15-97/02-28-98	CELL KINETICS, INC.	100,000
1R01AG14960-01	MASTERS, JOHN R CONDITIONAL IMMORTALIZATION OF HUMAN PROSTATE STEM CELLS	09-01-97/08-30-98	U OF L UNIVERSITY COLLEGE LONDON	58,870
1R01AG14961-01	ROSNER, WILLIAM PROSTATIC STEROIDS AND SECOND MESSENGERS	03-11-97/02-28-98	ST. LUKE'S-ROOSEVELT INST FOR HLTH S	220,800

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R01AG14963-01	DICKSON, ROBERT B APOPTOSIS & MALIGNANT PROGRESSION IN MAMMARY TUMOR CELLS	05-01-97/02-28-98	GEORGETOWN UNIVERSITY	253,488
1R29AG15003-01	BARZILAI, NIR DYSREGULATION OF GLUCOSE HOMEOSTATIS IN AGING	09-30-97/08-31-98	YESHIVA UNIVERSITY	101,250
1R13AG15037-01	BURKHAUSER, RICHARD V CROSS NATIONAL CONFERENCE ON HEALTH AND RETIREMENT DATA	07-01-97/06-30-98	SYRACUSE UNIVERSITY	40,000
1R01AG15053-01	ANDERSEN, ANDERS H VISUALIZATION OF GRADED RESPONSES IN FUNCTIONAL MRI	07-01-97/	UNIVERSITY OF KENTUCKY	
1R13AG15060-01	ABRAHAM, GEORGE N SUCCESSFUL AGING AND THE NEW MILLENNIUM	09-30-97/08-31-98	UNIVERSITY OF ROCHESTER	18,250
1R13AG15074-01	ROGERS, ANDREI THIRD COLORADO CONFERENCE ON ELDERLY MIGRATION	08-15-97/07-31-99	UNIVERSITY OF COLORADO AT BOULDER	19,900
1R01AG15110-01	GARBER, ALAN M DISUTILITY OF FUNCTIONAL LIMITATIONS IN THE ELDERLY	09-30-97/08-31-98	STANFORD UNIVERSITY	149,077
1R01AG15134-01	RICHARDSON, ARLAN G TRANSGENIC MODELS TESTING ROLE OF DNA DAMAGE IN AGING	04-03-97/04-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	350,154
1R01AG15141-01	WOOD, JAMES W BIODEMOGRAPHIC MODELS OF REPRODUCTIVE AGING	06-01-97/05-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	390,869
1R03AG15151-01	HUANG, TING-TING GENETIC MODIFIERS AND CARDIOMYOPATHY	09-30-97/09-29-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	73,563
1R03AG15156-01	HU, WEI-YIN IMMIGRANT ASSIMILATION AND ECONOMIC STATUS	09-15-97/08-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	49,777
1R03AG15158-01	HARWOOD, JAMES T INTERGENERATIONAL COMMUNICATION--CONTENT/STRUCTURE	09-15-97/08-31-99	UNIVERSITY OF KANSAS LAWRENCE	71,443
1R03AG15159-01	NEWSOM, JASON T NEGATIVE REACTIONS TO ASSISTANCE WITH DAILY FUNCTIONING	09-30-97/08-31-99	PORTLAND STATE UNIVERSITY	68,939
1R03AG15160-01	CONTRADA, RICHARD J RELIGION & SPIRITUALITY IN RECOVERY FROM CARDIAC SURGERY	09-30-97/09-29-99	RUTGERS THE STATE UNIV NEW BRUNSWICK	78,431
1R03AG15162-01	CHEN, SHU G INTERACTION OF HUMAN PRION PROTEIN WITH SULFATE GLYCANS	09-30-97/08-31-99	CASE WESTERN RESERVE UNIVERSITY	76,500

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG15166-01	CRYSTAL, STEPHEN OUT OF POCKET HEALTH CARE COST OF THE ELDERLY	09-30-97/08-31-99	RUTGERS THE STATE UNIV NEW BRUNSWICK	77,849
1R03AG15170-01	PHILLIPS, VICTORIA L RESTRUCTURING LONG TERM CARE IN GEORGIA	09-30-97/08-31-99	EMORY UNIVERSITY	77,173
1R03AG15171-01	OKEN, BARRY S EFFICACY OF GINKGO BILOBA IN ALZHEIMER DISEASE	09-30-97/08-31-99	OREGON HEALTH SCIENCES UNIVERSITY	74,053
1R03AG15172-01	BLONDELLE, SYLVIE E MODEL SYSTEMS FOR BETA AMYLOID FORMATION AND INHIBITION	09-30-97/02-28-99	TORREY PINES INSTITUTE/MOLECULAR STU	83,900
1R03AG15178-01	WOODLAND, ROBERT T IN VITRO METHOD OF ACCELERATING LYMPHOCYTE SENESCENCE	09-30-97/08-31-99	UNIVERSITY OF MASSACHUSETTS MEDICAL	77,497
1R03AG15179-01	KUKULL, WALTER A EARLY LIFE RISK FACTORS FOR ALZHEIMERS DISEASE	09-30-97/08-31-99	UNIVERSITY OF WASHINGTON	70,161
1R03AG15180-01	LAZARIDIS, EMMANUEL N DIMENSIONS OF COGNITIVE IMPAIRMENT	09-30-97/09-28-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	72,891
1R03AG15186-01	POND, SAMUEL B, III ADAPTATION AND GOAL ORIENTATION	09-30-97/08-31-99	NORTH CAROLINA STATE UNIVERSITY RALE	73,750
1R03AG15187-01	HELMSTETTER, CHARLES E DEVELOPMENT OF A MAMMALIAN CELL AGING MACHINE	09-30-97/08-31-99	FLORIDA INSTITUTE OF TECHNOLOGY	62,337
1R03AG15197-01	BRAND, RICHARD A DOES OSTEOPOROSIS ALTER BONE CELL RESPONSE TO STRAIN?	09-30-97/09-29-99	UNIVERSITY OF IOWA	69,997
1R03AG15204-01	BENSON, DEANNA L ESTRADIOL MEDIATED DENDRITIC SPINE INDUCTION	09-30-97/08-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	84,750
1R03AG15206-01	SCHARFSTEIN, DAVID S MANAGED CARE, PHYSICIAN QUALITY AND HEALTH OUTCOMES	09-30-97/09-29-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	70,103
1R03AG15207-01	BAMBRICK, LINDA L ABNORMAL CALCIUM HOMEOSTASIS IN MOUSE TRISOMY 16 NEURONS	09-30-97/09-29-99	UNIVERSITY OF MARYLAND BALT PROF SCH	66,490
1R03AG15212-01	WEINSTEIN, MAXINE A SOCIAL CONTEXT OF HEALTH MAINTENANCE AMONG THE AGING	09-30-97/08-31-99	GEORGETOWN UNIVERSITY	80,500
1R03AG15213-01	SOLDO, BETH J CHILDLESSNESS, WEALTH & TRANSFERS IN MIDLIFE & OLD AGE	09-30-97/09-29-99	GEORGETOWN UNIVERSITY	77,697

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1R03AG15215-01	MOBBS, CHARLES V REPRODUCTIVE AND NEUROENDOCRINE AGING--ROLE OF LEPTIN	09-30-97/09-29-98	MOUNT SINAI SCHOOL OF MEDICINE OF CU	82,694
1R03AG15224-01	GUSTMAN, ALAN L MISSING DATA/QUALITY IN HRS PENSION/SOCIAL SECURITY DATA	09-30-97/08-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	81,542
1R03AG15227-01	ANDRES, VINCENTE AGE DEPENDENT CONTROL OF VASCULAR SMOOTH MYOCYTE GROWTH	09-30-97/08-31-99	ST. ELIZABETH'S MEDICAL CENTER OF BO	82,190
7R03AG15230-02	GOMEZ-PINILLA, FERNANDO GLIAL ACTIVATION BY FGF AND PROTEOGLYCANS IN AGING	02-01-99/08-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	74,149
1R03AG15234-01	PATTERSON, WINSTON C MECHANISMS OF NEOVASCULARIZATION IN ATHERSCLEROSIS	09-30-97/09-29-98	UNIVERSITY OF TEXAS MEDICAL BR GALVE	74,999
9R01AG15239-06	GRANHOLM, ANN-CHARLOTTE E CNS NORADRENERGIC NEURONS--TROPHIC FACTORS	08-15-97/07-31-98	UNIVERSITY OF COLORADO HLTH SCIENCES	144,839
1R03AG15250-01	JONES, MILDRED IMPACT OF EARLY HOSPITAL DISCHARGE IN THE AGED	09-30-97/09-29-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	15,660
1R03AG15252-01	CROWTHER, MARTHA R COMPENSATORY GRANDPARENTING--RAISING ANOTHER GENERATION	09-30-97/09-29-98	DUKE UNIVERSITY	23,081
1P30AG15265-01	JOHN, ROBERT NATIONAL CENTER ON NATIVE AMERICAN AGIN	09-30-97/	UNIVERSITY OF NORTH TEXAS	
1P30AG15266-01	KIYAK, H ASUMAN UW RESOURCE CENTER ON MINORITY AGING RESEARCH	09-30-97/	UNIVERSITY OF WASHINGTON	
1P30AG15268-01	WILLIAMS, MARY P MCGHEE RESOURCE CENTER FOR MINORITY AGING RESEARCH	09-30-97/	MOREHOUSE SCHOOL OF MEDICINE	
1P30AG15272-01	PEREZ-STABLE, ELISEO J RESOURCE CENTER FOR AGING RESEARCH IN DIVERSE POPULATIO	09-30-97/06-30-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	551,557
1P30AG15281-01	JACKSON, JAMES S CENTER FOR URBAN AFRICAN AMERICAN AGING RESEARCH	09-30-97/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	551,713
1R03AG15283-01	RITTENHOUSE, KAY D BETA-BLOCKER MODULATION OF AQUEOUS HUMOR PRODUCTION	09-30-97/09-29-98	UNIVERSITY OF NORTH CAROLINA CHAPEL	27,000
1P30AG15284-01	LEVINE, DAVID M ENHANCING HEALTH STATUS IN AGING MINORITY POPULATIONS	09-30-97/	JOHNS HOPKINS UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 97				
1P30AG15286-01	TILLEY, BARBARA C CENTER FOR AFRICAN AMERICAN AGING RESEARCH	09-30-97/06-30-98	CASE WESTERN RESERVE UNIV-HENRY FORD	694,913
1R03AG15288-01	MALDONADO, TAMMY A BETA AMYLOID PLAQUES IN SALMON BRAIN	09-30-97/09-29-98	UNIVERSITY OF COLORADO AT BOULDER	16,200
1P30AG15289-01	MOSELY, KENNETH D SCSU RESOURCE CENTER FOR MINORITY AGING RESEARCH	09-30-97/	SOUTH CAROLINA STATE COLLEGE	
1P30AG15292-01	MANSON, SPERO M NATIVE ELDER RESEARCH CENTER	09-30-97/06-30-98	UNIVERSITY OF COLORADO HLTH SCIENCES	551,700
1P30AG15294-01	LANTIGUA, RAFAEL A COLUMBIA CENTER FOR THE ACTIVE LIFE OF MINORITY ELDERS	09-30-97/06-30-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	622,695
9R01AG15301-09	GRANT, IGOR ALZHEIMER CAREGIVER COPING--MENTAL AND PHYSICAL HEALTH	09-30-97/08-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	373,442
1R03AG15314-01	WALTON, JOSEPH P AGED AUDITORY SYSTEM: INHIBITION AND TEMPORAL PROCESSIN	09-30-97/09-29-98	UNIVERSITY OF ROCHESTER	71,478
1R01AG15317-01	SACHS, GREG DEMENTIA RESEARCH: INFORMED, PROXY, AND ADVANCE CONSENT	09-30-97/08-31-98	UNIVERSITY OF CHICAGO	279,500
1R01AG15321-01	WILLIAMSON, GAIL M CAREGIVER MENTAL HEALTH IMPAIRMENT--IMPACT ON ELDER CARE	09-30-97/08-31-98	UNIVERSITY OF GEORGIA	335,064
1R01AG15340-01	MANDELBLATT, JEANNE S COST EFFECTIVENESS OF HPV SCREENING FOR CERVIX CANCER	09-30-97/08-31-98	GEORGETOWN UNIVERSITY	346,406
1R01AG15404-01	GUMERLOCK, PAUL H BPH--MOLECULAR BIOLOGY OF P53 AND BCL2 ALTERATIONS	09-30-97/08-31-98	UNIVERSITY OF CALIFORNIA DAVIS	199,076
9R01AG15428-04	BOUSFIELD, GEORGE R CARBOHYDRATE AND FSH SPECIFICITY DETERMINATION	09-15-97/07-31-98	WICHITA STATE UNIVERSITY	188,132
1R01AG15430-01	HAHN, KLAUS M RHO FAMILY GTPASES AND APOPTOTIC SIGNALING	09-01-97/07-31-98	SCRIPPS RESEARCH INSTITUTE	304,896
9R01AG15435-13	OSDOBY, PHILIP A CELL SURFACE AND OSTEOCLAST DEVELOPMENT	09-01-97/07-31-98	WASHINGTON UNIVERSITY	234,526
1R01AG15478-01	SINGER, DANIEL E EPIDEMIOLOGY OF ANTICOAGULATION IN ATRIAL FIBRILLATION	09-30-97/08-31-98	MASSACHUSETTS GENERAL HOSPITAL	680,451

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY 97				
1R01AG15482-01	RASENICK, MARK M REGULATION OF G PROTEIN MEDIATED PHOSPHOLIPID SIGNALING	09-01-97/06-30-98	UNIVERSITY OF ILLINOIS AT CHICAGO	181,444
1R01AG15500-01	COOKE, PAUL S MECHANISM OF ESTROGEN ACTION IN UTERUS AND VAGINA	09-15-97/08-31-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	155,315
1P01AG15501-01	KRAFFT, GRANT A SUPRAMOLECULAR ABETA STRUCTURE--GLIAL/NEURONAL RESPONSE	09-15-97/08-31-98	EVANSTON NORTHWESTERN HEALTHCARE	635,338
1R01AG15556-01	MA, JIANJIE RYANODINE RECEPTOR OF E/C COUPLING IN STRIATED MUSCLES	09-01-97/07-31-98	CASE WESTERN RESERVE UNIVERSITY	215,450
1R29AG15694-01	JURIVICH, DONALD A STRESS RESPONSES IN THE HUMAN IMMUNE SYSTEM DURING AGING	09-15-97/07-31-98	UNIVERSITY OF ILLINOIS AT CHICAGO	106,498
1R01AG15709-01	ISAYA, GRAZIA NEW DETERMINANTS OF MTDNA INTEGRITY IN YEAST AND HEART	09-30-97/07-31-98	YALE UNIVERSITY	197,469
1R01AG15710-01	ZASSENHAUS, HANS P ANIMAL MODEL WITH HIGH LEVELS OF MUTANT MTDNAS	09-30-97/07-31-98	ST. LOUIS UNIVERSITY	220,750
1R01AG15720-01	KRONTIRIS, THEODORE G MAPPING INTERACTIVE CANCER SUSCEPTIBILITY LOCI	09-30-97/08-31-98	BECKMAN RESEARCH INSTITUTE	1,120,612
1R01AG15722-01	LANG, NICHOLAS P PROSTATE CANCER--EXPOSURE AND DNA ADDUCTS	09-30-97/08-31-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	290,642
1R01AG15730-01	LUBORSKY, MARK R MEANING OF SELF RATED HEALTH	09-30-97/06-30-98	WAYNE STATE UNIVERSITY	273,577
1R55AG15739-01	WONG, REBECCA IMMIGRATION AND INTERGENERATIONAL TRANSFER	09-30-97/09-29-99	GEORGETOWN UNIVERSITY	50,000
1R01AG15745-01	ARMSTRONG, DAVID M INNOVATIVE NEURONAL TRACING IN AGING AND DISEASE	09-30-97/08-31-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	210,631
1R01AG15749-01	ZHAO, LUE PING RISK PREDICTION MODELS AND APPLICATIONS TO BREAST CANCER	09-30-97/08-31-98	FRED HUTCHINSON CANCER RESEARCH CENT	275,511
1P01AG15960-01	BASERGA, RENATO L GENETIC ANALYSIS OF APOPTOSIS	07-01-97/	THOMAS JEFFERSON UNIVERSITY	
				390,277,876 2,144

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
3P01AG00001-23S1	ROSENE, DOUGLAS L NEURAL SUBSTRATES OF COGNITIVE DECLINE IN AGING	02-01-98/		BOSTON UNIVERSITY	
2T32AG00164-11	DEMENT, WILLIAM C RESEARCH TRAINING IN GERIATRIC SLEEP DISORDERS MEDICINE	05-01-98/		STANFORD UNIVERSITY	
3T32AG00245-03S2	SMALL, GARY W UCLA GERIATRIC RESEARCH FELLOWSHIP PROGRAM	11-01-97/	04-30-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	27,234
1T32AG00249-01A2	MUNGAS, DAN M POSTDOCTORAL TRAINING IN NEUROPSYCHOLOGY OF AGING	05-01-98/		UNIVERSITY OF CALIFORNIA	
1T32AG00263-01	BERGEMAN, CINDY S METHODOLOGICAL ISSUES IN GERONTOLGICAL RESEARCH	07-01-98/		UNIVERSITY OF NOTRE DAME	
2R01AG00322-22A2	RACKOVSKY, SHALOM R AGING: CONFORMATIONAL CHANGE OF COLLAGEN	12-01-97/		MOUNT SINAI SCHOOL OF MEDICINE	
3P01AG00538-22S1	COTMAN, CARL W BEHAVIORAL & NEURAL PLASTICITY IN THE AGED	07-01-98/	06-30-99	UNIVERSITY OF CALIFORNIA IRVINE	
5K08AG00643-06	WEINER, DEBRA K CHRONIC PAIN IN THE NURSING HOME	08-01-98/	07-31-99	UNIVERSITY OF PITTSBURGH	
5K08AG00648-06	MARCANTONIO, EDWARD R REDUCING DELIRIUM AFTER HIP FRACTURE--A PROACTIVE MODEL	08-01-98/	07-31-99	HEBREW REHABILITATION CTR FOR AGED	
1K01AG00719-01A1	SMITH, EVERETT L AN EXPLANT MODEL FOR BONE REGULATORY MECHANISMS	12-01-97/		UNIVERSITY OF WISCONSIN MADISON	
1K07AG00738-01A2	CASSEL, CHRISTINE K ACADEMIC CAREER AWARD	07-01-98/		MOUNT SINAI SCH OF MEDICINE	
1K08AG00742-01A2	CASSON, PETER R OVARIAN CO-REGULATION OF ADRENAL ANDROGEN SECRETION	04-01-98/		BAYLOR COLLEGE OF MEDICINE	
1K01AG00743-01A2	DIPIETRO, LORETTA EFFECTS OF EXERCISE ON GLUCOSE REGULATION IN AGING	04-01-98/		JOHN B PIERCE LABORATORY INC	
1K01AG00769-01A1	HENSLEY, KENNETH CYTOKINE-STIMULATED -NO IN STROKE AND NITRONE PROTECTION	12-01-97/		OKLAHOMA MEDICAL RESEARCH FND	
1K01AG00772-01A2	O'HARA, RUTH EVALUATING MARKERS OF COGNITIVE DECLINE IN THE ELDERLY	07-01-98/		STANFORD UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5K08AG00775-02	JOHNSON, FREDERICK B WERNERS PROTEIN BIOCHEMISTRY AND RIBOSOMAL DNA IN AGING	09-01-98/08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	
1K08AG00783-01A1	SIMS, RICHARD V MOBILITY IMPAIRMENT IN OLDER ADULTS	07-01-98/	UNIVERSITY OF ALABAMA/BIRMINGHAM	
1K01AG00803-01	ARCHER, SUJATA L HRT, HOMOCYSTEINE & B-VITAMIN IN POSTMENOPAUSAL WOMEN	12-01-97/	NORTHWESTERN UNIVERSITY	
1K01AG00804-01	SPRINGER, MATTHEW L ANGIOGENICALLY-ENHANCED GENE THERAPY FOR ATHEROSCLEROSIS	12-01-97/	STANFORD UNIVERSITY	
1K02AG00805-01A1	MC DANIEL, MARK A PROSPECTIVE MEMORY, NEUROPSYCHOLOGY, AND AGING	08-01-98/	UNIVERSITY OF NEW MEXICO	
1K01AG00807-01A1	WOOD, STACEY A SENSORY DETERIORATION IN NORMAL AGING	07-01-98/	UNIVERSITY OF CALIFORNIA AT LOS ANGE	
1K01AG00812-01A1	FAURON, CHRISTIANE M MITOCHONDRIAL-NUCLEAR INTERACTIONS & CELLULAR AGING	07-01-98/	UNIVERSITY OF UTAH	
1K02AG00815-01	LEE, GLORIA PHOSPHORYLATION AND SPATIAL LOCALIZATION OF TAU PROTEINS	12-01-97/	BRIGHAM AND WOMEN'S HOSPITAL	
1K01AG00832-01	BACK, CARLA L FUNCTIONAL ABILITY IN ALZHEIMER'S DISEASE	07-01-98/	UCLA SCHOOL OF MEDICINE	
1K01AG00839-01	PANICKAR, KIRAN S ESTROGEN AND CREB	04-01-98/	UNIVERSITY OF FLORIDA	
1K02AG00840-01	GELLER, ALFRED I HELPER VIRUS-FREE HSV-1 VECTORS FOR PARKINSON'S	04-01-98/	CHILDREN'S HOSPITAL (BOSTON)	
1K01AG00845-01	GUPTA, ANANDARUP REGULATION OF PHOSPHATE TRANSPORT IN THE OSTEOCLAST	04-01-98/	BARNES-JEWISH HOSPITAL NORTH	
1K01AG00846-01	SALOMON, ROBERT N VASCULAR WALL BIOLOGY IN THE AGING ORGANISM	04-01-98/	NEW ENGLAND MEDICAL CENTER	
1K08AG00854-01	MOSLEY, RODNEY L AGE-ASSOCIATED SKEWING OF T CELL REPERTOIRES	07-01-98/	UNIVERSITY OF MICHIGAN	
1K07AG00857-01	RUBIN, ROBERT T NIA ACADEMIC LEADERSHIP AWARD IN THE NEUROSCIENCES	07-01-98/	ALLEGHENY UNIV OF THE HEALTH SCI	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1K02AG00859-01	MC CLELLAN, MARK B UNDERSTANDING CHANGES IN THE HEALTH OF OLDER AMERICANS	06-01-98/	NATIONAL BUREAU OF ECONOMIC RESEARCH	
1K08AG00862-01	LASKOWITZ, DANIEL T APOE, MICROGLIAL ACTIVATION, & NEURODEGENERATIVE DISEASE	07-01-98/	DUKE UNIVERSITY	
3P01AG01743-19S4	KLINMAN, NORMAN R IMMUNOBIOLOGY OF AGING	09-03-97/08-31-98	SCRIPPS RESEARCH INSTITUTE	
3P50AG05142-14S1	FINCH, CALEB E ADRC CONSORTIUM	04-01-97/03-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	
2R01AG05601-14A1	MONNIER, VINCENT M BROWNING OF HUMAN COLLAGEN IN DIABETES AND AGING	07-01-98/	CASE WESTERN RESERVE UNIVERSITY	
1F32AG05765-01A1	INSEL, KATHLEEN P EFFECT OF REPEATED ACTIONS ON SOURCE MONITORING	09-01-97/	UNIVERSITY OF ARIZONA	
1F32AG05796-01	BRAUN, BARRY S GLUCOSE UPTAKE AND DNL WITH IGF-I & HRT IN ELDERLY WOMEN	09-01-97/	STANFORD UNIVERSITY	
1F32AG05797-01	JOHNSTON, DANIEL S A STUDY OF TESTICULAR AGING IN SAM-P1 MICE	08-01-97/	WASHINGTON STATE UNIVERSITY	
1F32AG05800-01	CHUNG, SUSAN S MITOCHONDRIAL DEFECTS, OXIDATIVE STRESS AND SARCOPENIA	09-01-97/	UNIVERSITY OF WISCONSIN	
1F32AG05801-01	WALTER, PATRICK B IRON AND OXIDANT CAUSED DAMAGED TO MITOCHONDIA IN AGING	09-01-97/	UNIV OF CALIFORNIA, BERKELEY	
1F32AG05802-01	LIN, YU-HUEI REGULATION OF APP PROCESSING BY PKC ISOZYMES	08-01-97/	SAN FRANCISCO GENERAL HOSPITAL	
1F32AG05809-01A1	SAIDPOUR, ASAD AGING AND VISUAL SCENE PERCEPTION	04-01-98/	UNIV OF CALIFORNIA, RIVERSIDE	
1F31AG05812-01	HARDEN, TAMARA C MINORITY PREDOCTORAL FELLOWSHIP PROGRAM	09-01-97/	UNIVERSITY OF KANSAS	
1F32AG05814-01	WOLKOW, CATHERINE A REGULATION OF C ELEGANS LIFESPAN AND DIAPAUSE BY AGE-1	01-01-98/	MASSACHUSETTS GENERAL HOSPITAL	
1F33AG05816-01	BEDFORD, VICTORIA H LONGITUDINAL PATTERNS OF SIBLING RELATIONSHIP QUALITY	01-06-98/	MIAMI UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1F32AG05820-01	LICHT, ELIOT A OSTEOPOROSIS AND EPILEPSY: AGE AND HORMONES VS DRUGS	07-01-98/		UNIVERSITY OF CALIFORNIA, LOS ANGELE	
1F32AG05823-01	SHULTZ, KENNETH S TRAINING IN A MULTIDISCIPLINARY APPROACH TO RETIREMENT	08-01-98/		UNIV OF SOUTHERN CALIFORNIA, LA	
1F32AG05824-01	KELLER, JEFFREY N MITOCHONDRIAL MEDIATED OXYRADICAL NEURONAL LOSS	06-01-98/		UNIV OF KENTUCKY RESEARCH FDN	
1F32AG05825-01	LIN, KUI DAF-16'S FUNCTION IN REGULATING LIFESPAN IN C ELEGANS	04-01-98/		UNIV OF CALIFORNIA, SAN FRANCISCO	
2R01AG07410-06A1	REITZES, DONALD C RETIREMENT TRANSITIONS AND PSYCHOLOGICAL WELL-BEING	12-01-97/		GEORGIA STATE UNIVERSITY	
2R01AG07724-11	WOLF, NORMAN S AGING CELL REPLICATIVE LOSS, C.R. PROTECTION	04-01-98/		UNIVERSITY OF WASHINGTON	
2R01AG07793-09A2	JAGUST, WILLIAM J LONGITUDINAL SPECT AND PET STUDIES OF DEMENTIA	07-01-98/		UNIVERSITY OF CALIF-LAWRENC BERKELEY	
3R01AG08459-08S1	SOHAL, RAJINDAR S ANTIOXIDANT ENZYMES AND AGING IN TRANSGENIC DROSOPHILA	12-01-97/	06-30-98	SOUTHERN METHODIST UNIVERSITY	3,113
3P01AG08761-08S5	VAUPEL, JAMES W OLDEST-OLD MORTALITY - DEMOGRAPHIC MODELS AND ANALYSIS	04-01-98/		DUKE UNIVERSITY	
2R01AG08776-06A1	CODY, DIANNA D STRENGTH, DENSITY & MICROSTRUCTURE OF THE PROXIMAL FEMUR	12-01-97/		CASE WESTERN RESERVE UNIV-HENRY FORD	
3R01AG08835-09S1	BURKE, DEBORAH M MEMORY AND LANGUAGE IN OLD AGE	12-24-97/	11-30-98	POMONA COLLEGE	58,752
2P01AG08938-14	EPSTEIN, CHARLES J AGE-RELATED DEGENERATION	08-01-98/		UNIVERSITY OF CALIFORNIA SAN FRANCIS	
5R01AG09258-06	KAY, MARGUERITE M B IMMUNOCHEMISTRY OF AN AGING ANTIGEN	06-01-98/	05-31-99	UNIVERSITY OF ARIZONA	
3R01AG09282-06S2	ALLEN, PHILIP A AGE DIFFERENCES IN EPISODIC AND SEMANTIC MEMORY	12-01-97/	02-28-98	CLEVELAND STATE UNIVERSITY	33,961
3R01AG09791-04S2	YOUNG, ROSALIE F CULTURAL IMPACT ON CAREGIVING OUTCOME--ALZHEIMER'S PTS	06-01-95/	05-31-98	WAYNE STATE UNIVERSITY	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
2R01AG09801-09	MILLER, RICHARD A ACTIVATION DEFECTS IN AGING T CELLS	07-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
2R01AG10138-04A2	HAROUTUNIAN, VAHRAM SYNTHESIS OF B-APP IN TRANSMITTER DEFICIENT MODELS OF AD	12-01-97/	MOUNT SINAI SCHOOL OF MEDICINE	
2P01AG10184-06A1	WEST, SHEILA K VISUAL IMPAIRMENT AND FUNCTIONAL STATUS IN OLDER PERSONS	04-01-98/	JOHNS HOPKINS UNIVERSITY	
3P01AG10207-05S1	KELSOE, GARNETT H MECHANISMS OF IMMUNOSENESCENCE	09-01-97/08-31-97	UNIVERSITY OF MARYLAND BALT PROF SCH	
3R01AG10412-06A1S1	ROSS, PHILIP D FALLS AND FRACTURES AMONG ELDERLY JAPANESE-AMERICANS	07-01-98/	HAWAII OSTEOPOROSIS FOUNDATION	
5R01AG10412-07	ROSS, PHILIP D FALLS AND FRACTURES AMONG ELDERLY JAPANESE AMERICANS	03-01-98/02-28-99	HAWAII OSTEOPOROSIS FOUNDATION	
7R01AG11041-05	PRUCHNO, RACHEL A PSYCHOLOGICAL WELL BEING OF CORESIDENT GRANDPARENTS	09-01-98/	BOSTON COLLEGE	
2R01AG11171-05A2	TENNSTEDT, SHARON L PREDICTORS OF LONG TERM CARE USE: ETHNICITY VS CLASS	12-01-97/	NEW ENGLAND RES INSTITUTES, INC	
2R01AG11331-06A1	CAPLAN, ARNOLD I EXTRACELLULAR MATRIX AND AGING (SKIN)	09-01-97/	CASE WESTERN RESERVE UNIVERSITY	
7R37AG11375-06	KAPLAN, GEORGE A HEALTH AND FUNCTION OVER THREE DECADES IN ALAMEDA COUNTY	04-01-98/	UNIVERSITY OF MICHIGAN	
2R01AG11472-05A1	THORPE, SUZANNE R LIPOPROTEIN OXIDATION IN ATHEROSCLEROSIS AND AGING	07-01-98/	UNIVERSITY OF SOUTH CAROLINA AT COLU	
2P50AG11748-06	CZAJA, SARA J MIAMI CENTER ON HUMAN FACTORS AND AGING RESEARCH	08-01-98/	UNIVERSITY OF MIAMI CORAL GABLES	
2R01AG11903-04	CUELLO, A CLAUDIO SYNAPTIC REGROWTH IN THE CNS AFTER LESION	09-01-97/	MCGILL UNIVERSITY	
2R01AG11965-04A2	BOX, HAROLD C MULTILESIONAL ASSAYS OF OXIDATIVE DNA DAMAGE	07-01-98/	NYS DEPT HEALTH/HEALTH RES INC	
2R01AG12131-04	SCHON, ERIC A MITOCHONDRIAL DNA MUTATIONS AND HUMAN AGING	12-01-97/	COLUMBIA UNIVERSITY HEALTH SCIENCES	

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FY: 98				
5R29AG12407-04	PERKINSON, MARGARET A DEMENTIA/CARDIAC SYMPTON MANAGEMENT BY FAMILY	04-01-98/03-31-99	WASHINGTON UNIVERSITY	
3R01AG12685-05S1	YOUNKIN, STEVEN G FACTORS GOVERNING ALZHEIMERS ABETA PROTEIN	12-01-97/03-31-98	MAYO FOUNDATION	49,408
3R01AG12713-03S1A1	YESAVAGE, JEROME A AGE-RELATED LONGITUDINAL CHANGES IN AVIATOR PERFORMANCE	09-01-97/	STANFORD UNIVERSITY	
2R01AG12953-04A1	SNOW, ALAN D A RAT MODEL TO STUDY BETA/A4 AMYLOID DEPOSITION IN BRAIN	07-01-98/	UNIVERSITY OF WASHINGTON	
2R01AG12976-04	POTTER, LINCOLN T DISCOVERY AND EXPRESSION OF NEW ANTICHOLINERGIC TOXINS.	07-01-98/	UNIVERSITY OF MIAMI	
3U01AG12980-04S1	WILLIS, ROBERT J ASSET & HEALTH DYNAMICS AMONG THE OLDEST OLD-SUPPLEMENT	07-01-98/	UNIVERSITY OF MICHIGAN	
3P30AG13314-02S1	VIJG, JAN A HARVARD NATHAN SHOCK CENTER IN BASIC BIOLOGY OF AGING	02-01-98/06-30-98	HARVARD UNIVERSITY	27,079
1R01AG13651-01A2	ATHWAL, RAGHBIR S GENETIC ANALYSIS OF CELL SENESCENCE	07-01-98/	TEMPLE UNIVERSITY	
1R01AG13723-01A2	GOATE, ALISON M UNDERSTANDING THE ROLE OF PRESENILINS IN AD	12-01-97/	WASHINGTON UNIVERSITY	
5R01AG13780-03	GANDY, SAMUEL E REGULATED CLEAVAGE OF AMYLOID PRECURSOR--MOLECULAR BASIS	04-01-98/03-31-99	CORNELL UNIVERSITY MEDICAL CENTER	
1R01AG13858-01A2	EAKER, ELAINE D PSYCHOSOCIAL EPIDEMIOLOGY OF AGING IN A RURAL POPULATION	12-01-97/	MARSHFIELD MEDICAL RESEARCH & EDUC F	
1R01AG13872-01A1	KING, RICHARD J AGE-RELATED DEVELOPMENT OF CHRONIC LUNG INJURY (ARDS)	04-01-98/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
5R01AG13966-03	ISCHIROPOULOS, HARRY PEROXYNITRITE AND NEURODEGENERATIVE DISEASES OF AGING	04-01-98/03-31-99	CHILDRENS HOSPITAL	
1R01AG13977-01A2	CEFALU, WILLIAM T ANTI-AGING MECHANISMS OF CALORIC RESTRICTION	12-01-97/	BOWMAN GRAY SCHOOL OF MEDICINE	
3R01AG13978-01A1S1	POEHLMAN, ERIC T ENERGETIC ADAPTATION TO THE MENOPAUSE TRANSITION	07-01-98/	UNIVERSITY OF VERMONT & ST AGRIC COL	

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FY: 98					
1R43AG14057-01A2	KNUTSON, KAREN A COMPUTER SYSTEM TO SUPPORT CARE MANAGEMENT SERVICES	03-01-98/		OPENCARE, INC.	
1R01AG14097-01A2	BELMONT, JOHN M EXECUTIVE FUNCTION AND ADAPTIVE COGNITION IN AGING	07-01-98/		UNIVERSITY OF KANSAS	
1R01AG14099-01A2	MILES, TONI P PROSTATIC HYPERPLASIA IN OLDER BLACK AND WHITE TWINS	07-01-98/		UNIV OF TEXAS HEALTH SCI CENTER	
1R01AG14118-01A1	ROUBENOFF, RONENN INFLAMMATORY CYTOKINES AND SARCOPENIA IN AGING	01-01-97/		TUFTS UNIVERSITY	
5R01AG14127-02	BAUMGARTEN, MONA PRESSURE ULCERS IN ELDERLY EMERGENCY DEPARTMENT PATIENTS	09-01-98/	08-31-99	UNIVERSITY OF PENNSYLVANIA	
1R01AG14128-01A1	WILLOTT, JAMES F NEUROBEHAVIORAL CORRELATES OF AUDITORY SYSTEM PLASTICITY	09-01-97/		NORTHERN ILLINOIS UNIVERSITY	
1R01AG14129-01A1	LIANG, MATTHEW H EPIDEMIOLOGY OF RISK FACTORS IN OSTEOARTHRITIS	04-01-98/		BRIGHAM AND WOMEN'S HOSPITAL	
1R03AG14235-01A1	SAVAGE, LISA M AGING AND ALCOHOL: NEUROPATHOLOGY & BEHAVIORAL EFFECTS	09-01-97/		SUNY AT BINGHAMTON	
1R01AG14261-01A1	MEYDANI, MOHSEN VIT E & FATTY ACID MECH OF ENDOTHEL CELL/MONOCYTE ADHES	09-01-97/		TUFTS UNIVERSITY	
1R01AG14362-01A1	MRZLJAK, LADISLAV MUSCARINIC RECEPTORS IN AGED PRIMATE CORTEX	12-01-97/		YALE UNIVERSITY	
1R01AG14368-01A1	KESHNER, EMILY A STABILIZATION OF POSTURE AND GAZE IN THE ELDERLY	12-01-97/		REHABILITATION INSTITUTE RESEARCH CO	
1R29AG14374-01A1	GAMACHE, GAIL R GRANDPARENT HEALTH OUTCOMES--PARENTS HAVE MENTAL ILLNESS	06-01-98/		UNIVERSITY OF MASSACHUSETTS AMHERST	
1R01AG14381-01A2	PAPPOLLA, MIGUEL A MELATONIN AND ANTIOXIDANTS AS THERAPEUTIC AGENTS	07-01-98/		UNIVERSITY OF SOUTH ALABAMA	
1R01AG14408-01A1	VERDERY, ROY B CYTOKINES IN ANOREXIA IN OLDER SUBACUTE PATIENTS	12-01-97/		UNIVERSITY OF ARIZONA	
1R01AG14422-01A1	WHITFIELD, KEITH E COGNITIVE AGING IN AFRICAN-AMERICANS	12-01-97/		PENNSYLVANIA STATE UNIVERSITY	

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FY: 98				
1R01AG14429-01A1	FRONGILLO, EDWARD A, JR SCREENING MEASURES FOR FOOD INSECURITY IN THE ELDERLY	07-01-98/	CORNELL UNIVERSITY ITHACA	
1R01AG14434-01A1	SEEMAN, TERESA E BIOPSYCHOSOCIAL FACTORS IN COGNITIVE & PHYSICAL AGING	04-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R29AG14437-01A1	SHERMAN, SCOTT E TRAINING PHYSICIANS TO COUNSEL ABOUT EXERCISE	12-01-97/	SEPULVEDA RESEARCH CORP	
1R15AG14438-01A1	BAGCHI, MANASHI AGE RELATED OXIDATIVE DAMAGE AND APOPTOSIS IN RATS	07-01-98/	CREIGHTON UNIVERSITY	
1R01AG14439-01A1	HAAKE, ANNE R EF-1ALPHA REGULATED KERATINOCYTE APOPTOSIS IN SKIN AGING	04-01-98/	UNIVERSITY OF ROCHESTER	
1R01AG14454-01A1	SINGER, BURTON H BIOPSYCHOSOCIAL FACTORS IN COGNITIVE & PHYSICAL AGING	04-01-98/	PRINCETON UNIVERSITY	
1R15AG14464-01A1	KELLEY, GEORGE A EXERCISE, AGING & OSTEOPOROSIS IN WOMEN: A META-ANALYSIS	05-16-98/	NORTHERN ILLINOIS UNIVERSITY	
1R03AG14485-01A2	KNIGHT, BOB G EMOTION, COGNITION AND AGING	05-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R29AG14488-01A1	ROOKS, DANIEL S MAXIMIZE HIP FRACTURE RECOVERY WITH EXERCISE IN ELDERLY	07-01-98/	BETH ISRAEL HOSPITAL MEDICAL CENTER	
1R03AG14507-01A1	COUCH, KENNETH A DISABILITY, DISPLACEMENT, AND EARLY JOB LOSS	09-01-97/	UNIVERSITY OF CONNECTICUT	
1R03AG14513-01A1	WILD, KATHERINE V DRIVING AND AWARENESS OF DEFICITS IN ALZHEIMER DISEASE	09-01-97/	OREGON HEALTH SCIENCES UNIVERSITY	
1R03AG14528-01A1	MARCOTTE, DAVE E DEPRESSION AND THE DECISION TO RETIRE AMONG OLDER WORKER	05-01-98/	NORTHERN ILLINOIS UNIVERSITY	
1R03AG14577-01A1	WALLACE, STEVEN P IMMIGRANT ELDERLY: HEALTH STATUS AND ACCESS TO CARE	10-01-97/	UNIVERSITY OF CALIFORNIA LOS ANGELES	
3R01AG14656-01S1	BELSKY, JAY INTERGENERATIONAL RELATIONS IN ADULTHOOD	09-30-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	7,297
3R01AG14656-01S2	BELSKY, JAY INTERGENERATIONAL RELATIONS IN ADULTHOOD	09-30-97/08-31-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	7,289

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FY: 98					
1R01AG14665-01A1	MEYER, KEITH C INFLAMMATION IN THE SEEMINGLY NORMAL AGING HUMAN LUNG	07-01-98/		UNIVERSITY OF WISCONSIN MADISON	
1R01AG14700-01	GROSSMAN, MURRAY COMPREHENSION IN ALZHEIMER'S DISEASE AND AGING	07-01-97/		UNIVERSITY OF PENNSYLVANIA	
1R01AG14704-01A1	MILLIGAN, CAROLANNE E REGULATION OF APOPTOSIS INHIBITORY PROTEINS	07-01-98/		WAKE FOREST UNIVERSITY	
1R01AG14737-01A1	REUBEN, DAVID B DOES MOBILE MAMMOGRAPHY INCREASE SCREENING?	04-01-98/		UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R01AG14755-01A1	BUTLER, DAVID L AGE-RELATED NATURAL AND CELL-ASSISTED TENDON REPAIR	03-01-98/		UNIVERSITY OF CINCINNATI	
1R01AG14758-01A1	PRUCHNO, RACHEL A WELL-BEING OF NONMETROPOLITAN CAREGIVING DYADS	04-01-98/		BRADLEY UNIVERSITY	
5R01AG14769-03	COGGAN, ANDREW R AGING AND SKELETAL MUSCLE FATTY ACID METABOLISM	09-01-98/	08-31-99	UNIVERSITY OF MARYLAND	
1R01AG14777-01A1	TERI, LINDA PROBLEM-SOLVING/PHYSICAL INTERVENTIONS & AGING	07-01-98/		UNIVERSITY OF WASHINGTON	
1R03AG14802-01A1	RHEE, SIYON IMMIGRATION & HEALTH STATUS OF IMMIGRANT ELDERLY ASIANS	09-01-98/		CALIFORNIA STATE UNIVERSITY LOS ANGE	
1R03AG14821-01A1	KUTTY, NANDINEE K COPING WITH AGE-DISABILITIES THROUGH HOME MODIFICATION	09-01-98/		CORNELL UNIVERSITY	
1R03AG14836-01A1	BOAZ, RACHEL F ECONOMIC VULNERABILITY DUE TO HEALTH CARE COSTS	02-01-98/		CUNY GRADUATE SCH & UNIV CTR	
1R03AG14879-01A1	WONG, MAMIE M CORRELATES OF SUBSTANCE USE AMONG THE ELDERLY	01-01-98/		WESTED	
1R03AG14902-01A1	ZAUSZNIEWSKI, JACLENE A SOCIAL COGNITIVE EFFECTS ON ELDER'S RESOURCEFULNESS	01-01-98/		CASE WESTERN RESERVE UNIVERSITY	
1R43AG14949-01A1	DEAN, ROBERT C, JR AN IN-BED EXERCISER FOR BEDRIDDEN GERIATRIC PATIENTS	03-01-98/		SYNERGY INNOVATIONS, INC	
1R01AG14959-01	PAMPEL, FRED C PUBLIC SUPPORT FOR GOVERNMENT PROGRAMS	01-01-98/		UNIVERSITY OF COLORADO	

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FY: 98					
1R01AG14967-01	BELL, NORMAN H AGING, HORMONES AND BONE METABOLISM	12-01-97/		MEDICAL UNIV OF SOUTH CAROLINA	
1R13AG14969-01	WEINREICH, DONNA M LOOKING FOR TOMORROW TODAY: AGING--HOUSING--DESIGN	09-01-98/		MARYLAND GERONTOLOGICAL ASSOC	
1R01AG14978-01	HENDERSON, VICTOR W ESTROGEN AND OTHER ALZHEIMER RISK FACTORS IN THE OLD	12-01-97/		UNIVERSITY OF SOUTHERN CALIFORNIA	
1R13AG14981-01	SOLOMON, DAVID H CAN AN AGING WORKFORCE BE PRODUCTIVELY EMPLOYED?	01-01-98/		UNIVERSITY OF CALIFORNIA AT LOS ANGE	
1R01AG14982-01	CARSTENSEN, LAURA L SUCCESSFUL ADAPTATION TO THE AGING PROCESS	12-01-97/		STANFORD UNIVERSITY	
1R13AG14987-01	MC CARTER, ROGER J M EXERCISE, OXIDATIVE STRESS AND AGING	10-01-97/		AMERICAN AGING ASSOCIATION	
1R01AG14989-01	MYERSON, JOEL CONSEQUENCES OF AGE-RELATED COGNITIVE SLOWING	12-01-97/		WASHINGTON UNIVERSITY	
1R01AG14990-01	NIKOLIC-ZUGIC, JANKO T CELL REPERTOIRE AND FUNCTION IN IMMUNE SENESCENCE	12-01-97/		SLOAN-KETTERING INSTITUTE FOR CANCER	
1R01AG15009-01A1	KALU, DIKE N AGING BONE LOSS: COMBINATION THERAPY WITH GROWTH HORMONE	07-01-98/		UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R01AG15010-01	STEINHELPER, MARK E PHYSIOLOGY OF C-TYPE NATRIURETIC PEPTIDE	12-01-97/		UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R01AG15014-01	ALEXANDER, NEIL B TASK-SPECIFIC RESISTANCE TRAINING TO IMPROVE TRANSFERS	12-01-97/		UNIVERSITY OF MICHIGAN	
1R29AG15021-01	GOODMAN-GRUEN, DEBORAH CAUSES & CONSEQUENCES OF SARCOPENIA IN OLD AGE	12-01-97/		UNIVERSITY OF CALIFORNIA SAN DIEGO	
1R01AG15032-01	GUYTON, JOHN R NOVEL APOE LIPOPROTEINS IN RESPONSE TO NEURAL INJURY	12-01-97/		DUKE UNIVERSITY	
1R01AG15036-01	RUBERT, MARK P ELDERS AT RISK FOR FUNCTIONAL INDEPENDENCE	12-01-97/		UNIVERSITY OF MIAMI	
1R01AG15078-01	KAYE, JEFFREY FORM AND FUNCTION OF FRONTAL LOBE IN HEALTHY OLDEST OLD	12-01-97/		OREGON HEALTH SCIENCES UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R01AG15080-01A1	PARRY, BARBARA L MENOPAUSE AND HRT: EFFECTS ON MOOD AND CIRCADIAN RHYTHMS	07-01-98/		UNIVERSITY OF CALIFORNIA SAN DIEGO	
1R01AG15082-01	MILBERG, WILLIAM P SEMANTIC MEMORY IN ALZHEIMER'S DISEASE AND NORMAL AGING	12-01-97/		HARVARD MEDICAL SCHOOL	
1R01AG15094-01	GISOLFI, CARL V AGE, THERMOREGULATION, AND BRAIN NEUROTRANSMITTERS	12-01-97/		UNIVERSITY OF IOWA	
1P01AG15103-01A1	ABRAHAM, CARMELA R PATHOGENIC PROTEIN INTERACTIONS IN ALZHEIMER'S DISEASE	07-01-98/		BOSTON UNIVERSITY	
1R01AG15105-01	BUTLER, DAVID L AGE-RELATED ADAPTATION OF TENDON FIBROCARTILAGE TO FORCE	01-01-98/		UNIVERSITY OF CINCINNATI	
1R01AG15120-01A1	MURASKO, DONNA M CELL MEDIATED IMMUNITY TO INFLUENZA IN THE ELDERLY	07-01-98/		ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG15123-01	GARDNER, ANDREW W PHYSICAL ACTIVITY IN OLDER PERIPHERAL VASCULAR PATIENTS	12-01-97/		UNIVERSITY OF MARYLAND AT BALTIMORE	
1R01AG15127-01A1	SCHMIDT, ANN M WOUND HEALING AGING GLYCATION AND RAGE	07-01-98/		COLUMBIA UNIVERSITY HEALTH SCIENCES	
1R01AG15128-01	SAINFORT, FRANCOIS DEVELOPMENT & VALIDATION OF A NURSING HOME QUALITY MODEL	12-01-97/		UNIVERSITY OF WISCONSIN	
1R01AG15131-01A1	KOTZIN, BRIAN L CD8+ T CELL EXPANSIONS IN AGING MICE AND HUMANS	07-01-98/		NATIONAL JEWISH MEDICINE & RES CTR	
5R01AG15134-02	RICHARDSON, ARLAN G TRANSGENIC MODELS TESTING ROLE OF DNA DAMAGE IN AGING	03-01-98/	02-28-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R03AG15144-01	ARNOLD, NANCY L CONSUMER CHOICE AMONG RURAL ELDERLY: BEST PRACTICES	10-01-97/		UNIVERSITY OF MONTANA	
1R01AG15146-01A1	WOLOZIN, BENJAMIN SIGNAL TRANSDUCTION OF PRESENILINS	07-01-98/		LOYOLA UNIVERSITY CHICAGO	
1R03AG15149-01	LIN, TIEN-SUNG T EFFECTS OF WATER-SOLUBLE C60 ANTIOXIDANTS ON AGING	09-01-97/		WASHINGTON UNIVERSITY	
1R03AG15150-01	CHAKRABARTY, SHILLA ROLE OF NITRIC OXIDE IN PREMATURE OVARIAN AGING	09-01-97/		UNIVERSITY OF TEXAS MEDICAL BR GALVE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1F32AG05820-01	LICHT, ELIOT A OSTEOPOROSIS AND EPILEPSY: AGE AND HORMONES VS DRUGS	07-01-98/		UNIVERSITY OF CALIFORNIA, LOS ANGELE	
1F32AG05823-01	SHULTZ, KENNETH S TRAINING IN A MULTIDISCIPLINARY APPROACH TO RETIREMENT	08-01-98/		UNIV OF SOUTHERN CALIFORNIA, LA	
1F32AG05824-01	KELLER, JEFFREY N MITOCHONDRIAL MEDIATED OXYRADICAL NEURONAL LOSS	06-01-98/		UNIV OF KENTUCKY RESEARCH FDN	
1F32AG05825-01	LIN, KUI DAF-16'S FUNCTION IN REGULATING LIFESPAN IN C ELEGANS	04-01-98/		UNIV OF CALIFORNIA, SAN FRANCISCO	
2R01AG07410-06A1	REITZES, DONALD C RETIREMENT TRANSITIONS AND PSYCHOLOGICAL WELL-BEING	12-01-97/		GEORGIA STATE UNIVERSITY	
2R01AG07724-11	WOLF, NORMAN S AGING CELL REPLICATIVE LOSS, C.R. PROTECTION	04-01-98/		UNIVERSITY OF WASHINGTON	
2R01AG07793-09A2	JAGUST, WILLIAM J LONGITUDINAL SPECT AND PET STUDIES OF DEMENTIA	07-01-98/		UNIVERSITY OF CALIF-LAWRENC BERKELEY	
3R01AG08459-08S1	SOHAL, RAJINDAR S ANTIOXIDANT ENZYMES AND AGING IN TRANSGENIC DROSOPHILA	12-01-97/	06-30-98	SOUTHERN METHODIST UNIVERSITY	3,113
3P01AG08761-08S5	VAUPEL, JAMES W OLDEST-OLD MORTALITY - DEMOGRAPHIC MODELS AND ANALYSIS	04-01-98/		DUKE UNIVERSITY	
2R01AG08776-06A1	CODY, DIANNA D STRENGTH, DENSITY & MICROSTRUCTURE OF THE PROXIMAL FEMUR	12-01-97/		CASE WESTERN RESERVE UNIV-HENRY FORD	
3R01AG08835-09S1	BURKE, DEBORAH M MEMORY AND LANGUAGE IN OLD AGE	12-24-97/	11-30-98	POMONA COLLEGE	58,752
2P01AG08938-14	EPSTEIN, CHARLES J AGE-RELATED DEGENERATION	08-01-98/		UNIVERSITY OF CALIFORNIA SAN FRANCIS	
5R01AG09258-06	KAY, MARGUERITE M B IMMUNOCHEMISTRY OF AN AGING ANTIGEN	06-01-98/	05-31-99	UNIVERSITY OF ARIZONA	
3R01AG09282-06S2	ALLEN, PHILIP A AGE DIFFERENCES IN EPISODIC AND SEMANTIC MEMORY	12-01-97/	02-28-98	CLEVELAND STATE UNIVERSITY	33,961
3R01AG09791-04S2	YOUNG, ROSALIE F CULTURAL IMPACT ON CAREGIVING OUTCOME--ALZHEIMER'S PTS	06-01-95/	05-31-98	WAYNE STATE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG15182-01	PANETTI, TRACEE S PHENOTYPIC CONSEQUENCES OF NOTCH3/CADASIL MUTATIONS	09-01-97/	UNIVERSITY OF WISCONSIN MADISON	
1R03AG15184-01A1	DISILVESTRO, ROBERT A MODERATE ZINC DEFICIENCY IN ELDERLY SUBJECTS	07-01-98/	OHIO STATE UNIVERSITY	
1R03AG15185-01	NOKES, KATHLEEN M EXPLORING DIFFERENCES: PEOPLE WITH HIV OVER/UNDER 50	09-01-97/	HUNTER COLLEGE	
1R03AG15190-01	KHARAZI, ALEXANDER I MYELOLYMPHOID PROGENITORS & AGE-RELATED LYMPHOMA IN MICE	09-01-97/	UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R03AG15191-01	MC GARRY, KATHLEEN RETIREMENT AND THE COST OF HEALTH INSURANCE	10-01-97/	UNIVERSITY OF CALIFORNIA	
1R03AG15193-01	FRISINA, ROBERT D AGING AUDITORY SYSTEM: NEUROIMAGING CALCIUM REGULATION	09-01-97/	UNIVERSITY OF ROCHESTER	
1R03AG15194-01	KARNER, TRACY X INCREASING ADRD SELF CARE WITH HOMECARE ASSISTANCE	09-01-97/	UNIVERSITY OF KANSAS	
1R03AG15195-01	SLOBOUNOV, SEMYON M EEG AND POSTURAL MOVEMENTS IN YOUNG AND AGED ADULTS	09-01-97/	PENNSYLVANIA STATE UNIVERSITY	
1R03AG15196-01	WHITFIELD, KEITH E SOCIAL SUPPORT AND EVERYDAY COGNITION IN BLACK ELDERLY	09-01-97/	PENNSYLVANIA STATE UNIVERSITY	
1R03AG15198-01	SEALFON, STUART C TOPOLGY AND MODELING OF PRESENILIN 1	09-01-97/	MOUNT SINAI SCHOOL OF MEDICINE	
1R03AG15200-01	FRESA, KERIN L CHANGES IN ACTIVATION-INDUCED CELL DEATH WITH AGE	09-01-97/	PHILADELPHIA COLLEGE OF OSTEOPATHIC	
1R03AG15202-01	ESSER, KARYN A TRANSLATIONAL CHANGES IN AGE-ASSOCIATED MUSCLE ATROPHY	01-01-98/	UNIVERSITY OF ILLINOIS AT CHICAGO	
1R03AG15203-01	EDELMAN, PERRY ARTHRITIS SELF-MANAGEMENT: KNOWLEDGE/ATTITUDES/BEHAVIOR	10-01-97/	NORTHWESTERN UNIVERSITY	
1R03AG15205-01	HIMES, CHRISTINE L BODY SIZE AND DISABILITY AT OLDER AGES	09-01-97/	SYRACUSE UNIVERSITY	
1R03AG15209-01	JHAVERI, SONAL STRUCTUAL ALTERATIONS IN AGING VISUAL SYSTEM	09-01-97/	MASSACHUSETTS INSTITUTE OF TECHNOLOG	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R03AG15214-01	SLADE, ERIC P VOLUNTEERISM AND THE OLDER ADULT HUMAN CAPITAL RESOURCE	09-01-97/		JOHNS HOPKINS UNIVERSITY	
1R03AG15216-01	CLARK, DANIEL O LIFESTYLES & MEDICAL SELF-CARE BEHAVIORS IN OLDER ADULTS	09-01-97/		INDIANA UNIVERSITY	
1R03AG15217-01	FRIEDLAND, ROBERT B HRS DATA: INFORMING THE FINANCIAL COMMUNITY	10-01-97/		GERONTOLOGICAL SOCIETY AMERICA	
1R03AG15218-01	HAUSER, ROBERT M SOCIOECONOMIC STATUS & PSYCHOLOGICAL WELL-BEING	09-01-97/		UNIVERSITY OF WISCONSIN	
1R03AG15219-01	DENGEL, DONALD R STRENGTH TRAINING, BLOOD PRESSURE AND INSULIN ACTION	09-01-97/		UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R03AG15221-01	YING, SHAO-YAO ACTIVIN & ACTIVIN RECEPTORS IN THE PROSTATE DURING AGING	09-01-97/		UNIVERSITY OF SOUTHERN CALIFORNIA	
1R03AG15222-01	TANDAN, RUP ENERGY METABOLISM IN AMYOTROPHIC LATERAL SCLEROSIS	09-01-97/		UNIVERSITY OF VERMONT	
1R03AG15225-01	STEINMEIER, THOMAS L FAMILY RETIREMENT MODELING WITH HEALTH/RETIREMENT STUDY	09-01-97/		NATIONAL BUREAU OF ECONOMIC RESEARCH	
1R03AG15226-01	HEATHERTON, TODD F SELF-REGULATORY RESOURCES AND AGING	09-01-97/		DARTMOUTH COLLEGE	
1R03AG15229-01	DEVOS, SUSAN M MATERIAL STATUS & OLD WOMEN'S SOLO LIVING, MEXICO '60-90	09-01-97/		UNIVERSITY OF WISCONSIN	
1R03AG15231-01	FAHEY, JOHN L IMMUNE DYSREGULATION AND AGING	09-01-97/		UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R03AG15233-01	MORGAN, WILLIAM W TEMPORAL/SPATIAL CONTROL OF AGE-RELATED GENES	09-01-97/		UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R03AG15235-01	HENNEN, JOHN A HOSPITALIZATIONS OF DEMENTED ELDERLY IN EPESE STUDIES	01-01-98/		MCLEAN HOSPITAL	
1R43AG15280-01A1	WATTS, GRADY AGING & MENTAL HEALTH: RESOURCES FOR YOU AND YOUR FAMILY	06-01-98/		STATE OF ART, INC	
1R01AG15295-01	PRESTWOOD, KAREN M PATHOGENESIS OF OSTEOPOROSIS IN OLDER WOMEN	12-01-97/		UNIVERSITY OF CONNECTICUT HEALTH CEN	

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FY: 98					
1R01AG15315-01	QUAID, KIMBERLY A CAPACITY TO CONSENT IN PATIENTS WITH DEMENTING ILLNESS	10-01-97/		INDIANA UNIVERSITY	
1R01AG15316-01	RABINS, PETER V INFORMED CONSENT FOR RESEARCH: THE COGNITIVELY IMPAIRED	10-01-97/		JOHNS HOPKINS UNIVERSITY	
1R01AG15320-01	MCCARTER, ROGER J A NUTRIONAL PROBE OF PLASMA GLUCOSE IN AGING	04-01-98/		UNIV OF TEXAS HEALTH SCI CENTER	
1R01AG15327-01	KROMER, LAWRENCE F NEUROTHROPHINS: MAINTENACE OF CNS NEURONAL CIRCUITS	04-01-98/		GEORGETOWN UNIVERSITY	
1R01AG15342-01	BECKER, KENNETH L N-TERMINUS OF PROCALCITONIN:INDICATOR OF SEPSIS	04-01-98/		VETERANS AFFAIRS MEDICAL CENTER	
1R01AG15346-01	GREENDALE, GAIL A ENDOGENOUS AND EXOGENOUS STEROIDS AND HEALTH OUTCOMES	04-01-98/		UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R29AG15356-01	RICHARDS, LORIE G CROSS-LANGUAGE ACTIVATION IN BILINGUAL ELDERS	04-01-98/		UNIV OF KANSAS MEDICAL CENTER	
1R01AG15371-01	LIAN, JANE B REGULATION OF APOPTOSIS IN BONE FORMING CELLS	04-01-98/		UNIVERSITY OF MASSACHUSETTS MEDICAL	
1R01AG15374-01	ALLEN, ROBERT G INFLUENCE OF AGE ON EFFECTS ON NORMAL AND MUTANT SOD-1	04-01-98/		MEDICAL COLLEGE OF PA AND HAHNEMANN	
1R29AG15388-01	CARTER, PATRICK A TESTING MODELS OF AGING WITH HIGH EXERCISE MICE	01-01-98/		WASHINGTON STATE UNIVERSITY	
1R29AG15398-01	PETERSON, ERIC D TOWARD A RATIONAL USE OF REVASCULARIZATION IN THE AGED	04-01-98/		DUKE UNIVERSITY MEDICAL CTR	
1R01AG15406-01	JOHNSON, THOMAS E ROLE OF TYROSINE KINASE RECEPTORS IN AGING PROCESSES	04-01-98/		UNIVERSITY OF COLORADO AT BOULDER	
1P01AG15429-01	STRITTMATTER, WARREN J APOLIPOPROTEIN E IN THE STRESSED CENTRAL NERVOUS SYSTEM	04-01-98/		DUKE UNIVERSITY	
1R29AG15439-01	TOWER, RONI B MEANING AND CONSEQUENCES OF CLOSENESS IN OLDER COUPLES	04-01-98/		YALE UNIVERSITY	
1R21AG15456-01	REED, TERRY E GENETIC EPIDEMIOLOGICAL STUDIES IN AN AGING TWIN COHORT	04-01-98/		INDIANA UNIVERSITY	

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FY: 98					
1R01AG15463-01	LESNEFSKY, EDWARD J ANTIOXIDANTS DECREASE REPERFUSION INJURY IN AGING HEART	04-01-98/		CASE WESTERN RESERVE UNIVERSITY	
1R03AG15468-01	MAZZEO, ROBERT S EFFECT OF VOLUNTARY EXERCISE ON AGING IMMUNE SYSTEM	01-01-98/		UNIVERSITY OF COLORADO AT BOULDER	
1R01AG15477-01A1	BREITNER, JOHN C PREVENTION OF ALZHEIMER'S DEMENTIA & COGNITIVE DECLINE	09-01-98/		JOHNS HOPKINS UNIVERSITY	
1R01AG15483-01	JACOBS, DAVID B CONTROL OF GLUT1 IN ALZHEIMER'S DISEASE	04-01-98/		FINCH UNIV OF HLTH SCI/CHICAGO MED S	
1R03AG15492-01	WOLOZIN, BENJAMIN REGULATION OF NFKAPPAB BY PRESENILIN-2	01-01-98/		LOYOLA UNIVERSITY CHICAGO	
1R03AG15493-01	COX, CAROLE B EMPOWERMENT: A MEANS TO ENHANCE CAREGIVING CAPACITIES	01-01-98/		FORDHAM UNIVERSITY	
1R03AG15496-01	SCRABLE, HEIDI A NOVEL SYSTEM TO REGULATE NEURONAL PHOSPHATASE ACTIVITY	01-01-98/		UNIVERSITY OF VIRGINIA CHARLOTTESVIL	
1R15AG15497-01	BAKSI, KRISHNA RECOMBINANT MUSCARINIC TOXIN MT7: ALZHEIMER'S DISEASE	04-01-98/		CENTRAL UNIVERSITY OF THE CARIBE	
1R15AG15499-01	HUGHES, JAMES P STATHMIN SIGNALING MECHANISMS AND LINKS TO ALZHEIMER'S	05-01-98/		INDIANA STATE UNIVERSITY	
1R03AG15506-01	WESTERINK, MA JULIE AGING & HUMORAL IMMUNITY TO PNEUMOCOCCAL POLYSACCHARIDE	01-01-98/		MEDICAL COLLEGE OF OHIO	
1R03AG15508-01	BROOKS, KATHRYN H B CELL ACTIVATION MEDIATED BY CD5+ NEOPLASTIC B CELLS	01-01-98/		MICHIGAN STATE UNIVERSITY	
1R03AG15509-01	BERG, CYNTHIA A COLLABORATIVE EVERYDAY PROBLEM SOLVING IN OLDER COUPLES	03-01-98/		UNIVERSITY OF UTAH	
1R03AG15512-01	MEHTA, PANKAJ D BIOLOGICAL MARKERS TO MONITOR AD	01-01-98/		INSTITUTE FOR BASIC RES IN DEV DISAB	
1R03AG15513-01	KATZNELSON, LAURENCE TESTOSTERONE EFFECTS ON MUSCLE FUNCTION IN ELDERLY MEN	01-01-98/		MASSACHUSETTS GENERAL HOSPITAL	
1R03AG15514-01	KEARSE, KELLY P EFFECTS OF AGE ON T LYMPHOCYTE DEVELOPMENT AND FUNCTION	01-01-98/		EAST CAROLINA UNIVERSITY	

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FY: 98					
1R03AG15515-01	SKAFF, MARILYN M LIFE DOMAINS AND PERSONAL CONTROL IN LATE LIFE	01-01-98/		UNIVERSITY OF CALIFORNIA	
1R03AG15516-01A1	BARRO, ROBERT J HEALTH AND ECONOMIC GROWTH	05-01-98/		NATIONAL BUREAU OF ECON RES	
1R03AG15518-01	RYSCHON, KAY L EXERCISE EFFECT ON HEART RATE VARIABILITY IN OLDER WOMEN	01-01-98/		CREIGHTON UNIVERSITY	
1R03AG15519-01	SPEER, DAVID C HIV PREVENTION AMONG MIDDLE AND OLDER ADULTS	01-01-98/		UNIVERSITY OF SOUTH FLORIDA	
1R03AG15520-01	BOWSER, ROBERT ALTERNATIVELY EXPRESSED GENES IN ALZHEIMER DISEASE	01-01-98/		UNIVERSITY OF PITTSBURGH AT PITTSBUR	
1R03AG15521-01	LEE, JO ANN ELDER CARE AND RETIREMENT DECISIONS WITH THE HRS DATA	01-01-98/		UNIVERSITY OF NORTH CAROLINA	
1R03AG15522-01A1	SNYDER, PETER J TESTOSTERONE AND RECONDITIONING IN ELDERLY MEN	05-01-98/		UNIVERSITY OF PENNSYLVANIA	
1R03AG15523-01	CRAFT, SUZANNE ANDROGEN EFFECTS ON COGNITION IN AGING AND ALZHEIMER'S	01-01-98/		UNIVERSITY OF WASHINGTON	
1R03AG15524-01	RYAN, ALICE S AEROBIC AND RESISTIVE TRAINING WITH DIET IN OLDER WOMEN	01-01-98/		UNIV OF MARYLAND AT BALTIMORE	
1R03AG15526-01	PERRIN, KAREN M DEVELOPMENT OF SPIRITUALITY INSTRUMENT HEALTH & AGING	01-01-98/		UNIVERSITY OF SOUTH FLORIDA	
1R03AG15527-01	MADDEN, KELLEY S SYMPATHETIC INNERVATION IN THE THYMUS OF AGING MICE	01-01-98/		UNIVERSITY OF ROCHESTER	
1R03AG15528-01	YU, LUCY C HEALTH & SERVICES USE AMONG AFRICAN & CHINESE AMERICANS	03-01-98/		PENNSYLVANIA STATE UNIVERSITY	
1R03AG15529-01	LASKOWITZ, DANIEL T THE EFFECT OF APOE ON CHOLINERGIC NEURON SURVIVAL	01-01-98/		DUKE UNIVERSITY	
1R03AG15530-01	GRAY, SHELLY L BENZODIAZEPINE DRUG USE IN THE ELDERLY: PATTERNS & RISKS	01-01-98/		UNIVERSITY OF WASHINGTON	
1R03AG15531-01	KIMBLE, ROBERT B ESTROGEN REGULATION OF THE TUMOR NECROSIS FACTOR PROMOT	01-01-98/		BARNES-JEWISH HOSPITAL OF ST LOUIS	

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FY: 98				
1R03AG15532-01	CHAUHAN, VED P AMYLOID BETA-PROTEIN AND ACTIN ASSEMBLY	04-01-98/	NYS INST FOR BASIC RES DEV DISABILIT	
1R03AG15533-01	KERNS, JAMES M AGING AND THE REGENERATIVE RESPONSE TO NERVE INJURY	01-01-98/	RUSH-PRESBY-ST LUKE'S MED CTR	
1R03AG15534-01	HWANG, BANG H CALORIC RESTRICTION & LONGEVITY: AN NPY/BDNF HYPOTHESIS	01-01-98/	INDIANA UNIVERSITY	
1R03AG15535-01	DOKAS, LINDA A INTEGRATION OF CELLULAR STRESS RESPONSES IN BRAIN	01-01-98/	MEDICAL COLLEGE OF OHIO AT TOLEDO	
1R03AG15536-01	YUNG, RAYMOND L AGING-ASSOCIATED HORMONAL CHANGES & LYMPHOCYTE HOMING	01-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R03AG15537-01	CLAFFEY, KEVIN P THE ROLE OF VPF/VEGF IN ALZHEIMER'S DISEASE PROGRESSION	01-01-98/	BETH ISRAEL DEACONESS MEDICAL CENTER	
1R03AG15540-01	TAYLOR, AUBREY E MELATONIN AS AN ANTIOXIDANT IN AGING	01-01-98/	UNIVERSITY OF SOUTH ALABAMA	
1R03AG15542-01	ABRAMS, JOHN M PREVENTING APOPTOSIS IN A MODEL OF RETINAL DEGENERATION	01-01-98/	UNIVERSITY OF TEXAS SW MED CTR/DALLA	
1R03AG15543-01	BAILEY, ERIC J SELF-CARE & OLDER ADULTS: QUALITY OF LIFE NEEDS	01-01-98/	INDIANA UNIVERSITY	
1R03AG15546-01	RODGERS, ANTOINETTE Y USING FOCUS GROUPS TO DEVELOP AN AIDS PREVENTION PROGRAM	01-01-98/	RUTGERS UNIVERSITY	
1R03AG15550-01	ZIEGLER, STEVEN F REGULATION OF CD69 EXPRESSION IN YOUNG AND OLD T CELLS	01-01-98/	VIRGINIA MASON RESEARCH CENTER	
1R03AG15553-01	LEE, JOHN M ALTERATION OF B-AMYLOID NEUROTOXICITY	04-01-98/	LOYOLA UNIVERSITY	
1R03AG15554-01	KANT, ASHIMA K RELATION OF NUTRITIONAL WITH DISABILITY IN THE ELDERLY	01-01-98/	QUEENS COLLEGE	
1R03AG15557-01	PIZZONIA, JOHN H GLIAL OXIDATIVE INJURY IN NEONATE, ADULT & AGED CNS	01-01-98/	YALE UNIVERSITY	
1R03AG15558-01A1	DUNLOP, DOROTHY CHRONIC DISEASES, DISABILITY AND NURSING HOME USE	05-01-98/	NORTHWESTERN UNIVERSITY	

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FY: 98					
1R03AG15559-01	ZIMNIAK, PIOTR ELECTROPHILIC LIPID PEROXIDATION PRODUCTS IN AGING	01-01-98/		UNIVERSITY OF ARKANSAS MED SCIS LTL	
1R03AG15560-01	SANDEFUR, GARY D SECONDARY ANALYSIS OF SOCIAL SUPPORT AND HEALTH	01-01-98/		UNIVERSITY OF WISCONSIN	
1R03AG15561-01	HUNDLEY, WILLIAM G ENDOTHELIAL DYSFUNCTION IN HEART FAILURE ASSESSED BY MRI	01-01-98/		WAKE FOREST UNIVERSITY	
1R03AG15562-01	JEMMERSON, RONALD R NATURALLY - OCCURRING AUTOREACTIVE B CELLS IN AGING	01-01-98/		UNIVERSITY OF MINNESOTA	
1R03AG15563-01	MARSHALL, GAILEN D ALTERED VACCINE RESPONSES IN DISTRESSED ELDERLY HUMANS	01-01-98/		UNIV OF TEXAS HLTH SCI CENTER	
1R03AG15564-01	PRECHEL, MARY M MICROGLIAL ACTIVATION WITH AGING	01-01-98/		LOYOLA UNIVERSITY OF CHICAGO	
1R03AG15566-01	SNOW, DIANE M PROTEOGLYCANS, AMYLOID CONFORMATIONAL CHANGES AND AGING	01-01-98/		UNIVERSITY OF KENTUCKY	
1R03AG15567-01	UNNERSTALL, JAMES R XENOGRAFTS AND PLASTICITY OF LOCUS COERULEUS IN AGED RAT	01-01-98/		UNIVERSITY OF ILLINOIS AT CHICAGO	
1R03AG15571-01	KOPERA-FRYE, KAREN F PROMOTING POSITIVE HEALTH BEHAVIORS AMONG OLDER ADULTS	01-15-98/		UNIVERSITY OF AKRON	
1R03AG15572-01	FRONSTIN, PAUL THE EFFECT OF EMPLOYEE BENEFITS ON RETIREMENT PATTERNS	01-01-98/		EMPLOYEE BENEFIT RESEARCH INSTITUTE	
1R03AG15573-01	KOTWAL, GIRISH J PATHOGENESIS OF THE C-TERMINUS OF APP	01-01-98/		UNIVERSITY OF LOUISVILLE	
1R03AG15575-01A1	BUCKLEY, CYNTHIA J AGRICULTURAL WORKERS AND RETIREMENT	07-01-98/		UNIVERSITY OF TEXAS AUSTIN	
1R03AG15578-01	PATRICK, JULIE M TASK PERFORMANCE AND DECISION QUALITY	01-01-98/		BRADLEY UNIVERSITY	
1R03AG15579-01	CROMWELL, RONITA L CONTROL OF HEAD STABILITY IN OLDER ADULTS DURING WALKING	01-01-98/		TEMPLE UNIVERSITY	
1R03AG15580-01	TERASAWA, EI AGING OF THE NEUROENDOCRINE HYPOTHALAMUS	01-01-98/		UNIVERSITY OF WISCONSIN MADISON	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R03AG15581-01	DAVIS, GAIL C OSTEOPOROSIS SELF-CARE INTERVENTION FOR OLDER ADULTS	01-01-98/		TEXAS WOMAN'S UNIVERSITY	
1R03AG15582-01	STRONY, JOHN T OXYGEN RADICAL PRODUCTION AND MYOCARDIAL VIABILITY	01-01-98/		CASE WESTERN RESERVE UNIVERSITY	
1R03AG15583-01	COHEN, MARC A PATTERNS OF INFORMAL CARE AMONG DISABLED	01-01-98/		LIFEPLANS, INC	
1R03AG15584-01	LOMBARDO, NANCY E SPIRITUALITY MEASURES: RELATIONSHIPS, AGING AND HEALTH	01-01-98/		WELLESLEY COLLEGE	
1R03AG15586-01	PORTER, JOHN D MECHANISMS OF SARCOPENIA IN EXTRAOCULAR MUSCLE	01-01-98/		UNIVERSITY OF KENTUCKY	
1R03AG15587-01	CRAWFORD, FIONA C INTERACTIONS IN AB VASOACTIVITY	01-01-98/		UNIVERSITY OF SOUTH FLORIDA	
1R03AG15588-01	PEARCE, KATHERINE F ESTROGEN AND COGNITIVE FUNCTION IN ALZHEIMER'S DISEASE	01-01-98/		WAKE FOREST UNIVERSITY	
1R03AG15589-01	SUMNER, DALE R BONE MECHANICAL PROPERTIES IN AGING	01-01-98/		RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R03AG15590-01	QUAN, FRANKLIN THE ROLE OF HLA-A2 VARIATION IN ALZHEIMER DISEASE.	01-01-98/		OREGON HEALTH SCIENCES UNIV	
1R03AG15591-01	JANMEY, PAUL A AGE RELATED ALTERATIONS IN NEUROFILAMENT DYNAMICS	01-01-98/		BRIGHAM & WOMEN'S HOSPITAL	
1R03AG15595-01	WIKLER, KENNETH HORMON REG OF CELL SURVIVAL IN THE AGING PRIMATE RETINA	01-01-98/		YALE UNIVERSITY	
1R03AG15597-01	SRIVASTAVA, RAI A ENVIRONMENTAL FACTORS AND ALZHEIMER'S DISEASE	01-01-98/		WASHINGTON UNIVERSITY	
1R03AG15598-01A1	GIBSON, GLORIA D INHERITANCES, BEQUESTS, AND LONG-TERM CARE EXPECTATIONS	05-01-98/		JOHNS HOPKINS UNIVERSITY	
1R03AG15600-01	GOSSELIN, LUC E COLLAGEN PROPERTIES IN AGING MUSCLE DURING REPAIR	01-15-98/		SUNY @ BUFFALO	
1R03AG15601-01	MAIESE, KENNETH MOLECULAR PATHWAYS OF NEURONAL AGING	01-01-98/		WAYNE STATE UNIVERSITY	

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1R03AG15602-01	RABINOVITCH, PETER S MITOCHON AND REACT OXYGEN IN AMYLOID B-INDUCED CELL DEA	01-01-98/		UNIVERSITY OF WASHINGTON	
1R03AG15604-01	METCALF, ELEANOR S INNATE IMMUNE MECHANISMS UNDERLYING SEPSIS IN THE AGED	01-01-98/		HENRY M JACKSON FDN FOR THE ADV MIL/	
1R03AG15606-01	FRANKEL, STEWART A CHANGES IN HETEROCHROMATIN & DROSOPHILA LIFE SPAN	01-01-98/		YALE UNIVERSITY	
1R03AG15607-01	NG, YUK-CHOW GENDER DIFFERENCES IN MYOCARDIAL AGING	01-01-98/		PENNSYLVANIA STATE UNIV HERSHEY MED	
1R03AG15608-01	STEINHELPER, MARK E TRANSCRIPTIONAL REGULATION OF NPPC IN HYPOTHALAMUS	01-01-98/		UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R03AG15610-01	TUCKER, VICKY L MICROVASCULAR PERMEABILITY IN AGING SKELETAL MUSCLES	07-01-98/		UNIV OF CALIFORNIA DAVIS	
1R03AG15613-01	ROTH, JEROME A ANTIPROLIFERATIVE ACTION OF MELATONIN'S NUCLEAR RECEPTOR	12-01-97/		STATE UNIVERSITY OF NEW YORK AT BUFF	
1R03AG15614-01	SHEA, THOMAS B IMPACT OF PHOSPHOLIPIDS ON TAU	01-01-98/		UNIVERSITY OF MASSACHUSETTS LOWELL	
1R03AG15615-01	KUMARI, VIJAYA G ADRENERGIC REGULATION OF FGF-2 SYNTHESIS BY ASTROCYTES	01-01-98/		UNIVERSITY OF CALIFORNIA DAVIS	
1R03AG15616-01	MILL, THEODORE MOLECULAR MECHANISM OF ANTIOXIDATION BY HUMAN ESTROGENS	01-03-98/		SRI INTERNATIONAL	
1R03AG15617-01	BROWN, SHARON A PROMOTING DIABETES SELF-CARE IN HISPANIC ELDERLY	01-01-98/		UNIVERSITY OF TEXAS AUSTIN	
1R03AG15618-01	BISHOP, BEVERLY P AGING AND SNORING OF THE LARYNGEAL MUSCLE PARALYZED RAT	01-01-98/		STATE UNIVERSITY OF NEW YORK	
1R03AG15619-01	MOLLENHAUER, JUERGEN A ANNEXIN V EXPRESSION IN CARTILAGE OF AGING HUMAN DONORS	01-01-98/		RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R03AG15630-01	BRESSLER, STEVEN L FE65 IN SIGNAL TRANSDUCTION HEADING TO APOPTOSIS	01-01-98/		UNIVERSITY OF WASHINGTON	
1R03AG15632-01	SMITH, MARK A CELL CYCLE ABNORMALITIES IN ALZHEIMER DISEASE	01-01-98/		CASE WESTERN RESERVE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R03AG15633-01	KHARLAMOV, ALEXANDER PHOTOISCHEMIA IN MOUSE: A NEW MODEL TO STUDY AGED BRAIN	01-01-98/		ALLEGHENY UNIV OF HEALTH SCIENCE	
1R03AG15634-01	TEZAPSIDIS, NIKOLAOS PRESENILIN-BINDING PROTEINS AS REGULATORS OF AB1-42 PROD	01-01-98/		MOUNT SINAI SCHOOL OF MEDICINE	
1R03AG15635-01	COON, DAVID W ELDERLY CAREGIVERS OF HIV+ PERSONS: PSYCHOSOCIAL RISKS	01-01-98/		PALO ALTO INST FOR RESEARCH & EDUC	
1R03AG15636-01	BAYLIS, CHRISTINE EXTRACELLULAR MATRIX ACCUMULATION IN AGING KIDNEY	01-01-98/		WEST VIRGINIA UNIVERSITY	
1R03AG15637-01	SCHWARTZ, CAROLYN E RESPONSE SHIFT AND ALTRUISM IN THE AGING CHRONICALLY ILL	01-01-98/		FRONTIER SCIENCE & TECH RESEARCH FDN	
1R03AG15639-01	URBANSKI, HENRYK F GONADAL STEROIDS AND THE AGING HYPOTHALAMUS	01-01-98/		OREGON REGIONAL PRIMATE RESEARCH CEN	
1R03AG15640-01	DUNN, JULIE E APOE EPSILON-4, ESTROGEN, VITAMINS E&A & COGNITIVE FUNCT	01-01-98/		NORTHWESTERN UNIVERSITY	
1R03AG15641-01	ROMEIS, JAMES C AGE, SENSE OF CONTROL AND BEHAVIORAL GENETICS	01-01-98/		SAINT LOUIS UNIVERSITY	
1R03AG15643-01	DARKWA, OSEI K SELF-CARE BEHAVIOR AMONG ELDERLY AFRICAN AMERICANS	01-01-98/		UNIVERSITY OF ILLINOIS	
1R03AG15644-01	SOPHER, BRYCE L PRESENILIN 1: MUTATIONS AND FUNCTIONS	01-01-98/		UNIVERSITY OF WASHINGTON	
1R03AG15648-01	BUNAG, RUBEN D MOLECULAR BIOLOGY OF CARDIOVASCULAR AGING	01-01-98/		UNIVERSITY OF KANSAS MEDICAL CENTER	
1R03AG15649-01	DEVANEY, SHARON A RETIREMENT PLANNING: ARE SELF-EMPLOYED WORKERS AT RISK	01-01-98/		PURDUE RESEARCH FOUNDATION	
1R03AG15652-01	HAHN, THEODORE J DETERMINATION OF THE OSTEOARTHRITIS NITRIC OXIDE SYNTHA	01-01-98/		UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R03AG15654-01	SHOUKAS, ARTIN A CAROTID SINUS REFLEX CONTROL IN THE AGING	01-01-98/		JOHNS HOPKINS UNIVERSITY	
1R03AG15655-01	KELLY, KEVIN M KINDLED SEIZURES AND CALCIUM CHANNELS IN AGED RAT BRAIN	01-01-98/		ALLEGHENY UNIV OF HEALTH SCIENCE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG15657-01	FUKAGAWA, NAOMI K MITOCHONDRIAL DNA MUTATIONS IN AGING AND HEART DISEASE	01-01-98/	UNIVERSITY OF VERMONT	
1R03AG15661-01	ROTH, JESSE SLEEP APNEA: PHENOTYPING AND GENOTYPING OF SIB PAIRS	01-01-98/	JOHNS HOPKINS UNIVERSITY	
1R03AG15662-01	BORST, STEPHEN E GROWTH HORMONE AND INSULIN RESISTANCE IN AGING MUSCLE	01-09-97/	UNIVERSITY OF FLORIDA	
1R03AG15664-01	WHYTE, MARTIN K SOCIAL AND HEALTH STATUS OF THE ELDER IN A CHINESE CITY	01-01-98/	GEORGE WASHINTON UNIVERSITY	
1R03AG15665-01	FORMAN, DANIEL AGE AND DISEASE RELATED CHANGES IN VASCULAR FUNCTION	01-01-98/	HEBREW REHAB CENTER FOR AGED	
1R03AG15666-01	SANDERS, VIRGINIA M NEUROMODULATION OF AGED B CELLS	01-01-98/	LOYOLA UNIVERSITY MEDICAL CENTER	
1R03AG15668-01	KAPLITT, MICHAEL G CEREBROPROTECTIVE MECHANISMS OF ESTROGEN REPLACEMENT	01-01-98/	CORNELL UNIVERSITY MEDICAL COLL	
1R03AG15669-01	SOLODKIN, ANA NEUROBIOLOGICAL BASES OF RECOVERY AFTER STROKE:	01-01-98/	UNIV OF MARYLAND, BALTIMORE	
1R03AG15670-01	LE, PHONG T MOLECULAR MECHANISMS OF THYMIC INVOLUTION	01-01-97/	LOYOLA UNIVERSITY CHICAGO	
1R03AG15674-01	MATTHIASSON, HAUKUR COPING IN ADULTHOOD: DEVELOPMENT AND SITUATION FACTORS	02-01-98/	UNIVERSITY OF SOUTH FLORIDA	
1R03AG15676-01	SCHAUFELE, FREDERICK J TRANSCRIPTION FACTORS REGULATING AGE-RELATED GH DECLINE	01-01-98/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R03AG15678-01A1	HOGAN, DENNIS P ESTIMATES OF FUNCTIONAL CHANGES USING MULTIPLE DATASETS	07-01-98/	BROWN UNIVERSITY	
1R03AG15679-01	BURSZTAJN, SHERRY NEUROTRANSMITTERS AND DNA INTEGRITY IN THE AGING BRAIN	09-01-97/	MCLEAN HOSPITAL	
1R03AG15683-01	TONEY, GLENN M CENTRAL SYMPATHETIC REGULATION IN HEART FAILURE	01-01-98/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R03AG15684-01	GANGULY, KALYAN REGULATION OF CHOLINE ACETYLTRANSFERASE GENE EXPRESSION	01-01-98/	HEALTH SCIENCE CENTER AT BROOKLYN	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG15685-01	SWANSON, JANE L INTERSECTION OF PERSONALITY AND INTERESTS IN ADULTHOOD	01-01-98/	SOUTHERN ILLINOIS UNIVERSITY	
1R03AG15687-01	JOHN, ROBERT DEVELOPMENT OF MULTICULTURAL RELIGIOSITY SCALE	01-01-98/	UNIVERSITY OF NORTH TEXAS	
1R03AG15690-01	LIOU, HSIOU-CHI NFKB/REL AND IMMUNE SENESCENCE	01-01-98/	CORNELL UNIVERSITY MED COLLEGE	
1R03AG15697-01	BAKER, SONIA P SOCIAL NETWORKS AND COMMUNITY RESOURCES AMONG OLDER	01-01-98/	NEW YORK UNIVERSITY	
1R03AG15699-01	BENOIT, JOSEPH N THE RESISTANCE VASCULATURE IN AGING	01-01-98/	UNIVERSITY OF SOUTH ALABAMA	
1R03AG15706-01	JOHNSON, CLAYTON H A MODEL SYSTEM FOR MITOCHONDRIAL INJURY	01-01-98/	UNIV OF ARKANSAS MED SCIENCES	
1R03AG15707-01	STACK, STEVEN J WOMEN'S LABOR FORCE PARTICIPATION, AGE, AND SUICIDE	01-01-98/	UNIVERSITY RESEARCH ASSOCIATES	
1R03AG15711-01	SLADE, ERIC P INCOME RATIONING AND ACTIVITY CHOICES OF OLDER ADULTS	01-01-98/	JOHNS HOPKINS UNIVERSITY	
1R43AG15718-01	LETZT, ALAN M AUTOMATED DRUG ADVISORY AND MONITORING SYSTEM	03-01-98/	INNOVATIVE ENTERPRISES INTERNATIONAL	
1R43AG15723-01	STROMBECK, RITA D MANAGING HIV/AIDS-A PROGRAM FOR OLDER ADULTS	02-01-98/	HEALTHCARE EDUCATION ASSOCIATES	
1R43AG15724-01	ADOLPH, ALAN R LOW-COST TELEMEDICAL SYSTEMS: DEVELOPMENT AND EVALUATION	03-01-98/	BIOTEL/PHYSIOTEL	
1R41AG15731-01	GONZALEZ-LIMA, FRANCISCO TEST FOR EARLY DIAGNOSIS OF ALZHEIMER'S DISEASE	03-01-98/	CEDRA CORP	
1R03AG15738-01	DELACALLE, SONSOLES THROMBIN-PN1 CLEARANCE IN ALZHEIMER'S DISEASE	01-01-98/	BETH ISRAEL DEACONESS MEDICAL CENTER	
1R01AG15741-01	SCHMAHMANN, JEREMY D METHODOLOGIES FOR NEURAL CONNECTIVITY STUDIES	09-01-97/	MASSACHUSETTS GENERAL HOSP	
1R01AG15742-01	SADUN, ALFREDO A INNOVATIVE APPROACHES FOR MICROSCOPIC TRACT-TRACING	02-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	

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1R01AG15743-01	HORVATH, TAMAS VISUAL PATHWAYS INNERVATING NEUROENDOCRINE CELLS	09-01-97/	YALE UNIVERSITY SCH OF MEDICINE	
1R01AG15744-01	GELLER, ALFRED I TRACT-TRACING OF IDENTIFIED NEURONS USING HSV-1 VECTORS	04-01-98/	CHILDREN'S HOSPITAL (BOSTON)	
1R01AG15747-01	RYE, DAVID B NOVEL SILVER METHOD FOR MAPPING THE HUMAN BASAL GANGLIA	12-01-97/	EMORY UNIVERSITY SCHOOL OF MED	
1R15AG15755-01	ARQUITT, ANDREA B ZINC, COPPER AND IRON EFFECTS AND INTERACTIONS IN BONE	09-01-98/	OKLAHOMA STATE UNIVERSITY	
1R15AG15759-01	MCGUIRE, LISA C IMPROVING OLDER ADULTS' MEMORY FOR MEDICAL INFORMATION	07-01-98/	ALLEGHENY COLLEGE	
1R01AG15764-01	FISK, ARTHUR D AGING AND DESIGN OF TECHNOLOGY	07-01-98/	GEORGIA INSTITUTE OF TECHNOLOGY	
1R01AG15770-01	KENNEY, WILLIAM L, JR AGING AND HEMODYNAMIC ADJUSTMENTS TO HYPERTHERMIA	07-01-98/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	
1R01AG15784-01	ABRAHAM, CARMELA R APP PROCESSING AND INFLAMMATION IN ALZHEIMER'S DISEASE	07-01-98/	BOSTON UNIVERSITY	
1R01AG15786-01	OKA, ROBERTA K PRO-SELF EXERCISE PROGRAM IN PATIENTS WITH HEART FAILURE	07-01-98/	UNIV OF CALIFORNIA SAN FRANCISCO	
1R15AG15787-01	HIGGINS, PATRICIA A FAILURE TO THRIVE IN THE LONG-TERM VENTILATOR PATIENT	07-01-98/	CASE WESTERN RESERVE UNIVERSITY	
1R01AG15801-01	BUXBAUM, JOSEPH D PRESENILINS, APOPTOSIS AND A-BETA	07-01-98/	MOUNT SINAI SCH OF MEDICINE	
1R01AG15807-01	ROGERS, WENDY A AGING AND DESIGN OF TECHNOLOGY	09-01-98/	UNIV OF GEORGIA RES FDN INC	
1R01AG15809-01	PATTERSON, MARIAN B VASCULAR DISEASE EFFECTS ON COGNITION AND BEHAVIOR IN AD	07-01-98/	CASE WESTERN RESERVE UNIVERSITY	
1R21AG15826-01	MORGAN, BARBARA S COMPUTER-ASSISTED INTERVENTIONS FOR TYPE II DIABETICS	07-01-98/	UNIV OF MIAMI SCHOOL OF NURSING	
1R29AG15844-01	KENNY, ANNE BONE LOSS IN OLDER MEN WITH LOW TESTOSTERONE LEVELS	07-01-98/	UCONN HEALTH CENTER	

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1P50AG15847-01	SCHNELLE, JOHN F APPLIED GERONTOLOGY RESEARCH CENTER	07-01-98/	EMORY UNIVERSITY	
1P50AG15848-01	MONTGOMERY, RHONDA J ENHANCING PRACTICAL COMMUNICATION WITH OLDER ADULTS	07-01-98/	UNIVERSITY OF KANSAS LAWRENCE	
1R01AG15858-01	CAREY, JAMES R COMPARATIVE DEMOGRAPHY & ECOLOGY OF PROLONGED LIFE SPAN	07-01-98/	UNIVERSITY OF CALIFORNIA DAVIS	
1R01AG15864-01	VITEK, MICHAEL P REGULATION OF AMYLOID PLAQUE PATHOLOGY	07-01-98/	DUKE UNIVERSITY MEDICAL CENTER	
1R01AG15884-01	KELLER, EVAN T AGING, GENE EXPRESSION AND OXIDATIVE STRESS	07-01-98/	EASTERN VIRGINIA MED SCH/MED COL HAM	
1R01AG15888-01	SOUDER, J ELAINE THE EFFECT OF VISUAL DEFICITS ON AMBULATION IN DEMENTIA	07-01-98/	UNIVERSITY OF ARKANSAS	
1R01AG15893-01	HOBBS, MONTE V EFFECTS OF AGING ON CD8+ T CELL FUNCTIONS	07-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R13AG15898-01	DALTON, ARTHUR J DEMENTIA IN DOWN SYNDROME: TREATMENT COLLOQUIM	04-01-98/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R01AG15920-01	HERSHEY, DOUGLAS A AGING & COMPLEX PROBLEM SOLVING: STRUCTURAL FOUNDATIONS	08-01-98/	OKLAHOMA STATE UNIVERSITY	
1P01AG15921-01	DE VRIES, GEORGE H MOLECULAR MECHANISMS OF MGUS NEUROPATHY	07-09-98/	LOYOLA UNIVERSITY CHICAGO	
1P01AG15923-01	WICKLINE, SAMUEL A THE EFFECTS OF AGING ON CARDIAC DIASTOLIC FUNCTION	07-01-98/	BARNES-JEWISH HOSPITAL	
1R01AG15936-01	SUREWICZ, K WITOLD NEURONAL MEMBRANE AS A TARGET OF BETA-AMYLOID PEPTIDE	07-01-98/	CASE WESTERN RESERVE UNIVERSITY	
1R01AG15938-01	SALA-I-MARTIN, XAVIER X EXPLAINING SOCIAL SECURITY	07-01-98/	NATIONAL BUREAU OF ECON RESEARCH	
1R01AG15939-01	MCTIERNAN, ANNE EFFECT OF EXERCISE ON IMMUNE FUNCTION IN OLDER WOMEN	07-01-98/	FRED HUTCHINSON CANCER RESCH CTR	
1P01AG15942-01	MILLER, RICHARD A MOLECULAR MECHANISMS OF T CELL AGING IN MICE	07-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15944-01	ROGERS, WENDY A TASK STRATEGIES, AGING, AND SKILL ACQUISITION	09-01-98/	UNIV OF GEORGIA RES FDN INC	
1R03AG15946-01	STOCK, WENDY A OLDER WORKER JOB DISPLACEMENT: INCIDENCE & IMPLICATIONS	05-01-98/	KANSAS STATE UNIVERSITY	
1R03AG15950-01	KELLER, EVAN T AGING, CD4+ CELL TELOMERE LENGTH AND VACCINE RESPONSE	05-01-98/	MEDICAL COLLEGE OF HAMPTON ROADS	
1R03AG15968-01	RUHM, CHRISTOPHER J HEALTH, RETIREMENT, AND SOCIAL SECURITY	06-01-98/	NATIONAL BUREAU OF ECONOMIC RESEARCH	
1R01AG15969-01	STULL, DONALD E EFFECT OF HEART FAILURE ON THE QUALITY OF FAMILY LIFE	07-01-98/	UNIVERSITY OF AKRON	
1R03AG15970-01	ADAMCHAK, DONALD J THE IMPACT OF THE NATIONAL PENSION IN NAMIBIA	06-01-98/	KANSAS STATE UNIVERSITY	
1R01AG15972-01	RUDBERG, MARK CLINICAL OUTCOMES OF NURSING HOME RESIDENTS	07-01-98/	UNIVERSITY OF CHICAGO	
1R03AG15974-01	SLADE, ERIC P VOLUNTEERING AND OTHER USES OF TIME AT RETIREMENT	05-01-98/	JOHNS HOPKINS UNIVERSITY	
1R03AG15975-01	HEIDRICH, SUSAN M SELF DISCREPANCY AND ADJUSTMENT TO CHRONIC ILLNESS	07-01-98/	UNIVERSITY OF WISCONSIN MILWAUKEE	
1R03AG15976-01	AROIAN, KAREN J CROSS-CULTURAL MEASUREMENT OF SYMPTOM SELF-CARE	05-01-98/	BOSTON COLLEGE	
1R03AG15977-01	RESNICK, BARBARA M TESTING THE WALC PROGRAM TO IMPROVE EXERCISE ADHERENCE	05-01-98/	UNIVERSITY OF MARYLAND	
1R01AG15978-01	WESTERINK, MA JULIE ELDERLY RESPONSE TO PNEUMOCOCCAL POLYSACCHARIDE VACCINE	07-01-98/	MEDICAL COLLEGE OF OHIO	
1R03AG15981-01	DAWSON, RALPH, JR TAURINE HOMEOSTASIS IN AGING	05-01-97/	UNIVERSITY OF FLORIDA	
1R03AG15985-01	KYNE, LORRAINE HU ANTIBODY RESP TO C DIFFICILE AND ITS TOXINS	07-01-98/	BETH ISRAEL DEACONESS MED CENTER	
1R03AG15986-01	FUKAGAWA, NAOMI K ASSESSMENT OF ANTIOXIDANT CAPACITY IN POSTMENOPAUSAL WO	05-01-98/	UNIVERSITY OF VERMONT	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG15987-01	WING, STEVE THE LOCAL FOOD ENVIRONMENT AND DIETARY INTAKE IN ARIC	07-01-98/	UNIV OF NORTH CAROLINA	
1R03AG15989-01	BEN-NER, AVNER WORKPLACE INJURIES AMONG OLDER WORKERS	06-01-98/	UNIVERSITY OF MINNESOTA	
1R03AG15992-01	XU, XUEMIN ROLE OF APOE IN A BETA FORMATION	05-01-98/	CASE WESTERN RESERVE UNIVERSITY	
1R03AG15993-01	BRAUER, DONNA THE ROLE OF AFFECT IN SELF-CARE OF CHRONIC CONDITIONS	05-01-98/	UNIV OF MINNESOTA	
1R03AG15994-01	OXFORD, JULIA T MOLECULAR MECHANISM OF ARTICULAR CARTILAGE REPAIR	07-01-98/	COLORADO STATE UNIVERSITY	
1R03AG15995-01	ROFUTH, TODD W DOES RELIGION IMPACT MENTAL HEALTH OF NURSING RESIDENTS?	05-01-98/	JEWISH HOME FOR THE AGED INC	
1R03AG15996-01	MAY, CYNTHIA P AGE, MEMORY, AND EMOTION	05-01-98/	UNIVERSITY OF ARIZONA	
1R03AG15997-01	MURPHY-SOUTHWICK, COLLEEN TITLE OMITTED	03-01-98/	UNIVERSITY OF MONTANA	
1R03AG15998-01	WATLINGTON, CHARLES O DHEA: METABOLISM AND NA+ TRANSPORT IN CULTURED KIDNEY	01-01-98/	VIRGINIA COMMONWEALTH UNIVERSITY	
1R03AG16000-01	EHRLICH, YIGAL H ECTO-PKC ON CNS NEURONS: A TARGET FOR B-AMYLOID PEPTIDES	05-01-98/	COLL OF STATEN ISLD WILLOWBROOK CMPS	
1R03AG16001-01	BLAIR, CHARLES E TESTING AND REFINING THE BEHAVIOR MANAGEMENT CHECKLIST	07-01-98/	UNIV OF TEXAS MED BRANCH	
1R03AG16003-01	RAY, JHARNA STUDIES ON AGING OF HUMAN EYES: SIGNIFICANCE TO ARMD	05-01-98/	CORNELL UNIVERSITY	
1R03AG16005-01	MAY, JEFFREY V FSH-RECEPTOR GENE EXPRESSION IN THE AGING HUMAN OVARY	05-01-98/	UNIVERSITY OF KANSAS	
1R03AG16008-01	LANGA, KENNETH M CHANGES IN INFORMAL HOME CARE IN AN AGING POPULATION	05-01-98/	UNIVERSITY OF MICHIGAN	
1R03AG16009-01	HONIG, MARJORIE LABOR SUPPLY OF PRE-RETIREMENT MARRIED WOMEN	07-01-98/	CUNY GRADUATE SCH AND UNIV CTR	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG16010-01	MARTINEZ, DANIEL A COLLAGEN CROSS-LINKS IMPACTING IN VITRO BONE RESORPTION	05-01-98/	UNIVERSITY OF HOUSTON	
1R03AG16011-01	WEINBERG, JOANNA K SURVEY OF AIDS HIV/AIDS SERVICE PROVIDERS	05-01-98/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R03AG16012-01	KAPASI, ZOHER F EXERCISE-INDUCED MODULATION OF IN AGING	05-01-98/	EMORY UNIVERSITY	
1R03AG16014-01	CHAPMAN, BARBARA S DOES RECEPTOR-INDUCED APOPTOSIS CONTROL PROB-CELL POOLS	05-01-98/	CALIFORNIA STATE UNIVERSITY	
1R03AG16015-01	MC INTOSH, MICHAEL K ATTENUATION OF HUMAN PREADIPOCYLE GROWTH BY DHEA	05-01-98/	UNIV OF NORTH CAROLINA, GREENSBORO	
1R03AG16016-01	MCCAMMON, MARK T ABERRANT PROTEIN ASSEMBLY AND AGING	05-01-98/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
1R03AG16017-01	ATRI, SAID UTILIZATION DIFFERENTIALS AMONG NEW MEDICARE ENROLLEES	07-01-98/	STATE UNIVERSITY OF NEW YORK	
1R03AG16018-01	COX, HAROLD G PERCEPTIONS OF AGE AND WORKER PRODUCTIVITY	06-01-98/	INDIANA STATE UNIVERSITY	
1R03AG16020-01	GOULD, ODETTE N MEMORY STRATEGIES AND MEDICATION ADHERENCE	06-01-98/	NORTH DAKOTA STATE UNIVERSITY	
1R03AG16023-01	NAGAHARA, ALAN H AGING AND ATTENTION: ROLE OF PREFRONTAL DOPAMINE	05-01-98/	LOYOLA UNIVERSITY	
1R03AG16025-01	BOARDLEY, DEBRA J ANDROSTENEDIONE SUPPLEMENTATION IN OLDER MEN AND WOMEN	05-15-98/	UNIVERSITY OF TOLEDO	
1R03AG16026-01	COLTON, CAROL A MICROGLIAL MEDIATED REGULATION OF THE NMDA CHANNEL	05-01-98/	GEORGETOWN UNIVERSITY	
1R03AG16030-01	EVANS, SYLVIA M RETRODIFFERENTIATION IN SKELETAL MUSCLE	05-01-98/	UNIV OF CALIFORNIA, SAN DIEGO	
1R03AG16033-01	YANG, KEYI NONVIRAL VECTORS FOR GENE TRANSFER IN THE AGED RAT BRAIN	05-01-98/	UNIV OF TEXAS HLTH SCI CTR	
1R03AG16036-01	KELLEY, COLLEEN M CONFORMITY IN MEMORY ACROSS THE ADULT LIFESPAN.	06-01-98/	FLORIDA STATE UNIVERSITY	

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FY: 98				
1R03AG16037-01	SPENCER, JEAN C PERSONAL ADAPTATION TO RELOCATION BY ELDERS	06-01-98/	TEXAS WOMAN'S UNIVERSITY	
1R03AG16038-01	DUKER, NAHUM J MOLECULAR STRUCTURES OF AGE-RELATED DNA ALTERATIONS	07-01-98/	TEMPLE UNIVERSITY	
1R03AG16039-01	WILLIAMS, JAMES M STUDIES ON THE CAPACITY OF AGED CARTILAGE TO REPAIR	07-01-98/	RUSH-PRESBYTERIAN-ST LUKE'S MED CTR	
1R03AG16043-01	ESCHER, ALAN P AGGREGATION OF ERF3 PROTEIN IN THE AGING MAMMALIAN BRAIN	05-01-98/	LOMA LINDA UNIVERSITY	
1R03AG16044-01	REDDIX, RHODA A AGE-RELATED CHANGES IN INTESTINAL DELTA OPIOID RECEPTORS	05-01-98/	LOUISIANA STATE UNIV MED CTR NEW ORL	
1R03AG16045-01	RHYMES, JILL DECISION MAKING IN THE MANAGED CARE SETTING	05-01-98/	BAYLOR COLLEGE OF MEDICINE	
1R03AG16046-01	BENJAMIN, IVOR J OXIDATIVE STRESS IN AGING HSF1 KNOCKOUT MICE	05-01-98/	UNIVERSITY OF TEXAS SW MED CTR/DALLA	
1R03AG16047-01	KAYYALI, USAMAH S PROCESSING OF APP IN CALCINEURIN-DEFICIENT MICE	05-01-98/	HARVARD UNIVERSITY	
1R03AG16049-01	MCGIVERN, ROBERT AGING: INFLUENCE OF ANDROGENS ON THERMOREGULATION	05-01-98/	SAN DIEGO STATE UNIVERSITY	
1R03AG16050-01	FLEMING-MORAN, MILLICENT E DIABETES INTERVENTION IN ARIZONA BORDER COMMUNITIES DI-A	05-01-98/	INDIANA UNIVERSITY	
1R03AG16051-01	PARKER, JAMES C MICROVASCULAR BAROTRAUMA IN THE AGING LUNG	05-01-98/	UNIVERSITY OF SOUTH ALABAMA	
1R03AG16052-01	BELLI, ROBERT F HEALTH CARE INTERVIEWS WITH OLD AND YOUNG RESPONDENTS	05-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R03AG16055-01	DAVISON, GERALD C SOCIAL-INTERPERSONAL COGNITION IN ALZHEIMER'S DISEASE	05-01-98/	UNIV OF SOUTHERN CALIFORNIA, LA	
1R03AG16057-01	KICLITER, EARL RETINAL AGING IN MACACA MULATTA FROM PUERTO RICO	05-01-98/	UNIVERSITY OF PUERTO RICO	
1R03AG16058-01	KRITZ, MARY M IMMIGRATION, AGING AND HOUSEHOLD LIVING ARRANGEMENTS	05-01-98/	CORNELL UNIVERSITY ITHACA	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R03AG16060-01	DIMRI, G PROMOTER TRAPPING OF SENESCENCE PROMOTERS	05-01-98/		UNIV OF CALIFORNIA/LBNL	
1R03AG16061-01	YOUNG, ROSALIE F STRUCTURAL BARRIERS TO BREAST CANCER SERVICES	05-01-98/		WAYNE STATE UNIVERSITY	
1R03AG16062-01	WUTOH, ANTHONY K MEDICATION USE & RISK BEHAVIORS IN OLDER HIV+ PATIENTS	06-01-98/		HOWARD UNIVERSITY	
1R03AG16063-01	PETERS, NORAH D RELIGIOSITY, VOLUNTEERISM & MENTAL HEALTH	05-01-98/		BEAVER COLLEGE	
1R03AG16064-01	ROGINA, BLANKA COST OF REPRODUCTION IN FLIES: A MODEL TO STUDY AGING	07-01-98/		UNIV OF CONNECTICUT HEALTH CTR	
1R03AG16066-01	SCHOENBERG, NANCY E CHD SELF-CARE TREATMENT DECISION-MAKING	07-01-98/		UNIV OF KENTUCY RESEARCH FDN	
1R03AG16068-01	TAN, ROBERT S LOW DOSE TESTOSTERONE & COGNITION, MOODS & FUNCTION	06-01-98/		VA MEDICAL CENTER	
1R03AG16069-01	QUADAGNO, JILL B HEALTH AND SOCIAL STRATIFICATION	07-01-98/		FLORIDA STATE UNIVERSITY	
1R03AG16070-01	CAREY, JAMES R LONGEVITY AND AGING IN WILD MEDFLY POPULATIONS	07-01-98/		UNIVERSITY OF CALIFORNIA DAVIS	
1R03AG16077-01	SHAPIRO, MATTHEW D EARNINGS DYNAMICS OVER THE LIFE CYCLE	05-01-98/		UNIVERSITY OF MICHIGAN	
1R03AG16082-01	KIYAK, H ASUMAN ELDERS RE-ENTERING THE WORKFORCE: ABILITIES AND NEEDS	05-01-98/		UNIVERSITY OF WASHINGTON	
1R03AG16084-01	AMZEL, L MARIO X-RAY STRUCTURE OF B-AMYLOID BOUND TO ANTIBODY	05-01-98/		JOHNS HOPKINS UNIVERSITY	
1R03AG16087-01	HOLDEN, KAREN FINANCIAL PREPAREDNESS FOR RETIREMENT: THE HRS COHORT	05-01-98/		UNIV OF WISCONSIN-MADISON	
1R03AG16089-01	GILLEY, DAVID W PERSONALITY CHARACTERISTICS AND DISABILITY IN OLDER ADU	05-01-98/		RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R03AG16090-01	HOLAHAN, CHARLES J STABILITY AND CHANGE IN PSYCHOSOCIAL RESOURCES	06-01-98/		UNIVERSITY OF TEXAS AUSTIN	

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FY: 98				
1R03AG16091-01	KNIGHT, ERIC ANGIOTENSIN CE INHIBITORS IN OLDER PATIENTS WITH CHF	07-01-98/	BRIGHAM & WOMENS HOSPITAL INC	
1R03AG16094-01	POWELL, LYNDA H HEALTH-RELATED SPIRITUAL BEHAVIORS	05-01-98/	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R03AG16095-01	WHITE, DAVID P AGING AND SLEEP: PHARYNGEAL AIRWAY ANATOMY AND FUNCTION	05-01-98/	BRIGHAM AND WOMEN'S HOSPITAL	
1R03AG16096-01	TAGLIAFERRO, ANTHONY R DHEA AND FAT OXIDATION IN MALE AND FEMALE MINIATURE PIGS	06-01-98/	UNIVERSITY OF NEW HAMPSHIRE	
1R03AG16098-01	TKACS, NANCY C NEURAL RESPONSES TO IMMUNE STIMULATION IN AGING RATS	05-01-98/	UMDNJ-NEW JERSEY MED SCHOOL	
1R03AG16100-01	BRAZEAU, GAYLE A ESTROGEN DEPENDENT HSP70 EXPRESSION IN STRIATED MUSCLE	05-01-98/	UNIVERSITY OF FLORIDA	
1R03AG16102-01	REVSKOY, SERGEI Y GLUCOCORTICOID RESISTANCE GENE(S) TRAP IN AGING.	08-01-98/	NORTHWESTERN UNIVERSITY	
1R03AG16104-01	LEBARON, RICHARD G DEVELOPMENT OF SPLICE JUNCTION ANTI-VERSICAN ANTIBODIES	05-01-98/	UNIVERSITY OF TEXAS SAN ANTONIO	
1R03AG16106-01	STEIN, PHYLLIS K AGING AND HEART RATE VARIABILITY: A FOLLOW-UP STUDY	05-01-98/	BARNES-JEWISH HOSPITAL	
1R03AG16107-01	DIEHL, MANFRED STABILITY OF OLDER ADULTS' SELF-REPRESENTATIONS	07-01-98/	UNIVERSITY OF COLORADO	
1R03AG16110-01	ECKHOLDT, HAFTAN STUDYING HIV RISK IN THE AGING	05-01-98/	ALBERT EINSTEIN COLL OF MED	
1R03AG16112-01	WASHBURN, ALLYSON M SOCIAL COGNITION AND BEHAVIOR IN AGING AND DEMENTIA	05-01-98/	GOLDMAN INSTITUTE ON AGING	
1R03AG16114-01	MCILWAIN, DAVID L GROWTH HORMONE AND CNS ATROPY	05-01-98/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
1R03AG16115-01	CZERNIK, PIOTR J S1-3 PROTEIN, HUMAN INHIBITOR OF DNA SYNTHESIS	05-01-98/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
1R03AG16116-01	SEIDLITZ, LARRY M RELIGIOUSNESS AND PHYSICAL HEALTH: MEDIATION BY EMOTIONS	05-01-98/	UNIVERSITY OF ROCHESTER	

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FY: 98				
1R03AG16117-01	CROCKER, JENNIFER AGING AND CONTINGENCIES OF SELF-ESTEEM	01-01-98/	UNIVERSITY OF MICHIGAN	
1R03AG16118-01	REED, TERRY E A RESPOSITORY FOR GENETIC STUDIES OF AGING IN TWINS	03-01-98/	INDIANA UNIVERSITY	
1R03AG16119-01	ZHAN, XI THE MECHANISTIC MECHANISM FOR SENESCENCE	05-01-98/	AMERICAN NATIONAL RED CROSS	
1R03AG16122-01	BARTKE, ANDRZEJ EFFECTS OF CALORIC RESTRICTION IN DWARF MICE	05-01-98/	SOUTHERN ILLINOIS UNIVERSITY CARBOND	
1R03AG16123-01	GALLANT, MARY P DAILY DYNAMIC OF SELF-CARE AMONG OLDER ADULTS	06-01-98/	UNIVERSITY AT ALBANY, SUNY	
1R03AG16124-01	SAWADA-HIRAI, RITSUKO ANIMAL MODEL FOR AGE RELATED DISEASE	05-01-98/	BILLUPS-ROTHENBERG, INC	
1R03AG16125-01	LABOUVIE-VIEF, GISELA RELIGIOUSNESS, EMOTION, AND HEALTH IN THE ELDERLY	07-01-98/	WAYNE STATE UNIVERSITY	
1R03AG16126-01	CHAKRAVARTI, BULBUL AGING, OXIDATIVE STRESS AND T CELL MEDIATED IMMUNITY	05-01-98/	UNIVERSITY OF ROCHESTER	
1R03AG16128-01	JOHNSON, NAN E SOCIAL REDUCTION OF DISABILITY FOR NONMETRO ELDERS	06-01-98/	MICHIGAN STATE UNIVERSITY	
1R03AG16129-01	MOULTON, PATRICIA J SELF-MANAGEMENT INTERVENTIONS IN ELDERLY HEART FAILURE	07-01-98/	RUTGERS-STATE UNIV OF NEW JERSEY	
1R03AG16131-01	LAURY-KLEINTOP, LISA D AGING VS ATHEROSCLEROSIS ALTERATIONS IN GENE EXPRESSION	05-01-98/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R03AG16132-01	KELLY, KEVIN M A MODEL OF POSTINFARCTION EPILEPSY IN AGED RATS	05-01-98/	ALLEGHENY UNIV OF HLTH SCIENCES	
1R03AG16133-01	JACOBS, DAVID B ALTERED POSTTRANSCRIPTIONAL CONTROL OF GLUT1 IN AD	05-01-98/	FINCH UNIV OF HLTH SCI/CHICAGO MED S	
1R03AG16134-01	TAYLOR, DONALD H LINKING PROBATE DATA TO AN ELDERLY COHORT	05-01-98/	DUKE UNIVERSITY	
1R03AG16136-01	HURD, MICHAEL D WEALTH ASSESSMENT IN HRS AND AHEAD: ANCHORING EFFECTS	05-01-98/	RAND	

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FY: 98				
1R03AG16137-01	ALBRIGHT, JOSEPH F CONSEQUENCE OF AGING:SUSCEPTIBILITY TO IMMUNOTOXICANTS	05-04-98/	GEORGE WASHINGTON UNIVERSITY	
1R03AG16139-01	TURCOTTE, LORRAINE P AGING, NUTRITION AND EXERCISE AND FATTY ACID METABOLISM	05-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R03AG16144-01	WINK, PAUL M ANTECEDENT & CURRENT IMPLICATIONS OF WISDOM IN OLD AGE	05-01-98/	WELLESLEY COLLEGE	
1R03AG16146-01	LAVI, EHUD THE ROLE OF LP(A) IN HUMAN ATHEROSCLEROSIS	05-01-98/	UNIVERSITY OF PENNSYLVANIA	
1R01AG16150-01	ROVNER, BARRY W DISABILITY IN AGE RELATED VISION LOSS	07-01-98/	THOMAS JEFFERSON UNIVERSITY	
1R43AG16154-01	DAVIS, HOWARD P AN ECONOMICAL, PSYCHOMOTOR, NEUROMUSCULAR SCREENING TEST	07-01-98/	SCIENTECH, INC.	
1R01AG16165-01	BURKHAUSER, RICHARD V ECONOMIC BEHAVIOR FOLLOWING THE ONSET OF A DISABILITY	07-01-98/	SYRACUSE UNIVERSITY AT SYRACUSE	
1R43AG16167-01	RASO, VICTOR A CEREBRAL ANTIBODY DELIVERY TO TREAT ALZHEIMER'S DISEASE	07-01-98/	BOSTON BIOTECHNOLOGY CORPORATION	
2R44AG16171-02	ALLDREDGE, ELHAM-EID ASSESSMENT OF DOCTOR OLDER PATIENT INTERACTIONS	07-01-98/	REDA INTERNATIONAL INC	
1R43AG16173-01	WANG, CHUNG-YIH A NOVEL LUMINESCENT BIOSENSOR TO MEASURE SERUM FOLATE	09-07-98/	PROTEIN SOLUTIONS, INC.	
1R03AG16272-01	QUALLS, CONSTANCE D FIGURATIVE LANGUAGE IN OLDER AFRICAN AMERICANS	06-01-98/	UNIVERSITY OF MEMPHIS	
1R03AG16273-01	TANG, TRICIA S BARRIERS TO CANCER SCREENING AMONG OLDER CHINESE WOMEN	07-01-98/	UNIVERSITY OF VERMONT	
1R03AG16275-01	KING, SHARON V AGING BLACK PARENTS OF ADULT DEPENDENT CHILDREN	07-01-98/	GEORGIA STATE UNIVERSITY	
1R03AG16276-01	EKINCI, FATMA CELLULAR BASIS FOR NEURODEGENERATION IN AD	07-01-98/	UNIV OF MASSACHUSETTS LOWELL	
1R03AG16278-01	JACKSON, ARRICK L FEAR OF CRIME AND ANXIETY AMONG THE ELDERLY	08-16-98/	WASHINGTON STATE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG16279-01	MARTINEZ, IVERIS AGING IN EXILE: MENTAL HEALTH AMONG ELDER CUBANS IN SOUT	09-01-98/	JOHNS HOPKINS UNIVERSITY	
1R25AG16374-01	BALLARD, BILLY R UTMB NETWORK TO ENHANCE MINORITY RECRUITMENT TO AGING RE	12-01-98/	UNIVERSITY OF TEXAS MEDICAL BRANCH	
1R25AG16377-01	MESCO, EUGENE R UNDERGRADUATE INTERNSHIPS FOR RECRUITMENT OF MINORITY RE	12-01-98/	SAVANNAH STATE UNIVERSITY	
1R25AG16406-01	ADAMS, JAMES P, JR RECRUITING AND DEVELOPING MINORITY RESEARCHERS IN AGING	12-01-98/	UNIVERSITY OF ALABAMA	
1R01AG16828-01	BHATTACHARYA, AMIT ERGONOMIC ASPECTS OF OLDER WORKERS' POSTURAL BALANCE	09-01-98/	UNIVERSITY OF CINCINNATI	
1R01AG16829-01	ZWERLING, CRAIG S WORK ACCOMMODATIONS FOR OLDER WORKERS WITH DISABILITIES	09-30-98/	UNIVERSITY OF IOWA	
1R01AG16830-01	PRANSKY, GLENN S WORK INJURIES AND ILLNESSES IN OLDER WORKERS	10-01-98/	UNIVERSITY OF MASSACHUSETTS MEDICAL	
1R01AG16831-01	MARSHALL, NANCY L HEALTH RISKS TO OLDER WORKERS IN THE SERVICE INDUSTRIES	09-01-98/	WELLESLEY COLLEGE	
1R01AG16832-01	MONK, TIMOTHY H INSOMNIA AND CIRCADIAN DISRUPTION IN OLDER SHIFT WORKERS	09-01-98/	UNIVERSITY OF PITTSBURGH AT PITTSBUR	
1R01AG16869-01	KWOK, PUI-YAN METHOD FOR GLOBAL AND TARGETED DISCOVERY OF SNP MARKERS	10-01-98/	WASHINGTON UNIVERSITY	
7R01AG16996-02	BONNEY, GEORGE E GENETIC EPIDEMIOLOGY MODELS AND COMPUTER SOFTWARE	09-30-98/	HOWARD UNIVERSITY	
5P01AG00001-23	ROSENE, DOUGLAS L NEURAL SUBSTRATES OF COGNITIVE DECLINE IN AGING	02-01-98/01-31-99	BOSTON UNIVERSITY	1,338,899
5T32AG00029-23	COHEN, HARVEY J BEHAVIOR AND PHYSIOLOGY IN AGING	05-01-98/04-30-99	DUKE UNIVERSITY	168,234
5T32AG00030-22	STORANDT, MARTHA A AGING AND DEVELOPMENT	05-01-98/04-30-99	WASHINGTON UNIVERSITY	220,971
5T32AG00037-22	BENGTSON, VERN L MULTIDISCIPLINARY RESEARCH TRAINING IN GERONTOLOGY	05-01-98/04-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	310,737

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FY: 98				
5T32AG00048-21	ZARIT, STEVEN H INTERDISCIPLINARY TRAINING IN GERONTOLOGY	05-01-98/04-30-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	230,957
2T32AG00057-21	RABINOVITCH, PETER S GENETIC APPROACHES TO AGING RESEARCH	05-01-98/04-30-99	UNIVERSITY OF WASHINGTON	470,152
5T32AG00078-18	HOLLOSZY, JOHN O EXERCISE AS PREVENTIVE MEDICINE IN THE AGING PROCESS	05-01-98/04-30-99	WASHINGTON UNIVERSITY	186,067
2T32AG00080-19	OLDSTONE, MICHAEL B NEUROBIOLOGIC AND IMMUNOLOGIC ASPECTS OF AGING	05-01-98/04-30-99	SCRIPPS RESEARCH INSTITUTE	230,083
5T32AG00093-17	FINCH, CALEB E TRAINING IN ENDOCRINOLOGY AND NEUROBIOLOGY OF AGING	05-01-98/04-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	373,449
2T32AG00096-16	COTMAN, CARL W TRAINING IN THE NEUROBIOLOGY OF AGING	05-01-98/04-30-99	UNIVERSITY OF CALIFORNIA IRVINE	224,131
5T32AG00105-14	CAPLAN, ARNOLD I CELLULAR & MOLECULAR AGING	05-01-98/04-30-99	CASE WESTERN RESERVE UNIVERSITY	184,433
5T32AG00107-15	COLEMAN, PAUL D TRAINING IN GERIATRICS AND NEUROBIOLOGY OF AGING	05-01-98/04-30-99	UNIVERSITY OF ROCHESTER	42,622
5T32AG00114-14	GAFNI, ARI C MULTIDISCIPLINARY RESEARCH TRAINING IN AGING	05-01-98/04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	405,164
5T32AG00115-14	POLGAR, PETER R PRE- AND POSTDOCTORAL TRAINING IN BIOCHEMISTRY OF AGING	05-01-98/04-30-99	BOSTON UNIVERSITY	177,824
5T32AG00117-14	DUNKLE, RUTH E SOCIAL RESEARCH TRAINING ON APPLIED ISSUES OF AGING	05-01-98/04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	452,379
5T32AG00120-12	BENNETT, RICHARD G RESEARCH TRAINING IN GERONTOLOGY AND GERIATRICS	05-01-98/04-30-99	JOHNS HOPKINS UNIVERSITY	252,195
5T32AG00129-10	HAUSER, ROBERT M POPULATION, LIFE COURSE AND AGING	05-01-98/04-30-99	UNIVERSITY OF WISCONSIN MADISON	81,806
5T32AG00131-14	CRISTOFALO, VINCENT J CELLULAR AND MOLECULAR ASPECTS OF AGING	05-01-98/04-30-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	163,384
5T32AG00134-13	WEISSERT, WILLIAM G PUBLIC HEALTH AND AGING TRAINING PROGRAM	05-01-98/04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	151,526

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5T32AG00139-12	LAND, KENNETH C SOCIAL AND MEDICAL DEMOGRAPHY OF AGING	05-15-98/04-30-99	DUKE UNIVERSITY	192,068
5T32AG00144-12	KOWAL, JEROME RESEARCH TRAINING IN GERIATRIC MEDICINE	05-01-98/04-30-99	CASE WESTERN RESERVE UNIVERSITY	153,697
5T32AG00149-12	BRANDT, JASON RESEARCH TRAINING IN DEMENTIAS OF AGING	05-01-98/04-30-99	JOHNS HOPKINS UNIVERSITY	159,871
2T32AG00153-11	KASL, STANISLAV V RESEARCH TRAINING IN THE EPIDEMIOLOGY OF AGING	07-01-98/04-30-99	YALE UNIVERSITY	244,519
5T32AG00155-11	ELDER, GLEN H, JR DEMOGRAPHY OF AGING AND THE LIFE COURSE	05-01-98/04-30-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	113,072
5T32AG00156-09	HORN, JOHN L FORMING CAREERS IN DEVELOPMENTAL NEUROCOGNITION	05-15-98/04-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	136,198
5T32AG00158-11	BURING, JULIE E TRAINING PROGRAM IN EPIDEMIOLOGIC RESEARCH ON AGING	05-01-98/04-30-99	BRIGHAM AND WOMEN'S HOSPITAL	51,207
3T32AG00164-10S1	DEMENT, WILLIAM C RESEARCH TRAINING IN GERIATRIC SLEEP DISORDERS MEDICINE	05-15-98/04-30-99	STANFORD UNIVERSITY	80,835
2T32AG00165-11	CHATTERJEE, BANDANA TRAINING PROGRAM IN MOLECULAR BASIS OF AGING	05-01-98/04-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	273,635
2T32AG00172-11	CUMMINGS, JEFFREY L DEMENTIA AND BEHAVIORAL NEUROLOGY, RESEARCH FELLOWSHIP	05-01-98/04-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	1
2T32AG00175-11	SMITH, ANDERSON D RESEARCH TRAINING IN COGNITIVE AGING	05-15-98/04-30-99	GEORGIA INSTITUTE OF TECHNOLOGY	142,739
5T32AG00177-10	PRESTON, SAMUEL H DEMOGRAPHY OF AGING	05-01-98/04-30-99	UNIVERSITY OF PENNSYLVANIA	124,723
5T32AG00181-09	CAULEY, JANE A TRAINING IN THE EPIDEMIOLOGY OF AGING	05-01-98/04-30-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	201,954
5T32AG00182-10	BURKE, GREGORY L TRAINING GRANT: GERONTOLOGY AND GERIATRIC MEDICINE	05-01-98/04-30-99	WAKE FOREST UNIVERSITY	68,364
5T32AG00183-10	DARLINGTON, GRETCHEN J CELL & MOLECULAR BIOLOGY OF AGING	05-01-98/04-30-99	BAYLOR COLLEGE OF MEDICINE	212,191

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5T32AG00186-10	WISE, DAVID A ECONOMICS OF AGING TRAINING PROGRAM -- EXTENSION	09-30-98/04-30-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	141,355
3T32AG00186-10S1	WISE, DAVID A ECONOMICS OF AGING TRAINING PROGRAM -- EXTENSION	09-30-98/04-30-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	44,496
5T32AG00189-10	LIEM, RONALD K CELLULAR AND NEUROBIOLOGICAL ASPECTS OF AGING	05-01-98/04-30-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	144,561
5T32AG00194-10	HAMERMAN, DAVID AGING TRAINING GRANT	05-01-98/04-30-99	YESHIVA UNIVERSITY	224,969
5T32AG00196-10	MEYER, EDWIN M, JR TRAINING IN THE NEUROBIOLOGY OF AGING	05-01-98/04-30-99	UNIVERSITY OF FLORIDA	83,644
5T32AG00198-07	KANE, ROBERT L MINNESOTA TRAINING GRANT AGING	05-15-98/04-30-99	UNIVERSITY OF MINNESOTA TWIN CITIES	292,183
5T32AG00204-09	WINGFIELD, ARTHUR TRAINING IN COGNITIVE AGING IN A SOCIAL CONTEXT	05-01-98/04-30-99	BRANDEIS UNIVERSITY	127,653
5T32AG00205-08	NELSON, JAMES F TRAINING IN NUTRITIONAL & INTERVENTIONAL GERONTOLOGY	05-01-98/04-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	61,725
5T32AG00208-09	HAYWARD, MARK POPULATION BIOLOGY, GENERATIONS, AND COHORT SUCCESSION	05-01-98/04-30-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	115,940
5T32AG00209-09	RUSSELL, ROBERT M RESEARCH TRAINING PROGRAM IN NUTRITION AND AGING	05-01-98/04-30-99	TUFTS UNIVERSITY MEDFORD	113,647
2T32AG00212-06	LANDEFELD, C S RESEARCH TRAINING IN GERIATRIC MEDICINE	08-01-98/04-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	165,426
2T32AG00213-08	WEINDRUCH, RICHARD H BIOLOGY OF AGING AND AGE-RELATED DISEASES	06-15-98/04-30-99	UNIVERSITY OF WISCONSIN MADISON	242,299
5T32AG00214-08	HEISTAD, DONALD D INTERDISCIPLINARY RESEARCH TRAINING PROGRAM IN AGING	05-01-98/04-30-99	UNIVERSITY OF IOWA	401,140
5T32AG00216-07	GAGE, FRED H TRAINING IN THE NEUROPLASTICITY OF AGING	05-01-98/04-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	327,815
2T32AG00219-06A1	GOLDBERG, ANDREW P RESEARCH TRAINING IN GERONTOLOGY AND EXERCISE PHYSIOLOGY	05-01-98/04-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	132,988

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5T32AG00220-05	MARKSON, ELIZABETH W MULTIDISCIPLINARY TRAINING PROGRAM IN AGING RESEARCH	05-01-98	04-30-99	BOSTON UNIVERSITY	146,038
5T32AG00221-07	THORNTON, ARLAND D TRAINING IN THE DEMOGRAPHY AND ECONOMICS OF AGING	05-01-98	04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	308,369
5T32AG00222-07	PAUL, DAVID L TRAINING IN THE MOLECULAR BIOLOGY OF NEURODEGENERATION	05-01-98	04-30-99	HARVARD UNIVERSITY	430,328
5T32AG00223-05	RAMSDELL, JOE W GERIATRIC RESEARCH INSTITUTIONAL TRAINING GRANT	05-01-98	04-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	42,380
2T32AG00226-06	KEMPER, SUSAN RESEARCH TRAINING PROGRAM IN COMMUNICATION AND AGING	08-15-98	04-30-99	UNIVERSITY OF KANSAS LAWRENCE	6,818
5T35AG00230-06	WARD, WALTER F SHORT-TERM TRAINING STUDENTS IN HEALTH PROFESSIONAL SCHO	05-01-98	04-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	52,056
3T32AG00231-05S1	FURNER, SYLVIA EPIDEMIOLOGY AND BIOSTATISTICS IN AGING RESEARCH	07-15-98	04-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	33,830
5T32AG00237-05	SCHOEN, ROBERT POSTDOCTORAL TRAINING IN THE DEMOGRAPHY OF AGING	05-01-98	04-30-99	JOHNS HOPKINS UNIVERSITY	55,032
5T32AG00238-05	BURKHAUSER, RICHARD V ECONOMICS & DEMOGRAPHY OF AGING	05-01-98	04-30-99	SYRACUSE UNIVERSITY	11,395
5T32AG00241-05	KAHANA, EVA F PREDOC TRNG: SOCIAL ASPECTS OF HEALTH RESEARCH AND AGING	05-01-98	04-30-99	CASE WESTERN RESERVE UNIVERSITY	98,795
5T32AG00242-05	WISE, PHYLLIS M MOLECULAR AND CELLULAR BASIS OF BRAIN AGING	05-01-98	04-30-99	UNIVERSITY OF KENTUCKY	70,226
5T32AG00243-05	WAITE, LINDA J SPECIALIZED TRAINING PROGRAM IN THE DEMOGRAPHY & ECON.	05-01-98	04-30-99	UNIVERSITY OF CHICAGO	164,404
5T32AG00244-05	KAROLY, LYNN A POSTDOCTORAL TRAINING IN THE STUDY OF AGING	07-15-98	04-30-99	RAND CORPORATION	16,179
3T32AG00245-03S1	SMALL, GARY W UCLA GERIATRIC RESEARCH FELLOWSHIP PROGRAM	11-01-97	02-28-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	27,234
5T32AG00246-04	LEE, RONALD D TRAINING IN THE DEMOGRAPHY AND ECONOMICS OF AGING	09-15-98	04-30-99	UNIVERSITY OF CALIFORNIA BERKELEY	42,262

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5T32AG00247-03	FRIED, LINDA P EPIDEMIOLOGY AND BIOSTATISTICS OF AGING	05-01-98/04-30-99	JOHNS HOPKINS UNIVERSITY	185,256
3T32AG00247-03S1	FRIED, LINDA P EPIDEMIOLOGY AND BIOSTATISTICS OF AGING	08-01-98/04-30-99	JOHNS HOPKINS UNIVERSITY	22,680
5T32AG00250-02	ZIRKIN, BARRY R TRAINING IN THE CELLULAR AND MOLECULAR BASES OF AGING	05-01-98/04-30-99	JOHNS HOPKINS UNIVERSITY	123,126
5T32AG00251-03	WEI, JEANNE Y HARVARD INSTITUTIONAL RESEARCH TRAINING PROGRAM ON AGING	05-01-98/04-30-99	HARVARD UNIVERSITY	247,951
5T32AG00252-02	BREDESEN, DALE E APOPTOSIS--BASIC MECHANISMS AND DISEASE RELEVANCE	05-01-98/04-30-99	BURNHAM INSTITUTE	261,388
5T32AG00253-02	GRISSO, JEANE A GERIATRIC CLINICAL EPIDEMIOLOGY TRAINING GRANT	05-01-98/04-30-99	UNIVERSITY OF PENNSYLVANIA	162,571
5T32AG00255-02	LEE, VIRGINIA M TRAINING IN AGE RELATED NEURODEGENERATIVE DISEASES	05-01-98/04-30-99	UNIVERSITY OF PENNSYLVANIA	218,664
5T32AG00256-02	PACK, ALLAN I MD/PHD PROGRAM IN SLEEP AND CHRONOBIOLOGY	07-01-98/04-30-99	UNIVERSITY OF PENNSYLVANIA	135,429
5T32AG00257-02	MUFSON, ELLIOTT J TRAINING IN AGE-RELATED NEURODEGENERATIVE DISORDERS	05-01-98/04-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	132,064
1T32AG00259-01	BLAU, HELEN M MOLECULAR PHARMACOLOGY OF DISEASES OF AGING	09-30-98/04-30-99	STANFORD UNIVERSITY	46,236
1T32AG00260-01	VAN ELDIK, LINDA J DRUG DISCOVERY TRAINING IN AGE-RELATED DISORDERS	06-01-98/04-30-99	NORTHWESTERN UNIVERSITY	68,496
1T32AG00261-01	STERN, YAAKOV NEUROPSYCHOLOGY AND COGNITION IN AGING	06-15-98/04-30-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	95,970
1T32AG00262-01	MAGZINER, JAY S RESEARCH TRAINING IN THE EPIDEMIOLOGY OF AGING	05-01-98/04-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	58,115
1T32AG00264-01	ROWLES, GRAHAM D RESEARCH TRAINING IN GERONTOLOGY	07-01-98/04-30-99	UNIVERSITY OF KENTUCKY	66,491
1T32AG00266-01	CAMPISI, JUDITH TRAINING IN BASIC AGING RESEARCH	05-01-98/04-30-99	UNIVERSITY OF CALIF-LAWRENC BERKELEY	85,388

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3K12AG00294-13S1	WEI, JEANNE Y PHYSICIAN SCIENTIST PROGRAM AWARD	09-30-98/07-31-99	HARVARD UNIVERSITY	100,073
5P01AG00378-26	CRISTOFALO, VINCENT J CELLULAR SENESCENCE AND CONTROL OF CELL PROLIFERATION	01-01-98/12-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	836,348
2R01AG00425-33	HOLLOSZY, JOHN O EXERCISE INDUCED BIOCHEMICAL AND ANATOMIC ADAPTATIONS	07-15-98/06-30-99	WASHINGTON UNIVERSITY	298,219
5R01AG00443-25	SCHIFFMAN, SUSAN S GUSTATORY AND OLFACTORY CHANGES WITH AGE	09-01-98/08-31-99	DUKE UNIVERSITY	302,878
5K12AG00488-08	SORENSEN, LEIF B GERIATRIC ACADEMIC PROGRAM AWARD	09-01-98/08-31-99	UNIVERSITY OF CHICAGO	506,520
5K12AG00503-09	ABRASS, ITAMAR B GERIATRIC ACADEMIC PROGRAM AWARD	09-01-98/08-31-99	UNIVERSITY OF WASHINGTON	328,103
5K12AG00521-08	WEINER, LESLIE P MCSDPA--NEUROGERONTOLOGY	08-01-98/07-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	479,248
5P01AG00538-22	COTMAN, CARL W BEHAVIORAL AND NEURAL PLASTICITY IN THE AGED	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA IRVINE	853,117
3P01AG00538-22S2	COTMAN, CARL W BEHAVIORAL AND NEURAL PLASTICITY IN THE AGED	08-15-98/06-30-99	UNIVERSITY OF CALIFORNIA IRVINE	74,501
5K01AG00589-04	NEUMARK, DAVID RESEARCH ON THE ECONOMICS OF AGING & AGE DISCRIMINATION	02-01-98/12-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	107,784
5K01AG00593-05	HEADEN, ALVIN E JR RACE, LTC SERVICE MIX, AND CAREGIVER TIME COST	01-01-98/12-31-98	NORTH CAROLINA STATE UNIVERSITY RALE	101,012
5K08AG00599-05	DUGAN, LAURA L FREE RADICAL MECHANISMS IN NEURAL INJURY IN VITRO	02-01-98/01-31-99	WASHINGTON UNIVERSITY	93,549
5K07AG00608-06	GOLDBERG, ANDREW P GERIATRIC LEADERSHIP ACADEMIC AWARD	07-01-98/06-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	86,403
5K08AG00615-05	WALLACE, JEFFREY I WEIGHT LOSS AND FAILURE TO THRIVE	04-01-98/03-31-99	UNIVERSITY OF WASHINGTON	89,640
5K07AG00618-05	GOODWIN, JAMES S GERIATRIC LEADERSHIP ACADEMIC AWARD	04-01-98/03-31-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	60,042

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5K08AG00623-05	MAHONEY, JANE E FALLS AFTER HOSPITAL DISCHARGE	01-01-98/12-31-99	UNIVERSITY OF WISCONSIN MADISON	95,917
5K08AG00627-05	HEUSER, MARK D FAILURE TO THRIVE IN ELDERS	03-01-98/02-28-99	UNIVERSITY OF MARYLAND BALT PROF SCH	95,644
5K04AG00631-05	ZAKERI, ZAHRA MECHANISMS OF PROGRAMMED CELL DEATH	05-01-98/04-30-99	QUEENS COLLEGE	82,936
5K04AG00634-05	GOATE, ALISON M GENETIC APPROACH TO THE ETIOLOGY OF ALZHEIMER DISEASE	05-01-98/04-30-99	WASHINGTON UNIVERSITY	76,584
5K07AG00635-05	WISE, DAVID A GERIATRIC LEADERSHIP ACADEMIC AWARD--EXTENSION	05-01-98/03-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	86,080
5K08AG00639-05	BARZILAI, NIR J AGING AND PERIPHERAL AND HEPATIC GLUCOSE METABOLISM	09-01-98/08-31-99	YESHIVA UNIVERSITY	96,660
7K08AG00643-05	WEINER, DEBRA K CHRONIC PAIN IN THE NURSING HOME	08-01-98/07-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	88,538
5K01AG00645-05	MORIN, CATHERINE L INTERACTION OF TNF ALPHA & NUTRITION IN AGED ADIPOSE TIS	09-30-98/08-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	84,232
5K01AG00646-04	ELIAS, PENELOPE K AGE, HYPERTENSION, AND COGNITIVE FUNCTIONING	12-01-97/11-30-98	BOSTON UNIVERSITY	101,822
7K08AG00648-05	MARCANTONIO, EDWARD R REDUCING DELIRIUM AFTER HIP FRACTURE--A PROACTIVE MODEL	08-01-98/07-31-99	HEBREW REHABILITATION CENTER FOR AGE	92,340
5K11AG00649-06	YUEN, ERIC C BDNF AND OXIDATIVE INJURY IN MOTOR NEURONS	07-01-98/06-30-99	UNIVERSITY OF WASHINGTON	100,008
5K01AG00650-04	PUGH, THOMAS D CALORIES, AGING, AND LOCALIZATION OF MTDNA ABNORMALITIES	09-01-98/08-31-99	UNIVERSITY OF WISCONSIN MADISON	83,365
5K08AG00656-04	CHIN, STEVEN SUEY-MING TAU PATHOLOGY IN PROGRESSIVE SUPRANUCLEAR PALSY	01-01-98/12-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	99,090
5K01AG00657-05	GARDNER, ANDREW W EXERCISE REHABILITATION OF YOUNGER AND OLDER CLAUDICANTS	02-01-98/01-31-00	UNIVERSITY OF MARYLAND BALT PROF SCH	107,150
5K11AG00658-04	OLICHNEY, JOHN M ERPS AND VERBAL MEMORY IN AGING DEMENTIA AND AMNESIA	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	97,408

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FY: 98				
5K04AG00659-04	MAGNUSSON, KATHY R AGE RELATED CHANGE IN GLUTAMATE RECEPTORS	01-01-98/12-31-98	COLORADO STATE UNIVERSITY	79,935
5K01AG00661-04	KLERMAN, ELIZABETH B REHABILITATION OF CIRCADIAN BLINDNESS IN OLDER PEOPLE	01-01-98/12-31-98	BRIGHAM AND WOMEN'S HOSPITAL	108,540
5K04AG00663-04	KOHRT, WENDY M EXERCISE AND HRT IN OSTEOPENIC ELDERLY WOMEN AND MEN	01-01-98/12-31-98	WASHINGTON UNIVERSITY	76,536
5K01AG00670-03	SCHOENI, ROBERT F HEALTH STATUS AND FAMILY SUPPORT OF THE ELDERLY	02-01-98/01-31-00	RAND CORPORATION	89,201
5K11AG00671-03	HISAMA, FUKI M POSITIONAL CLONING OF THE WERNERS SYNDROME GENE	07-01-98/06-30-99	YALE UNIVERSITY	98,849
5K04AG00676-04	LESNEFSKY, EDWARD J, JR MITOCHONDRIA INCREASE OXIDATIVE INJURY IN AGING HEART	07-01-98/06-30-99	CASE WESTERN RESERVE UNIVERSITY	81,000
5K01AG00677-04	PAHLAVANI, MOHAMMAD A DOES CALORIC RESTRICTION AFFECT IL-2 TRANSCRIPTION?	08-15-98/07-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	62,995
5K08AG00680-04	ROSEN, HAROLD N ADJUSTMENT OF ESTROGEN DOSING ACCORDING TO BONE TURNOVER	04-01-98/03-31-99	BETH ISRAEL DEACONESS MEDICAL CENTER	94,738
5K08AG00681-04	MARQUEZ-STERLING, NUMA R ENDOCYTOTIC TRAFFICKING OF APP IN CULTURED CNS NEURONS	04-01-98/03-31-99	NORTHWESTERN UNIVERSITY	91,530
5K08AG00684-04	BONOMO, ROBERT A MECHANISMS OF ANTIBIOTIC RESISTANCE IN THE NURSING HOME	09-01-98/08-31-99	CASE WESTERN RESERVE UNIVERSITY	94,500
5K01AG00685-03	BERMAN, DORA M WEIGHT LOSS AND FAT METABOLISM IN POSTMEMOPAUSAL WOMEN	04-01-98/03-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	100,207
5K01AG00686-03	ARKIN, SHARON M AD REHAB BY STUDENTS--EFFECTS ON FUNCTIONING AND DECLINE	09-01-98/08-31-99	UNIVERSITY OF ARIZONA	79,944
5K01AG00687-04	DAVY, KEVIN P DIET AND EXERCISE EFFECTS IN OBESE POSTMENOPAUSAL WOMEN	04-01-98/03-31-99	COLORADO STATE UNIVERSITY	96,109
5K01AG00690-04	YAN, SHI D ALZHEIMERS, GLYCATION, RECEPTORS AND OXIDANT STRESS	07-01-98/06-30-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	104,803
7K01AG00691-04	RITCHIE, CHRISTINE S NUTRITIONAL STATUS AND ORAL HEALTH IN FRAIL OLDER ADULTS	11-15-98/03-31-99	UNIVERSITY OF LOUISVILLE	64,833

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FY: 98				
5K01AG00692-03	DELBONO, OSVALDO SKELETAL MUSCLE IMPAIRMENT IN AGING	03-01-98/02-28-99	WAKE FOREST UNIVERSITY	95,040
5K04AG00694-05	PEACOCKE, MONICA GENETIC STUDIES OF COWDENS SYNDROME	06-01-98/05-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	86,508
5K08AG00695-02	KELLER, BRENDA K VISUAL IMPAIRMENT AND FUNCTIONAL STATUS IN FRAIL ELDERLY	09-01-98/07-31-99	UNIVERSITY OF NEBRASKA MEDICAL CENTE	102,600
5K08AG00698-04	CHAI, TOBY C NEUROPLASTICITY OF THE AGING BLADDER	02-15-98/01-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	93,960
5K01AG00701-03	LARKIN, LISA M REHABILITATION OF MICRONEUROVASCULAR GRAFTS IN OLD RATS	08-01-98/07-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	106,961
5K01AG00702-03	ZOHOORI, NAMVAR DEMOGRAPHY OF HEALTHY AGING--ROLE OF NUTRITIONAL FACTORS	08-01-98/07-31-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	100,243
5K01AG00703-03	WEIR, DAVID R RESEARCH TRAINING IN ECONOMIC ASPECTS OF CHRONIC DISEASE	02-01-98/01-31-99	UNIVERSITY OF CHICAGO	95,310
5K02AG00708-03	LI, CHRISTINE FUNCTION OF AMYLOID PRECURSOR-RELATED GENE IN C ELEGANS	12-01-97/11-30-98	BOSTON UNIVERSITY	82,990
5K08AG00710-02	BROWN, JEANETTE S URINARY INCONTINENCE--PREVALENCE, INCIDENCE, AND RISKS	05-01-98/04-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	98,710
5K08AG00712-02	BEYTH, REBECCA J IMPROVING THE USE OF ANTICOAGULANT THERAPY IN THE AGED	09-01-98/08-31-99	CASE WESTERN RESERVE UNIVERSITY	86,647
5K11AG00713-04	MOALLI, MARIA R MECHANOTRANSDUCTION IN TRABECULAR BONE	09-01-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	106,920
7K08AG00714-04	COVINSKY, KENNETH E IMPROVING QUALITY OF LIFE IN ELDERS WITH MEDICAL ILLNESS	12-15-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	84,800
5K08AG00715-04	MARGOLIS, DAVID J PREDICTION MODEL FOR THE TREATMENT OF VENOUS LEG ULCERS	07-01-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	106,358
5K01AG00717-02	ELO, IRMA T SOCIOECONOMIC STATUS, HEALTH AND MORTALITY	09-30-98/08-31-99	UNIVERSITY OF PENNSYLVANIA	88,506
5K07AG00718-03	LIPSCHITZ, DAVID A GERIATRIC LEADERSHIP ACADEMIC AWARD	04-01-98/03-31-00	UNIVERSITY OF ARKANSAS MED SCIS LTL	90,135

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5K01AG00722-02	STEVENS, ALAN B THERAPEUTIC ACTIVITIES IN THE NURSING HOME	02-01-98/01-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	85,233
5K01AG00723-04	DENGEL, DONALD R INSULIN ACTION, SODIUM AND EXERCISE IN HYPERTENSION	09-01-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	107,069
5K04AG00724-04	PETERSON, CHARLOTTE A REGULATION OF GENE EXPRESSION IN MUSCLE SATELLITE CELLS	09-01-98/08-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	81,000
5K08AG00725-03	GREENBERG, STEVEN M MOLECULAR RISK FACTORS FOR CEREBRAL AMYLOID ANGIOPATHY	08-01-98/07-31-99	MASSACHUSETTS GENERAL HOSPITAL	103,378
5K02AG00728-03	BICKFORD, PAULA C NORADRENERGIC FUNCTION IN BRAIN AGING & OXIDATIVE STRESS	07-01-98/06-30-99	UNIVERSITY OF COLORADO HLTH SCIENCES	85,488
5K07AG00729-03	FINCH, CALEB E MULTIDISCIPLINARY APPROACHES IN BIOGERONTOLOGY	09-01-98/08-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	83,044
5K01AG00732-03	SPECTOR, ALEXANDER A MATHEMATICAL MODELING OF THE AGING COCHLEA	07-01-98/06-30-99	JOHNS HOPKINS UNIVERSITY	90,450
5K02AG00733-03	BIGELOW, DIANA J AGING AND OXIDATION IN SKELETAL AND CARDIAC MUSCLE	07-01-98/06-30-99	UNIVERSITY OF KANSAS LAWRENCE	86,325
5K07AG00739-02	WAITE, LINDA J ACADEMIC LEADERSHIP CAREER AWARD	12-15-97/11-30-98	UNIVERSITY OF CHICAGO	89,853
5K01AG00740-02	GOWER, BARBARA A POSTMENOPAUSAL HORMONE THERAPY AND INTRA ABDOMINAL FAT	12-01-97/11-30-98	UNIVERSITY OF ALABAMA AT BIRMINGHAM	82,188
5K07AG00744-02	CARNES, MARY L WOMENS HEALTH ACADEMIC LEADERSHIP AWARD	07-01-98/06-30-99	UNIVERSITY OF WISCONSIN MADISON	86,184
5K02AG00745-03	SCHWINN, DEBRA A TRANSCRIPTIONAL REGULATION OF THE HUMAN 1A ADRENOCEPTORS	05-01-98/04-30-99	DUKE UNIVERSITY	85,169
5K01AG00746-02	HAN, EUN S IDENTIFYING GENES ACUTELY RESPONSIVE TO FOOD RESTRICTION	07-01-98/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	74,586
5K01AG00747-02	RYAN-SMITH, ALICE J OBESITY, GLUCOSE METABOLISM AND DIET IN OLDER WOMEN	09-01-98/08-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	93,418
5K01AG00748-02	GRIGORENKO, ELENA V MOLECULAR CHARACTERIZATION OF RETINA AGING	04-01-98/03-31-99	WAKE FOREST UNIVERSITY	81,275

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5K08AG00751-02	HIGGINS, DONALD S, JR AGE, ENERGY AND EXCITOTOXICITY	04-01-98	03-31-99	OHIO STATE UNIVERSITY	101,693
5K01AG00752-02	SKINNER, JONATHAN S WHY DO THE RICH LIVE LONGER	12-01-97	11-30-98	DARTMOUTH COLLEGE	108,367
5K08AG00755-03	HAMEL, MARY E OUTCOMES AND COSTS OF INVASIVE THERAPIES FOR THE ELDERLY	09-01-98	08-31-99	BETH ISRAEL DEACONESS MEDICAL CENTER	101,106
5K02AG00756-02	FARAH, MARTHA J COGNITIVE NEUROSCIENCE OF DEMENTIA	09-15-98	08-31-99	UNIVERSITY OF PENNSYLVANIA	90,158
1K08AG00759-01A1	GILL, THOMAS M PREVENTION OF FUNCTIONAL DISABILITY IN AT RISK ELDERS	01-01-98	12-31-98	YALE UNIVERSITY	105,516
1K01AG00760-01A1	TSOU, HUI C AGING AND RETINOID RECEPTORS	01-01-98	12-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	108,108
5K08AG00764-02	ADAMEC, EMIL CALPAINS AND AGING AND AD PATHOGENESIS	05-01-98	04-30-99	MC LEAN HOSPITAL (BELMONT, MA)	87,863
5K01AG00766-02	TIMCHENKO, NIKOLAI A C/EBP ALPHA MEDIATED REGULATION OF P21/SDI-1	08-01-98	07-31-99	BAYLOR COLLEGE OF MEDICINE	84,100
5K01AG00767-02	CAWTHON, RICHARD M IDENTIFICATION OF GENES CONTRIBUTING TO HUMAN LONGEVITY	04-01-98	03-31-99	UNIVERSITY OF UTAH	93,420
1K07AG00768-01A1	SCHWARTZ, JANICE B GERIATRIC LEADERSHIP ACADEMIC AWARD	12-15-97	11-30-98	NORTHWESTERN UNIVERSITY	108,000
5K08AG00774-03	MONTINE, THOMAS J CROSSLINKING OF APOE AND TAU IN ALZHEIMERS DISEASE	07-01-98	06-30-99	VANDERBILT UNIVERSITY	100,591
1K02AG00778-01	HORIUCHI, SHIRO BIODEMOGRAPHIC ANALYSIS OF AGING TRAJECTORIES	07-01-98	06-30-99	ROCKEFELLER UNIVERSITY	75,260
5K08AG00784-02	MEGA, MICHAEL S PATHOLOGY OF BRAIN METABOLISM IN ALZHEIMERS DISEASE	08-01-98	07-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	100,656
1K02AG00785-01A1	OLSHANSKY, STUART J TRAINING PROGRAM ON THE BIODEMOGRAPHY OF AGING	06-15-98	05-31-99	UNIVERSITY OF CHICAGO	82,707
5K08AG00790-02	MARCINIAK, ROBERT A MOLECULAR ANALYSIS OF THE WERNERS GENE PRODUCT	09-01-98	08-31-99	MASSACHUSETTS GENERAL HOSPITAL	103,058

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5K08AG00793-02	IRIZARRY, MICHAEL C TRANSGENIC MODELS OF ALZHEIMERS DISEASE	06-01-98/05-31-99	MASSACHUSETTS GENERAL HOSPITAL	103,378
1K01AG00795-01A1	PATRYLO, PETER R EPILEPTOGENESIS IN THE AGED CNS	05-01-98/04-30-99	YALE UNIVERSITY	76,856
5K02AG00796-02	GRANHOLM, ANN-CHARLOTTE E CNS NORADRENERGIC NEURONS--TROPHIC FACTORS	08-15-98/07-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	84,228
7K08AG00798-02	LIN, MICHAEL T DEFECTIVE ENERGY METABOLISM AND ALZHEIMER DISEASE	12-01-98/01-31-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	39,330
1K08AG00800-01	SWERDLOW, RUSSELL H PATHOPHYSIOLOGY IN NEURODEGENERATION	01-01-98/12-31-98	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	100,656
1K08AG00801-01A1	BINKLEY, NEIL C VITAMIN K AND SKELETAL HEALTH	09-01-98/07-31-99	UNIVERSITY OF WISCONSIN MADISON	107,136
1K23AG00802-01A1	FISHER, NAOMI D AGING AND HYPERTENSION--GENDER, GENES AND RISK	09-30-98/08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	106,736
1K07AG00806-01A1	GERTLER, PAUL J LEADERSHIP IN AGING RESEARCH AND TEACHING	09-30-98/08-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	107,228
1K08AG00808-01	GRAY, SHELLY L BENZODIAZEPINE USE AND RISK OF DISABILITY IN THE ELDERLY	01-15-98/01-14-99	UNIVERSITY OF WASHINGTON	83,154
1K07AG00809-01	BIRGE, STANLEY J GERIATRIC ACADEMIC CAREER AWARD	12-01-97/	BARNES-JEWISH HOSPITAL	
1K01AG00810-01	BENLOUCIF, SUSAN J SLEEP/WAKE RHYTHMS IN AGING--TREATMENT WITH NIMODIPINE	01-01-98/12-31-98	NORTHWESTERN UNIVERSITY	88,571
1K02AG00811-01A1	CHEN, QIAN STABILIZATION OF MATRIX STRUCTURE IN MATURE CARTILAGE	09-01-98/08-31-99	PENNSYLVANIA STATE UNIV HERSHEY MED	60,416
1K01AG00817-01	MC DONALD, PAIGE A STRESS/IMMUNE FUNCTION IN WOMEN WITH HISTORY OF CANCER	06-15-98/05-31-99	HOWARD UNIVERSITY	73,016
5K01AG00818-02	ROSAL, MILAGROS C ADHERENCE TO DIETARY MODIFICATION	09-01-98/08-31-99	UNIVERSITY OF MASSACHUSETTS MEDICAL	91,547
5K08AG00822-02	MOUTON, CHARLES P IMPACT OF DOMESTIC VIOLOENCE ON HEALTH OF OLDER WOMEN	09-01-98/07-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	87,803

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1K08AG00826-01A1	JUSTICE, AMY C MEDIATORS OF AGE ASSOCIATED OUTCOMES IN HIV INFECTION	09-30-98/08-31-99	CASE WESTERN RESERVE UNIVERSITY	86,801
1K01AG00828-01	JONES, PAMELA P AGAGE & SYMPATHETIC METABOLIC CARDIOVASCULAR REGULATION	06-01-98/03-31-99	UNIVERSITY OF COLORADO AT BOULDER	89,105
1K01AG00829-01	CUERVO, ANA M MECHANISMS OF REDUCED PROTEIN DEGRADATION WITH AGE	05-01-98/04-30-99	TUFTS UNIVERSITY BOSTON	90,891
1K07AG00830-01	LAVIZZO-MOUREY, RISA J UNIVERSITY OF PENNSYLVANIA LONG TERM CARE NETWORK	04-01-98/03-31-99	UNIVERSITY OF PENNSYLVANIA	86,265
1K01AG00831-01A1	TRAPPE, TODD A ADAPTATION OF SENESCENT MUSCLE TO EXERCISE TRAINING	09-30-98/08-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	69,541
1K08AG00833-01	MORRISON, SEAN NIA DEVELOPMENT AWARD PAIN AND DELIRIUM IN HIP FRACTURE	07-01-98/06-30-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	104,326
1K07AG00834-01	GRAVENSTEIN, STEFAN GERIATRIC LEADERSHIP AWARD	09-01-98/08-31-99	EASTERN VIRGINIA MED SCH/MED COL HAM	86,280
1K02AG00836-01	WEISS, JOHN H ZN2+ AND CALCIUM PERMEABLE AMPA/KAINATE CHANNELS	06-01-98/05-31-99	UNIVERSITY OF CALIFORNIA IRVINE	75,816
1K01AG00837-01	TIAN, RONG GLUCOSE UTILIZATION IN SENESCENT HEARTS	04-01-98/03-31-99	BRIGHAM AND WOMEN'S HOSPITAL	107,136
3K01AG00843-01S1	BURNETT, CAROLINE B CANCER SCREENING GUIDELINE ADHERENCE--UNDERSERVED ELDERS	09-30-97/08-31-98	GEORGETOWN UNIVERSITY	16,200
5K01AG00843-02	BURNETT, CAROLINE B CANCER SCREENING GUIDELINE ADHERENCE--UNDERSERVED ELDERS	09-01-98/08-31-99	GEORGETOWN UNIVERSITY	97,912
1K01AG00847-01	TANAKA, HIROFUMI AGING, HABITUAL EXERCISE, AND ARTERIAL COMPLIANCE	08-01-98/07-31-99	UNIVERSITY OF COLORADO AT BOULDER	89,468
1K07AG00848-01	LEVKOFF, SUE E LEADERSHIP AWARD IN MINORITY AGING AND HEALTH RESEARCH	08-15-98/07-31-99	HARVARD UNIVERSITY	107,957
1K01AG00850-01	COLOM, LUIS V ION CHANNELS AND AMYLOID-INDUCED CELL DEATH	08-15-98/07-31-99	BAYLOR COLLEGE OF MEDICINE	86,400
1K01AG00851-01	GOODPASTER, BRETT H MUSCLE COMPOSITION AND METABOLISM IN AGING AND EXERCISE	09-01-98/08-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	92,448

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FY: 98				
1K08AG00852-01	WEILBAECHER, KATHERINE M MICROPHTHALMIA IN OSTEOCLAST DEVELOPMENT	07-01-98/06-30-99	DANA-FARBER CANCER INSTITUTE	100,969
1K07AG00853-01	LACHS, MARK S NIA ACADEMIC CAREER LEADERSHIP AWARD	09-30-98/07-31-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	108,000
1K01AG00861-01	NIVEN, ANNE F FUNCTIONAL ANALYSIS OF ASTROCYTE DERIVED APOE3 AND APOE4	08-15-98/07-31-99	WASHINGTON UNIVERSITY	81,831
1K23AG00867-01	SZUBA, MARTIN P SLEEP AND CHRONOBIOLOGY OF LATE-LIFE DEPRESSION	09-15-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	132,948
1K07AG00868-01	CALLAHAN, CHRISTOPHER M ENHANCING AGING RESEARCH POTENTIAL AT INDIANA UNIVERSITY	09-30-98/08-31-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	107,223
1K08AG00880-01	FEANY, MEL B GENETIC MODEL OF NEURODEGENERATION	09-30-98/08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	92,320
1K08AG00882-01	SCHOENBAUM, GEOFFREY M NEURAL REPRESENTATIONS IN PREFRONTAL SYSTEMS IN AGED RAT	09-30-98/08-31-99	JOHNS HOPKINS UNIVERSITY	90,625
1K08AG00888-01	YAFFE, KRISTINE ESTROGEN COMPOUNDS, COGNITION & DEMENTIA IN OLDER WOMEN	09-30-98/08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	101,712
1K01AG00931-01	KARLAWISH, JASON H COMMUNITY EQUIPOISE AND THE ETHICS OF CLINICAL RESEARCH	09-30-98/08-31-99	UNIVERSITY OF PENNSYLVANIA	92,032
2R01AG01159-22	MANTON, KENNETH G DEMOGRAPHIC STUDY OF MULTIPLE CAUSES OF DEATH	05-01-98/11-30-98	DUKE UNIVERSITY	198,739
2R01AG01228-19	WRIGHT, WOODRING E GENE EXPRESSION IN AGING AND DEVELOPMENT	12-15-97/11-30-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	337,435
3P01AG01743-19S1	KLINMAN, NORMAN R IMMUNOBIOLOGY OF AGING	01-15-98/08-31-98	SCRIPPS RESEARCH INSTITUTE	226,721
3P01AG01743-19S2	KLINMAN, NORMAN R IMMUNOBIOLOGY OF AGING	03-15-98/08-31-98	SCRIPPS RESEARCH INSTITUTE	21,000
5P01AG01743-20	KLINMAN, NORMAN R IMMUNOBIOLOGY OF AGING	09-01-98/08-31-99	SCRIPPS RESEARCH INSTITUTE	1,119,375
5P01AG01751-20	MARTIN, GEORGE M GENE ACTION IN THE PATHOBIOLOGY OF AGING	08-01-98/07-31-99	UNIVERSITY OF WASHINGTON	953,199

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
2R01AG01760-18	KLAG, MICHAEL J PRECURSORS OF PREMATURE DISEASE AND DEATH	09-30-98/08-31-99	JOHNS HOPKINS UNIVERSITY	372,086
5P01AG02132-18	PRUSINER, STANLEY B DEGENERATIVE AND DEMENTING DISEASES OF AGING	02-01-98/12-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	2,001,362
5R37AG02163-16	MADDEN, DAVID J AGE AND SELECTIVE ATTENTION IN VISUAL SEARCH	03-01-98/02-28-99	DUKE UNIVERSITY	231,095
5P01AG02219-18	MOHS, RICHARD C CLINICAL AND BIOLOGIC STUDIES IN EARLY ALZHEIMERS	04-15-98/03-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	1,581,503
5R01AG02224-19	WISE, PHYLLIS M NEUROENDOCRINE AND NEUROCHEMICAL FUNCTION DURING AGING	07-01-98/06-30-99	UNIVERSITY OF KENTUCKY	294,231
2R01AG02331-16	CLEMMONS, DAVID R IGFBP5 AND INTEGRINS AND CONTROLLING IGF1 ACTIONS	07-01-98/06-30-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	322,338
5R37AG02452-19	LIGHT, LEAH L DIRECT AND INDIRECT MEASURES OF MEMORY IN OLD AGE	09-01-98/08-31-99	PITZER COLLEGE	206,470
3R37AG02452-19S1	LIGHT, LEAH L DIRECT AND INDIRECT MEASURES OF MEMORY IN OLD AGE	09-30-98/08-31-99	PITZER COLLEGE	5,000
5R01AG02467-17	KUSHNER, IRVING INDUCTION OF ACUTE PHASE PROTEIN BIOSYNTHESIS	03-01-98/02-28-99	CASE WESTERN RESERVE UNIVERSITY	227,838
2R01AG02577-15A1	NIMNI, MARCEL E OSTEOGENESIS: DEVELOPMENT, MODULATION AND AGING	12-01-97/	CHILDREN'S HOSPITAL OF LOS ANGELES	
5R01AG02711-20	ANCOLI-ISRAEL, SONIA PREVALENCE OF SLEEP APNEA IN AN AGED POPULATION	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	232,765
5R01AG02822-17	STOCKDALE, FRANK E DEVELOPMENTAL AGE AND CHANGES IN MYOSIN ISOZYMES	12-01-97/11-30-98	STANFORD UNIVERSITY	293,758
5R01AG03051-15	REISBERG, BARRY AGING AND DEMENTIA--LONGITUDINAL COURSE OF SUBGROUPS	07-01-98/06-30-99	NEW YORK UNIVERSITY MEDICAL CENTER	281,355
5R37AG03055-17	ELIAS, MORRILL F AGE HYPERTENSION AND INTELLECTIVE PERFORMANCE	07-01-98/06-30-99	UNIVERSITY OF MAINE ORONO	309,850
3R37AG03188-16S1	WOODBURY, MAX A LONGITUDINAL MODELS OF CORRELATES OF AGING AND LONGEVITY	09-01-97/05-31-99	DUKE UNIVERSITY	140,000

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG03362-12	HARTLEY, JOELLEN T AGING AND PROSE MEMORY--BEHAVIORAL AND EEG PREDICTORS	07-01-98/05-31-99	CALIFORNIA STATE UNIVERSITY LONG BEA	194,672
2R01AG03376-16	BARNES, CAROL A NEUROBEHAVIORAL RELATIONS IN SENESCENT HIPPOCAMPUS	12-01-97/11-30-98	UNIVERSITY OF ARIZONA	227,415
5R37AG03501-17	LEVENTHAL, HOWARD SYMPTOM AND EMOTION STIMULI TO HEALTH ACTION IN ELDERLY	07-01-98/06-30-99	RUTGERS THE STATE UNIV NEW BRUNSWICK	547,980
5R01AG03763-12	WHISLER, RONALD L CELLULAR MECHANISMS OF HUMAN IMMUNOSENESCENCE	01-01-98/12-31-98	OHIO STATE UNIVERSITY	207,444
2P01AG03949-16A1	LIPTON, RICHARD B EINSTEIN AGING STUDY	07-01-98/06-30-99	YESHIVA UNIVERSITY	1,631,222
5R01AG03978-15	MILLER, RICHARD A T CELL SUBSETS DEFINED BY P-GLYCOPROTEIN	12-01-97/11-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	233,752
3R01AG03978-15S1	MILLER, RICHARD A T CELL SUBSETS DEFINED BY P GLYCOPROTEIN	12-15-97/11-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	2,859
5P01AG03991-15	MORRIS, JOHN C HEALTHY AGING AND SENILE DEMENTIA	01-15-98/12-31-98	WASHINGTON UNIVERSITY	1,566,316
5R01AG04058-14	WERNER, JOHN S OPTICAL AND NEURAL CHANGES IN AGING VISUAL SYSTEMS	03-01-98/02-28-99	UNIVERSITY OF COLORADO AT BOULDER	170,584
5R01AG04085-14	MURPHY, CLAIRE L CHEMOSENSORY PERCEPTION AND PSYCHOPHYSICS IN THE AGED	06-01-98/05-31-99	SAN DIEGO STATE UNIVERSITY	185,520
5R01AG04146-12	BOOTH, ALAN MARITAL INSTABILITY OVER THE LIFE COURSE	01-01-98/12-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	270,698
5P01AG04220-11	WISNIEWSKI, HENRYK M AGING AND SENILE DEMENTIA OF THE ALZHEIMER TYPE	06-01-98/05-31-99	NEW YORK ST OFF OF MR AND DEV DISAB	698,352
5R37AG04306-13	HASHER, LYNN A AGE, INHIBITION, AND THE CONTENTS OF WORKING MEMORY	08-01-98/07-31-99	DUKE UNIVERSITY	314,796
2R01AG04337-10A2	CUNNINGHAM, WALTER R AGE CHANGES IN INTELLECTUAL ABILITIES IN THE ELDERLY	12-01-97/	UNIVERSITY OF FLORIDA	
5P01AG04342-15	OLDSTONE, MICHAEL B AGING DISEASE--TRANSGENIC/VIROLOGIC/IMMUNOLOGY STUDIES	12-01-97/11-30-98	SCRIPPS RESEARCH INSTITUTE	904,330

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY 98				
5R01AG04360-16	FARR, ANDREW G AGE DEPENDENT MODULATION OF T CELL FUNCTION	08-01-98/07-31-99	UNIVERSITY OF WASHINGTON	233,960
5P01AG04418-15	BICKFORD, PAULA C AMINERGIC FUNCTION IN AGING AND ALZHEIMERS DISEASE	05-01-98/03-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	993,645
5R37AG04517-15	WINGFIELD, ARTHUR AGE AND DECISION STRATEGIES IN RUNNING MEMORY FOR SPEECH	04-01-98/03-31-99	BRANDEIS UNIVERSITY	179,830
2R37AG04542-12	LANDFIELD, PHILIP W HIPPOCAMPAL SYNAPTIC STRUCTURE--PHYSIOLOGY DURING AGING	01-01-98/12-31-98	UNIVERSITY OF KENTUCKY	221,525
5P30AG04590-14	ROCKWELL, RICHARD C FACTORS IN AGING--DEVELOPMENT RESEARCH RESOURCES	05-01-98/04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	642,000
5R01AG04736-15	THONAR, EUGENE J AGE RELATED DIFFERENCES IN CARTILAGE PROTEOGLYCANS	04-01-98/03-31-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	207,343
2R01AG04743-07A2	ALWIN, DUANE F STABILITY OF INDIVIDUAL DIFFERENCES	01-15-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	135,322
3R01AG04743-07AZS1	ALWIN, DUANE F STABILITY OF INDIVIDUAL DIFFERENCES	09-30-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	10,551
3R37AG04810-13S2	LU, JOHN K HORMONE SECRETION AND PREGNANCY DURING AGING	06-15-98/03-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	10,000
3R01AG04821-15S1	OZER, HARVEY L IMMORTALIZATION OF SV40 TRANSFORMED CELLS	02-15-98/07-31-98	UNIVERSITY OF MEDICINE & DENTISTRY O	35,298
5R01AG04821-16	OZER, HARVEY L, M.D. IMMORTALIZATION OF SV40 TRANSFORMED HUMAN CELLS	08-01-98/07-31-99	UNIVERSITY OF MEDICINE & DENTISTRY O	416,618
5P01AG04875-15	RIGGS, BYRON L PHYSIOLOGY OF BONE METABOLISM IN AN AGING POPULATION	07-01-98/06-30-99	MAYO FOUNDATION	1,346,335
5P01AG04953-15	ALBERT, MARILYN S AGE-RELATED CHANGES OF COGNITION IN HEALTH AND DISEASE	08-01-98/07-31-99	MASSACHUSETTS GENERAL HOSPITAL	1,470,690
5R01AG04980-35	THORBECKE, G J GERMINAL CENTERS, ANTIBODY PRODUCTION, AND LYMPHOMA	08-01-98/06-30-99	NEW YORK UNIVERSITY MEDICAL CENTER	330,558
5P01AG05119-12	MARKESBERY, WILLIAM R BRAIN OXIDATION IN THE PATHOGENESIS OF AD	05-01-98/04-30-99	UNIVERSITY OF KENTUCKY	761,388

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FY: 98				
3P01AG05119-12S2	MARKESBERY, WILLIAM R BRAIN OXIDATION IN THE PATHOGENESIS OF AD	09-01-98/04-30-99	UNIVERSITY OF KENTUCKY	45,810
5P50AG05128-15	SCHMECHEL, DONALD E ALZHEIMERS DISEASE RESEARCH CENTER	05-01-98/04-30-99	DUKE UNIVERSITY	1,960,670
3P50AG05128-15S1	SCHMECHEL, DONALD E ALZHEIMERS DISEASE RESEARCH CENTER	09-01-98/04-30-99	DUKE UNIVERSITY	75,116
3P50AG05131-14S4	THAL, LEON J ALZHEIMERS DISEASE	02-01-98/03-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	9,650
5P50AG05131-15	THAL, LEON J ALZHEIMERS DISEASE	04-15-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	2,532,343
3P50AG05131-15S1	THAL, LEON J ALZHEIMERS DISEASE	08-01-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	75,000
5P50AG05133-15	DEKOSKY, STEVEN T ALZHEIMERS DISEASE RESEARCH CENTER	05-15-98/04-30-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	1,436,760
3P50AG05133-15S1	DEKOSKY, STEVEN T ALZHEIMERS DISEASE	08-01-98/04-30-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	75,000
5P50AG05134-15	GROWDON, JOHN H ALZHEIMERS DISEASE	04-15-98/03-31-99	HARVARD UNIVERSITY	1,760,504
3P50AG05134-15S1	GROWDON, JOHN H ALZHEIMERS DISEASE	08-15-98/03-31-99	HARVARD UNIVERSITY	75,000
5P50AG05136-15	RASKIND, MURRAY A ALZHEIMERS DISEASE RESEARCH CENTER	05-15-98/04-30-99	UNIVERSITY OF WASHINGTON	2,312,934
3P50AG05136-15S1	MARTIN, GEORGE M ALZHEIMERS DISEASE RESEARCH CENTER	08-15-98/04-30-99	UNIVERSITY OF WASHINGTON	75,000
5P50AG05138-15	DAVIS, KENNETH L ALZHEIMERS DISEASE	04-15-98/03-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	2,098,428
3P50AG05138-15S1	DAVIS, KENNETH L ALZHEIMERS DISEASE	08-01-98/03-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	78,200
5P50AG05142-15	FINCH, CALEB E ADRC CONSORTIUM	04-15-98/03-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	2,607,360

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3P50AG05142-15S1	FINCH, CALEB E ADRC CONSORTIUM	09-01-98/03-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	100,000
3P50AG05144-14S1	MARKESBERY, WILLIAM R ALZHEIMERS DISEASE RESEARCH CENTER	02-15-98/04-30-98	UNIVERSITY OF KENTUCKY	27,346
5P50AG05144-15	MARKESBERY, WILLIAM R ALZHEIMER'S DISEASE RESEARCH CENTER	05-01-98/04-30-99	UNIVERSITY OF KENTUCKY	1,377,130
3P50AG05144-15S1	MARKESBERY, WILLIAM R ALZHEIMERS DISEASE RESEARCH CENTER	08-01-98/04-30-99	UNIVERSITY OF KENTUCKY	75,000
5P50AG05146-16	PRICE, DONALD L, JR AGING, NEURODEGENERATIVE DISEASE, AND ANIMAL MODELS	07-01-98/03-31-99	JOHNS HOPKINS UNIVERSITY	1,385,117
3P50AG05146-16S1	PRICE, DONALD L, JR AGING, NEURODEGENERATIVE DISEASE, AND ANIMAL MODELS	09-30-98/03-31-99	JOHNS HOPKINS UNIVERSITY	75,000
5R01AG05213-12	FRIEDMAN, DAVID AGE EFFECTS ON THE COGNITIVE ERPD/CARDIAC WAVE EFFECT	06-15-98/05-31-99	NEW YORK STATE PSYCHIATRIC INSTITUTE	277,250
5R37AG05233-11	FREEDMAN, ROBERT R BEHAVIORAL TREATMENT OF MENOPAUSAL HOT FLASHES	05-01-98/04-30-99	WAYNE STATE UNIVERSITY	282,875
3R37AG05233-11S1	FREEDMAN, ROBERT R BEHAVIORAL TREATMENT OF MENOPAUSAL HOT FLASHES	08-15-98/04-30-99	WAYNE STATE UNIVERSITY	5,000
3R37AG05284-12S1	DAVIS, MARADEE A LIVING ARRANGEMENTS HEALTH AND SURVIVAL--OLDER US ADULTS	02-01-97/01-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	5,000
5R37AG05284-13	DAVIS, MARADEE A LIVING ARRANGEMENTS HEALTH AND SURVIVAL--OLDER US ADULTS	02-01-98/01-31-00	UNIVERSITY OF CALIFORNIA SAN FRANCIS	238,283
3R37AG05284-13S1	DAVIS, MARADEE A LIVING ARRANGEMENTS HEALTH AND SURVIVAL--OLDER US ADULTS	02-01-98/01-31-00	UNIVERSITY OF CALIFORNIA SAN FRANCIS	5,000
5R01AG05317-11	WOOLLACOTT, MARJORIE H AGE RELATED CHANGES IN POSTURE AND MOVEMENT	08-01-98/07-31-99	UNIVERSITY OF OREGON	171,924
3R37AG05333-13S2	PEREIRA-SMITH, OLIVIA M MOLECULAR AND CYTOGENETIC STUDIES OF HUMAN CELL AGING	03-15-98/04-30-98	BAYLOR COLLEGE OF MEDICINE	5,000
4R37AG05333-14	PEREIRA-SMITH, OLIVIA M MOLECULAR AND CYTOGENETIC STUDIES OF HUMAN CELL AGING	05-01-98/04-30-99	BAYLOR COLLEGE OF MEDICINE	316,591

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG05394-14	ENSRUD, KRISTINE E FRACTURES IN OLDER WOMEN	09-30-98/08-31-99	UNIVERSITY OF MINNESOTA TWIN CITIES	389,628
5R01AG05407-13	CUMMINGS, STEVEN R OSTEOPOROTIC FRACTURES	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	1,527,482
5R01AG05552-11	HESS, THOMAS M SOCIAL COGNITION AND AGING	07-15-98/06-30-99	NORTH CAROLINA STATE UNIVERSITY RALE	126,911
3R01AG05552-11S1	HESS, THOMAS M SOCIAL COGNITION AND AGING	08-01-98/06-30-99	NORTH CAROLINA STATE UNIVERSITY RALE	4,000
7R37AG05604-13	NIXON, RALPH A DYNAMICS OF THE NEURONAL CYTOSKELETON IN AGING BRAIN	02-01-98/12-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	382,868
5R37AG05628-14	GOOD, ROBERT A CELLULAR ENGINEERING TO TREAT/PREVENT DISEASES OF AGING	04-01-98/03-31-99	UNIVERSITY OF SOUTH FLORIDA	175,298
5R01AG05633-12	GOOD, ROBERT A REDUCED CALORIES, PROLIFERATION, IMMUNITY, CANCER, AGING	04-01-98/03-31-99	UNIVERSITY OF SOUTH FLORIDA	144,491
5P50AG05681-15	JOHNSON, EUGENE M, JR ALZHEIMERS DISEASE RESEARCH CENTER	05-01-98/04-30-99	WASHINGTON UNIVERSITY	2,088,356
3P50AG05681-15S1	JOHNSON, EUGENE M, JR ALZHEIMERS DISEASE RESEARCH CENTER	08-15-98/04-30-99	WASHINGTON UNIVERSITY	75,000
5F32AG05717-03	TANAKA, HIROFUMI OBESE POSTMENOPAUSAL WOMEN--EFFECTS OF EXERCISE	02-01-98/07-31-98	UNIVERSITY OF COLORADO AT BOULDER	16,080
7F32AG05727-03	LEVY, BECCA R SOCIOCULTURAL INFLUENCES ON AFRICAN AMERICAN LONGEVITY	07-01-98/06-30-99	YALE UNIVERSITY	29,900
5F32AG05728-03	KECK, B JANE SEROTONERGIC NEUROPHARMACOLOGY OF THE AGING BRAIN	04-01-98/03-31-99	PENNSYLVANIA STATE UNIV HERSHEY MED	30,492
5R01AG05731-09	BONDADA, SUBBARAO AGE ASSOCIATED CHANGES IN B LYMPHOCYTE FUNCTION	08-01-98/07-31-99	UNIVERSITY OF KENTUCKY	227,040
5F32AG05733-04	LI, HONG L REGULATION OF APOPTOSIS BY ICH1S	05-01-98/04-30-99	HARVARD UNIVERSITY	30,492
5F32AG05739-04	REENSTRA, WENDE R THREONINE PHOSPHORYLATION AND EGFR SIGNALING	01-15-98/01-14-99	BOSTON UNIVERSITY	32,824

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R37AG05739-13	BALL, KARLENE K IMPROVEMENT OF VISUAL PROCESSING IN OLDER ADULTS	02-01-98/01-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	211,050
5F32AG05742-03	WANG, SUYUE MECHANISM AND FUNCTION OF ICH3--ICE/CED3 FAMILY	03-01-98/02-28-99	HARVARD UNIVERSITY	31,824
5F32AG05743-02	THOMPSON-SCHILL, SHARON L MODELS OF SEMANTIC IMPAIRMENT IN ALZHEIMERS DISEASE	07-01-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	29,160
5F32AG05747-03	HOLT, SHAWN E LINEAGE SPECIFIC ROLE FOR PRB IN AGING AND CANCER	02-20-98/02-19-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	30,492
5F32AG05750-03	PRULL, MATTHEW W FUNCTIONAL MR IMAGING OF MEMORY AND AGING	09-09-98/09-08-99	STANFORD UNIVERSITY	29,160
5F31AG05752-03	FAIRCLOTH, CHRISTOPHER A PREDOCTORAL FELLOWSHIP PROGRAM (DISABILITY)	08-19-98/08-18-99	UNIVERSITY OF FLORIDA	14,748
5F32AG05759-03	AMEND, DIANE L MRI AND MRS FOR THE DIAGNOSIS OF ALZHEIMERS DISEASE	05-01-98/04-30-99	NORTHERN CALIFORNIA INSTITUTE RES &	30,492
5F32AG05762-02	KASHON, MICHAEL L VASOPRESSIN, CIRCADIAN RHYTHMS, AND REPRODUCTIVE AGING	12-01-97/10-31-98	UNIVERSITY OF KENTUCKY	29,160
5F32AG05766-02	STONE, DAVID J APOLIPOPROTEIN RESPONSE TO STEROIDS--SYNAPTIC REMODELING	12-01-97/11-30-98	UNIVERSITY OF SOUTHERN CALIFORNIA	29,160
5F32AG05769-02	LI, YONGHONG MOLECULAR ANALYSIS OF AMYLOID BETA TOXICITY	12-01-97/11-30-98	SALK INSTITUTE FOR BIOLOGICAL STUDIE	29,160
1F32AG05770-01A1	CHOU, LI S OBSTACLE HEIGHT EFFECTS ON BALANCE DURING GAIT	03-30-99/	MAYO FOUNDATION	23,619
5F32AG05771-02	HASTEN, DEBORAH L RESISTANCE EXERCISE AND PROTEIN SYNTHESIS IN THE ELDERLY	11-01-97/10-31-98	WASHINGTON UNIVERSITY	29,160
5F31AG05772-02	MCKNIGHT, SPONTANEOUS R GENETIC CHARACTERIZATION OF SPE 21	01-01-98/12-31-98	UNIVERSITY OF ARIZONA	14,496
5F32AG05774-02	MOTTA, DIANE R DIFFERENTIAL SIGNALING OF M2 AND M4 MUSCARINIC RECEPTORS	11-01-97/10-31-98	UNIVERSITY OF MINNESOTA TWIN CITIES	25,176
5F32AG05776-02	HUANG, SHURONG REGULATION OF REPLICATIVE SENESCENCE BY THE WRN GENE	03-01-98/02-28-99	UNIVERSITY OF CALIF-LAWRENC BERKELEY	31,492

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5F32AG05778-02	WAGNER, ANTHONY D MEMORY ILLUSIONS AND DISTORTIONS IN AGING	09-01-98/08-31-99	HARVARD UNIVERSITY	26,176
5F32AG05779-02	CONNER, JAMES M NGF GENE THERAPY IN PRIMATE MODELS OF AGING	03-01-98/02-28-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	32,824
5F32AG05781-03	EPSTEIN, CHARLES B IDENTIFICATION OF COMPONENTS OF YEAST TELOMERASE	10-01-98/09-30-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	32,500
5F32AG05782-02	HUANG, XUDONG ZINC AND ALZHEIMERS AMYLOID CHEMISTRY	11-01-97/10-31-98	MASSACHUSETTS GENERAL HOSPITAL	29,160
5F31AG05783-02	HILLS, ALEXANDER C MINORITY PREDOCTORAL FELLOWSHIP PROGRAM	09-01-98/08-31-99	CASE WESTERN RESERVE UNIVERSITY	
1F32AG05784-01	BRONIKOWSKI, ANNE M ENERGY EXPENDITURE AND AGING IN MUS	01-01-98/	UNIVERSITY OF WISCONSIN MADISON	26,176
5F32AG05790-02	OGG, SCOTT A MOLECULAR CHARACTERIZATION OF AGING IN C ELEGANS	08-01-98/07-31-99	MASSACHUSETTS GENERAL HOSPITAL	30,160
5F32AG05791-02	STARLING, RAYMOND D INTERACTION OF GENETICS AND AGING ON ENERGY METABOLISM	07-15-98/07-14-99	UNIVERSITY OF VERMONT & ST AGRIC COL	30,160
5P01AG05793-14	JOHNSTON, C C, JR SOME DETERMINANTS OF BONE MASS IN THE ELDERLY	09-01-98/08-31-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	1,449,468
3F32AG05798-01S1	FRIEDLANDER, ANNE L IGF-I, ERT & EXERCISE EFFECTS ON FAT USE & MUSCLE MRNA	11-01-97/10-31-98	STANFORD UNIVERSITY	1,000
5F32AG05798-02	FRIEDLANDER, ANNE L IGF-I, ERT & EXERCISE EFFECTS ON FAT USE & MUSCLE MRNA	10-01-98/09-30-99	STANFORD UNIVERSITY	31,720
3F32AG05799-01S1	NOMACK, CHRISTOPHER J EXERCISE IN ELDERLY WITH PERIPHAL VASCULAR DISEASE	03-31-98/03-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	1,000
1F32AG05803-01	NEWMAN, MARY C PREDICTION AND DIAGNOSIS OF ALZHEIMER'S DISEASE	12-01-97/11-30-98	UNIVERSITY OF ARIZONA	30,160
3F32AG05804-01S1	NICOLLE, MICHELLE M PHOSPHOINOSITIDE HYDROLYSIS AND MEMORY DECLINE IN AGING	11-01-97/10-31-98	MAYO CLINIC JACKSONVILLE	1,000
3F32AG05805-01S1	REDISH, AARON D AGING AND MULTIPLE MAPS IN THE HIPPOCAMPUS	11-01-97/10-31-98	UNIVERSITY OF ARIZONA	1,000

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FY: 98				
1F32AG05806-01	HURLEY, MEGAN M OLDER ADULTS' READING COMPREHENSION OF MEDICAL MATERIALS	10-01-97/	UNIVERSITY OF KANSAS LAWRENCE	
1F32AG05807-01	WEGESIN, DOMONICK J HORMONE REPLACEMENT THERAPY EFFECTS ON MEMORY	11-01-97/10-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	30,160
1F32AG05808-01	CHASTEEN, ALISON L MENTAL REPRESENTATIONS OF AGING EFFECTS ON MEMORY	01-01-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	25,000
3F32AG05810-01S1	COTRELL, VICTORIA C SELF PERCEPTIONS IN INDIVIDUALS WITH ALZHEIMERS DISEASE	11-01-97/10-31-98	OREGON STATE UNIVERSITY	1,000
1F32AG05817-01	TEKIRIAN, TINA L PSE TRAFFICKING AND PROCESSING ON A-BETA PRODUCTION	05-01-98/04-30-99	MASSACHUSETTS GENERAL HOSPITAL	25,000
1F32AG05818-01	WILSON, MELINDA E NEUROPROTECTIVE ACTIONS OF ESTROGEN IN CORTICAL EXPLANTS	07-01-98/06-30-99	UNIVERSITY OF KENTUCKY	26,176
1F32AG05821-01	KUEHL-KOVARIK, MARY C FUNCTIONAL ANALYSIS OF NMDA RECEPTORS IN THE AGING BRAIN	07-01-98/07-02-98	COLORADO STATE UNIVERSITY	37,012
1F32AG05822-01	SMINE, ABDELKRIM INTERACTION BETWEEN PRESENILIN 1 AND BRAIN G PROTEIN	04-01-98/	CLEVELAND CLINIC FOUNDATION	31,492
1F32AG05826-01	JOLLY, CHRISTOPHER A DIET AND AGING EFFECT ON T CELL FUNCTION	05-01-98/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	30,160
1F32AG05828-01	KEMPTES, KAREN A AGE AND WORKING MEMORY IN SENTENCE PROCESSING	10-26-98/10-25-99	BRANDEIS UNIVERSITY	25,000
1F32AG05829-01	SKURNIK, IAN W AGE RELATED DIFFERENCES IN BELIEF OF FALSE INFORMATION	03-25-99/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	23,608
1F32AG05830-01	BURNS, COLIN S KINETICS & MECHANISM OF AMYLOID FORMATION STUDIES BY ESR	10-01-98/09-30-99	UNIVERSITY OF CALIFORNIA SANTA CRUZ	25,000
1F32AG05831-01	DEGTEREV, ALEXEI I IN VIVO MECHANISMS OF CASPASE ACTIVATION	03-25-99/	HARVARD UNIVERSITY	23,608
1F32AG05832-01	MU, XI Y AGE ALTERED CYTOKINE PROFILE AND ANTITUMOR ACTIVITY	11-01-98/10-31-99	SIDNEY KIMMEL CANCER CENTER	37,012
1F32AG05834-01	ZHU, GUOFEN K APP PROCESSING AND GENE EXPRESSION BY PKC EPSILON	10-01-98/09-30-99	SAN FRANCISCO GEN HOSP MED CTR	26,176

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FY: 98				
1F32AG05836-01	IKEZU, TSUNEYA CAVEOLAE FOR THE PROCESSING OF APP	10-01-98/09-30-99	CLEVELAND CLINIC FOUNDATION	36,300
1F32AG05840-01	MORGAN, SUSAN E ISOLATION OF NOVEL G2 CHECKPOINT AND APOPTOTIC GENES	10-01-98/09-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	32,824
5P01AG05842-13	WISE, DAVID A ECONOMICS OF AGING	04-15-98/12-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	851,916
3P01AG05842-13S1	WISE, DAVID A ECONOMICS OF AGING	05-01-98/12-31-98	NATIONAL BUREAU OF ECONOMIC RESEARCH	64,886
5R37AG05891-13	FRANGIONE, BLAS AMYLOIDOSIS AND ALZHEIMERS DISEASE	07-01-98/06-30-99	NEW YORK UNIVERSITY MEDICAL CENTER	373,986
5R01AG05892-16	IQBAL, KHALID ALZHEIMER'S NEUROFIBRILLARY TANGLES--BIOCHEMICAL STUDIES	12-01-97/04-01-99	NEW YORK STATE OFFICE OF MENTAL HEAL	266,236
5R01AG05893-18	HERSH, LOUIS B CHOLINE ACETYLTRANSFERASE	04-01-98/03-31-99	UNIVERSITY OF KENTUCKY	251,141
4R37AG05894-26	FINE, RICHARD E NEURONAL CA++ SEQUESTERING COMPARTMENTS--PROTECTIVE ROLE	05-01-98/04-30-99	BOSTON UNIVERSITY	342,350
5R01AG05917-13	ROTUNDO, RICHARD L REGULATION OF ACETYLCHOLINESTERASE SYNTHESIS & ASSEMBLY	07-01-98/06-30-99	UNIVERSITY OF MIAMI	279,581
5R01AG05980-05	MOHANKUMAR, PULIYUR S NEUROENDOCRINOLOGY OF REPRODUCTIVE AGING	03-01-98/02-28-99	KANSAS STATE UNIVERSITY	115,153
2R37AG06036-13	ARNSTEN, AMY F COGNITIVE LOSS WITH AGE--ROLE OF CORTICAL CATECHOLAMINES	08-01-98/06-30-99	YALE UNIVERSITY	270,753
2R01AG06072-11A1	CZEISLER, CHARLES A DISRUPTED SLEEP IN THE ELDERLY--CIRCADIAN ETIOLOGY	04-15-98/03-31-99	BRIGHAM AND WOMEN'S HOSPITAL	417,180
5R01AG06088-12	GAGE, FRED H CHARACTERIZATION & UTILIZATION OF ADULT PROGENITOR CELLS	03-01-98/02-28-99	SALK INSTITUTE FOR BIOLOGICAL STUDIE	375,026
5R01AG06093-26	NAKAJIMA, YASUKO ULTRASTRUCTURE AND FUNCTION OF NERVE AND MUSCLE	02-01-98/01-31-99	UNIVERSITY OF ILLINOIS AT CHICAGO	209,964
3R37AG06108-13S1	HORNSBY, PETER J AGING OF ENDOCRINE CELLS IN CULTURE	03-01-98/03-31-98	BAYLOR COLLEGE OF MEDICINE	5,000

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R37AG06116-14	DICE, JAMES F, JR PROTEIN DEGRADATION IN AGING HUMAN FIBRODBLASTS	04-01-98/03-31-99	TUFTS UNIVERSITY BOSTON	305,074
5R37AG06127-12	GILDEN, DONALD NEUROBIOLOGY OF VARICELLA ZOSTER VIRUS	07-01-98/06-30-99	UNIVERSITY OF COLORADO HLTH SCIENCES	378,181
3R01AG06157-11S2	FAULKNER, JOHN A EXERCISE, INJURY & REPAIR OF MUSCLE FIBERS	02-15-98/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	3,050
5R01AG06157-12	FAULKNER, JOHN A EXERCISE, INJURY & REPAIR OF MUSCLE FIBERS IN AGED MICE	07-01-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	221,818
3R37AG06168-12S1	JAZWINSKI, S M CELLULAR AGING IN A YEAST MODEL SYSTEM	04-15-98/08-31-98	LOUISIANA STATE UNIV MED CTR NEW ORL	5,000
5R37AG06168-13	JAZWINSKI, S M CELLULAR AGING IN A YEAST MODEL SYSTEM	09-01-98/08-31-99	LOUISIANA STATE UNIV MED CTR NEW ORL	248,196
5R01AG06170-13	POTTER, LINCOLN T CHOLINERGIC MECHANISMS IN AGING AND AD	05-01-98/04-30-99	UNIVERSITY OF MIAMI	295,304
5R37AG06173-13	SELKOE, DENNIS J AGING IN THE BRAIN--ROLE OF THE FIBROUS PROTEINS	02-15-98/01-31-99	BRIGHAM AND WOMEN'S HOSPITAL	387,167
5R01AG06246-13	KELLEY, KEITH W HORMONAL RESTORATION OF A FUNCTIONAL THYMUS DURING AGING	09-01-98/08-31-99	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	320,376
5R01AG06265-13	PARK, DENISE C CONTEXT EFFECTS ON THE AGING MEMORY	07-01-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	254,638
2R01AG06268-06	ERBER, JOAN T JUDGING FORGETFUL YOUNG AND OLDER ADULTS	05-01-98/	FLORIDA INTERNATIONAL UNIVERSITY	
5R01AG06348-11	GASKIN, FELICIA AUTOANTIBODIES IN ALZHEIMERS DISEASE AND NORMAL AGING	12-01-97/11-30-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	232,877
2R01AG06434-11	GERHARDT, GREG A AGE INDUCED CHANGES IN MONOAMINE PRESYNAPTIC FUNCTION	12-01-97/11-30-98	UNIVERSITY OF COLORADO HLTH SCIENCES	150,828
5R01AG06528-13	DAVIDSON, JEFFREY M ELASTIN AND COLLAGEN IN THE AGING PROCESS	09-01-98/08-31-99	VANDERBILT UNIVERSITY	210,129
5R01AG06537-12	SEALS, DOUGLAS R SYMPATHETIC NERVOUS SYSTEM ACTIVITY AND HUMAN AGING	04-01-98/03-31-99	UNIVERSITY OF COLORADO AT BOULDER	315,587

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5P01AG06569-11	WYSS, J MICHAEL ALZHEIMERS DISEASE--A MULTIDISCIPLINARY APPROACH	05-01-98/04-30-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	1,102,043
5R01AG06601-12	KOSIK, KENNETH S PATHOBIOLOGY OF TAU PROTEIN	08-01-98/07-31-99	BRIGHAM AND WOMEN'S HOSPITAL	311,287
5R01AG06605-12	CORKIN, SUZANNE THEORETICAL ANALYSIS OF LEARNING IN AGE RELATED DISEASE	02-01-98/01-31-99	MASSACHUSETTS INSTITUTE OF TECHNOLOG	327,946
5R01AG06647-11	MORRISON, JOHN H CORTICO-CORTICAL LOSS IN ALZHEIMERS DISEASE IN THE AGED	04-01-98/03-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	325,052
3R37AG06665-10S2	HORWITZ, BARBARA A AGING AND GENDER EFFECTS ON RESPONSES TO COLD IN RATS	12-01-97/07-31-98	UNIVERSITY OF CALIFORNIA DAVIS	5,000
3R37AG06665-10S3	HORWITZ, BARBARA A AGING AND GENDER EFFECTS ON RESPONSES TO COLD	05-01-98/07-31-98	UNIVERSITY OF CALIFORNIA DAVIS	5,000
5R37AG06665-11	HORWITZ, BARBARA A AGING AND GENDER EFFECTS ON RESPONSES TO COLD IN RATS	08-01-98/07-31-99	UNIVERSITY OF CALIFORNIA DAVIS	243,282
2U01AG06781-12	LARSON, ERIC B ALZHEIMERS DISEASE PATIENT REGISTRY	07-01-98/06-30-99	UNIVERSITY OF WASHINGTON	840,945
5U01AG06786-13	KOKMEN, EMRE ALZHEIMERS DISEASE PATIENT REGISTRY	09-01-98/08-31-99	MAYO FOUNDATION	1,112,284
5P01AG06803-11	DAVIES, PETER F FUNDAMENTAL STUDIES ON ALZHEIMERS DISEASE	05-15-98/04-30-99	YESHIVA UNIVERSITY	1,084,722
5R37AG06826-13	SALTHOUSE, TIMOTHY A ADULT AGE DIFFERENCES IN REASONING AND SPATIAL ABILITIES	09-01-98/08-31-99	GEORGIA INSTITUTE OF TECHNOLOGY	208,568
2R01AG06849-11	OSTERGAARD, ARNE L PRIMING DEFICITS & BRAIN SYSTEMS IN DEMENTIA & AMNESIA	08-15-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	113,280
7R01AG06943-11	VLASSARA, HELEN GLYCATION IN DIABETES AND AGING	12-01-98/04-30-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	59,325
2R01AG06945-12	BLAIR, STEVEN N IMPACT OF PHYSICAL FITNESS AND EXERCISE ON HEALTH	05-01-98/03-31-99	COOPER INSTITUTE FOR AEROBICS RESEAR	668,511
5R01AG06946-11	ORME, IAN M AGING AND IMMUNITY IN TUBERCULOSIS	01-01-98/12-31-98	COLORADO STATE UNIVERSITY	229,091

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5R37AG07025-12	MANTON, KENNETH G FORECASTING LIFE AND ACTIVE LIFE EXPECTANCY	08-01-98	07-31-99	DUKE UNIVERSITY	254,192
5R01AG07137-12	MC ARDLE, J J GROWTH CURVE OF ADULT INTELLIGENCE FROM CONVERGENCE DATA	07-15-98	05-31-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	236,340
5R01AG07198-12	MANTON, KENNETH G FUNCTIONAL AND HEALTH CHANGES OF THE ELDERLY	04-01-98	03-31-99	DUKE UNIVERSITY	1,319,432
3R01AG07198-12S4	MANTON, KENNETH G FUNCTIONAL AND HEALTH CHANGES OF THE ELDERLY	09-30-98	03-31-99	DUKE UNIVERSITY	300,000
7R37AG07218-12	HERMAN, BRIAN A MECHANISMS OF CELL DEATH IN LIVER CELLS	07-01-98	06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	355,996
5P01AG07232-10	MAYEUX, RICHARD P EPIDEMIOLOGY OF DEMENTIA	02-01-98	01-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	1,929,852
5R01AG07367-11	ROGERS, JOSEPH B INFLAMMATORY MECHANISMS IN ALZHEIMERS DISEASE	09-01-98	08-31-99	SUN HEALTH RESEARCH INSTITUTE	349,841
5R01AG07370-10	STERN, YAAKOV PREDICTORS OF SEVERITY IN ALZHEIMERS DISEASE	07-01-98	06-30-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	627,215
5T32AG07434-02	LEVINE, RICHARD B PREDOCTORAL TRAINING PROGRAM IN NEUROSCIENCE	09-01-98	04-30-99	UNIVERSITY OF ARIZONA	104,850
4R37AG07444-11	WANG, EUGENIA GROWTH CONTROL IN AGING FIBROBLASTS	08-01-98	04-30-99	MC GILL UNIVERSITY	169,440
7R01AG07450-10	MACIAG, THOMAS ENDOTHELIAL CELL SENESCENCE GENES	03-01-98	02-28-99	MAINE MEDICAL CENTER	240,717
5R01AG07467-10	OOKHTENS, MURAD EFFECT OF AGING ON INTERORGAN GLUTATHIONE HOMEOSTASIS	05-15-98	04-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	263,130
2R01AG07469-11	MANTON, KENNETH G ACTIVE LIFE EXPECTANCY IN OLD AND OLDEST OLD POPULATIONS	09-30-98	08-31-99	DUKE UNIVERSITY	176,227
2R01AG07554-11	WILLOTT, JAMES F MODULATION OF AGE RELATED CHANGES IN THE AUDITORY SYSTEM	05-01-98	04-30-99	NORTHERN ILLINOIS UNIVERSITY	176,476
5R01AG07562-11	GANGULI, MARY EPIDEMIOLOGY OF DEMENTIA: A PROSPECTIVE COMMUNITY STUDY	08-01-98	07-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	842,162

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG07569-10	PARASURAMAN, RAJA ATTENTION IN AGING AND EARLY ALZHEIMERS DEMENTIA	04-01-98/03-31-99	CATHOLIC UNIVERSITY OF AMERICA	204,943
5R01AG07584-10	KUKULL, WALTER A GENETIC DIFFERENCES IN ALZHEIMERS CASES AND CONTROLS	08-01-98/07-31-99	UNIVERSITY OF WASHINGTON	192,764
2R01AG07591-09A2	KOZIKOWSKI, ALAN P AGENTS FOR THE TREATMENT OF MEMORY AND LEARNING DISORDER	04-01-98/	GEORGETOWN UNIVERSITY	
5R01AG07631-09	BRATER, DONALD C CLINICAL PHARMACOLOGY OF LOOP DIURETICS	09-01-98/08-31-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	250,745
5R37AG07637-10	HERMALIN, ALBERT I RAPID DEMOGRAPHIC CHANGE AND WELFARE	04-01-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	382,267
5R01AG07648-09	GOLD, PAUL E AGING AND MEMORY	07-01-98/06-30-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	242,807
5R01AG07654-10	FISK, ARTHUR D AUTOMATIC AND CONTROLLED PROCESSING AND AGING	09-01-98/08-31-99	GEORGIA INSTITUTE OF TECHNOLOGY	144,962
2R01AG07657-10	SOHAL, RAJINDAR S CELLULAR AGING AND OXYGEN FREE RADICALS	04-01-98/03-31-99	SOUTHERN METHODIST UNIVERSITY	212,492
3R01AG07719-10S2	MURASKO, DONNA M IMMUNE PARAMETERS AS BIOMARKERS OF AGING	06-15-98/03-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	87,076
3R01AG07724-10S1	WOLF, NORMAN S BIOMARKERS OF AGING--CELLULAR PROLIFERATION AND TURNOVER	09-30-98/03-31-99	UNIVERSITY OF WASHINGTON	41,231
3R01AG07735-10S1	MARKOWSKA, ALICJA L BEHAVIORAL AND PHYSIOLOGICAL BIOMAKERS OF AGING	05-01-97/03-31-99	JOHNS HOPKINS UNIVERSITY	2,758
2R01AG07747-11	BRONSON, RODERICK T AGE RELATED LESIONS AS BIOMARKERS OF AGING	04-01-98/	TUFTS UNIVERSITY BOSTON	
2R01AG07805-08A2	GRIFFITH, WILLIAM H, III PHYSIOLOGY OF CHOLINERGIC BASAL FOREBRAIN NEURONS	01-01-98/12-31-98	TEXAS A&M UNIVERSITY HEALTH SCIENCE	168,300
5R37AG07823-10	KAHANA, EVA F ADAPTATION TO FRAILTY AMONG DISPERSED ELDERLY	07-01-98/06-30-99	CASE WESTERN RESERVE UNIVERSITY	160,012
3R37AG07977-15S1	BENGTSON, VERN L LONGITUDINAL STUDY OF GENERATIONS AND MENTAL HEALTH	12-01-97/06-30-98	UNIVERSITY OF SOUTHERN CALIFORNIA	100,279

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
2R01AG07977-16A2	BENGTSON, VERN L LONGITUDINAL STUDY OF GENERATIONS AND MENTAL HEALTH	08-01-98	07-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	474,063
5R01AG07988-09	BODEN, GUENTHER ETHANOL & FAT INDUCED INSULIN RESISTANCE IN THE ELDERLY	08-01-98	07-31-99	TEMPLE UNIVERSITY	247,786
5R01AG07991-08	MC DOWD, JOAN M ATTENTION AND AGING--UNDERSTANDING NEGATIVE PRIMING	05-15-98	04-30-99	UNIVERSITY OF KANSAS MEDICAL CENTER	174,324
5R01AG07992-09	WRIGHT, WOODRING E MECHANISMS OF CELLULAR IMMORTALIZATION	01-01-98	12-31-98	UNIVERSITY OF TEXAS SW MED CTR/DALLA	323,234
5P01AG07996-08	LOTZ, MARTIN K JOINT AGING AND OSTEOARTHRITIS	06-01-98	03-31-99	SCRIPPS RESEARCH INSTITUTE	1,194,936
5R01AG07998-09	DIVENYI, PIERRE L SPEECH PERCEPTION UNDER NONOPTIMAL CONDITIONS IN AGING	01-01-98	12-31-99	EAST BAY INSTITUTE FOR RESEARCH AND	160,074
5R01AG08010-10	BURGIO, KATHRYN L BIOFEEDBACK AND TREATMENT OF URINARY INCONTINENCE	04-01-98	03-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	415,508
5P50AG08012-11	HERRUP, KARL F UHC/CWRU ADRC COMPETITIVE RENEWAL	07-01-98	05-31-99	CASE WESTERN RESERVE UNIVERSITY	1,867,624
3P50AG08012-11S1	HERRUP, KARL F NO TITLE	08-01-98	05-31-99	CASE WESTERN RESERVE UNIVERSITY	80,000
5P30AG08017-09	KAYE, JEFFREY A ALZHEIMER DISEASE CENTER	04-01-98	03-31-99	OREGON HEALTH SCIENCES UNIVERSITY	848,077
3P30AG08017-09S1	KAYE, JEFFREY A ALZHEIMER DISEASE CENTER	08-01-98	03-31-99	OREGON HEALTH SCIENCES UNIVERSITY	75,000
5P30AG08031-09	PETERSEN, RONALD C ALZHEIMERS DISEASE CENTER	05-01-98	04-30-99	MAYO FOUNDATION	939,460
3P30AG08031-09S1	PETERSEN, RONALD C ALZHEIMERS DISEASE CENTER	08-01-98	04-30-99	MAYO FOUNDATION	78,115
5P30AG08051-09	FERRIS, STEVEN H ALZHEIMERS DISEASE CENTER CORE GRANT	07-01-98	04-30-99	NEW YORK UNIVERSITY MEDICAL CENTER	1,091,590
3P30AG08051-09S1	FERRIS, STEVEN H ALZHEIMERS DISEASE CENTER CORE GRANT	08-01-98	04-30-99	NEW YORK UNIVERSITY MEDICAL CENTER	216,111

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3P30AG08051-09S2	FERRIS, STEVEN H ALZHEIMERS DISEASE CENTER CORE GRANT	08-15-98/04-30-99	NEW YORK UNIVERSITY MEDICAL CENTER	50,580
5R37AG08055-10	SCHAIE, K WARNER LONGITUDINAL STUDIES OF ADULT COGNITIVE DEVELOPMENT	12-01-97/11-30-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	972,972
3R37AG08055-10S1	SCHAIE, K W LONGITUDINAL STUDIES OF ADULT COGNITIVE DEVELOPMENT	07-01-98/11-30-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	5,000
5R01AG08076-08	IQBAL, KHALID NEURONAL CYTOSKELETAL ALTERATIONS IN ALZHEIMERS DISEASE	02-15-98/01-31-99	INSTITUTE FOR BASIC RES IN DEV DISAB	239,813
5R01AG08109-13	O'CONNOR, CLARE M METHYLATION OF ATYPICAL PROTEIN ASPARTYL RESIDUES	07-01-98/06-30-99	BOSTON COLLEGE	266,284
5R01AG08122-10	WOLF, PHILIP A EPIDEMIOLOGY OF DEMENTIA IN THE FRAMINGHAM STUDY	07-01-98/06-30-99	BOSTON UNIVERSITY	278,495
5R37AG08146-10	WISE, DAVID A PENSION PLAN PROVISIONS AND EARLY RETIREMENT EXTENSION	04-15-98/12-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	157,556
5R37AG08155-10	GAMBETTI, PIERLUIGI PRION DISEASES	04-01-98/03-31-99	CASE WESTERN RESERVE UNIVERSITY	370,060
5R01AG08200-11	ROBAKIS, NIKOLAOS K PRODUCTION OF CYTOPLASMIC DOMAIN CONTAINING SOLUBLE APP	09-01-98/08-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	259,491
2R01AG08206-10	ARMSTRONG, DAVID M TRANSMITTER NEUROANATOMY IN ALZHEIMERS DISEASE	01-01-98/12-31-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	255,852
5R01AG08211-08	MAGZINER, JAY S EPIDEMIOLOGY OF DEMENTIA IN AGED NURSING HOME ADMISSIONS	08-01-98/07-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	446,180
5R01AG08226-08	ABERNETHY, DARRELL R CALCIUM, AGING, AND HYPERTENSION	07-01-98/06-30-99	GEORGETOWN UNIVERSITY	193,136
5R01AG08235-08	DIXON, ROGER A INDIVIDUAL DIFFERENCES IN MEMORY CHANGE IN THE AGED	01-01-98/06-01-99	UNIVERSITY OF VICTORIA	129,780
3P01AG08291-08S1	LILLARD, LEE A SOCIAL AND ECONOMIC FUNCTIONING IN OLDER POPULATIONS	01-01-98/08-31-98	RAND CORPORATION	19,860
2P01AG08291-09	Hurd, Michael D HEALTH AND ECONOMIC STATUS IN OLDER POPULATIONS	09-30-98/08-31-99	RAND CORPORATION	1,146,000

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG08293-08	HUMES, LARRY E SPEECH RECOGNITION BY THE HEARING IMPAIRED ELDERLY	07-01-98/06-30-99	INDIANA UNIVERSITY BLOOMINGTON	231,888
5R01AG08313-07	KUTAS, MARTA BRAIN POTENTIALS (ERPS)--LANGUAGE, MEMORY, AND AGING	04-01-98/02-28-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	319,682
5P01AG08321-08	ZIRKIN, BARRY R AGING AND MALE REPRODUCTIVE TRACT STRUCTURE/FUNCTION	04-01-98/03-31-99	JOHNS HOPKINS UNIVERSITY	758,653
5R01AG08325-09	KAWAS, CLAUDIA H RISK FACTORS AND EARLY SIGNS IN ALZHEIMERS DISEASE/BLSA	05-01-98/04-30-99	JOHNS HOPKINS UNIVERSITY	662,904
5R37AG08346-08	LILLARD, LEE A INTERGENRATIONAL TRANSFERS	02-01-98/01-31-99	RAND CORPORATION	139,548
5R01AG08415-09	ANCOLI-ISRAEL, SONIA A SLEEP CONSOLIDATION IN A NURSING HOME POPULATION	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	320,724
5R01AG08419-09	RASKIND, MURRAY A PSYCHOPATHOLOGY OF ALZHEIMER'S--PSYCHONEUROENDOCRINOLOGY	04-01-98/03-31-99	UNIVERSITY OF WASHINGTON	242,650
2R01AG08436-06A1	MC DANIEL, MARK A A COMPONENTIAL ANALYSIS OF PROSPECTIVE MEMORY AND AGING	05-01-98/	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	
5R01AG08441-09	SCHACTER, DANIEL L AGING MEMORY	01-01-98/12-31-98	HARVARD UNIVERSITY	232,041
3R01AG08459-08S2	SOHAL, RAJINDAR S ANTIOXIDANT ENZYMES AND AGING IN TRANSGENIC DROSOPHILA	12-15-97/06-30-98	SOUTHERN METHODIST UNIVERSITY	3,113
5R01AG08470-10	LANSBURY, PETER T, JR AMYLOID DEPOSITION IN ALZHEIMER'S DISEASE	07-01-98/06-30-99	BRIGHAM AND WOMEN'S HOSPITAL	235,939
5R01AG08479-07	SONSALLA, PATRICIA K DOPAMINERGIC NEUROTOXINS AND AGING	08-01-98/07-31-99	UNIV OF MED/DENT NJ-R W JOHNSON MED	179,821
5R01AG08487-09	HYMAN, BRADLEY T NEUROPATHOLOGICAL ALTERATIONS IN ALZHEIMERS DISEASE	12-01-97/11-30-98	MASSACHUSETTS GENERAL HOSPITAL	432,729
3R01AG08487-09S1	HYMAN, BRADLEY T NEUROPATHOLOGICAL ALTERATIONS IN ALZHEIMERS DISEASE	06-15-97/11-30-98	MASSACHUSETTS GENERAL HOSPITAL	60,712
5R37AG08511-08	DIOKNO, ANANIAS C MESA PROJECT--PREVENTION OF URINARY INCONTINENCE	07-01-98/06-30-99	WILLIAM BEAUMONT HOSPITAL	351,752

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R37AG08514-11	GAGE, FRED H, III GRAFTING GENETICALLY MODIFIED CELLS TO THE BRAIN	07-01-98/06-30-99	SALK INSTITUTE FOR BIOLOGICAL STUDIE	350,867
5R01AG08538-07	BLUM, MARIANN M GROWTH FACTORS IN THE ADULT AND AGING BRAIN	05-01-98/04-30-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	221,248
5R37AG08557-08	HAUG, MARIE R STRESSES STRAINS AND ELDERLY PHYSICAL HEALTH	03-01-98/02-28-99	CASE WESTERN RESERVE UNIVERSITY	190,108
2R01AG08562-07A1	WILLIAMS-RUSSO, PAMELA G TRIAL OF SEDATION TECHNIQUE TO REDUCE COGNITIVE DEFICITS	12-01-97/11-30-98	HOSPITAL FOR SPECIAL SURGERY	235,271
5R01AG08573-16	BANDMAN, EVERETT IMMUNOBIOCHEMICAL STUDY OF MUSCLE MYOSIN ISOFORMS	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA DAVIS	237,902
5R01AG08575-06	ARIEFF, ALLEN I HYPONATREMIC ENCEPHALOPATHY--ROLE OF AGE	01-01-98/12-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	222,414
5P50AG08664-09	APPEL, STANLEY H ALZHEIMERS DISEASE RESEARCH CENTER	07-01-98/05-31-99	BAYLOR COLLEGE OF MEDICINE	937,599
3P50AG08664-09S1	APPEL, STANLEY H ALZHEIMERS DISEASE RESEARCH CENTER	09-01-98/05-31-99	BAYLOR COLLEGE OF MEDICINE	75,000
5P30AG08665-09	COLEMAN, PAUL D ALZHEIMERS DISEASE CENTER	05-01-98/04-30-99	UNIVERSITY OF ROCHESTER	902,609
3P30AG08665-09S1	COLEMAN, PAUL D ALZHEIMERS DISEASE CENTER	09-01-98/04-30-99	UNIVERSITY OF ROCHESTER	75,000
5P50AG08671-10	GILMAN, SID MICHIGAN ALZHEIMERS DISEASE RESEARCH CENTER	07-01-98/05-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	1,967,488
3P50AG08671-10S1	GILMAN, SID MICHIGAN ALZHEIMERS DISEASE RESEARCH CENTER	08-15-98/05-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	75,000
5R37AG08678-09	OUSLANDER, JOSEPH G TREATMENT OF INCONTINENCE IN NURSING HOMES	01-01-98/12-31-98	EMORY UNIVERSITY	396,273
3R37AG08678-09S1	OUSLANDER, JOSEPH G TREATMENT OF INCONTINENCE IN NURSING HOMES	07-15-98/12-31-98	EMORY UNIVERSITY	5,000
5P50AG08702-10	SHELANSKI, MICHAEL L ALZHEIMERS DISEASE RESEARCH CENTER	07-01-98/05-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	1,470,103

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3P50AG08702-10S1	SHELANSKI, MICHAEL L ALZHEIMERS DISEASE RESEARCH CENTER	09-01-98/05-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	75,000
5R37AG08707-08	WEKSLER, MARC E AUTOIMMUNE REACTIONS IN AGING	12-01-97/11-30-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	185,923
5R01AG08710-09	ROBERTS, EUGENE L, JR AGE RELATED CHANGES IN BRAIN METABOLIC NEUROPHYSIOLOGY	08-01-98/07-31-99	UNIVERSITY OF MIAMI	107,813
5R01AG08721-09	FRANGIONE, BLAS AMYLOID ANGIOPATHY EARLY PLAQUES AND AGING	09-30-98/08-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	259,193
5R01AG08724-09	GATZ, MARGARET J DEMENTIA IN SWEDISH TWINS	08-01-98/07-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	1,337,862
3R01AG08724-09S1	GATZ, MARGARET J DEMENTIA IN TWINS	09-01-98/07-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	50,842
5P01AG08761-09	VAUPEL, JAMES W OLDEST-OLD MORTALITY--DEMOGRAPHIC MODELS AND ANALYSIS	08-15-98/12-31-98	DUKE UNIVERSITY	1,298,379
5R01AG08768-09	SELTZER, MARSHA M AGING MOTHERS OF RETARDED ADULTS--IMPACTS OF CAREGIVING	09-01-98/08-31-99	UNIVERSITY OF WISCONSIN MADISON	340,445
5R01AG08796-08	DISTERHOFT, JOHN F CALCIUM REGULATION OF LEARNING IN AGING HIPPOCAMPUS	07-01-98/06-30-99	NORTHWESTERN UNIVERSITY	250,265
5P60AG08808-10	HALTER, JEFFREY B CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-01-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	1,117,929
5P60AG08812-09	WEI, JEANNE Y HARVARD OLDER AMERICANS INDEPENDENCE CENTER	03-15-98/02-28-99	HARVARD UNIVERSITY	833,634
3P60AG08812-09S1	WEI, JEANNE Y HARVARD OLDER AMERICANS INDEPENDENCE CENTER	05-01-98/02-28-99	HARVARD UNIVERSITY	89,950
3P60AG08812-09S2	WEI, JEANNE Y HARVARD OLDER AMERICANS INDEPENDENCE CENTER	09-30-98/02-28-99	HARVARD UNIVERSITY	137,324
3P60AG08812-09S3	WEI, JEANNE Y OLDER AMERICANS INDEPENDENCE CENTER	09-30-98/02-28-99	HARVARD UNIVERSITY	118,000
5R01AG08816-08	CARSTENSEN, LAURA L SOCIAL INTERACTION IN OLD AGE	01-01-98/12-31-98	STANFORD UNIVERSITY	218,355

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG08835-09	BURKE, DEBORAH M MEMORY AND LANGUAGE IN OLD AGE	12-01-97/03-31-99	POMONA COLLEGE	130,676
3R01AG08835-09S2	BURKE, DEBORAH M MEMORY AND LANGUAGE IN OLD AGE	12-01-97/03-31-99	POMONA COLLEGE	58,752
4R37AG08861-09	MCCLEARN, GERALD E ORIGINS OF VARIANCE IN THE OLD-OLD--OCTOGENARIAN TWINS	09-20-98/08-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	374,500
3R37AG08861-09S1	MCCLEARN, GERALD E ORIGINS OF VARIANCE IN THE OLD OLD--OCTOGENARIAN TWINS	09-20-98/08-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	5,000
5R01AG08932-16	CAPLAN, ARNOLD I PROTEOGLYCAN SYNTHESIS DURING DEVELOPMENT AND AGING	12-01-97/11-30-98	CASE WESTERN RESERVE UNIVERSITY	241,752
3R37AG08937-07S2	HEYMAN, ALBERT RACE DIFFERENCES IN PREVALENCE AND INCIDENCE OF DEMENTIA	12-15-97/01-31-98	DUKE UNIVERSITY	815
5R37AG08937-08	HEYMAN, ALBERT RACE DIFFERENCES IN PREVALENCE AND INCIDENCE OF DEMENTIA	02-01-98/01-31-99	DUKE UNIVERSITY	405,519
3R37AG08937-08S1	HEYMAN, ALBERT RACE DIFFERENCES IN PREVALENCE AND INCIDENCE OF DEMENTIA	06-01-98/01-31-99	DUKE UNIVERSITY	5,000
5R01AG09006-08	SCHREIBER, BARBARA M CELLULAR METABOLISM OF AMYLOID PROTEINS IN AGING	01-01-98/12-31-98	BOSTON UNIVERSITY	225,122
3R35AG09014-07S1	BLASS, JOHN P CELL BIOLOGICAL STUDIES IN ALZHEIMERS DISEASE	07-01-98/04-30-99	WINIFRED MASTERSON BURKE MED RES INS	125,000
5R01AG09029-08	FARRER, LINDSAY A GENETIC EPIDEMIOLOGICAL STUDIES OF ALZHEIMERS DISEASE	05-01-98/04-30-99	BOSTON UNIVERSITY	803,643
3R01AG09029-08S1	FARRER, LINDSAY A ALZHEIMER DISEASE IN AFRICAN AMERICANS	06-01-98/04-30-99	BOSTON UNIVERSITY	370,605
2R01AG09140-07	MEYDANI, SIMIN N AGING, VITAMIN E, & MACROPHAGE CYCLOOXYGENASE REGULATION	08-01-98/06-30-99	TUFTS UNIVERSITY BOSTON	265,167
5R01AG09191-07	GORDON-SALANT, SANDRA M AUDITORY TEMPORAL PROCESSES, SPEECH PERCEPTION AND AGING	12-01-97/11-30-98	UNIVERSITY OF MARYLAND COLLEGE PK CA	204,284
5R01AG09202-07	GANGULI, MARY INDO-US CROSS NATIONAL DEMENTIA EPIDEMIOLOGY STUDY	02-01-98/01-31-00	UNIVERSITY OF PITTSBURGH AT PITTSBUR	665,183

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG09203-07	LABOUVIE-VIEF, GISELA COGNITIVE AND EMOTIONAL MATURITY IN ADULTHOOD AND AGING	08-01-98/06-30-99	WAYNE STATE UNIVERSITY	330,890
5R01AG09214-07	RANCE, NAOMI E REPRODUCTIVE AGING AND THE HUMAN HYPOTHALAMUS	06-01-98/05-31-99	UNIVERSITY OF ARIZONA	169,407
5P01AG09215-09	TROJANOWSKI, JOHN Q MOLECULAR SUBSTRATES OF AGING AND NEURON DEATH	05-01-98/04-30-99	UNIVERSITY OF PENNSYLVANIA	1,252,768
5R01AG09219-08	BARNES, CAROL A TRANSCRIPTION FACTOR GENES, NEURONAL PLASTICITY & AGING	06-05-98/05-31-99	UNIVERSITY OF ARIZONA	292,228
5R01AG09221-06	KRAUSE, NEAL M WELL BEING AMONG AGED--PERSONAL CONTROL & SELF ESTEEM	04-01-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	238,336
5R01AG09235-09	NEBERT, DANIEL W OXIDATIVE STRESS, CELL DEATH AND THE (AH) GENE BATTERY	08-01-98/07-31-99	UNIVERSITY OF CINCINNATI	315,931
2R37AG09241-05	WRONSKI, THOMAS J RESTORATION OF LOST BONE MASS AFTER OVARIECTOMY	08-01-98/07-31-99	UNIVERSITY OF FLORIDA	152,030
5R01AG09253-08	JOHNSON, MARCIA K AGING EFFECTS ON MEMORY FOR SOURCE OF INFORMATION	09-30-98/08-31-99	PRINCETON UNIVERSITY	273,455
5R01AG09278-08	WANG, EUGENIA FIBROBLAST AGING AND PROGRAMMED CELL DEATH	09-01-98/08-31-99	MC GILL UNIVERSITY	143,402
3R01AG09282-06S1	ALLEN, PHILIP A AGE DIFFERENCES IN EPISODIC AND SEMANTIC MEMORY	12-01-97/02-28-98	CLEVELAND STATE UNIVERSITY	30,932
5R01AG09282-07	ALLEN, PHILIP A AGE DIFFERENCES IN EPISODIC AND SEMANTIC MEMORY	04-01-98/02-28-99	CLEVELAND STATE UNIVERSITY	273,442
5R01AG09287-07	PERRY, GEORGE NEUROFIBRILLARY PATHOLOGY IN ALZHEIMER DISEASE	12-01-97/11-30-98	CASE WESTERN RESERVE UNIVERSITY	184,907
5R01AG09301-07	VOLICER, LADISLAV SENILE CHANGES IN CIRCADIAN RHYTHMS AND BEHAVIOR	01-01-98/12-31-98	MC LEAN HOSPITAL (BELMONT, MA)	261,665
5R01AG09341-11	SWAN, GARY E AMBULATORY BLOOD PRESSURE AND COGNITION IN THE ELDERLY	12-01-97/11-30-99	SRI INTERNATIONAL	612,813
5R37AG09383-09	GREIDER, CAROL W STRUCTURE/FUNCTION OF TELOMERES IN MAMMALIAN AGING	08-01-98/07-31-99	JOHNS HOPKINS UNIVERSITY	284,807

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
2R01AG09389-06A1	TAGER, IRA B EPIDEMIOLOGY OF AGING AND PHYSICAL FUNCTION	06-01-98/03-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	695,654
5R01AG09413-07	SHMOOKLER-REIS, ROBERT J POLYMORPHIC GENES MODULATING LIFESPAN IN C ELEGANS	12-01-97/11-30-98	UNIVERSITY OF ARKANSAS MED SCIS LTL	200,264
7R01AG09453-09	VLASSARA, HELEN AGING AND VASCULAR DISEASE--ROLE OF GLYCATION	12-01-98/06-30-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	151,055
5P01AG09464-08	GREENGARD, PAUL SIGNAL TRANSDUCTION AND ALZHEIMERS DISEASE	07-15-98/06-30-99	ROCKEFELLER UNIVERSITY	573,174
5P01AG09466-08	DE TOLEDO-MORRELL, LEYLA ANATOMIC, PHYSIOLOGIC, AND COGNITIVE PATHOLOGY OF AD	04-01-98/03-31-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	1,116,408
5R01AG09468-06	SLOAN, FRANK A PUBLIC SUBSIDIES EFFECTS ON USE OF LONGTERM CARE	09-01-98/08-31-99	DUKE UNIVERSITY	126,288
2R01AG09486-06A1	CHAPMAN, SANDRA B COGNITIVE DISCOURSE PROCESSING IN ELDERLY POPULATIONS	12-01-97/	UNIVERSITY OF TEXAS DALLAS	
5R37AG09521-12	BLAU, HELEN M ACTIVATORS OF HUMAN MUSCLE GENES	04-01-98/03-31-99	STANFORD UNIVERSITY	376,079
3R37AG09521-12S1	BLAU, HELEN M ACTIVATORS OF HUMAN MUSCLE GENES	09-01-98/03-31-99	STANFORD UNIVERSITY	5,000
2P01AG09524-06A1	FRISINA, D R AGING AUDITORY SYSTEM--PRESBYCUSIS AND ITS NEURAL BASES	06-01-98/04-30-99	ROCHESTER INSTITUTE OF TECHNOLOGY	1,045,033
5P01AG09525-07	BLUSZTAJN, JAN K AGING OF BRAIN--EFFECTS OF PERINATAL CHOLINE EXPOSURE	01-15-98/11-30-99	BOSTON UNIVERSITY	986,961
5R01AG09556-05	PSATY, BRUCE M TRENDS IN THE USE OF CVD MEDICATIONS IN OLDER ADULTS	09-01-98/08-31-99	UNIVERSITY OF WASHINGTON	159,468
7R01AG09661-07	WATERS, GLORIA S SENTENCE PROCESSING IN AGING AND DAT	04-01-98/02-28-99	BOSTON UNIVERSITY	334,253
5R01AG09663-08	REVES, JOSEPH G AGING AND COGNITION AFTER CARDIAC SURGERY	02-01-98/01-31-99	DUKE UNIVERSITY	268,025
5R01AG09665-13	POTTER, HUNTINGTON EXPRESSION STUDIES ON ALZHIEMERS DISEASE RELATED GENES	07-01-98/06-30-99	HARVARD UNIVERSITY	213,784

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FY: 98				
5R01AG09686-08	BAKER, HARRIET D PLASTICITY IN THE AGING OLFACTORY SYSTEM	07-01-98/06-30-99	WINIFRED MASTERSON BURKE MED RES INS	320,108
5R37AG09692-09	WOLINSKY, FREDRIC D PANEL ANALYSIS OF THE AGEDS USE OF HEALTH SERVICES	06-01-98/05-31-99	ST. LOUIS UNIVERSITY	156,184
5R01AG09693-08	BALOH, ROBERT W DIZZINESS IN OLDER PEOPLE	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	396,937
5R01AG09735-17	BRADSHAW, RALPH A STRUCTURE AND FUNCTION OF NERVE GROWTH FACTOR	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA IRVINE	210,416
5U01AG09740-09	WILLIS, ROBERT J HEALTH AND RETIREMENT STUDY	02-01-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	3,624,795
3U01AG09740-09S1	WILLIS, ROBERT J HEALTH AND RETIREMENT STUDY	02-15-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	54,722
3U01AG09740-09S2	WILLIS, ROBERT J HEALTH AND RETIREMENT STUDY	09-30-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	370,000
7P01AG09743-08	BURKHAUSER, RICHARD V WELL-BEING OF THE ELDERLY IN A COMPARATIVE CONTEXT	09-30-98/08-31-99	CORNELL UNIVERSITY ITHACA	503,302
5R01AG09755-08	MACKAY, DONALD G ORGANIZATION OF COGNITIVE PROCESSES IN OLD AGE	06-01-98/04-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	359,501
5R01AG09761-08	OAFNI, ARI LASER SPECTROSCOPY OF TRIPLET STATES IN PROTEINS	12-01-97/11-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	300,324
5R01AG09769-08	LARSON, ERIC B EPIDEMIOLOGY OF DEMENTIA IN OLDER JAPANESE AMERICANS	05-01-98/04-30-99	UNIVERSITY OF WASHINGTON	1,019,570
2R01AG09775-07	HAUSER, ROBERT M WISCONSIN LONGITUDINAL STUDY	03-15-98/02-28-99	UNIVERSITY OF WISCONSIN MADISON	286,080
5R13AG09787-08	SCHAIE, K WARNER CONFERENCE--STRUCTURE AND AGING	08-01-98/07-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	36,762
3R01AG09791-04S3	YOUNG, ROSALIE F CULTURAL IMPACT ON CAREGIVING OUTCOME--ALZHEIMERS PTS	01-01-98/05-31-98	WAYNE STATE UNIVERSITY	30,126
2R01AG09791-05A2	YOUNG, ROSALIE F CULTURAL IMPACT ON CAREIVING-OUTCOMES FOR CARE PROVIDERS	04-01-98/	WAYNE STATE UNIVERSITY	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5P01AG09793-08	MCNEILL, THOMAS H DOPAMINERGIC AND BASAL GANGLIA PLASTICITY IN AGING	06-01-98/05-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	1,034,369
5R01AG09822-07	HOBBS, MONTE V CYTOKINE GENE EXPRESSION CD4+ IN AGING MICE	08-01-98/07-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	257,540
5R01AG09834-07	STABLER, SALLY P PREVALENCE AND SPECTRUM OF B12 DEFICIENCY IN THE AGED	09-01-98/08-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	199,115
5R01AG09862-08	SNOWDON, DAVID A INDEPENDENT AND DEPENDENT LIFE IN THE ELDERLY	05-01-98/04-30-99	UNIVERSITY OF KENTUCKY	907,744
2R01AG09892-05A2	PELCHAT, MARCIA L FOOD PREFERENCES AND AVERSIONS IN THE ELDERLY	07-01-98/	MONELL CHEMICAL SENSES CENTER	
5R01AG09900-08	EBERWINE, JAMES H GENE EXPRESSION IN SINGLE AGING NEURONS AND GLIA	07-15-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	286,910
3R37AG09901-05S1	MAGAZINER, JAY S DETERMINANTS OF RECOVERY FROM HIP FRACTURE (BONE/MUSCLE)	04-01-98/06-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	5,000
5R37AG09901-06	MAGZINER, JAY S DETERMINANTS OF RECOVERY FROM HIP FRACTURE (BONE/MUSCLE)	07-01-98/06-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	446,386
3R37AG09901-06S1	MAGAZINER, JAY S DETERMINANTS OF RECOVERY FROM HIP FRACTURE (BONE/MUSCLE)	07-01-98/06-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	5,000
3R01AG09905-06S1	ABRAHAM, CARMELA R AMYLOIDOGENESIS ROLE OF REACTIVE ASTROCYTES	06-15-98/11-30-99	BOSTON UNIVERSITY	127,952
5R37AG09909-09	CAMPISI, JUDITH CELLULAR SENESCENCE AND CONTROL OF GENE EXPRESSION	09-01-98/08-31-99	UNIVERSITY OF CALIF-LAWRENC BERKELEY	306,430
5R01AG09931-07	STEWART, ANITA L INCREASING PHYSICAL ACTIVITY OF ELDERS IN THE COMMUNITY	02-01-98/01-31-00	UNIVERSITY OF CALIFORNIA SAN FRANCIS	319,722
5R01AG09948-06	THOMAN, MARILYN L T CELL MATURATION AND THYMIC ACTIVITY IN THE AGED	09-01-98/08-31-99	SIDNEY KIMMEL CANCER CENTER	284,161
5R01AG09952-05	KEMPER, SUSAN SPEECH ACCOMMODATIONS BY AND TO OLDER ADULTS	12-01-97/11-30-98	UNIVERSITY OF KANSAS LAWRENCE	152,694
5R01AG09956-07	HENDRIE, HUGH C INDIANAPOLIS/IBADAN DEMENTIA PROJECT	01-01-98/12-31-98	INDIANA UNIV-PURDUE UNIV AT INDIANAP	939,017

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FY: 98				
5P01AG09973-08	GALLAGHER, MICHELA COGNITION AND HIPPOCAMPAL/CORTICAL	09-30-98/08-31-99 SYSTEMS IN AGING	JOHNS HOPKINS UNIVERSITY	1,285,531
3P01AG09973-08S1	GALLAGHER, MICHELA COGNITION AND HIPPOCAMPAL/CORTICAL	09-30-98/08-31-99 SYSTEMS IN AGING	JOHNS HOPKINS UNIVERSITY	30,000
5R01AG09988-07	FRIEDMAN, DAVID AGE-RELATED ERP MEASURES IN ALZHEIMERS DISEASE	08-01-98/07-31-99	NEW YORK STATE PSYCHIATRIC INSTITUTE	284,606
5R01AG10009-07	FURMAN, JOSEPH M VESTIBULO/OCULAR FUNCTION IN THE ELDERLY	04-15-98/03-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	128,746
2R01AG10026-06A1	CARTEE, GREGORY D AGING, CALORIE RESTRICTION AND INSULIN SIGNALING	05-01-98/04-30-99	UNIVERSITY OF WISCONSIN MADISON	189,331
5R01AG10034-07	DUBINSKY, JANET M INTERACTION OF HYPOXIC AND EXCITOTOXIC NEURONAL	01-01-98/12-31-99	UNIVERSITY OF MINNESOTA TWIN CITIES	160,424
5R01AG10057-03	MBAWUIKE, INNOCENT N INFLUENZA NUCLEOPROTEIN AS A PROBE FOR LOW CTL IN AGING	09-01-98/08-31-99	BAYLOR COLLEGE OF MEDICINE	198,549
5R01AG10102-08	GORELICK, PHILIP B DEMENTIA IN THE BLACK AGED--AD AND VAD	07-01-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	377,292
5P01AG10120-07	FOGEL, ROBERT W EARLY INDICATORS OF LATER WORK LEVELS, DISEASE, & DEATH	07-01-98/05-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	681,349
5P30AG10123-08	CUMMINGS, JEFFREY L UCLA ALZHEIMERS DISEASE CENTER	07-15-98/06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	858,730
3P30AG10123-08S1	CUMMINGS, JEFFREY L ALZHEIMERS DISEASE CENTER	08-01-98/06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	61,815
3P30AG10123-08S2	CUMMINGS, JEFFREY L UCLA ALZHEIMERS DISEASE CENTER	09-30-98/06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	36,152
5P30AG10124-08	TROJANOWSKI, JOHN Q ALZHEIMERS DISEASE CENTER CORE	07-15-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	965,276
3P30AG10124-08S1	TROJANOWSKI, JOHN Q ALZHEIMERS DISEASE CENTER CORE	09-01-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	75,000
5P30AG10129-08	JAGUST, WILLIAM J UC DAVIS ALZHEIMERS DISEASE CENTER CORE	07-15-98/06-30-99	UNIVERSITY OF CALIFORNIA DAVIS	911,070

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3P30AG10129-08S1	JAGUST, WILLIAM J UC DAVIS ALZHEIMERS DISEASE CENTER CORE	09-01-98/06-30-99	UNIVERSITY OF CALIFORNIA DAVIS	75,000
5P30AG10130-08	DELONG, MAHLON R EMORY ALZHEIMERS DISEASE CENTER	07-01-98/06-30-99	EMORY UNIVERSITY	1,084,082
3P30AG10130-08S1	DE LONG, MAHLON R ALZHEIMERS DISEASE CENTER	08-01-98/06-30-99	EMORY UNIVERSITY	75,000
5P30AG10133-08	GHETTI, BERNARDINO INDIANA ALZHEIMERS DISEASE CENTER	07-15-98/06-30-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	1,150,024
3P30AG10133-08S1	GHETTI, BERNARDINO INDIANA ALZHEIMERS DISEASE CENTER	09-01-98/06-30-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	75,000
5R37AG10143-16	CLARK, RICHARD A FIBRONECTIN AND CELL RECRUITMENT	09-01-98/08-31-99	STATE UNIVERSITY NEW YORK STONY BROO	241,947
5R01AG10147-05	KOEPSELL, THOMAS D CASE CONTROL STUDY OF OLDER PEDESTRIAN INJURY SITES	08-01-98/07-31-99	UNIVERSITY OF WASHINGTON	275,654
2R01AG10149-06	BAUMGARTNER, RICHARD N BODY COMPOSITION CHANGES IN THE ELDERLY--SARCOPENIA	08-01-98/07-31-99	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	704,497
5P30AG10161-08	EVANS, DENIS A ALZHEIMERS DISEASE CORE CENTER	07-01-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	1,197,813
3P30AG10161-08S1	EVANS, DENIS A ALZHEIMERS DISEASE CENTER	09-30-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	232,013
3P30AG10161-08S2	EVANS, DENIS A ALZHEIMERS DISEASE CORE CENTER	08-15-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	100,000
5R37AG10168-07	PRESTON, SAMUEL H RACIAL AND ETHNIC MORTALITY DIFFERENCES AT OLDER AGES	02-15-98/01-31-99	UNIVERSITY OF PENNSYLVANIA	307,496
2R01AG10172-05A1	COHEN-MANSFIELD, JISKA TREATMENT OF AGITATION IN THE NURSING HOME	09-30-98/08-31-99	HEBREW HOME OF GREATER WASHINGTON	311,382
3R01AG10175-05S1	PEDERSEN, NANCY L GENETIC & ENVIRONMENTAL INFLUENCES--BIOBEHAVIORAL AGING	05-01-98/08-31-98	UNIVERSITY OF SOUTHERN CALIFORNIA	151,890
2P01AG10179-04A1	SHAPIRO, MATTHEW D WEALTH, SAVINGS & FINANCIAL SECURITY IN OLDER HOUSEHOLDS	09-30-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	430,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3P01AG10184-05S3	WEST, SHEILA K VISUAL IMPAIRMENT AND FUNCTIONAL STATUS IN OLDER PERSONS	04-01-98/07-31-99	JOHNS HOPKINS UNIVERSITY	95,458
7P01AG10207-07	KELSOE, GARNETT H MECHANISMS OF IMMUNOSENESCENCE	09-30-98/08-31-99	DUKE UNIVERSITY	683,020
5R01AG10210-07	LEE, VIRGINIA M BIOLOGY OF ALZHEIMER PAIRED HELICAL FILAMENTS	06-01-98/05-31-99	UNIVERSITY OF PENNSYLVANIA	236,065
5R01AG10220-05	MUNGAS, DAN M ENGLISH AND SPANISH ASSESSMENT OF COGNITION IN ELDERLY	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA DAVIS	206,936
5R29AG10264-05	GLICKSMAN, ALLEN CULTURAL AND SOCIAL SOURCES OF WELL-BEING IN NORMAL AGED	01-01-98/12-31-98	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	82,748
5R01AG10299-07	SCHMIDT, ROBERT E NEUROPATHOLOGY OF THE AGING SYMPATHETIC NERVOUS SYSTEM	05-01-98/04-30-99	WASHINGTON UNIVERSITY	271,403
2R01AG10315-05A1	EVANS, DENIS A LONGITUDINAL STUDY OF DAY CARE IN ALZHEIMERS DISEASE	02-15-98/11-30-98	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	355,608
2U01AG10330-06	HOLMES, DOUGLAS COORDINATING CENTER CONTINUATION	07-01-98/03-31-99	HEBREW HOME FOR THE AGED AT RIVERDAL	176,505
3U01AG10353-07S1	DAWSON-HUGHES, B CALCIUM AND VITAMIN D EFFECT ON BONE LOSS	11-15-97/08-31-98	TUFTS UNIVERSITY BOSTON	58,792
5U01AG10353-08	DAWSON-HUGHES, BESS CALCIUM AND VITAMIN D EFFECTS ON BONE LOSS	09-15-98/08-31-99	TUFTS UNIVERSITY BOSTON	137,189
3U01AG10353-08S1	DAWSON-HUGHES, BESS CALCIUM AND VITAMIN D EFFECT ON HIP BONE LOSS	09-30-98/08-31-99	TUFTS UNIVERSITY BOSTON	240,609
5U01AG10373-08	GALLAGHER, JOHN C TREATMENT FOR OSTEOPOROSIS OF THE HIP	09-01-98/08-31-99	CREIGHTON UNIVERSITY	380,786
5P60AG10415-08	REUBEN, DAVID B UCLA OLDER AMERICANS INDEPENDENT CENTER	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	818,608
2R01AG10425-06	TUCKER, KATHERINE L NUTRITION AND FRAILTY AMONG ELDERLY HISPANIC IN MA	04-01-98/	TUFTS UNIVERSITY BOSTON	
5P01AG10435-08	GAGE, FRED H, III GENE THERAPY FOR ALZHEIMERS DISEASE	03-01-98/02-28-99	SALK INSTITUTE FOR BIOLOGICAL STUDIE	1,234,251

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
3P01AG10435-08S1	Gage, Fred H GENE THERAPY FOR ALZHEIMERS DISEASE	09-30-98	02-28-99	SALK INSTITUTE FOR BIOLOGICAL STUDIE	12,065
5P60AG10463-08	Abraham, George M ROCHESTER AREA PEPPER CENTER	07-01-98	06-30-99	UNIVERSITY OF ROCHESTER	751,472
5P60AG10469-07	TINETTI, MARY E CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	08-01-98	07-31-99	YALE UNIVERSITY	1,260,049
5U01AG10483-08	THAL, LEON J ALZHEIMERS DISEASE COOPERATIVE STUDY	07-15-98	06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	5,850,604
3U01AG10483-08S1	THAL, LEON J ALZHEIMERS	09-15-98	06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	132,466
3U01AG10483-08S2	THAL, LEON J ALZHEIMERS DISEASE COOPERATIVE STUDY	09-30-98	06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	88,570
5P60AG10484-07	ETTINGER, WALTER H, JR CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTERS	07-01-98	06-30-99	WAKE FOREST UNIVERSITY	1,495,922
3P60AG10484-07S1	ETTINGER, WALTER H, JR CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTERS	09-30-98	06-30-99	WAKE FOREST UNIVERSITY	10,150
5P01AG10485-08	SIMPKINS, JAMES W DISCOVERY OF NOVEL DRUGS TO ALZHEIMER'S DISEASE	08-01-98	07-31-99	UNIVERSITY OF FLORIDA	926,592
2R37AG10486-06	ROY, ARUN K AGING AND ANDROGEN RECEPTOR GENE REGULATION	01-01-98	12-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	228,007
3R37AG10486-06S1	ROY, ARUN K AGING AND ANDROGEN RECEPTOR GENE REGULATION	06-15-98	12-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	5,000
3R37AG10486-06S2	ROY, ARUN K AGING AND ANDROGEN RECEPTOR GENE REGULATION	07-15-98	12-31-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	5,000
2R01AG10489-06	LANTIGUA, RAFAEL ACTIVE LIFE EXPECTANCY AMONG URBAN MINORITY ELDERLY	12-01-97/		COLUMBIA UNIVERSITY HEALTH SCIENCES	
5P01AG10514-07	PAPACONSTANTINOU, JOHN AGING EFFECTS ON MOLECULAR RESPONSES TO STRESS	06-01-98	05-31-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	821,087
5R01AG10520-04	GORDON, JON W AGE RELATED NEURODEGENERATION AND TRANSGENIC MOUSE	01-01-98	12-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	269,678

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
2R01AG10530-05A1	NEFF, MARIA H GM1 CORRECTS NEUROTRANSMITTER DEFICITS IN AGED BRAIN	06-01-98/05-31-99	OHIO STATE UNIVERSITY	207,743
3R01AG10531-04S1	FERNANDES, GABRIEL AGING, FOOD RESTRICTION AND T CELL SUBSET FUNCTION	04-01-98/02-28-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	99,777
3P01AG10542-04S2	SCHULTZ, ALBERT B FUNDAMENTAL ASPECTS OF MOBILITY IN OLD ADULTS	03-15-98/03-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	1,103
2P01AG10542-05A2	ASHTON-MILLER, JAMES A FUNDAMENTAL ASPECTS OF MOBILITY IN OLD ADULTS	05-01-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	842,153
2R01AG10546-04A2	WENK, GARY L AGING VULNERABILITY TO INFLAMMATORY PROCESSES	09-01-98/08-31-99	UNIVERSITY OF ARIZONA	252,619
5R01AG10599-08	COOPERMAN, BARRY S ANTICHYMOTRYPSIN INTERACTION WITH SERINE PROTEASES	09-01-98/08-31-99	UNIVERSITY OF PENNSYLVANIA	269,699
3R01AG10599-08S1	COOPERMAN, BARRY S ANTICHYMOTRYPSIN INTERACTION WITH SERINE PROTEASES	09-30-98/08-31-99	UNIVERSITY OF PENNSYLVANIA	15,275
3R01AG10606-06S2	RAPP, PETER R COGNITIVE FUNCTION IN THE AGED	07-15-98/01-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	128,690
5R01AG10629-03	ALMON, RICHARD R AGING MUSCLE--DISUSE, GLUCOCORTICOIDS, AND IGF 1	08-01-98/06-30-99	STATE UNIVERSITY OF NEW YORK AT BUFF	238,265
5R01AG10634-07	SANES, JEROME N NEURAL CONTROL OF HUMAN VOLUNTARY MOVEMENTS	04-01-98/03-31-99	BROWN UNIVERSITY	287,272
5R01AG10643-07	BLIWISE, DONALD L SUNDOWN SYNDROME IN A SKILLED NURSING FACILITY	07-01-98/06-30-99	EMORY UNIVERSITY	224,210
5R01AG10668-07	MUFSON, ELLIOTT J GALANIN IN ALZHEIMER'S DISEASE	04-15-98/03-31-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	264,720
5R01AG10669-08	AIKEN, JUDD M PRION PROTEIN IN MINK ENCEPHALOPATHY	07-01-98/06-30-99	UNIVERSITY OF WISCONSIN MADISON	161,760
5R01AG10675-08	MALTER, JAMES S APP MRNA DYSREGULATION AND ALZHEIMERS DISEASE	06-01-98/05-31-99	UNIVERSITY OF WISCONSIN MADISON	171,732
5R01AG10676-07	SALTON, STEPHEN R REGULATION OF VGF BY NEUROTROPHIC GROWTH FACTORS	06-01-98/05-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	231,947

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3R01AG10676-07S1	SALTON, STEPHEN R REGULATION OF VGF BY NEUROTROPHIC GROWTH FACTORS	07-15-98/05-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	25,425
2R01AG10681-06A2	CARLSON, GEORGE A TRANSGENIC MOUSE MODELS FOR ALZHEIMER'S DISEASE	04-01-98/	MC LAUGHLIN RESEARCH INS FOR BIOMED	
5R01AG10685-08	FRAUTSCHY, SALLY A B PROTEIN DEPOSITION AND TOXICITY IN THE BRAIN	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	114,452
5R01AG10686-06	KRUEGER, BRUCE K GLIAL NEURONAL INTERACTIONS IN NEURODEGENERATION	12-01-97/11-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	208,049
5R01AG10689-05	MASLIAH, ELIEZER BASIS OF SYNAPTIC PATHOLOGY IN ALZHEIMERS DISEASE	12-01-97/11-30-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	155,018
5R01AG10738-07	KAHANA, EVA F BUFFERS OF IMPAIRMENT DISABILITY CASCADE AMONG OLD	07-15-98/06-30-99	CASE WESTERN RESERVE UNIVERSITY	287,820
2R01AG10755-06A1	GRANHOLM-BENTLEY, CHARLOTTE MECHANISMS OF NGF-INDUCED COGNITIVE IMPROVEMENT IN AGING	09-15-98/08-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	189,283
5P01AG10770-06	PRUSINER, STANLEY B MOLECULAR PATHOGENESIS OF AGE-DEPENDENT CNS DEGENERATION	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	1,743,349
3P01AG10770-06S1	PRUSINER, STANLEY B MOLECULAR PATHOGENESIS OF AGE-DEPENDENT CNS DEGENERATION	09-01-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	60,475
5P01AG10821-07	CARLSON, BRUCE M MUSCLE DENERVATION AND REGENERATION--INFLUENCE OF AGING	08-01-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	917,967
5R01AG10851-06	COLLIER, TIMOTHY J REGNERATION IN THE AGED AND INJURED DOPAMINE SYSTEM	12-01-97/11-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	241,117
3R01AG10868-05S1	SAHU, ABHIRAM HYPOTHALAMIC NEUROPEPTIDE Y AND REPRODUCTIVE AGING	03-15-98/02-28-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	74,859
5R29AG10871-05	ALWAY, STEPHEN E MECHANISMS FOR NEW FIBER FORMATION IN AGING MUSCLE	08-01-98/06-30-99	UNIVERSITY OF SOUTH FLORIDA	102,732
5R01AG10880-06	CRAFT, SUZANNE GLUCOSE REGULATION AND MEMORY IN ALZHEIMERS DISEASE	04-01-98/03-31-99	UNIVERSITY OF WASHINGTON	151,972
5R01AG10885-07	EVERS, BERNARD M SURGICAL STUDIES OF ONTOGENY, AGING AND THE GUT	06-01-98/05-31-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	235,331

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG10886-05	DE BEER, FREDERICK C SERUM AMYLOID A PROTEIN--ROLE IN ATHEROGENESIS	08-01-98/07-31-99	UNIVERSITY OF KENTUCKY	192,332
2R01AG10897-13A2	WEINER, MICHAEL W 1H MRSI OF AGING BRAIN AND SENILE DEMENTIA	01-01-98/12-31-98	NORTHERN CALIFORNIA INSTITUTE RES &	410,361
5R35AG10916-08	NIXON, RALPH A PROTEOLYSIS IN ALZHEIMERS DISEASE PATHOGENESIS	07-01-98/06-30-99	NATHAN S. KLINE INSTITUTE FOR PSYCH	600,638
5R35AG10917-07	MARTIN, GEORGE M LEADERSHIP AND EXCELLANCE IN ALZHEIMERS DISEASE AWARD	07-01-98/05-31-99	UNIVERSITY OF WASHINGTON	752,305
3R01AG10925-04S1	ARNAUD, CLAUDE D BUILDING BONE IN OSTEOPOROSIS WITH PTH AND ESTROGEN	04-20-98/05-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	40,688
5R01AG10925-05	ARNAUD, CLAUDE D BUILDING BONE IN OSTEOPOROSIS WITH PTH AND ESTROGEN	06-01-98/05-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	270,978
2R01AG10939-06A1	MARKIDES, KYRIAKOS S LONGITUDINAL STUDY OF MEXICAN AMERICAN ELDERLY HEALTH	09-30-98/06-30-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	713,546
2R01AG10940-06A1	HAMMAN, RICHARD F HISPANIC HEALTH AND AGING, SAN LUIS VALLEY, CO	09-30-98/03-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	397,292
5R35AG10953-07	FRANGIONE, BLAS ALZHEIMERS DISEASE AND AMYLOID PROTEINS	09-30-98/08-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	657,022
5R35AG10963-07	MAYEUX, RICHARD P GENE-ENVIRONMENT INTERACTIONS IN ALZHEIMERS DISEASE	07-01-98/05-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	741,002
5R01AG10999-06	HOFFMAN, ANDREW R GH AND IGF-I TREATMENT OF ELDERLY WOMEN	09-01-98/08-31-99	STANFORD UNIVERSITY	190,805
5R01AG11000-02	URBAN, RANDALL J LONG TERM ADMINISTRATION OF TESTOSTERONE IN ELDERLY MEN	04-01-98/03-31-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	241,177
5R01AG11026-19	MC CORMICK, J JUSTIN CLONING OF GENES INVOLVED IN CELL IMMORTALIZATION	01-01-98/12-31-98	MICHIGAN STATE UNIVERSITY	251,585
5R01AG11032-05	WILLIS, SHERRY L ALZHEIMERS DISEASE AND EVERYDAY COMPETENCE	06-01-98/04-30-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	238,392
2R01AG11054-04	RUBEN, GEORGE C TAU STRUCTURES IN ALZHEIMER TANGLES AND ON MICROTUBULES	03-01-98/	CUNY GRADUATE SCH AND UNIV CTR	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
2R01AG11056-05	WOOD, W GIBSON AGING, BRAIN MEMBRANES AND CHOLESTEROL DOMAINS	12-01-97/		UNIVERSITY OF MINNESOTA TWIN CITIES	
2R01AG11080-06	SELL, DAVID R GLYCOXIDATION AS A MARKER OF AGING	04-01-98/		CASE WESTERN RESERVE UNIVERSITY	
5R01AG11085-06	HARPER, JEFFREY W CELL CYCLE GENES AND CELLULAR SENESCENCE AND AGING	04-01-98/	03-31-99	BAYLOR COLLEGE OF MEDICINE	231,989
5R01AG11098-05	LIU, JAMES H PROGESTOGEN EFFECT ON BONE AND COGNITION IN MENOPAUSE	03-01-98/	02-28-99	UNIVERSITY OF CINCINNATI	136,092
2R01AG11099-06	CRUICKSHANKS, KAREN J EPIDEMIOLOGY OF AGE RELATED HEARING LOSS	03-01-98/	02-28-99	UNIVERSITY OF WISCONSIN MADISON	843,120
3R01AG11101-05S1	EVANS, DENIS A RISK FACTORS FOR INCIDENT ALZHEIMERS DISEASE	07-15-98/	02-28-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	99,084
5R01AG11119-06	GUARENTE, LEONARD P CELL SENESCENCE IN SACCHAROMYCES CEREVISIAE	03-01-98/	02-28-99	MASSACHUSETTS INSTITUTE OF TECHNOLOG	327,572
5R01AG11121-05	GABRIELI, JOHN D DECOMPOSITION OF MEMORY FAILURE IN ALZHEIMERS DISEASE	02-01-98/	01-31-99	STANFORD UNIVERSITY	321,159
3R01AG11121-05S1	GABRIELI, JOHN D DECOMPOSITION OF MEMORY FAILURE IN ALZHEIMERS DISEASE	09-01-98/	01-31-99	STANFORD UNIVERSITY	18,138
2R01AG11123-17A1	WOOD, JOHN G FUNCTIONAL COMPARTMENTALIZATION OF NEURONS AND GLIA	05-01-98/	04-30-99	EMORY UNIVERSITY	182,257
5R01AG11143-07	MC CORMICK, WAYNE C LONGTERM CARE UTILIZATION IN JAPANESE AMERICANS	07-01-98/	06-30-99	UNIVERSITY OF WASHINGTON	251,868
4R37AG11144-06	BECKER, GAYLENE CULTURAL RESPONSES TO ILLNESS IN MINORITY AGED	09-01-98/	08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	222,561
5R01AG11155-03	PHILLIPS, LINDA R INTERVENTION FOR ABUSE OF AGING CAREGIVERS	09-01-98/	08-31-99	UNIVERSITY OF ARIZONA	327,572
3R01AG11155-03S1	PHILLIPS, LINDA R INTERVENTION FOR ABUSE OF AGING CAREGIVERS	09-30-98/	08-31-99	UNIVERSITY OF ARIZONA	28,385
2R01AG11230-05	RAZ, NAFTALI NEURAL CORRELATES OF AGE RELATED DIFFERENCES IN MEMORY	08-01-98/	07-31-99	UNIVERSITY OF MEMPHIS	274,583

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG11235-05	CRIMMINS, EILEEN M ACTIVE LIFE EXPECTANCY IN THE OLDER POPULATION	08-15-98/05-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	137,353
3R01AG11255-04S1	KREBS, DAVID E VESTIBULAR REHAB & STABILITY MODELING FOR OLDER PATIENTS	03-15-98/08-31-98	MASSACHUSETTS GENERAL HOSPITAL	973
5R01AG11255-05	KREBS, DAVID E VESTIBULAR REHAB & STABILITY MODELING FOR OLDER PATIENTS	09-01-98/08-31-99	MASSACHUSETTS GENERAL HOSPITAL	227,294
5R01AG11290-05	MEHTA, PANKAJ D CYTOKINES IN DOWN SYNDROME--LINK TO AD NEUROPATHOLOGY	09-15-98/08-31-99	INSTITUTE FOR BASIC RES IN DEV DISAB	234,248
3R01AG11294-05S1	JOHN, KENNETH R NAVAJO NATION COMPRESHENSIVE LONGTERM CARE STUDY	03-15-98/11-30-98	UNIVERSITY OF NORTH TEXAS	39,856
3R01AG11294-05S2	JOHN, ROBERT R NAVAJO NATION COMPREHENSIVE LONGTERM CARE STUDY	03-15-98/11-30-98	UNIVERSITY OF NORTH TEXAS	
5P01AG11337-05	YOUNG, ANNE B METABOLIC & EXCITOTOXIC CASCADE IN AGING & ALZHEIMERS	04-01-98/03-31-99	MASSACHUSETTS GENERAL HOSPITAL	865,558
3R01AG11350-04S1	RUSSELL, MICHAEL J ANIMAL MODEL OF ALZHEIMERS DISEASE	08-15-98/05-31-99	UNIVERSITY OF CALIFORNIA DAVIS	39,998
2R01AG11350-05	RUSSELL, MICHAEL J ANIMAL MODEL OF ALZHEIMER'S DISEASE	06-01-98/	UNIVERSITY OF CALIFORNIA DAVIS	
5P01AG11355-04	OLNEY, JOHN W EXCITATORY TRANSMITTERS, MEMORY, AGING AND DEMENTIA	02-15-98/01-31-99	WASHINGTON UNIVERSITY	644,580
2P01AG11370-04	SONNTAG, WILLIAM E GROWTH HORMONE & IGF1 IN CNS & CEREBROVASCULAR AGING	05-01-98/03-31-99	WAKE FOREST UNIVERSITY	604,648
4R37AG11375-07	KAPLAN, GEORGE A HEALTH AND FUNCTION OVER THREE DECADES IN ALAMEDA COUNTY	07-01-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	456,751
2R01AG11378-06	JACK, CLIFFORD R PREDICTING ALZHEIMERS DISEASE WITH MAGNETIC RESONANCE	06-01-98/05-31-99	MAYO FOUNDATION	262,887
5R01AG11380-05	BREITNER, JOHN C EPIDEMIOLOGY OF ALZHEIMERS DEMENTIA IN CACHE COUNTY UT	09-01-98/08-31-99	JOHNS HOPKINS UNIVERSITY	1,257,347
2R01AG11385-05A2	MUCKE, LENNART TRANSGENIC MODELS TO SUDY ALZHEIMERS DISEASE	05-01-98/04-30-99	J. DAVID GLADSTONE INSTITUTES	394,137

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG11386-06	MONTEIRO, MERVYN J NEUROFILAMENT KINASES	09-01-98/08-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	220,660
3R01AG11398-05S1	GOODMAN, MYRON F DNA ENZYMES IN AGING IN DIVIDING AND NONDIVIDING CELLS	05-15-98/04-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	49,250
2R01AG11398-06	GOODMAN, MYRON F DNA ENZYMES IN AGING IN DIVIDING & NONDIVIDING CELLS	04-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
5R29AG11403-05	FERRARIS, RONALDO P DIETARY REGULATION OF NUTRIENT ABSORPTION IN AGING	03-01-98/02-28-99	UNIVERSITY OF MEDICINE & DENTISTRY O	103,560
5P01AG11412-04	VAN CAUTER, EVE Y ALTERATIONS OF CIRCADIAN TIMING IN AGING	12-01-97/11-30-98	UNIVERSITY OF CHICAGO	1,110,823
5R01AG11451-06	HOYER, WILLIAM J AGING OF VISUAL/COGNITIVE MECHANISMS	07-15-98/06-30-99	SYRACUSE UNIVERSITY	140,940
5R01AG11465-05	SCARPACE, PHILIP J BROWN FAT THERMOGENESIS RESPONSE TO COLD AND AGE	12-01-97/11-30-99	UNIVERSITY OF FLORIDA	132,944
2R01AG11475-05A1	DAYNES, RAYMOND A THE DYSREGULATION OF INFLAMMATORY CYTOKINES AND AGING	04-01-97/	UNIVERSITY OF UTAH	
5R44AG11500-03	STERNS, RONNI S CARRIER LIFT TO ENHANCE DAILY ACTIVITIES	05-01-98/04-30-99	LIFESPAN ASSOCIATES	341,278
5R01AG11501-05	ALGASE, DONNA L WANDERING AND ITS SEQUELAE--COGNITION AND AGITATION	04-01-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	285,297
5R01AG11525-06	ANDERSON, STEPHEN P STRUCTURAL ASPECTS OF APP FUNCTION AND PATHOLOGY	07-15-98/06-30-99	RUTGERS THE STATE UNIV NEW BRUNSWICK	239,085
2R01AG11526-06A2	DAVIES, THERESA A AMYLOID PRECURSOR PROTEIN IN NORMAL/DEMENTIA PLATELETS	07-01-98/	BOSTON UNIVERSITY	
5R01AG11541-02	NELSON, DOROTHY A ETHNIC DIFFERENCES IN PROXIMAL FEMORAL MORPHOLOGY	12-01-97/11-30-99	WAYNE STATE UNIVERSITY	159,820
3R01AG11541-02S1	NELSON, DOROTHY A ETHNIC DIFFERENCES IN PROXIMAL FEMORAL MORPHOLOGY	07-01-98/11-30-99	WAYNE STATE UNIVERSITY	29,774
2P01AG11542-06	LEE, VIRGINIA M IN VITRO AND IN VIVO MODELS OF ALZHEIMERS DISEASE	09-01-98/08-31-99	UNIVERSITY OF PENNSYLVANIA	1,202,961

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG11549-05	GILMORE, GROVER C CONTRAST ENHANCEMENT AND READING IN ALZHEIMERS DISEASE	07-01-98/06-30-99	CASE WESTERN RESERVE UNIVERSITY	182,402
5R01AG11552-06	WILMOTH, JOHN R MEASUREMENT AND ANALYSIS OF OLDEST-OLD MORTALITY	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA BERKELEY	165,528
5R29AG11564-05	PAVALKO, ELIZA K WORK AND HEALTH AMONG WOMEN IN MIDLIFE AND BEYOND	04-01-98/03-31-00	INDIANA UNIVERSITY BLOOMINGTON	141,609
5R13AG11570-06	WISE, DAVID A SUMMER INSTITUTE WORKSHOP IN AGING AND HEALTH CARE	07-15-98/06-30-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	30,000
5R01AG11577-04	PERLMUTTER, DAVID H SEC RECEPTOR AND ALZHEIMERS DISEASE	12-01-97/11-30-99	WASHINGTON UNIVERSITY	162,252
5R29AG11602-05	WU, GE AGE, SENSATION AND FALLS--BIOMECHANICS AND PREVENTION	08-01-98/07-31-99	UNIVERSITY OF VERMONT & ST AGRIC COL	111,986
5R29AG11605-05	SHARPS, MATTHEW J AGING AND MEMORY FOR RELATIONAL AND IMAGERIC INFORMATION	07-01-98/06-30-99	CALIFORNIA STATE UNIVERSITY FRESNO	93,958
5R01AG11622-06	MADDEN, DAVID J NEUROIMAGING OF AGE RELATED COGNITIVE CHANGES	09-01-98/08-31-99	DUKE UNIVERSITY	471,269
5R01AG11623-04	YEUNG, CHO-YAU BRIAN SPECIFIC AMYLOID PLAQUE FORMATION	12-01-97/11-30-98	UNIVERSITY OF ILLINOIS AT CHICAGO	252,056
5R37AG11624-05	MOR, VINCENT DO GOOD NURSING HOMES ACHIEVE GOOD OUTCOMES?	07-01-98/06-30-99	BROWN UNIVERSITY	285,152
5R01AG11628-05	VER HOEVE, JAMES N NEURAL BASES OF VISUAL DEFICITS DURING AGING	05-01-98/04-30-99	UNIVERSITY OF WISCONSIN MADISON	319,161
3R01AG11643-05S1	HARRISON, DAVID E SELECTING AND IDENTIFYING GENES IMPORTANT IN LONGEVITY	09-15-98/08-31-99	JACKSON LABORATORY	206,545
3R01AG11644-05S1	TOWER, JOHN G DROSOPHILA LONGEVITY ASSURANCE GENES	09-15-98/03-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	109,553
3R01AG11653-05S1	MOUNTZ, JOHN D CORRECTION OF T CELL AGING IN TRANSGENIC MICE	09-15-98/03-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	110,874
3R01AG11658-05S1	CAMPISI, JUDITH SENESCENCE AND LONGEVITY MODULATING GENES	09-15-98/08-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	141,313

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3R01AG11659-05S1	WARD, SAMUEL LIFESPAN ENHANCING MUTATIONS IN C ELEGANS	09-15-98/03-31-99	UNIVERSITY OF ARIZONA	110,407
3R01AG11660-05S1	JAZWINSKI, S M YEAST--A SOURCE AND A TEST SYSTEM FOR MAMMALIAN LAGS	09-15-98/08-31-99	LOUISIANA STATE UNIV MED CTR NEW ORL	144,668
2P50AG11669-06	JETTE, ALAN M BOSTON UNIVERSITY ROYBAL CENTER CONSORTIUM	09-20-98/07-31-99	BOSTON UNIVERSITY	519,382
2P50AG11684-07	BALL, KARLENE K ENHANCING MOBILITY IN THE ELDERLY	09-15-98/06-30-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	519,005
3R01AG11687-05S1	MILLER, RICHARD A GENETIC CONTROL OF LONGEVITY	09-15-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	154,942
5R01AG11703-05	FRIED, LINDA P RISK FACTORS FOR PHYSICAL DISABILITY IN AGING WOMEN	07-01-98/05-31-99	JOHNS HOPKINS UNIVERSITY	339,326
3R01AG11703-05S1	FRIED, LINDA P RISK FACTORS FOR PHYSICAL DISABILITY IN AGING WOMEN	07-15-98/05-31-99	JOHNS HOPKINS UNIVERSITY	88,115
5R01AG11705-04	FERRARO, KENNETH F AGING AND HEALTH STATUS AMONG BLACK AND WHITE ADULTS	05-01-98/04-30-99	PURDUE UNIVERSITY WEST LAFAYETTE	144,920
2P50AG11711-06	PILLEMER, KARL A CORNELL APPLIED GERONTOLOGY RESEARCH INSTITUTE	09-15-98/07-31-99	CORNELL UNIVERSITY ITHACA	519,335
2P50AG11715-06	Park, Denise C CENTER FOR APPLIED COGNITIVE RESEARCH ON AGING	09-15-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	543,254
2P50AG11719-06	MORRIS, JOHN N MRCA ROYBAL CENTER OF APPLIED GERONTOLOGY	09-01-98/	HEBREW REHABILITATION CENTER FOR AGE	
3R01AG11722-05S1	CURTSINGER, JAMES W QTL MAPPING OF LONGEVITY GENES IN DROSOPHILA	09-15-98/03-31-99	UNIVERSITY OF MINNESOTA TWIN CITIES	112,545
5R01AG11728-06	LUNDBLAD, VICTORIA J TELOMERE REPLICATION AND SENESCENCE IN YEAST	09-01-98/08-31-99	BAYLOR COLLEGE OF MEDICINE	237,300
3P50AG11748-05S1	CZAJA, SARA J CENTER ON HUMAN FACTORS AND AGING RESEARCH	09-15-98/07-31-99	UNIVERSITY OF MIAMI CORAL GABLES	118,958
5R01AG11758-05	HAYWARD, MARK D ACTIVE LIFE EXPECTANCY IN THE OLDER POPULATION	08-01-98/07-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	101,162

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R37AG11761-05	LEE, RONALD D ECONOMIC DEMOGRAPHY OF INTER-AGE TRANSFER	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	216,776
3R37AG11761-05S1	LEE, RONALD D ECONOMIC DEMOGRAPHY OF INTER AGE TRANSFER	09-01-98/03-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	100,000
5R01AG11762-05	SCHELLENBERG, GERARD D CLONING OF THE CHROMOSOME 14 ALZHEIMERS DISEASE GENE	05-01-98/04-30-99	UNIVERSITY OF WASHINGTON	242,748
5R01AG11815-05	WOLF, DOUGLAS A DYNAMIC MICROSIMULATION OF ELDERS' HEALTH AND WELL-BEING	07-01-98/06-30-99	SYRACUSE UNIVERSITY	322,514
5R01AG11816-05	KENYON, CYNTHIA J GENETIC ANALYSIS OF AGING IN C ELEGANS	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	249,362
5R01AG11833-05	TOWER, JOHN G AGING-SPECIFIC GENE EXPRESSION IN DROSOPHILA	12-01-97/11-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	191,440
5R01AG11836-05	GALE, WILLIAM G PUBLIC POLICIES EFFECTS ON SAVING FOR RETIREMENT	09-30-98/08-31-99	BROOKINGS INSTITUTION	121,525
5R29AG11862-05	HEBERT, LIESI E EPIDEMIOLOGY OF A D IN WOMEN--RISK AND IMPACT	07-01-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	105,867
5R01AG11874-05	WISE, DAVID A FIRM HEALTH INSURANCE PLANS	07-01-98/06-30-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	186,223
5R29AG11876-05	POWERS, DOUGLAS C AGE AND VACCINE MODULATION OF INFLUENZA IMMUNITY	07-01-98/03-31-99	EASTERN VIRGINIA MED SCH/MED COL HAM	94,286
5R29AG11895-04	GRUBER, JONATHAN H HEALTH INSURANCE REFORM, OLDER WORKERS, AND RETIREMENT	08-01-98/07-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	111,863
3R01AG11903-03S1	CUELLO, A C TROPHIC FACTOR INDUCED SYNAPTIC REGROWTH IN THE CNS	03-15-98/08-31-98	MC GILL UNIVERSITY	42,115
5P01AG11915-05	WEINDRUCH, RICHARD H DIETARY RESTRICTION AND AGING	04-15-98/06-30-99	UNIVERSITY OF WISCONSIN MADISON	705,736
3P01AG11915-05S1	WEINDRUCH, RICHARD H DIETARY RESTRICTION AND AGING	05-01-98/06-30-99	UNIVERSITY OF WISCONSIN MADISON	73,923
3P01AG11915-05S2	WEINDRUCH, RICHARD DIETARY RESTRICTION AND AGING	09-30-98/06-30-99	UNIVERSITY OF WISCONSIN MADISON	17,324

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG11921-03	GIBSON, GARY E SIGNAL TRANSDUCTION SYSTEMS IN ALZHEIMERS DISEASE	02-15-98/01-31-00	WINIFRED MASTERSON BURKE MED RES INS	193,159
5R01AG11925-05	ROHER, ALEX E CHEMISTRY AND BIOLOGY OF ALZHEIMER'S AMYLOID PROTEINS	12-01-97/11-30-98	SUN HEALTH RESEARCH INSTITUTE	198,224
5R01AG11930-05	HUGHES, SUSAN L IMPACT OF TEAM MANAGED/HOSPITAL LINKED HOME CARE	04-01-98/03-31-99	UNIVERSITY OF ILLINOIS AT CHICAGO	240,552
5P01AG11952-05	RAHMAN, OMAR J DETERMINANTS OF HEALTHY AGING IN RURAL POPULATIONS	08-01-98/07-31-99	RAND CORPORATION	426,214
5R01AG11957-05	DEATON, ANGUS S AGING AND SAVING IN DEVELOPED AND DEVELOPING COUNTRIES	08-01-98/07-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	28,825
5R01AG11958-05	WYSS, J MICHAEL MECHANISMS OF AGE RELATED PLASTICITY IN THE CORTEX	05-01-98/04-30-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	193,956
5R01AG11967-07	CORTOPASSI, GINO A MITOCHONDRIAL MUTAGENESIS & AGE-RELATED PATHOPHYSIOLOGY	07-15-98/06-30-99	UNIVERSITY OF CALIFORNIA DAVIS	173,040
7R01AG11970-05	KELLER, EVAN T INTERLEUKIN 6 AND OSTEOPOROSIS	09-30-98/04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	146,847
5R01AG11979-03	CHELLURI, LAKSHMIPATHI QUALITY OF LIFE AFTER MECHANICAL VENTILATION IN THE AGED	07-01-98/06-30-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	368,473
5R01AG11995-04	LAWTON, M POWELL QUALITY OF LIFE, HEALTH, AND VALUATION OF LIFE BY ELDERS	01-01-98/12-31-98	PHILADELPHIA GERIATRIC CTR-FRIEDMAN	336,955
5R01AG12019-05	SCHELLENBERG, GERARD D CLONING OF THE CHROMOSOME 8 WERNERS SYNDROME GENE	09-01-98/08-31-99	UNIVERSITY OF WASHINGTON	208,870
2R01AG12101-06	DE LEON, MONY J PREDICTORS OF COGNITIVE DECLINE IN NORMAL AGING	09-01-98/08-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	259,773
5R01AG12112-04	CAMPBELL, SCOTT S HOMEOSTATIC FACTORS IN AGE RELATED SLEEP DISTURBANCE	12-01-97/11-30-98	WEILL MEDICAL COLLEGE OF CORNELL UNI	214,227
5R01AG12119-03	MAUDSLEY, ANDREW A DATA PROCESSING FOR MR SPECTROSCOPIC IMAGING	02-01-98/01-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	147,252
5R01AG12122-05	GRANHOLM, ANN-CHARLOTTE E AGED FOREBRAIN CHOLINERGIC NEURONS AND NGF DELIVERY	04-01-98/03-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	142,462

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG12136-04	LICHSTEIN, KENNETH L BIOBEHAVIORAL APPROACH TO INSOMNIA TREATMENT	05-01-98/08-31-99	UNIVERSITY OF MEMPHIS	55,124
5R37AG12138-04	SCHEFF, STEPHEN W AGE-RELATED CHANGES IN SYNAPTIC DENSITY	01-01-98/12-31-98	UNIVERSITY OF KENTUCKY	158,232
5R29AG12141-05	ANDERSEN, JULIE MODELS FOR EXPLORING FREE RADICAL DAMAGE	04-15-98/11-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	122,298
5R29AG12160-04	GOTTSCHALL, PAUL E PROTEASES, AGING, AND NEURODEGENERATIVE DISEASES	05-01-98/04-30-99	UNIVERSITY OF SOUTH FLORIDA	100,399
5R29AG12161-05	SHAPSES, SUE A NUTRITIONAL REGULATION OF BONE TURNOVER	09-01-98/08-31-99	RUTGERS THE STATE UNIV NEW BRUNSWICK	91,341
5R29AG12168-03	BROWN, SUSAN H FACILITATION OF MOTOR FUNCTION THROUGH SENSORY CUEING	09-01-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	99,494
5R01AG12227-04	SINOWAY, LAWRENCE I LIMB CONGESTION AND EXERCISE REFLEXES IN HEART FAILURE	01-01-98/12-31-98	PENNSYLVANIA STATE UNIV HERSHEY MED	218,195
7R01AG12235-04	SPINA, ROBERT J EXERCISE, ESTROGEN AND AGING--CARDIAC FUNCTION IN WOMEN	09-30-98/08-31-99	UNIVERSITY OF TEXAS AUSTIN	212,616
5R01AG12257-05	KITZMAN, DALANE W EXERCISE TRAINING/DIASTOLIC HEART FAILURE IN THE ELDERLY	07-01-98/06-30-99	WAKE FOREST UNIVERSITY	285,550
5R01AG12268-04	DILWORTH-ANDERSON, PEGGYE STRUCTURE AND OUTCOMES OF CAREGIVING TO BLACK ELDERLY	05-01-98/04-30-00	UNIVERSITY OF NORTH CAROLINA GREENSB	148,396
5R01AG12279-05	TILLY, JONATHAN L APOPTOSIS AND REPRODUCTIVE AGING OF THE FEMALE	01-01-98/12-31-98	MASSACHUSETTS GENERAL HOSPITAL	164,294
3R01AG12279-05S1	TILLY, JONATHAN L APOPTOSIS AND REPRODUCTIVE AGING OF THE FEMALE	06-01-98/12-31-98	MASSACHUSETTS GENERAL HOSPITAL	34,976
5R01AG12282-05	BREDESEN, DALE E MECHANISM OF INHIBITION OF NEURODEGENERATION AND AGING	07-01-98/06-30-99	BURNHAM INSTITUTE	251,544
2R37AG12287-05	HORNSBY, PETER J TYPE II 3BETA HSD GENE--REGULATION OF DHEAS SYNTHESIS	09-01-98/08-31-99	BAYLOR COLLEGE OF MEDICINE	255,300
5R01AG12288-05	SIMON, MELVIN I ANIMAL MODELS OF AGING IN RETINAL DEGENERATION	01-01-98/12-31-98	CALIFORNIA INSTITUTE OF TECHNOLOGY	383,229

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG12289-05	BENZER, SEYMOUR GENES MAINTAINING NERVOUS SYSTEM INTEGRITY DURING AGING	01-01-98/12-31-98	CALIFORNIA INSTITUTE OF TECHNOLOGY	232,114
5R01AG12293-04	HEINECKE, JAY W MYELOPEROXIDASE-MEDIATED VASCULAR INJURY	01-01-98/12-31-98	WASHINGTON UNIVERSITY	254,445
5P30AG12300-05	ROSENBERG, ROGER N NEUROBIOLOGY OF ALZHIMERS DISEASE AND AGING	04-15-98/03-31-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	1,178,627
3P30AG12300-05S1	ROSENBERG, ROGER N NEUROBIOLOGY OF ALZHIMERS DISEASE AND AGING	08-01-98/03-31-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	75,000
5R44AG12305-03	LOWRIMORE, GENE R SUPPORT ENVIRONMENT FOR GRADE MEMBERSHIP MODEL	05-01-98/04-30-99	DECISION SYSTEMS, INC.	383,412
5R44AG12308-03	SCHWARZ, MARK H COMPUTER TOOLS FOR OUTCOMES ANALYSIS OF HIP REPLACEMENT	09-30-98/08-31-99	MANDALA SCIENCES	369,882
3R01AG12316-05S1	ROSENTHAL, NADIA A TRANSGENIC MOUSE MODELS OF LONGEVITY	09-15-98/03-31-99	MASSACHUSETTS GENERAL HOSPITAL	132,755
2R44AG12326-02	HODDER, RICHARD A BARCODE TECHNOLOGY APPLIED TO PHYSICIAN MEDICARE BILLING	11-01-97/	DMH ASSOCIATES, INC.	
2R01AG12345-05	FISHER, ANNE G EXTENDING A PERFORMANCE EVALUATION FOR GERONTOLOGY	05-01-98/03-31-99	COLORADO STATE UNIVERSITY	231,757
2R01AG12350-06	KREGEL, KEVIN C OXIDATIVE STRESS AND AGING--INTEGRATED MECHANISMS	09-01-98/08-31-99	UNIVERSITY OF IOWA	222,390
5R01AG12358-04	KING, ABBY C EXERCISE, FUNCTIONING, AND STRESS IN WOMEN CAREGIVERS	07-01-98/06-30-99	STANFORD UNIVERSITY	337,983
5R01AG12364-05	KRIPKE, DANIEL F ILLUMINATION IN HUMAN AGING--SLEEP AND MOOD EFFECTS	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	382,383
2R01AG12376-04	KOO, EDWARD H APP TRAFFICKING AND THE PATHWAYS OF A BETA FORMATION	01-01-98/12-31-98	UNIVERSITY OF CALIFORNIA SAN DIEGO	212,779
2R01AG12381-04A1	TAYLOR, THOMAS R DECISION SUPPORT FOR PREVENTIVE HORMONE THERAPY	05-01-98/04-30-99	UNIVERSITY OF WASHINGTON	358,015
5R01AG12387-05	GREENWOOD, PAMELA M SPATIALLY CUED VISUAL PROCESSING OVER THE ADULT LIFESPAN	07-01-98/06-30-99	CATHOLIC UNIVERSITY OF AMERICA	134,552

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5R37AG12394-04	SMITH, JAMES P WEALTH DISPARITITES AMONG MATURE & OLDER ADULTS	06-01-98	03-31-99	RAND CORPORATION	138,289
2R01AG12396-05	JOHNSON, GAIL V TISSUE TRANSGLUTAMINASE--REGULATION AND DYSREGULATION	09-30-98	08-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	176,557
5R29AG12401-04	DELACALLE, SONSOLES CHOLINERGIC DENERVATION AND REINNERVATION IN AGING	07-01-98	06-30-99	BETH ISRAEL DEACONESS MEDICAL CENTER	117,553
5R01AG12406-05	HYMAN, BRADLEY T APOLIPOPROTEIN E AND ALZHEIMERS DISEASE	07-01-98	06-30-99	MASSACHUSETTS GENERAL HOSPITAL	261,724
7R29AG12407-03	PERKINSON, MARGARET A DEMENTIA/CARDIAC SYMPTON MANAGEMENT BY FAMILY	06-15-98	03-31-99	WASHINGTON UNIVERSITY	129,887
3P01AG12411-03S1	GRIFFIN, SUE T EARLY EVENTS IN ALZHEIMERS PATHOGENESIS	09-01-98	05-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	100,009
5R01AG12420-04	LILLARD, LEE A ELDERLY HEALTH AND HEALTH CARE UTILIZATION	06-15-98	03-31-99	RAND CORPORATION	142,392
5R01AG12423-03	LINK, CHRISTOPHER D TRANSGENIC C ELEGANS AS AMYLOID DISEASE MODEL	09-01-98	08-31-99	UNIVERSITY OF COLORADO AT BOULDER	213,843
5P01AG12435-05	CHUI, HELENA C AGING BRAIN--VASCULATURE, ISCHEMIA AND BEHAVIOR	09-01-98	08-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	1,415,240
5R01AG12442-04	WILSON, GLENN L AGING EFFECTS ON DNA REPAIR	03-01-98	02-28-99	UNIVERSITY OF SOUTH ALABAMA	207,754
5R29AG12444-04	LEE, DAVID J SENSORY IMPAIRMENT, FUNCTIONAL STATUS AND AGING	04-01-98	03-31-99	UNIVERSITY OF MIAMI	108,602
5R01AG12447-05	LESNEFSKY, EDWARD J, JR MITOCHONDRIAL FOCUS OF REPERFUSION INJURY IN AGING HEART	08-01-98	07-31-99	CASE WESTERN RESERVE UNIVERSITY	170,013
5R29AG12448-05	SLIWINSKI, MARTIN J AGE-ASSOCIATED CHANGES IN THE SPEED OF COGNITIVE PROCESS	07-01-98	06-30-99	YESHIVA UNIVERSITY	131,679
5R29AG12449-05	ALLEN, SUSAN M MARITAL GENDER ROLES AND DYNAMICS OF SPOUSAL CARE	09-01-98	08-31-99	BROWN UNIVERSITY	119,368
5R01AG12458-04	SIEGLER, ILENE C MODELS OF PERSONALITY, HEALTH, AND DISEASE IN ADULTHOOD	08-01-98	07-31-99	DUKE UNIVERSITY	228,388

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG12466-04	ABRAMS, JOHN M MOLECULAR AND GENETIC CONTROL OF PROGRAMMED CELL DEATH	05-01-98/04-30-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	273,002
7R29AG12467-05	OBEID, LINA M CERAMIDE AND CELL SENESCENCE	08-01-98/04-30-99	MEDICAL UNIVERSITY OF SOUTH CAROLINA	70,638
5U01AG12495-05	MIDGLEY, A R, JR MENOPAUSE AND HEALTH IN AGING WOMEN	06-01-98/05-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	1,048,258
5U01AG12505-05	POWELL, LYNDA H POPULATION STUDY OF MENOPAUSE IN AFRICAN AMERICAN WOMEN	07-01-98/05-31-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	600,992
3U01AG12505-05S1	POWELL, LYNDA H POPULATION STUDY OF MENOPAUSE IN AFRICAN AMERICAN WOMEN	07-15-98/05-31-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	14,684
5R01AG12527-04	SMITH, DOUGLAS H BRAIN INJURY EFFECTS--AGE RELATED COGNITIVE DYSFUNCTION	05-01-98/04-30-99	UNIVERSITY OF PENNSYLVANIA	213,401
3U01AG12531-04S1	NEER, ROBERT M MENOPAUSAL TRANSITION IN BLACK AND WHITE WOMEN	12-01-97/05-31-98	MASSACHUSETTS GENERAL HOSPITAL	49,047
5U01AG12531-05	NEER, ROBERT M MENOPAUSAL TRANSITION IN BLACK AND WHITE WOMEN	06-01-98/05-31-99	MASSACHUSETTS GENERAL HOSPITAL	435,608
5U01AG12535-05	WEISS, GERSON GYNECOLOGIC IMPACT OF THE MENOPAUSAL TRANSITION	08-15-98/05-31-99	UNIVERSITY OF MEDICINE & DENTISTRY O	557,645
3U01AG12535-05S1	WEISS, GERSON GYNECOLOGIC IMPACT OF THE MENOPAUSAL TRANSITION	09-01-98/05-31-99	UNIVERSITY OF MEDICINE & DENTISTRY O	24,244
5U01AG12539-05	GREENDALE, GAIL A EPIDEMIOLOGY AND BIOLOGY OF THE MENOPAUSAL TRANSITION	06-01-98/05-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	404,445
5U01AG12546-05	MATTHEWS, KAREN A MENOPAUSAL TRANSITION IN BLACK/WHITE WOMEN	07-01-98/05-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	572,599
3U01AG12546-05S1	MATTHEWS, KAREN A MENOPAUSAL TRANSITION IN BLACK/WHITE WOMEN	07-15-98/05-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	12,217
5R01AG12548-03	GIULIAN, DANA J GLIA MEDIATED BRAIN INJURY IN ALZHEIMERS DISEASE	05-15-98/04-30-00	BAYLOR COLLEGE OF MEDICINE	272,491
5R01AG12551-04	INOUYE, SHARON K INTERVENTION TRIAL TO PREVENT DELIRIUM IN THE ELDERLY	07-01-98/06-30-99	YALE UNIVERSITY	434,629

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3U01AG12553-04S2	MC KINLAY, SONJA M MENOPAUSE AND HEALTH IN AGING WOMEN	02-15-98/05-31-98	NEW ENGLAND RESEARCH INSTITUTES, INC	287,530
5U01AG12553-05	MCKINLAY, SONJA M MENOPAUSE AND HEALTH IN AGING WOMEN	07-01-98/05-31-99	NEW ENGLAND RESEARCH INSTITUTES, INC	1,476,853
5U01AG12554-05	GOLD, ELLEN B LIFESTYLE AND OVARIAN FUNCTION IN MID-LIFE WOMEN	06-01-98/05-31-99	UNIVERSITY OF CALIFORNIA DAVIS	395,390
5R29AG12556-04	RAAB-CULLEN, DIANE M IN VIVO SKELETAL RESPONSE TO MECHANICAL STIMULATION	04-15-98/03-31-99	CREIGHTON UNIVERSITY	95,945
5R01AG12557-04	COLE, KELLY J AGING EFFECTS ON GRASP FORCE CONTROL	05-01-98/04-30-99	UNIVERSITY OF IOWA	135,875
5R01AG12559-03	WEINBERG, RICHARD B NUTRIENT ANTIOXIDANT DEFENSE OF HIGH DENSITY LIPOPROTEIN	07-01-98/06-30-99	WAKE FOREST UNIVERSITY	157,877
2R44AG12572-02A2	CAMPBELL, THOMAS A DETECTION OF ALZHEIMER'S SPECIFIC PROTEINS IN CSF	07-01-98/	ISOLAB, INC.	
5P60AG12583-05	GOLDBERG, ANDREW P CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CENTER	07-01-98/06-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	1,102,422
5R01AG12587-05	ARMBRECHT, HARVEY J INTESTINAL CALCIUM ABSORPTION--EFFECT OF AGE	09-01-98/08-31-99	ST. LOUIS UNIVERSITY	191,282
5R01AG12609-05	BARNES, CAROL A CELL ASSEMBLIES, PATTERN COMPLETION, AND THE AGING BRAIN	04-01-98/03-31-99	UNIVERSITY OF ARIZONA	163,011
3R01AG12609-05S1	BARNES, CAROL A CELL ASSEMBLIES, PATTERN COMPLETION, AND THE AGING BRAIN	07-01-98/03-31-99	UNIVERSITY OF ARIZONA	10,135
2R01AG12611-04A1	JANOWSKY, JERI S SEX HORMONES ON COGNITION	12-01-97/11-30-98	OREGON HEALTH SCIENCES UNIVERSITY	161,893
2R44AG12626-02	FRIEDMAN, MARK B WIRELESS MONITOR TO PREVENT BEDSORES IN NURSING HOMES	09-01-98/08-31-99	AUGMENTECH, INC.	368,251
5U01AG12642-04	CZEISLER, CHARLES A CLINICAL TRIAL/MELATONIN AS HYPNOTIC FOR NEUROLAB CREW	08-01-98/07-31-99	BRIGHAM AND WOMEN'S HOSPITAL	280,630
5U01AG12646-04	BRADY, SCOTT T SPACE FLIGHT, STRESS, AND NEURONAL PLASTICITY	08-01-98/07-31-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	253,996

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG12653-04	MCKINNEY, MICHAEL GENE EXPRESSION IN AGING CENTRAL CHOLINERGIC NEURONS	08-15-98/07-31-99	MAYO FOUNDATION	227,655
5R29AG12658-03	COSTA, DORA L HEALTH OF YOUNG ADULTS--EVIDENCE CAUSES AND OUTCOMES	08-01-98/07-31-99	MASSACHUSETTS INSTITUTE OF TECHNOLOG	107,117
5R01AG12673-05	NEUNDORFER, MARCIA M DEPRESSION AND AGITATION IN AD--EFFECTS ON CAREGIVERS	09-01-98/08-31-99	CASE WESTERN RESERVE UNIVERSITY	117,746
5R29AG12674-05	BONDI, MARK W COGNITIVE ABILITIES OF AT RISK ELDERLY FOR DEMENTIA	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	70,540
5R29AG12679-04	WALSH, JOHN P SENESCENCE AND STRIATAL SYNAPTIC PLASTICITY	08-15-98/07-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	118,592
3R01AG12685-05S2	YOUNKIN, STEVEN G FACTORS GOVERNING ALZHEIMERS ALPHA/BETA PROTEIN	12-01-97/03-31-98	MAYO FOUNDATION	22,407
5R01AG12685-06	YOUNKIN, STEVEN G FACTORS GOVERNING ALZHEIMERS ABETA PROTEIN	04-15-98/03-31-99	MAYO FOUNDATION	308,275
5R29AG12686-04	BUSH, ASHLEY I ZINC AND ALZHEIMERS DISEASE PATHOPHYSIOLOGY	09-01-98/08-31-99	MASSACHUSETTS GENERAL HOSPITAL	124,731
3R01AG12689-03S1	RIDDLE, DONALD L GENES WITH MAJOR EFFECTS ON LIFE SPAN IN C ELEGANS	09-15-98/03-31-99	UNIVERSITY OF MISSOURI COLUMBIA	128,996
5R29AG12690-04	BRUZDZINSKI, CAROLYN J REGULATION OF PAI I AND LIVER PATHOLOGY IN THE AGED	07-01-98/06-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	104,373
5R01AG12694-04	COTMAN, CARL W ANIMAL MODEL OF HUMAN AGING AND DEMENTIA	09-30-98/08-31-99	UNIVERSITY OF CALIFORNIA IRVINE	158,083
5R01AG12712-03	MC CAFFREY, TIMOTHY A TGF-B1 RECEPTORS IN RESTENOSIS AND AGING	03-15-98/02-28-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	262,637
5R01AG12713-04	YESAVAGE, JEROME A AGE RELATED LONGITUDINAL CHANGES IN AVIATOR PERFORMANCE	09-01-98/08-31-99	STANFORD UNIVERSITY	174,233
1R01AG12716-01A1	SAYKIN, ANDREW J MEMORY ACTIVATION IN DAT: A FUNCTIONAL MRI STUDY	04-01-98/	DARTMOUTH COLLEGE	
5R29AG12718-04	SHAPIRO, I PAUL FUNCTION OF AN APP CYTOPLASMIC DOMAIN BINDING PROTEIN	01-01-98/12-31-98	OREGON HEALTH SCIENCES UNIVERSITY	105,450

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
7R01AG12721-03	VINCENT, INEZ MITOTIC MECHANISMS IN ALZHEIMERS DISEASE	09-30-98/08-31-99	UNIVERSITY OF WASHINGTON	172,150
5R29AG12731-04	MARKS, NADINE F SOCIOECONOMIC INEQUALITIES, GENDER, AND MIDLIFE HEALTH	08-01-98/07-31-99	UNIVERSITY OF WISCONSIN MADISON	99,646
5R01AG12738-03	FLYNN, DONNA D NEURON/GLIA COMMUNICATION RELEVANCE FOR AD	05-15-98/04-30-99	UNIVERSITY OF MIAMI	208,668
5R01AG12745-03	FREEMAN, ELLEN W EPIDEMIOLOGIC STUDY OF THE LATE REPRODUCTIVE YEARS	02-01-98/01-31-99	UNIVERSITY OF PENNSYLVANIA	532,118
5R01AG12749-04	SELKOE, DENNIS J PROTEIN/PROTEIN INTERACTIONS IN THE BIOLOGY OF BETA APP	12-01-97/11-30-98	BRIGHAM AND WOMEN'S HOSPITAL	421,573
5R01AG12753-04	HASHER, LYNN A AGE, OPTIMAL TIME OF DAY, AND COGNITION	09-01-98/08-31-99	DUKE UNIVERSITY	243,650
5R01AG12765-04	BLAZER, DAN G, II PHSE TEN YEAR FOLLOW-UP	09-30-98/08-31-99	DUKE UNIVERSITY	402,567
5R01AG12806-04	COLDITZ, GRAHAM A, Ph.D. IMPACT OF WORK ON WOMEN'S HEALTH AND QUALITY OF LIFE	09-01-98/08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	257,483
5P20AG12810-05	WISE, DAVID A NBER CENTER FOR AGING AND HEALTH RESEARCH	09-15-98/06-30-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	443,867
3P20AG12810-05S1	WISE, DAVID A NBER CENTER FOR AGING AND HEALTH RESEARCH	09-30-98/06-30-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	75,000
5P20AG12815-05	HURD, MICHAEL A RAND CENTER FOR THE STUDY OF AGING	09-01-98/06-30-99	RAND CORPORATION	258,778
5R29AG12819-04	KENT, JANE A SKELETAL MUSCLE FUNCTION IN AGING	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	90,426
5R01AG12822-03	EHSANI, ALI A ADAPTATIONS TO EXERCISE IN OLDER HYPERTENSIVE SUBJECTS	08-01-98/07-31-99	WASHINGTON UNIVERSITY	271,617
5R29AG12834-04	KIRWAN, JOHN P AGE, EXERCISE, DIET--EFFECTS ON GLUCOSE/FATTY ACID CYCLE	09-01-98/08-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	107,392
5P20AG12836-05	BEHRMAN, JERE H CENTER ON THE DEMOGRAPHY OF AGING	09-15-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	186,215

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5P20AG12837-05	WOLF, DOUGLAS A CENTER FOR DEMOGRAPHY AND ECONOMICS OF AGING	09-15-98/06-30-99	SYRACUSE UNIVERSITY	279,125
5P20AG12839-05	LEE, RONALD D CENTER ON THE DEMOGRAPHY AND ECONOMICS OF AGING	09-15-98/06-30-99	UNIVERSITY OF CALIFORNIA BERKELEY	209,922
5P20AG12844-05	SCHOEN, ROBERT HOPKINS CENTER ON THE DEMOGRAPHY OF AGING	09-15-98/06-30-99	JOHNS HOPKINS UNIVERSITY	142,399
5P20AG12846-05	HERMALIN, ALBERT I MICHIGAN EXPLORATORY CENTER ON DEMOGRAPHY OF AGING	09-30-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	448,861
5R01AG12850-06	FUKUCHI, KEN-ICHIRO EXPRESSION OF PERLECAN & BETA AMYLOID PRECURSOR PROTEIN	09-01-98/08-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	229,202
5P20AG12852-05	MANTON, KENNETH G CENTER FOR LONGITUDINAL ANALYSIS IN MEDICAL DEMOGRAPHY	09-30-98/06-30-99	DUKE UNIVERSITY	372,117
3P20AG12852-05S1	MANTON, KENNETH G CENTER FOR LONGITUDINAL ANALYSIS IN MEDICAL DEMOGRAPHY	09-30-98/06-30-99	DUKE UNIVERSITY	150,000
5R01AG12853-05	MAGGIO, JOHN AMYLOID PEPTIDE CONFORMATION AND AMYLOIDOSIS	01-01-98/12-31-98	UNIVERSITY OF CINCINNATI	249,135
3P20AG12857-04S1	WAITE, LINDA J CENTER ON DEMOGRAPHY AND ECONOMICS OF AGING (COA)	06-29-98/06-30-98	NATIONAL OPINION RESEARCH CENTER	111,250
5P20AG12857-05	WAITE, LINDA J CENTER ON DEMOGRAPHY AND ECONOMICS OF AGING (COA)	09-15-98/06-30-99	NATIONAL OPINION RESEARCH CENTER	196,716
5R01AG12859-05	YUAN, JUNYING MECHANISM & FUNCTIONS OF ICH-3 IN APOPTOSIS/INFLAMMATION	09-01-98/08-31-99	HARVARD UNIVERSITY	336,471
5R44AG12881-03	KENNEDY, GEMMA T UNIQUE PROTECTIVE BARRIER FOR INCONTINENCE	04-01-98/03-31-99	BIOMEDICAL DEVELOPMENT CORPORATION	375,000
2R44AG12883-02	HARTMAN, SHERI L MEDIA-BASED APPROACH TO PLANNING CARE FOR FAMILY ELDERS	03-01-98/02-28-99	NORTHWEST MEDIA, INC.	421,201
3R01AG12910-08S2	MULLAN, JOSEPH T STRESS AND COPING AMONG AIDS CAREGIVERS	09-30-97/08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	75,000
2R13AG12917-04	MILLER, RICHARD A SUMMER TRAINING COURSES IN AGING RESEARCH	04-01-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	33,014

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG12921-03	HURD, MICHAEL D USING SUBJECTIVE INFORMATION TO EXPLAIN SAVING DECISIONS	07-15-98/03-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	95,776
5R01AG12925-04	HARRIS, DAVID A PROPERTIES OF CELLULAR PRION PROTEINS	05-01-98/04-30-99	WASHINGTON UNIVERSITY	213,344
3R01AG12925-04S1	HARRIS, DAVID A PROPERTIES OF CELLULAR PRION PROTEINS	09-30-98/04-30-99	WASHINGTON UNIVERSITY	41,630
2R01AG12926-04	GUNDERSEN, GREGG G PHOSPHATASE TARGETING AND ALZHEIMER'S DISEASE TAU	07-01-98/	COLUMBIA UNIVERSITY HEALTH SCIENCES	
5R01AG12928-10	MALENKA, ROBERT C MECHANISMS OF SYNAPTIC PLASTICITY IN THE HIPPOCAMPUS	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	272,288
5R01AG12945-04	LEBOEUF, RENEE C MODELING ALZHEIMERS DISEASE--BY AMYLOID AND APOE	09-01-98/08-31-99	UNIVERSITY OF WASHINGTON	278,476
5R37AG12947-04	JOHNSON, EUGENE M, JR MECHANISM OF PROGRAMMED NEURONAL DEATH	05-01-98/04-30-99	WASHINGTON UNIVERSITY	219,597
5R01AG12954-08	NEVE, RACHAEL L MOLECULAR BIOLOGY OF ALZHEIMER DISEASE NEURODEGENERATION	07-01-98/06-30-99	MC LEAN HOSPITAL (BELMONT, MA)	196,240
5R01AG12962-03	HERMAN, JAMES P GLUCOCORTICOID RECEPTOR MECHANISMS STRESS AND AGING	05-01-98/04-30-99	UNIVERSITY OF KENTUCKY	160,687
5R01AG12963-05	SALMON, DAVID P COGNITIVE STUDIES OF THE LEWY BODY VARIANT OF AD	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	218,795
5R44AG12964-03	STATES, JEFFREY D TWO POSITIONAL DEVICES FOR UPPER TORSO ELEVATION	09-01-98/08-31-99	DESIGN ABLE, INC.	179,674
5R01AG12975-02	HAAN, MARY N EPIDEMIOLOGY OF FUNCTIONAL STATUS IN ELDERLY HISPANICS	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA DAVIS	487,528
3R01AG12975-02S1	HAAN, MARY N EPIDEMIOLOGY OF FUNCTIONAL STATUS IN ELDERLY HISPANICS	07-01-98/03-31-99	UNIVERSITY OF CALIFORNIA DAVIS	212,924
5R01AG12978-03	GARNER, CRAIG C BRAIN GUANYLATE KINASES--SYNAPTIC STABILITY MODULATORS	06-01-98/05-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	185,622
5U01AG12980-04	WILLIS, ROBERT J ASSET AND HEALTH DYNAMICS AMONG THE OLDEST OLD	02-15-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	2,283,820

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5R01AG12986-03	SCHEFF, STEPHEN W QUANTIFICATION OF SYNAPSE DENSITY IN ALZHEIMERS DISEASE	08-01-98	07-31-99	UNIVERSITY OF KENTUCKY	184,540
5R29AG12987-04	CLARK, DANIEL O FUNCTIONAL STATUS, EXERCISE, SES, & RACE AMONG THE AGED	09-01-98	08-31-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	98,935
5P01AG12992-04	BROWN, ROBERT H, JR SUPEROXIDE DISMUTASE IN AGING AND NEURODEGENERATION	04-15-98	03-31-99	MASSACHUSETTS GENERAL HOSPITAL	854,188
5P01AG12993-04	MICHAELIS, ELIAS K REACTIVE OXYGEN SPECIES AND AGING	08-01-98	07-31-99	UNIVERSITY OF KANSAS LAWRENCE	928,139
2R01AG12995-04	GABRIELI, JOHN D FUNCTIONAL MRI ANALYSIS OF MEMORY IN AGING	05-01-98	04-30-99	STANFORD UNIVERSITY	321,928
5R01AG12996-04	HALE, SANDRA S PROCESSING SPEED, WORKING MEMORY AND COGNITION IN DAT	07-01-98	06-30-99	WASHINGTON UNIVERSITY	97,892
1R01AG13000-01A2	SPIRO, AVRON III ROLE OF CARDIOVASCULAR RISK FACTORS IN COGNITIVE AGING	04-01-98	/	BOSTON UNIVERSITY	
5R01AG13007-04	COTMAN, CARL W MECHANISMS AND MOLECULAR PROFILES OF DEGENERATION IN AD	05-01-98	04-30-99	UNIVERSITY OF CALIFORNIA IRVINE	223,982
5R01AG13008-04	BOURGEOIS, MICHELLE S INCREASING EFFECTIVE COMMUNICATION IN NURSING HOMES	04-01-98	03-31-99	FLORIDA STATE UNIVERSITY	345,806
5R01AG13009-03	PETERSON, CHARLOTTE A MYOBLAST GROWTH AND DIFFERENTIATION DURING MUSCLE AGING	02-15-98	01-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	101,915
5R01AG13013-04	SCHNELLE, JOHN F MOBILITY AND INCONTINENCE MANAGEMENT EFFECTS ON SICKNESS	09-01-98	08-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	449,920
5R29AG13018-04	FLEISCHMAN, DEBRA A AGING AND IMPLICIT MEMORY--EVIDENCE FROM LESION STUDIES	05-15-98	04-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	119,560
5R29AG13019-04	CORCORAN, MARY A CAREGIVING STYLES OF SPOUSES WHO PROVIDE DEMENTIA CARE	08-01-98	07-31-99	GEORGE WASHINGTON UNIVERSITY	124,580
5R29AG13020-03	MADRIAN, BRIDGETTE C HEALTH INSURANCE AND THE LABOR MARKET--REVISED	07-15-98	06-30-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	114,664
5R01AG13027-04	JONIDES, JOHN AGE & WORKING MEMORY--NEUROIMAGING & BEHAVIORAL STUDIES	07-01-98	06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	284,470

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG13036-03	AMICK, BENJAMIN C, III WORKING LIVES AND MORTALITY IN AGING	05-01-98/04-30-99	NEW ENGLAND MEDICAL CENTER	287,478
5R01AG13037-03	COX, DONALD DEMONSTRATION EFFECT IN INTERGENERATIONAL TRANSFERS	03-01-98/01-31-00	BOSTON COLLEGE	195,560
3R01AG13038-02S1	SEALS, DOUGLAS R EXERCISE IN HYPERTENSIVE POSTMENOPAUSAL WOMEN	02-01-98/06-30-98	UNIVERSITY OF COLORADO AT BOULDER	15,134
5R01AG13038-03	SEALS, DOUGLAS R EXERCISE IN HYPERTENSIVE POSTMENOPAUSAL WOMEN	07-01-98/06-30-99	UNIVERSITY OF COLORADO AT BOULDER	408,587
2R44AG13049-02A2	ZAWADSKI, RICK T ADVANCING ADCS VIA A STANDARDIZED CORE DATA SET	08-15-98/07-31-99	RTZ ASSOCIATES	393,636
3R01AG13069-03S1	GREENSPAN, SUSAN L FEMORAL OSTEOPOROSIS IN ELDERLY WOMEN	04-25-98/04-30-98	BETH ISRAEL DEACONESS MEDICAL CENTER	80,249
5R01AG13069-04	GREENSPAN, SUSAN L FEMORAL OSTEOPOROSIS IN ELDERLY WOMEN	05-01-98/04-30-99	BETH ISRAEL DEACONESS MEDICAL CENTER	449,654
5R01AG13070-03	WELLE, STEPHEN L NUTRITION AND MYOFIBRILLAR PROTEIN METABOLISM IN OLD AGE	02-01-98/01-31-99	UNIVERSITY OF ROCHESTER	188,629
5R01AG13071-03	GALILI, URI MOLECULAR CHANGES IN ANTIBODY AFFINITY IN THE ELDERLY	03-15-98/01-31-00	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	238,885
5R01AG13078-11	FINK, PAMELA J SELECTION OF THE T CELL RECEPTOR REPERTOIRE	09-01-98/08-31-99	UNIVERSITY OF WASHINGTON	226,231
5R01AG13081-03	PONNAPPAN, USHA TRANSCRIPTION FACTOR NFKB AND IMMUNE SENESCENCE	08-01-98/07-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	124,993
5R01AG13087-05	DONAHUE, HENRY J GAP JUNCTIONS AND BONE CELL RESPONSE TO PHYSICAL SIGNALS	09-01-98/08-31-99	PENNSYLVANIA STATE UNIV HERSHEY MED	195,955
5R01AG13108-14	ROTHENBERG, ELLEN V LINEAGE ANALYSIS OF FUNC IN THYMOCYTE DIFF.	01-01-98/12-31-98	CALIFORNIA INSTITUTE OF TECHNOLOGY	273,741
5R01AG13132-05	DORSHKIND, KENNETH A LYMPHOPOIESIS DURING THYMIC INVOLUTION AND REGENERATION	05-01-98/04-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	208,179
1R43AG13134-01A1	MBANASO, MICHAEL U ELDERLY AFRICAN AMERICANS AS CAREGIVERS	11-01-97/	APPLIED RESEARCH INTERNATIONAL, INC.	

NATIONAL INSTITUTE ON AGING - ACTIVE GRANTS FOR FY 1997 - 1998

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG13153-03	KELNER, MICHAEL J ALTERATION OF ERCC GENE EXPRESSION IN VITRO AND IN VIVO	08-01-98/07-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	253,553
3R01AG13154-03S1	WALLACE, DOUGLAS C MITOCHONDRIAL GENETICS AND AGING	12-01-97/06-30-98	EMORY UNIVERSITY	2,781
5R01AG13154-04	WALLACE, DOUGLAS C MITOCHONDRIAL GENETICS AND AGING	07-01-98/06-30-99	EMORY UNIVERSITY	218,804
5R01AG13159-03	KOTLIKOFF, LAURENCE J ADEQUACY OF SAVING AND INSURANCE OF AMERICANS APPROACH	09-01-98/08-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	175,101
5R01AG13165-04	TURNER, DENNIS A NEURONAL AND POST LESION PLASTICITY IN AGING HIPPOCAMPUS	08-15-98/07-31-99	DUKE UNIVERSITY	220,594
5R01AG13170-03	MORRIS, MARTHA C VITAMINS E/C & INCIDENT AD-BIRACIAL COMMUNITY STUDY	05-01-98/04-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	402,970
5R01AG13180-02	SZINOVACZ, MAXIMILIANE E MARRIAGE, FAMILIES, AND RETIREMENT	07-01-98/06-30-99	OLD DOMINION UNIVERSITY	93,478
5R01AG13185-04	LIEM, RONALD K NEUROFILAMENT KINASES AND ALZHEIMERS DISEASE TAU	08-01-98/07-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	353,849
5R01AG13196-03	MARMOT, MICHAEL G CHANGES IN HEALTH--SOCIOECONOMIC STATUS AND PATHWAYS	09-30-98/03-31-99	U OF L UNIVERSITY COLLEGE LONDON	203,019
5R01AG13199-03	KAPLAN, GEORGE A EPIDEMIOLOGY OF QUALITY OF LIFE AND AGING	08-01-98/07-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	221,285
5R29AG13204-03	VOYTKO, MARY L COGNITION AND ESTROGEN IN MENOPAUSE	05-01-98/04-30-99	WAKE FOREST UNIVERSITY	119,827
5R29AG13208-04	BOWSER, ROBERT P NOVEL ANTIGEN IN DEVELOPING BRAIN AND ALZHEIMERS DISEASE	08-01-98/07-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	108,317
5R01AG13228-03	DWYER, JEFFREY W RECIPROCITY, FAMILY LONG TERM CARE AND ELDER WELL BEING	09-01-98/08-31-99	WAYNE STATE UNIVERSITY	206,765
5R29AG13237-04	SILVERSTEIN, MERRIL D GRANDPARENT/ADULT GRANDCHILD RELATIONS & PSYCHOLOGICAL	09-01-98/08-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	92,379
5R01AG13241-04	HALL, JANET E AGING AND THE HYPOTHALAMIC-PITUITARY REPRODUCTIVE AXIS	08-15-98/07-31-99	MASSACHUSETTS GENERAL HOSPITAL	300,899

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG13254-03	MANTON, KENNETH G POPULATION EFFECT OF CHRONIC DISEASE AND MORTALITY	05-01-98/04-30-99	DUKE UNIVERSITY	80,710
3U01AG13255-03S1	MAHONEY, DIANE M TLC TELEPHONE SYSTEM FOR ALZHEIMERS FAMILY CAREGIVERS	12-15-97/08-31-98	BOSTON MEDICAL CENTER	56,903
3U01AG13255-03S2	MAHONEY, DIANE M TLC TELEPHONE SYSTEM FOR ALZHEIMERS FAMILY CAREGIVERS	12-15-97/08-31-98	BOSTON UNIVERSITY	56,903
5U01AG13265-03	GITLIN, LAURA N HOME ENVIRONMENTAL SKILL BUILDING PROGRAM FOR CAREGIVERS	09-15-98/08-31-99	THOMAS JEFFERSON UNIVERSITY	401,199
3P30AG13280-03S1	RABINOVITCH, PETER S BASIC BIOLOGY OF AGING	04-01-98/06-30-98	UNIVERSITY OF WASHINGTON	49,000
5P30AG13280-04	RABINOVITCH, PETER S BASIC BIOLOGY OF AGING	07-01-98/06-30-99	UNIVERSITY OF WASHINGTON	490,999
3P30AG13282-02S1	CRISTOFALO, VINCENT J DYSREGULATION DURING AGING--MOLECULES, CELLS AND TISSUES	04-01-98/06-30-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	49,000
5P30AG13282-03	CRISTOFALO, VINCENT J DYSREGULATION DURING AGING--MOLECULES, CELLS AND TISSUES	07-01-98/06-30-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	400,829
3P30AG13283-03S2	FAULKNER, JOHN A BIOLOGY OF AGING	04-01-98/06-30-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	48,994
5P30AG13283-04	FAULKNER, JOHN A BIOLOGY OF AGING	07-01-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	445,575
5U01AG13289-04	GALLAGHER-THOMPSON, DOLORES E TREATMENT OF DISTRESS IN HISPANIC AND ANGLO CAREGIVERS	09-01-98/08-31-99	PALO ALTO INSTITUTE FOR RES & EDU	390,173
5U01AG13297-04	EISDORFER, CARL FAMILY-BASED INTERVENTIONS FOR CAREGIVERS	09-15-98/08-31-99	UNIVERSITY OF MIAMI	479,834
3U01AG13297-04S1	EISDORFER, CARL FAMILY BASED INTERVENTIONS FOR CAREGIVERS	09-30-98/08-31-99	UNIVERSITY OF MIAMI	68,779
7R29AG13300-04	DOU, QING P FUNCTIONS OF RB PROTEASE(S) IN APOPTOSIS	06-01-98/02-28-99	UNIVERSITY OF SOUTH FLORIDA	56,265
5U01AG13305-04	SCHULZ, RICHARD COORDINATING CENTER FOR ENHANCING ADRD CAREGIVING	09-01-98/08-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	438,760

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3U01AG13305-04S1	SCHULZ, RICHARD COORDINATING CENTER FOR ENHANCING ADRD CAREGIVING	09-30-98/08-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	50,000
5R01AG13308-04	SMALL, GARY W FUNCTIONAL MRI FOR EARLY DIAGNOSIS OF ALZHEIMER DISEASE	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	231,489
5R01AG13309-04	KALU, DIKE N ESTROGEN AND AGE RELATED DECLINE IN CALCIUM ABSORPTION	07-01-98/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	249,752
5U01AG13313-04	BURNS, ROBERT PROVIDERS AND ALZHEIMERS CAREGIVERS TOGETHER (PACT)	09-01-98/08-31-99	UNIVERSITY OF TENNESSEE AT MEMPHIS	404,055
3P30AG13314-02S2	VIJG, JAN A HARVARD NATHAN SHOCK CENTER IN BASIC BIOLOGY OF AGING	02-01-98/06-30-98	HARVARD UNIVERSITY	27,079
3P30AG13314-02S3	VIJG, JAN A HARVARD NATHAN SHOCK CENTER IN BASIC BIOLOGY OF AGING	04-01-98/06-30-98	HARVARD UNIVERSITY	48,836
5P30AG13314-03	WEI, JEANNE Y HARVARD NATHAN SHOCK CENTER IN BASIC BIOLOGY OF AGING	07-01-98/06-30-99	HARVARD UNIVERSITY	543,503
5R29AG13318-04	NIEMINEN, ANNA-LIISA MITOCHONDRIAL FUNCTION IN OXIDATIVE INJURY	01-01-98/12-31-98	CASE WESTERN RESERVE UNIVERSITY	107,100
3P30AG13319-03S1	RICHARDSON, ARLAN G NATHAN SHOCK AGING CENTER	04-01-98/06-30-98	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	49,000
5P30AG13319-04	RICHARDSON, ARLAN G NATHAN SHOCK AGING CENTER	07-01-98/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	521,049
3P01AG13329-03S1	ROSENTHAL, NADIA A MECHANISMS OF MUSCLE AGING--ANALYSIS AND INTERVENTION	01-01-98/06-30-98	MASSACHUSETTS GENERAL HOSPITAL	87,357
5P01AG13329-04	ROSENTHAL, NADIA A MECHANISMS OF MUSCLE AGING--ANALYSIS AND INTERVENTION	09-30-98/06-30-99	MASSACHUSETTS GENERAL HOSPITAL	956,397
5R01AG13332-02	MILLS, PAUL J HORMONE REPLACEMENT THERAPY AND ADRENERGIC PHYSIOLOGY	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	208,041
5R01AG13333-10	HAYES, WILSON C HIP FRACTURE RISK PREDICTION BY QDR	05-01-98/04-30-99	BETH ISRAEL DEACONESS MEDICAL CENTER	211,026
2R44AG13356-02	IRVINE, A B INTERACTIVE HRA FOR BEHAVIOR CHANGE BY THE ELDERLY	08-15-98/07-31-99	OREGON CENTER FOR APPLIED SCIENCE	362,877

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R44AG13363-03	SEARS, JAMES T GERIATRIC INDEPENDENT READING DEVICE	05-01-98/04-30-99	ASCENT TECHNOLOGY	349,249
5R01AG13396-03	MONK, TIMOTHY H PHASE SHIFT TOLERANCE IN OLDER PEOPLE	02-01-98/01-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	159,223
5R01AG13398-03	DE-BLAS, ANGEL L GABAA RECEPTORS IN AGING	06-15-98/05-31-99	UNIVERSITY OF CONNECTICUT STORRS	136,315
1R01AG13403-01A1	JOHNSON, JULIE E SELF-CARE TREATMENTS FOR INSOMNIA IN OLDER ADULTS	12-01-97/	UNIVERSITY OF NEVADA RENO	
5R01AG13406-04	BLAU, DAVID M HEALTH INSURANCE, HEALTH, AND RETIREMENT DYNAMICS	09-01-98/08-31-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	114,208
5R01AG13408-04	PEACOCK, MUNRO COMPARISON OF BONE STRENGTH AND MUSCLE STRENGTH AT HIP	09-01-98/08-31-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	270,659
5R29AG13409-04	CAMPBELL, WAYNE W WEIGHT LOSS AND RESISTANCE TRAINING IN OLDER WOMEN	07-01-98/06-30-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	106,755
5R01AG13411-03	COTMAN, CARL W ACTIVITY DEPENDENT PLASTICITY IN THE AGING BRAIN	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA IRVINE	220,354
5R01AG13418-03	DUNCAN, MARILYN J NEURAL MECHANISMS RESETTING THE AGED CIRCADIAN PACEMAKER	06-01-98/05-31-99	UNIVERSITY OF KENTUCKY	181,288
5R01AG13419-03	ANDERSEN, GEORGE J AGING AND PERFORMANCE OF COGNITIVE AND PERCEPTUAL TASKS	06-15-98/05-31-99	UNIVERSITY OF CALIFORNIA RIVERSIDE	119,479
5R01AG13425-03	WISE, PHYLLIS M NEUROPEPTIDES AND CARCADIAN RHYTHMS DURING AGING	07-01-98/05-31-99	UNIVERSITY OF KENTUCKY	187,709
5R01AG13426-03	MCMAHON, DOUGLAS G CELLULAR MECHANISMS OF CIRCADIAN PACEMAKER AGING	06-01-98/05-31-99	UNIVERSITY OF KENTUCKY	132,682
5R01AG13435-02	BREWER, GREGORY J AGE DEPENDENT RESPONSE OF HIPPOCAMPAL NEURONS TO STRESS	04-01-98/03-31-99	SOUTHERN ILLINOIS UNIVERSITY SCH OF	145,815
5R01AG13444-03	JENNES, LOTHAR M GNRH AND ITS CNS RECEPTORS AND REPRODUCTIVE AGING	06-01-98/05-31-99	UNIVERSITY OF KENTUCKY	153,018
5R01AG13445-03	MONTEIRO, MERVYN J ALZHEIMER PHF-ASSOCIATED KINASES	09-01-98/08-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	191,465

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG13454-03	LEGAN, SANDRA J NEURAL CONTROL OF LUTEINIZING HORMONE SECRETION IN AGING	07-01-98/06-30-99	UNIVERSITY OF KENTUCKY	204,105
5R01AG13457-03	FIATARONE, MARIA A EXERCISE EFFECTS ON PROTEIN NUTRITION IN RENAL FAILURE	08-01-98/07-31-99	TUFTS UNIVERSITY BOSTON	126,682
5R01AG13459-03	ORR, WILLIAM C REGULATION OF ANTIOXIDATIVE GENES AND AGING	08-01-98/07-31-99	SOUTHERN METHODIST UNIVERSITY	161,898
5R01AG13469-03	QUANDT, SARA A UNDER NUTRITION IN RURAL ELDERLY--PREDICTORS AND PROCESS	09-01-98/08-31-99	WAKE FOREST UNIVERSITY	201,606
5R01AG13474-03	BATES, ELIZABETH A AGING AND BILINGUALISM	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	194,125
5R01AG13478-03	SMITH, KEN R KINSHIP AND SOCIO-DEMOGRAPHIC DETERMINANTS OF MORTALITY	09-30-98/08-31-99	UNIVERSITY OF UTAH	286,248
3R01AG13478-03S1	SMITH, KEN R KINSHIP AND SOCIODEMOGRAPHIC DETERMINANTS OF MORTALITY	09-30-98/08-31-99	UNIVERSITY OF UTAH	147,930
5R29AG13482-03	GRODSTEIN, FRANCINE PROSPECTIVE STUDY OF COGNITIVE FUNCTION IN WOMEN	07-01-98/06-30-99	BRIGHAM AND WOMEN'S HOSPITAL	118,786
5R01AG13483-03	D'ESPOSITO, MARK WORKING MEMORY IN PARKINSONS DISEASE AND AGING	07-15-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	279,034
5R01AG13487-03	ALNEMRI, EMAD S CYSTEINE PROTEASES IN APOPTOSIS AND CANCER	08-01-98/07-31-99	THOMAS JEFFERSON UNIVERSITY	236,181
5P01AG13494-02	GASH, DON M AGING OF CENTRAL DOPAMINERGIC SYSTEMS IN PRIMATES	02-15-98/01-31-99	UNIVERSITY OF KENTUCKY	723,015
5R01AG13496-03	KRAFFT, GRANT A STRUCTURE/FUNCTION OF ALZHEIMERS AMYLOID-B AGGREGATES	09-30-98/08-31-99	EVANSTON NORTHWESTERN HEALTHCARE	232,672
5R01AG13499-03	FINCH, CALEB E APOJ (CLUSTERIN) IN ALZHEIMER DISEASE AND AGING	05-01-98/03-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	466,325
5R01AG13501-03	GOTTLIEB, ROBERTA A MECHANISMS OF APOPTOSIS IN BLOOD CELLS	02-01-98/01-31-99	SCRIPPS RESEARCH INSTITUTE	253,477
5R01AG13508-03	BERRY, JANE M MEMORY SELF EFFICACY AND MEMORY PERFORMANCE IN ADULTHOOD	09-01-98/08-31-99	UNIVERSITY OF RICHMOND	152,184

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R44AG13515-03	GIBIAN, GARY L IMPROVED MULTI MICROPHONE DIRECTIONAL HEARING AID	03-01-98/02-28-99	PLANNING SYSTEMS, INC.	301,802
5R01AG13519-04	GLOWACKI, JULIE AGE AND HORMONES ON BONE MARROW BIOLOGY	09-01-98/08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	280,259
5R01AG13523-04	LONG, MICHAEL W AGE RELATED CHANGES IN HUMAN OSTEOPROGENITOR CELLS	04-15-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	205,124
5R01AG13527-03	GAY, CAROL V EVALUATION OF BONE CELL FUNCTION BY CONFOCAL IMAGING	09-01-98/08-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	166,375
5R01AG13534-04	PACIFICI, ROBERTO MENOPAUSE AND HUMAN OSTEOCLASTOGENESIS	06-15-98/05-31-99	BARNES-JEWISH HOSPITAL	228,366
5R01AG13541-03	STOLLAR, BERNARD D MECHANISMS OF AUTOANITBODY FORMATION IN HUMAN AGING	08-01-98/07-31-99	TUFTS UNIVERSITY BOSTON	219,483
5R01AG13542-02	MURASKO, DONNA M ENHANCEMENT OF NON-SPECIFIC IMMUNITY IN AGED MICE	12-01-97/11-30-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	256,350
5R01AG13560-04	WALTER, CHRISTI A DNA REPAIR PROTEINS TARGETED TO THE MITOCHONDRIAL MATRIX	07-01-98/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	257,546
5R01AG13563-03	SOHAL, RAJINDAR S DIETARY MODULATION OF CELLULAR OXIDATIVE STRESS IN AGING	04-01-98/03-31-99	SOUTHERN METHODIST UNIVERSITY	175,970
5R01AG13566-04	NAPOLI, JOSEPH L RETINAL DEHYDROGENASES	07-01-98/06-30-99	STATE UNIVERSITY OF NEW YORK AT BUFF	176,080
5R44AG13575-03	MC KUSICK, DAVID LONG RANGE POPULATION PROJECTION BY DISABILITY STATUS II	09-01-98/08-31-99	ACTUARIAL RESEARCH CORPORATION	361,175
2R01AG13586-04	SHAY, NEIL F ZINC DEFICIENCY AND HYPOTHALAMIC DYSFUNCTION	08-01-98/	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	
1R43AG13600-01A2	NOELL, JOHN M MENOPAUSE--ENHANCING WOMENS KNOWLEDGE & DECISION MAKING	09-15-98/05-31-99	OREGON CENTER FOR APPLIED SCIENCE	99,984
5R01AG13612-04	MAJUMDAR, SHARMILA NON-INVASIVE ASSESSMENT OF TRABECULAR ARCHITECTURE	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	299,670
5R29AG13614-03	TUN, PATRICIA A AGING AND SPEECH COMPREHENSION IN DISTRACTING CONDITIONS	02-01-98/01-31-99	BRANDEIS UNIVERSITY	101,902

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG13616-11	DE LEON, MONY J CLINICAL CORRELATES OF LONGITUDINAL PET CHANGES IN AD	09-01-98/08-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	352,576
5R01AG13617-04	YOUNG, ANNE B METABOTROPIC GLUTAMATE RECEPTORS IN NEURODEGENERATION	08-01-98/07-31-99	MASSACHUSETTS GENERAL HOSPITAL	230,855
5R01AG13619-04	PITAS, ROBERT E APOE3 AND APOE4 EFFECTS ON CELLULAR PATHOBIOLOGY	07-01-98/06-30-99	J. DAVID GLADSTONE INSTITUTES	325,184
5R01AG13620-12	ZIFF, EDWARD B DYNAMICS OF C-FOS PROTEIN INTERACTIONS	08-01-98/07-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	169,786
7R01AG13622-04	SILVA, ALCINO J GENE TARGETING APPROACHES TO LEARNING AND MEMORY STUDIES	08-15-98/06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	243,481
5R29AG13623-05	LIPPA, CAROL F DEMENTIA WITH PARKINSONISM: WHAT ARE WE DIAGNOSING?	09-01-98/08-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	116,499
5R01AG13625-12	ROODMAN, GARSON D DEVELOPMENTAL ASPECTS OF OSTEOCLAST FORMATION IN VITRO	08-01-98/07-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	182,313
5P60AG13629-04	HOLLOSZY, JOHN O WASHINGTON UNIVERSITY CLAUDE D PEPPER OAIC	09-01-98/08-31-99	WASHINGTON UNIVERSITY	1,181,888
5P60AG13631-03	BESDINE, RICHARD W CLAUDE PEPPER OLDER AMERICANS INDEPENDENCE CENTER	09-01-98/08-31-99	UNIVERSITY OF CONNECTICUT HEALTH CEN	1,116,437
5R01AG13636-02	KAUFMAN, SHARON R ELDERLY AND THE EXPERIENCE OF DYING IN THE HOSPITAL	01-01-98/12-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	147,645
7R01AG13637-03	HERMAN, BRIAN A MECHANISMS OF HYPOXIC/REPERFUSION INJURY IN ENDOTHELIUM	08-01-98/07-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	217,431
5R01AG13642-02	LI, GUOHUA PILOT AGING AND AVIATION SAFETY	09-01-98/08-31-99	JOHNS HOPKINS UNIVERSITY	269,179
1R01AG13658-01A1	THOMAS, JOHN IMPAIRMENT AND MORBIDITY IN AGING AFRICAN AMERICANS	11-01-97/	MEHARRY MEDICAL COLLEGE	
5R29AG13660-03	KOCEJA, DAVID SPINAL CONTROL OF BALANCE IN THE ELDERLY	07-01-98/06-30-99	INDIANA UNIVERSITY BLOOMINGTON	101,215
5R01AG13662-02	WHITFIELD, KEITH E HEALTH AND PSYCHOSOCIAL FACTORS IN OLDER BLACK TWINS	09-01-98/08-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	179,481

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5P01AG13663-03	SMITH, JAMES R CONTROL OF GENE EXPRESSION IN CELLULAR SENESCENCE	04-01-98/03-31-99	BAYLOR COLLEGE OF MEDICINE	1,223,807
5R01AG13667-03	WURTMAN, RICHARD J AGING AND SLEEP--ROLE OF MELATONIN	05-01-98/04-30-99	MASSACHUSETTS INSTITUTE OF TECHNOLOG	424,672
5R01AG13669-03	BECKER, JAMES T FUNCTIONAL NEUROIMAGING OF SEMANTIC MEMORY IN AD	04-01-98/03-31-00	UNIVERSITY OF PITTSBURGH AT PITTSBUR	187,552
5R01AG13671-03	VINCENZ, CLAUDIUS FAS ASSOCIATED DEATH DOMAIN (FADD)	03-15-98/02-28-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	186,380
5R01AG13672-03	KAMBOH, M I RISK GENES IN ALZHEIMERS DISEASE	05-01-98/04-30-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	369,482
5R01AG13693-02	FERNANDES, GABRIEL J CALORIE RESTRICTION AGING AND PROGRAMMED CELL DEATH	07-15-98/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	200,956
1R01AG13696-01A2	MC LAUGHLIN, DIANE K MULTI-LEVEL MODELS OF INDIVIDUAL MORTALITY RISKS	04-01-98/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	
5R01AG13705-03	LEVY, EFRAT CEREBRAL AMYLOID ANGIOPATHY--CYSTATIN C DEPOSITION	09-30-98/08-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	250,853
5R01AG13706-03	GOLDGABER, DMITRY Y INHIBITION OF AMYLOID FORMATION BY TRANSTHYRETIN & APOE	04-01-98/03-31-99	STATE UNIVERSITY NEW YORK STONY BROO	250,474
1R01AG13707-01A2	MENDES DE LEON, CARLOS F FUNCTIONAL DECLINE DURING BEREAVEMENT IN THE ELDERLY	12-01-97/	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
5R01AG13711-03	MILLER, RICHARD A WILD DERIVED MOUSE STOCKS--NEW MODELS FOR AGING RESEARCH	09-01-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	230,549
5R01AG13718-03	HALL, STEPHEN D AGING EFFECT ON DRUG BIOAVAILABILITY	07-01-98/06-30-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	263,020
5R01AG13720-02	GUST, DEBORAH A AGING AND STRESS IN FEMALES	12-01-97/11-30-98	EMORY UNIVERSITY	232,378
5R01AG13726-03	HIEBERT, SCOTT W E2F AND DIFFERENTIATION, APOPTOSIS, AND LEUKEMIA	02-01-98/01-31-99	VANDERBILT UNIVERSITY	200,800
5R01AG13729-03	JOHNSON, EUGENE M, JR BIOLOGY AND PHARMACOLOGY OF THE GDNF HOMOLOG NEURTURIN	04-01-98/03-31-99	WASHINGTON UNIVERSITY	343,607

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG13730-03	MILBRANDT, JEFFREY D PHYSIOLOGY AND GENETICS OF THE GDNF HOMOLOG NEURTURIN	06-01-98/05-31-99	WASHINGTON UNIVERSITY	350,713
5R44AG13731-03	CUTLER, NEAL E DECISION SUPPORT SOFTWARE FOR FINANCING LONG TERM CARE	09-30-98/08-31-99	NATIONAL COUNCIL ON AGING DEVELOP CO	334,060
5R29AG13735-02	LEE, JONATHAN P ENERGETICS/FOLDING/AMYLOIDOGENESIS--ALZHEIMERS DISEASE	04-01-98/03-31-99	BOSTON UNIVERSITY	119,880
5R01AG13736-04	ROTHMAN, JOEL H REGULATION OF PROGRAMMED CELL DEATH IN C ELEGANS	04-01-98/03-31-99	UNIVERSITY OF CALIFORNIA SANTA BARBA	165,227
1R01AG13739-01A2	FERRARO, KENNETH F PANEL STUDY OF AGING, BMI AND HEALTH AMONG MEN & WOMEN	07-01-98/06-30-99	PURDUE UNIVERSITY WEST LAFAYETTE	118,747
1R01AG13741-01A2	COLE, GREGORY M MICROGLIAL/LIPOPROTEIN INTERACTIONS WITH BETA-AMYLOID	01-01-98/12-31-98	UNIVERSITY OF CALIFORNIA LOS ANGELES	181,174
5R29AG13757-02	LOGSDON, REBECCA G QUALITY OF LIFE IN ALZHEIMERS DISEASE	07-01-98/06-30-99	UNIVERSITY OF WASHINGTON	110,159
1R15AG13758-01A2	KURYLO, DANIEL D GROUPING PRINCIPLES IN AGING AND ALZHEIMERS DISEASE	09-01-98/08-31-99	BOWDOIN COLLEGE	32,633
5R01AG13762-02	CLAYTON, DAVID F FUNCTION OF AN ALZHEIMER DISEASE-RELATED PROTEIN	12-01-97/11-30-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	203,157
7R15AG13767-02	ANGELOPOULOUS, THEODORE J APO B KINETICS PRE AND POST TRAINING IN ELDERLY ADULTS	01-01-99/01-31-01	UNIVERSITY OF CENTRAL FLORIDA	82,122
5R01AG13769-03	EKERDT, DAVID J CHANGING DECISIONS AND PLANS FOR RETIREMENT	09-01-98/08-31-99	UNIVERSITY OF KANSAS LAWRENCE	145,054
5R29AG13773-04	BRUGGE, KAREN L DETECTION OF EARLY DEMENTIA IN ADULTS WITH DOWN SYNDROME	09-01-98/08-31-99	OHIO STATE UNIVERSITY	79,745
5R01AG13783-02	BIRKEN, STEVEN FORMS OF GONADOTROPINS AS MARKERS OF MENOPAUSE	09-01-98/08-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	289,872
5R01AG13784-04	SASSOON, DAVID A MOLECULAR BASIS OF UTERINE CELLULAR INTERACTIONS	08-01-98/07-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	265,307
5R13AG13786-03	WILKING, SPENCER V SUMMER INSTITUTES IN GERIATRIC MEDICINE	07-01-98/06-30-99	BOSTON UNIVERSITY	40,874

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY 98				
7R01AG13789-04	KELSOE, GARNETT H SOMATIC GENETICS OF T CELL IMMUNITY	09-30-98/02-28-99	DUKE UNIVERSITY	123,200
5R01AG13793-02	WOLF, MARSHA E CASE CONTROL STUDY OF FOOTWEAR AND FALLS IN OLDER ADULTS	09-01-98/08-31-99	UNIVERSITY OF WASHINGTON	284,957
7R01AG13797-04	HERMAN, BRIAN A APOPTOSIS AND CERVICAL CANCER	08-01-98/07-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	208,137
5R01AG13798-09	YABLONKA-REUVENI, ZIPORA SATELLITE CELL DYNAMICS--A ROLE FOR THE MYOFIBER	09-01-98/08-31-99	UNIVERSITY OF WASHINGTON	280,260
5R01AG13799-04	PASINETTI, GIULIO M COMPLEMENT AND NEUROPROTECTION--A MODEL FOR ALZHEIMERS	09-01-98/08-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	197,678
5R01AG13807-04	SONNENSCHEIN, CARLOS BREAST CANCER & AGING--A SOMATIC CELL GENETICS APPROACH	09-01-98/08-31-99	TUFTS UNIVERSITY BOSTON	280,728
1R43AG13826-01A2	GOLDMAN, NEIL LIGHT FIELD FOR SLEEP PHASE SYNDROMES	07-01-98/04-30-99	ENLIGHTENED TECHNOLOGIES ASSOCIATES	100,000
2R44AG13830-02	AVENT, R RICHARD PORTABLE MULTIMEDIA FOR FAMILY CAREGIVER TRAINING	02-15-98/01-31-99	AMERICAN RESEARCH CORP OF VIRGINIA	379,403
2R44AG13832-02	ANDERSON, ALBERT F SYSTEM FOR MANAGING LONGITUDINAL SURVEY DATA	07-15-98/06-30-99	PUBLIC DATA QUERIES, INC.	376,208
3R44AG13832-02S1	ANDERSON, ALBERT F SYSTEM FOR MANAGING LONGITUDINAL SURVEY DATA	09-01-98/06-30-99	PUBLIC DATA QUERIES, INC.	151,880
5R01AG13843-04	ODI, WEE L IMPACT OF NURSING HOME ENVIRONMENT ON MORBID OUTCOMES	09-01-98/08-31-99	HEBREW REHABILITATION CENTER FOR AGE	244,764
5R01AG13845-04	MCELREE, BRIAN AGE EFFECTS IN ATTENTION & MEMORY--PROCESS DISSOCIATION	08-01-98/07-31-99	NEW YORK UNIVERSITY	250,872
5P30AG13846-03	KOWALL, NEIL W BOSTON UNIVERSITY ALZHEIMERS DISEASE CORE CENTER	07-15-98/06-30-99	BOSTON UNIVERSITY	778,659
3P30AG13846-03S1	KOWALL, NEIL W MOUSE BREEDIDNG COLONY FOR ALZHEIMER RESEARCH	09-30-98/06-30-99	BOSTON UNIVERSITY	128,069
3P30AG13846-03S2	KOWALL, NEIL W ALZHEIMERS DISEASE	08-01-98/06-30-99	BOSTON UNIVERSITY	75,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
2R01AG13847-10	RILEY, RICHARD L THE B CELL REPERTOIRE OF NORMAL AND AUTOIMMUNE MICE	07-01-98/		UNIVERSITY OF MIAMI	
5R01AG13853-03	SCHWINN, DEBRA A TRANSCRIPTIONAL REGULATION OF HUMAN 1A-ADRENOCEPTORS	03-01-98/	02-28-99	DUKE UNIVERSITY	166,291
5P30AG13854-03	MESULAM, MAREK-MARSEL M ALZHEIMERS DISEASE CORE CENTER	07-15-98/	06-30-99	NORTHWESTERN UNIVERSITY	813,773
3P30AG13854-03S1	MESULAM, MAREK-MARSEL M ALZHEIMERS DISEASE CENTER	08-01-98/	06-30-99	NORTHWESTERN UNIVERSITY	53,721
5R01AG13856-03	HERING, THOMAS M REGULATION OF CARTILAGE REPAIR-SPECIFIC GENE EXPRESSION	03-15-98/	02-28-99	CASE WESTERN RESERVE UNIVERSITY	206,611
5R01AG13857-03	POOLE, A R TYPE II COLLAGEN DENATURATION IN AGING & OSTEOARTHRITIS	06-01-98/	05-31-99	MC GILL UNIVERSITY	133,069
5R01AG13860-03	HODIS, HOWARD N VITAMIN E ATHEROSCLEROSIS PREVENTION STUDY	04-01-98/	03-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	497,637
5R01AG13863-03	SLOANE, PHILIP D ALTERNATIVES TO NURSING HOMES FOR ALZHEIMERS DISEASE	09-01-98/	08-31-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	451,996
1R01AG13870-01A2	STEWART, THOMAS R AGING AND MULTIPLE CUE PROBABILITY LEARNING	01-01-98/		STATE UNIVERSITY OF NEW YORK AT ALBA	
7R01AG13871-03	ZIMMERMAN, SHERYL I MEDICAL AND FUNCTIONAL OUTCOMES OF RESIDENTIAL CARE	09-01-98/	08-31-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	461,403
1R29AG13873-01A2	SALAMONE, LORAN M GENETIC & LIFE-STYLE FACTORS IN MENOPAUSAL BONE DENSITY	12-15-97/	11-30-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	111,328
5R01AG13874-02	WITTE, PAMELA L MECHANISMS OF AGE RELATED CHANGES IN B LYMPHOPOIESIS	08-01-98/	07-31-99	LOYOLA UNIVERSITY MEDICAL CENTER	215,435
5R01AG13880-02	KESSLAK, JAMES P AGING AND NEUROTROPHIN EXPRESSION	03-01-98/	02-28-99	UNIVERSITY OF CALIFORNIA IRVINE	177,017
1R29AG13885-01A2	ALESSI, CATHY A ENVIRONMENTAL INTERVENTIONS ON SLEEP IN THE NURSING HOME	09-01-98/	08-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	90,090
5R13AG13888-03	SCHOENI, ROBERT F SUMMER INSTITUTE OF AGING STUDIES	07-01-98/	06-30-99	RAND CORPORATION	44,571

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FY: 98				
5R01AG13893-02	LUSARDI, ANNAMARIA SAVING AND WEALTH NEAR RETIREMENT	09-01-98/08-31-99	DARTMOUTH COLLEGE	52,122
1R01AG13894-01A1	MONTO, ARNOLD S INFLUENZA AND ITS CONTROL IN NURSING HOMES	12-01-97/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
5R01AG13902-02	SIERRA, LUIS F PROTEOLYSIS AND AGING--EFFECTS ON MAP KINASE ACTIVITY	08-01-98/07-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	168,398
5R01AG13910-02	CASALI, PAOLO AGING--ANTIBODY RESPONSE TO BACTERIAL AND VIRAL AGS	09-01-98/07-31-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	323,271
5R29AG13912-04	WOODARD, JOHN L FUNCTIONAL NEUROANATOMY OF MEMORY IN ALZHEIMERS DISEASE	07-01-98/06-30-99	EMORY UNIVERSITY	111,403
5R01AG13913-02	GUSTMAN, ALAN L RETIREMENT BEHAVIOR IN THE HEALTH AND RETIREMENT SURVEY	09-01-98/08-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	97,645
3P01AG13918-02S1	MANOLAGAS, STAVROS C AGE AND MOLECULAR CONTROL OF MARROW STROMAL CELLS	07-01-97/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
5P01AG13918-03	MANOLAGAS, STAVROS C MOLECULAR AND CELLULAR MECHANISMS OF OSTEOPOROSIS	06-01-98/05-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	874,232
3P01AG13918-03S1	MANOLAGAS, STAVROS C MOLECULAR AND CELLULAR MECHANISMS OF OSTEOPOROSIS	09-01-98/05-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	51,100
5R01AG13919-03	HALL, GARTH F IN SITU NEURONAL MODEL OF PHF/TAU ACCUMULATION IN AD	12-15-97/11-30-98	UNIVERSITY OF MASSACHUSETTS LOWELL	217,615
5R01AG13920-02	SHROFF, SANJEEV G VASCULAR STIFFNESS & CARDIOVASCULAR FUNCTION IN ELDERLY	06-01-98/05-31-99	UNIVERSITY OF CHICAGO	251,329
5R01AG13922-03	MACH, ROBERT H PET IMAGING STUDIES OF A RHESUS MONKEY MODEL OF AGING	09-01-98/08-31-99	WAKE FOREST UNIVERSITY	362,902
1R01AG13923-01A1	SIERRA, LUIS F ANERGY AS A MODEL FOR T CELL IMMUNOSENESCENCE	12-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
5R01AG13925-02	KIRKLAND, JAMES L AGING EFFECT ON PREADIPOCYTE DIFFERENTIATION	04-01-98/03-31-99	BOSTON MEDICAL CENTER	253,226
5R29AG13928-02	WOODS, JEFFREY A EXERCISE AS A MEANS OF ENHANCING IMMUNITY IN THE AGED	03-01-98/02-28-99	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	115,029

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R01AG13929-01A2	ENOKA, ROGER M STRENGTH TRAINING OF THE ELDERLY WITH LIGHT LOADS	12-01-97	11-30-98	UNIVERSITY OF COLORADO AT BOULDER	209,193
5R29AG13934-02	DELBONO, OSVALDO SINGLE SKETETAL MUSCLE FIBER IMPAIRMENT WITH AGING	04-01-98	03-31-99	WAKE FOREST UNIVERSITY	98,994
5R01AG13935-03	STINE-MORROW, ELIZABETH A AGE DIFFERENCES IN RESOURCE ALLOCATION DURING READING	07-01-98	06-30-99	UNIVERSITY OF NEW HAMPSHIRE	132,005
5R01AG13936-03	MORROW, DANIEL G EXPERTISE AND AGE DIFFERENCES IN PILOT COMMUNICATION	07-01-98	06-30-99	UNIVERSITY OF NEW HAMPSHIRE	184,615
5R01AG13939-03	VAN ELDIK, LINDA J SUPRAMOLECULAR A/BETA--GLIAL INTERACTIONS & CELL RESPONS	07-01-98	06-30-99	NORTHWESTERN UNIVERSITY	187,888
5R29AG13941-02	MARKUS, ETAN J AGING CHANGES IN BEHAVIOR AND HIPPOCAMPAL UNIT ACTIVITY	05-01-98	04-30-99	UNIVERSITY OF CONNECTICUT STORRS	103,189
5R29AG13945-02	TAGLIALATELA, GIULIO APOPTOTIC NEURAL SIGNALING PATHWAYS--AGING RELEVANCE	04-01-98	03-31-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	103,175
1R01AG13953-01A1	LIPSCHITZ, DAVID A AGE AND MOLECULAR CONTROL OF MARROW STROMAL CELLS	07-01-97	/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
5R01AG13956-03	MOLTZMAN, DAVID M APOE EFFECT ON CNS NEURONS--ROLE OF LRP	09-15-98	08-31-99	WASHINGTON UNIVERSITY	240,011
5R29AG13961-03	DORSEY, CYNTHIA M INSOMNIA IN ELDERLY--PASSIVE BODY HEATING VS ZOLPIDEM	09-01-98	08-31-99	MC LEAN HOSPITAL (BELMONT, MA)	101,249
5R01AG13965-02	HO, SHUK-MEI TOXICANT OR AGING INDUCED OXIDATIVE STRESS IN PROSTATE	03-01-98	02-28-99	TUFTS UNIVERSITY MEDFORD	210,210
7R01AG13966-02	ISCHIROPOULOS, HARRY PEROXYNITRITE AND NEURODEGENERATIVE DISEASES OF AGING	07-01-98	03-31-99	CHILDREN'S HOSPITAL OF PHILADELPHIA	181,298
5R01AG13967-03	DICK, MALCOLM B STRENGTHS & DEFICITS IN THE MOTOR SYSTEM OF AD PATIENTS	06-01-98	05-31-99	UNIVERSITY OF CALIFORNIA IRVINE	178,736
3R01AG13969-02S1	CHARNESS, NEIL H LIFE SPAN EXPERTISE	01-01-98	04-30-98	FLORIDA STATE UNIVERSITY	16,353
5R01AG13969-03	CHARNESS, NEIL H LIFE-SPAN EXPERTISE	05-01-98	04-30-99	FLORIDA STATE UNIVERSITY	240,813

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FY: 98				
1R29AG13971-01A2	GELDMACHER, DAVID S POOR VISION IN ALZHEIMER'S DISEASE: IMPACT & INTERVENTION	07-01-98/	CASE WESTERN RESERVE UNIVERSITY	
5R01AG13973-08	MC EVOY, CATHY L PRIOR KNOWLEDGE EFFECTS IN COGNITIVE AGING	05-01-98/04-30-99	UNIVERSITY OF SOUTH FLORIDA	92,489
5R01AG13975-02	MEYDANI, SIMIN N VITAMIN E AND INFECTION IN THE ELDERLY	05-01-98/04-30-99	TUFTS UNIVERSITY BOSTON	399,875
3R01AG13975-02S1	MEYDANI, SIMIN N VITAMIN E AND INFECTION IN THE ELDERLY	09-30-98/04-30-99	TUFTS UNIVERSITY BOSTON	116,874
1R01AG13976-01A1	WALLACE, DAVID R EFFECT OF AGE ON DOPAMINE-GLUTAMATE INTERACTIN IN BRAIN	12-01-97/	COLLEGE OF OSTEOPATHIC MED/OK STATE	
5R01AG13978-02	POEHLMAN, ERIC T ENERGETIC ADAPTATION TO THE MENOPAUSE TRANSITION	09-01-98/08-31-99	UNIVERSITY OF VERMONT & ST AGRIC COL	264,045
1R01AG13982-01A1	FAGARASAN, MIRELA O AMYLOID BETA-PEPTIDE TOXICITY. THERAPEUTIC APPROACHES	12-01-97/	VETERANS MEDICAL RESEARCH FDN/SAN DI	
5R01AG13983-14	CAMBIER, JOHN C SIGNAL TRANSDUCTION IN B CELL ACTIVATION	07-01-98/05-31-99	NATIONAL JEWISH MEDICINE & RES CTR	234,145
5R01AG13987-03	FENNELL, MARY L RURAL HOSPITAL LINKAGES TO LONG TERM CARE PROVIDERS	07-01-98/06-30-99	BROWN UNIVERSITY	209,595
5R37AG13993-04	RUBINSTEIN, ROBERT L BEREAVEMENT IN LONG TERM CARE	09-01-98/08-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	288,200
1R43AG14004-01A2	TURNER, LISA M COMMUNITY INTEGRATION FOR OLDER DEVELOPMENTALLY DISABLED	11-01-97/	TURNER ASSOCIATES	
2R44AG14007-02	WALKER, BONNIE L IMPROVING STAFF ATTITUDES TOWARD EXPRESSION OF ELDERLY	09-30-98/06-30-99	BONNIE WALKER AND ASSOCIATES	437,002
3R43AG14008-01A1S1	GERTMAN, PAUL M ELECTRONIC COMMUNITY FOR ALZHEIMERS CAREGIVERS	12-15-97/02-28-98	U.S. CARELINK	36,225
5R44AG14015-03	GRITZ, ROBERT M DEVELOPING PUBLIC-USE MEDICARE CLAIMS DATA FOR AHEAD	09-01-98/08-31-99	UNICON RESEARCH CORPORATION	303,503
1R43AG14017-01A1	TIHON, CLAUDE NOVEL URINARY DRAINAGE CONTROL AND CONTINENCE CATHETERS	02-01-98/	CONTIMED, INC.	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG14023-02	WACHTER, KENNETH W GRADE OF MEMBERSHIP MODELS IN AGING STUDIES	01-01-98/12-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	35,480
1R01AG14025-01A2	BREUER, BRENDA MAMMOGRAPHY IN A NURSING HOME: A FEASIBILITY STUDY	06-01-98/	JEWISH HOME AND HOSPITAL	
5R29AG14027-02	PROMISLOW, DANIEL E DEMOGRAPHY OF AGING--GENETIC AND COMPARATIVE ANALYSES	12-01-97/11-30-98	UNIVERSITY OF GEORGIA	101,525
1R01AG14047-01A1	PLAUD, JOSEPH J OPERANT CONDITIONING IN DEMENTIA	05-01-97/	UNIVERSITY OF NORTH DAKOTA	
5R01AG14051-02	NEBES, ROBERT D AGING, WHITE MATTER HYPERINTENSITIES & COGNITIVE DECLINE	03-01-98/02-28-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	262,274
5R29AG14066-03	NICKLAS, BARBARA J OBESITY, EXERCISE, & FAT CELL METABOLISM IN OLDER WOMEN	08-01-98/07-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	87,484
5R29AG14067-02	NIEVES, JERI W VITAMIN D SUPPLEMENTATION IN POSTMENOPAUSAL BLACK WOMEN	09-01-98/08-31-99	HELEN HAYES HOSPITAL	102,757
5R01AG14068-02	WEINTRAUB, SANDRA VISUAL SPATIAL ATTENTION IN ALZHEIMERS DISEASE	09-01-98/08-31-99	NORTHWESTERN UNIVERSITY	194,635
5R01AG14071-02	TYLER, KENNETH L MECHANISM OF VIRUS INDUCED CNS APOPTOSIS	06-01-98/05-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	200,733
5R01AG14073-02	CAVANAGH, PETER R STAIR DESCENT BY THE ELDERLY--SAFETY AND BIOMECHANICS	03-01-98/02-28-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	184,971
1R01AG14079-01A2	MURPHY, REGINA M BETA AMYLOID AGGREGTION AND TOXICITY--BREAKING THE LINK	06-01-98/05-31-99	UNIVERSITY OF WISCONSIN MADISON	115,515
3R01AG14080-01A1S1	MILLEN, BARBARA E CAUSES/CONSEQUENCES OF MALNUTRITION IN HOMEBOUND ELDERLY	01-01-98/08-31-98	BOSTON UNIVERSITY	56,109
5R01AG14080-02	MILLEN, BARBARA E CAUSES/CONSEQUENCES OF MALNUTRITION IN HOMEBOUND ELDERLY	09-01-98/08-31-99	BOSTON UNIVERSITY	969,557
5R01AG14082-02	FARAH, MARTHA J SEMANTIC AND VISUAL COGNITION IN ALZHEIMERS DISEASE	09-15-98/08-31-99	UNIVERSITY OF PENNSYLVANIA	220,517
5R01AG14088-02	PAHLAVANI, MOHAMMAD A TRANSCRIPTION FACTOR NFAT AND AGING IMMUNE SYSTEM	07-15-98/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	60,086

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1R29AG14091-01A2	DENNIS, JAMES E MESENCHYMAL PROGENITOR CELLS: LINEAGE MAPPING	07-01-97/	CASE WESTERN RESERVE UNIVERSITY	
5R01AG14093-02	SON, JIN H NEUROTROPHIC REGULATION OF NIGRAL DOPAMINE NEURONS	09-01-98/08-31-99	WINIFRED MASTERSON BURKE MED RES INS	271,532
1R01AG14096-01A1	HARRIS, NORMAN R AGE-DEPENDENT ISCHEMIA-REPERFUSION INJURY	04-01-98/	LOUISIANA STATE UNIV MED CTR SHREVEP	
3R01AG14098-01A1S1	STEIN, THOMAS P BEDREST AND PROTEIN LOSS IN THE ELDERLY	01-01-98/08-31-98	UNIV OF MED/DENT NJ-SCH OSTEOPATHIC	52,987
5R01AG14098-02	STEIN, THOMAS P BEDREST AND PROTEIN LOSS IN THE ELDERLY	09-01-98/08-31-99	UNIV OF MED/DENT NJ-SCH OSTEOPATHIC	435,320
5R29AG14100-02	HAUSDORFF, JEFFREY M GAIT INSTABILITY IN THE ELDERLY WITH INCREASED FALL RISK	09-01-98/07-31-99	BETH ISRAEL DEACONESS MEDICAL CENTER	112,905
5R01AG14102-02	RICHIE, JOHN P, JR GLUTATHIONE AND AGING--METABOLISM AND LIFE SPAN STUDIES	03-01-98/01-31-99	AMERICAN HEALTH FOUNDATION	185,158
5R01AG14103-02	YAN, SHI D RAGE--A RECEPTOR FOR AMYLOID BETA PEPTIDE	08-01-98/07-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	144,681
1R01AG14108-01A1	TYRRELL, KIM S VASCULAR STIFFNESS AND EFFECTS OF DIETARY INTERVENTION	12-15-97/11-30-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	523,247
1R29AG14110-01A1	MC GARRY, KATHLEEN M AGING AN INTERGENERATIONAL ASSISTANCE WITHIN FAMILIES	06-01-98/03-31-99	NATIONAL BUREAU OF ECONOMIC RESEARCH	107,590
5R01AG14111-02	SCHWARZ, NORBERT AGING, COGNITION AND CONTEXT EFFECTS IN SELF REPORTS	01-01-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	224,513
1R29AG14112-01A1	ELLIS, RICHARD D QUEUING THEORY MODELS--AGE DIFFERENCES IN VISUAL SEARCH	07-01-98/05-31-99	WAYNE STATE UNIVERSITY	80,442
5R01AG14116-02	REDFERN, MARK S POSTURAL CONTROL IN THE ELDERLY--THE ROLE OF ATTENTION	01-01-98/12-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	143,900
1R13AG14120-01A1	MEHROTRA, CHANDRA M BUILDING A COMMUNITY OF SCHOLARS IN PSYCHOLOGY OF AGING	02-15-98/01-31-99	COLLEGE OF ST. SCHOLASTICA	80,627
5R01AG14121-03	VATNER, STEPHEN F AGING EFFECTS ON CARDIOVASCULAR FUNCTION	08-01-98/07-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	286,753

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FY: 98				
5R01AG14124-02	YOUNG, TERRY MENOPAUSE AND MIDLIFE AGING EFFECTS ON SLEEP DISORDERS	01-01-98/12-31-98	UNIVERSITY OF WISCONSIN MADISON	326,300
5R01AG14126-02	BOOYSE, FRANCOIS M AGE, RACE, SEX AND AORTIC STIFFNESS--GENETIC MARKERS	09-01-98/08-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	527,558
1R01AG14130-01A1	ROOK, KAREN S IMPACT OF NEGATIVE SOCIAL ENCHANGES IN LATER LIFE	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA IRVINE	411,000
5R01AG14131-02	MILLER, MICHAEL E DISCRETE OUTCOME MODELS FOR EPIDEMIOLOGICAL SURVEYS	09-01-98/08-31-99	WAKE FOREST UNIVERSITY	129,119
1R01AG14133-01A1	BAZARGAN, MOHSEN LOS ANGELES NUTRITION AND ELDERLY STUDY	10-01-97/	PUBLIC HEALTH FOUNDATION ENTERPRISES	
1R01AG14142-01A1	MOORADIAN, ARSHAG D CEREBRAL MICROVESSEL SPECIFIC GENES - EFFECTS OF AGE	04-01-98/	ST. LOUIS UNIVERSITY	
5R01AG14149-02	SHEU, PHILLIP AUTOMATED IMAGE ANALYSIS OF HUMAN BRAIN CELLS	06-01-98/05-31-99	UNIVERSITY OF CALIFORNIA IRVINE	214,353
5R01AG14152-02	BECKER, GAYLENE MEANINGS OF CHRONICITY AND AGE FOR ETHNIC MINORITIES	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	235,655
5R01AG14155-02	PACK, ALLAN I CASE CONTROL STUDY OF INSOMNIA IN NONDEPRESSED ELDERLY	04-15-98/02-28-99	UNIVERSITY OF PENNSYLVANIA	450,819
5R01AG14158-03	SCHMADER, KENNETH E IMPACT OF GERIATRIC CARE ON DRUG RELATED PROBLEMS	08-01-98/07-31-99	DUKE UNIVERSITY	241,432
5R01AG14161-03	RUVKUN, GARY B INOSITOL SIGNALING IN C ELEGANS SENESCENCE AND DIAPAUSE	05-01-98/04-30-99	MASSACHUSETTS GENERAL HOSPITAL	282,900
5P01AG14248-02	SISODIA, SANGRAM PRESENILINS IN MODELS OF FAMILIAL ALZHEIMERS DISEASE	03-01-98/02-28-99	JOHNS HOPKINS UNIVERSITY	978,546
5R01AG14249-02	SAYRE, LAWRENCE M CYTOSKELETAL OXIDATIVE MODIFICATIONS	08-01-98/07-31-99	CASE WESTERN RESERVE UNIVERSITY	217,372
5U01AG14260-03	REBOK, GEORGE W TRIAL OF A COGNITIVE INTERVENTION FOR OLDER ADULTS	07-01-98/06-30-99	JOHNS HOPKINS UNIVERSITY	644,033
5U01AG14263-03	WILLIS, SHERRY L FLUID ABILITY TRAINING AMONG ELDERLY	07-15-98/06-30-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	612,203

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5U01AG14276-03	MARSISKE, MICHAEL FLUID REASONING TRAINING FOR URBAN ELDERS	07-01-98/06-30-99	WAYNE STATE UNIVERSITY	636,966
5U01AG14282-03	TENNSTEDT, SHARON E TRIAL OF A COGNITIVE INTERVENTION FOR OLDER ADULTS--CC	07-01-98/06-30-99	NEW ENGLAND RESEARCH INSTITUTES, INC	406,561
5U01AG14289-03	BALL, KARLENE K COGNITIVE TRAINING & EVERYDAY COMPETENCE IN THE ELDERLY	07-01-98/06-30-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	579,459
5R01AG14290-03	PETTEGREW, JAY W IN VIVO MR STUDIES OF METABOLISM IN ALZHEIMERS DISEASE	04-01-98/03-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	397,395
5R01AG14291-03	CALIGIURI, MICHAEL P EPS AND PREDICTORS OF PSYCHOSIS IN ALZHEIMERS DISEASE	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	161,690
1R01AG14297-01A2	KATERNDAHL, DAVID A ABUSE AND PSYCHOPATHOLOGY IN ELDERS	07-01-98/	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
5R01AG14301-02	HUDSON, MARGARET F ELDER ABUSE--A SCREENING PROTOCOL	09-01-98/08-31-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	151,541
1R01AG14303-01A1	KELLEY, SUSAN J GRANDPARENTS RAISING GRANDCHILDREN: INTERVENTION STUDY	05-01-98/	GEORGIA STATE UNIVERSITY	
5R01AG14304-03	LAWRENCE, VALERIE A MAXIMIZING POSTOPERATIVE FUNCTIONAL OUTCOMES IN ELDERS	08-01-98/07-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	350,930
2R44AG14308-02	ERWIN, JOSEPH M COMPARATIVE NEUROBIOLOGY OF AGING RESOURCE	05-15-98/04-30-99	BIOQUAL, INC.	379,667
1R43AG14309-01A1	HSIA, CARLETON J PREVENTION OF SKIN CANCER BY BETOPS	10-01-97/	SYNZYME TECHNOLOGY, INC.	
1R43AG14311-01A1	MILES, JEANNE A ASSISTED TRAINING TO ENHANCE ELDERS' QUALITY OF LIFE	01-15-98/	ELDER COMP	
1R43AG14315-01A1	MALONE, THOMAS B ADL ENHANCEMENT OF PERFORMANCE TOOL (ADEPT)	09-01-98/02-28-99	CARLOW INTERNATIONAL INC.	99,959
2R44AG14317-02A1	STERNS, RONNI S THE INTERPRECARE SYSTEM: A LANGUAGE INTERVENTION PRODUCT	09-01-98/08-31-99	CREATIVE ACTION, INC.	408,127
2R44AG14320-02	RAGER, ROBERT CD ROM MONITOR IMPROVES OLDER PERSONS MEMORY READINESS	07-15-98/06-30-99	COMPACT DISC, INC.	431,823

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R43AG14322-01A2	KHATAMI, MAHIN MULTIMEDIA SERVICES FOR DIABETES PREVENTION IN ELDERLY	03-01-98/	HEALTH UPDATE SOCIETY	
1R43AG14326-01A2	AUGUST, SUZANNE M ELECTRONIC MEDICATION COMPLIANCE NETWORK (EMCN)	03-01-98/	CHECKMATE ENGINEERING	
5R01AG14342-03	MCDEVITT, CAHIR A DEGENERATION AND REPAIR OF THE MENISCUS	07-01-98/06-30-99	CLEVELAND CLINIC FOUNDATION	211,577
5R01AG14343-02	MAJUMDAR, ADHIP N AGING GUT--REGULATION OF CELL PROLIFERATION	09-01-98/08-31-99	WAYNE STATE UNIVERSITY	156,595
5R01AG14345-02	ALBERT, MARTIN L LANGUAGE IN THE AGING BRAIN	03-01-98/02-28-99	BOSTON UNIVERSITY	259,366
1R29AG14346-01A1	FREEDMAN, VICKI A HEALTH AND CARE TRAJECTORIES OF OLDER DISABLED AMERICANS	02-01-98/01-31-99	RAND CORPORATION	120,248
1R01AG14349-01A1	GRIGSBY, JAMES P EXECUTIVE COGNITIVE ABILITIES AND FUNCTIONAL CAPACITY	01-01-98/	UNIVERSITY OF COLORADO HLTH SCIENCES	
5R01AG14351-02	MBAWUIKE, INNOCENT N TH1 CYTOKINES AND IMPAIRED CD8* CTLS IN ELDERLY	06-01-98/05-31-99	BAYLOR COLLEGE OF MEDICINE	236,220
1R01AG14357-01A1	ALNEMRI, EMAD MECHANISMS OF ACTIVATION OF ICE-LIKE CYSTEINE PROTEASES	01-01-98/12-31-98	THOMAS JEFFERSON UNIVERSITY	240,214
5R29AG14358-02	HSU, LI METHODS FOR AGE AT ONSET DATA IN GENETIC EPIDEMIOLOGY	06-01-98/05-31-99	FRED HUTCHINSON CANCER RESEARCH CENT	112,068
5P01AG14359-02	GAMBETTI, PIERLUIGI PATHOGENETIC MECHANISMS OF PRION DISEASES	07-01-98/05-31-99	CASE WESTERN RESERVE UNIVERSITY	900,355
5R01AG14363-02	ZAGORSKI, MICHAEL G SOLUTION STRUCTURE OF THE AMYLOID BETA (1/42)	04-01-98/03-31-99	CASE WESTERN RESERVE UNIVERSITY	144,781
5P01AG14366-02	LANSBURY, PETER T, JR ALZHEIMER AMYLOIDOGENESIS WITH NEW METHODS	07-15-98/05-31-99	BRIGHAM AND WOMEN'S HOSPITAL	940,609
5R01AG14369-02	BHASIN, SHALENDER SARCOPENIA--TESTOSTERONE DOSE RESPONSE IN OLDER MEN	05-15-98/04-30-99	CHARLES R. DREW UNIVERSITY OF MED &	382,892
1P01AG14373-01A1	BENNETT, JAMES P, JR MITOCHONDRIAL IMPAIRMENT IN ALZHEIMERS DISEASE	08-01-98/07-31-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	922,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5R29AG14376-02	TAYLOR, J ANDREW ARTERIAL STIFFNESS & AGE--EFFECTS ON CIRCULATORY CONTROL	06-01-98	05-31-99	HEBREW REHABILITATION CENTER FOR AGE	82,875
5R01AG14379-03	KIMURA, JAMES H STRUCTURE AND FUNCTION OF CARTILAGE MACROMOLECULES	08-01-98	07-31-99	CASE WESTERN RESERVE UNIV-HENRY FORD	217,442
1R55AG14381-01A2	PAPPOLLA, MIGUEL A MELATONIN AND ANTIOXIDANTS AS THERAPEUTIC AGENTS	09-30-98	09-29-00	UNIVERSITY OF SOUTH ALABAMA	100,000
5P01AG14382-02	WIEDERHOLT, WIGBERT C AGE RELATED NEURODEGENERATIVE DISEASES IN MICRONESIA	03-01-98	02-28-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	1,671,265
1P01AG14383-01A1	NAIR, SREEKUMARAN K PATHOGENESIS OF SARCOPENIA AND METABOLIC CHANGE IN AGING	07-01-98	05-31-99	MAYO FOUNDATION	1,565,402
7R29AG14384-02	KITTEN, ALLISON M ENDOTHELIN--A NOVEL AUTOCRINE MEDIATOR IN OSTEOGENESIS	08-01-98	07-31-99	TRINITY UNIVERSITY	86,962
1R01AG14386-01	DROPULIC, BORO RIBOZYME-MEDIATED PROPHYLAXIS FOR BREAST CANCER	04-01-97		JOHNS HOPKINS UNIVERSITY	
1R01AG14387-01A1	PENNYPACKER, KEITH R GENOMIC REGULATION OF AGE-RELATED PROTEINS, PRESENILINS	12-01-97		UNIVERSITY OF SOUTH FLORIDA	
1R01AG14389-01A1	DE MEERSMAN, RONALD E AGING, EXERCISE + HORMONE THERAPY AND VASCULAR STIFFNESS	06-01-98		COLUMBIA UNIVERSITY HEALTH SCIENCES	
5R01AG14392-02	ELDER, GREGORY A MURINE MODELS OF PRESENILIN I MUTATIONS	04-01-98	03-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	230,925
5R29AG14399-02	CHEN, QIAN STABILIZATION OF MATRIX STRUCTURE IN MATURE CARTILAGE	04-01-98	03-31-99	PENNSYLVANIA STATE UNIV HERSHEY MED	93,465
1R01AG14400-01A1	SZABO, ZSOLT 5-HT TRANSPORTER IN PARKINSONS DISEASE--A PET STUDY	12-01-97	11-30-98	JOHNS HOPKINS UNIVERSITY	244,735
1R01AG14404-01A1	TINETTI, MARY E MULTIPLE IMPAIRMENT MODEL OF DISABILITY IN OLDER PERSONS	01-01-98		YALE UNIVERSITY	
5R29AG14405-03	MORGANELLI, PETER M IGG FC RECEPTORS AND METABOLISM OF LDL IMMUNE COMPLEXES	08-01-98	07-31-99	DARTMOUTH COLLEGE	99,400
1R01AG14407-01A1	CRESS, M ELAINE EXERCISE & DETRAINING: EFFECTS ON FUNCTION AND CAPACITY	12-01-97		UNIVERSITY OF WASHINGTON	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG14412-02	PAVEZA, GREGORY J AGGRESSION AND VIOLENCE IN COMMUNITY BASED AD FAMILIES	08-01-98/07-31-99	UNIVERSITY OF SOUTH FLORIDA	313,286
1R01AG14415-01A1	TAYLOR, BRUCE A LONGITUDINAL STUDY OF ELDER ABUSE	12-01-97/	VICTIM SERVICES, INC.	
5R01AG14420-02	LIPSITZ, LEWIS A ESTROGEN AND BLOOD PRESSURE DYNAMICS IN AGING WOMEN	06-01-98/05-31-99	HEBREW REHABILITATION CENTER FOR AGE	137,544
5R01AG14424-02	HIMES, CHRISTINE L BODY SIZE AND DISABILITY AT OLDER AGES	09-01-98/08-31-99	SYRACUSE UNIVERSITY	82,784
5R01AG14427-02	BERG, KATHERINE OUTCOMES FOLLOWING SNF POSTACUTE CARE	07-01-98/06-30-99	BROWN UNIVERSITY	118,896
1R01AG14432-01A1	CORKIN, SUZANNE COGNITION IN AGING AND ALZHEIMERS DISEASE--AN FMRI STUDY	01-01-98/12-31-98	MASSACHUSETTS INSTITUTE OF TECHNOLOG	395,663
1R01AG14436-01A1	RIGGS, KAREN M AGE AND PREDICTORS OF ACCURATE DIET REPORTING	04-01-98/	TUFTS UNIVERSITY BOSTON	
1R01AG14440-01A1	SCHMECHEL, DONALD E APOE: RELATIONSHIP TO BRAIN AGING AND INJURY RESPONSE	12-01-97/	DUKE UNIVERSITY	
5R01AG14441-02	COLEMAN, PAUL D TAU PATHOLOGY AND SYNAPTIC MESSAGE IN ALZHEIMERS	05-15-98/04-30-99	UNIVERSITY OF ROCHESTER	136,991
5R01AG14446-02	OSHIMA, JUNKO TARGETED MUTAGENESIS OF WERNER SYNDROME GENE	07-01-98/06-30-99	UNIVERSITY OF WASHINGTON	204,907
5P01AG14449-02	MUFSON, ELLIOTT J NEUROBIOLOGY OF MILD COGNITIVE IMPAIRMENT IN THE ELDERLY	07-01-98/03-31-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	862,024
5R01AG14451-02	LAMB, BRUCE T TRANSGENIC MOUSE MODELS OF ALZHEIMERS DISEASE	04-01-98/03-31-99	CASE WESTERN RESERVE UNIVERSITY	102,877
3R01AG14451-02S1	LAMB, BRUCE T TRANSGENIC MOUSE MODELS OF ALZHEIMERS DISEASE	09-15-98/03-31-99	CASE WESTERN RESERVE UNIVERSITY	42,500
5R01AG14452-02	KURET, JEFFREY A STRUCTURE AND GENESIS OF TAU FILAMENTS	04-01-98/03-31-99	NORTHWESTERN UNIVERSITY	213,891
5R37AG14453-02	BINDER, LESTER I ASSEMBLY AND POLARITY OF TAU FILAMENTS	04-01-98/03-31-99	NORTHWESTERN UNIVERSITY	194,383

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG14456-03	TSENG, HUNG BIOLOGICAL FUNCTION OF BASONUCLIN	08-01-98/07-31-99	UNIVERSITY OF PENNSYLVANIA	193,899
5R01AG14461-02	CHALFIE, MARTIN CATALASE GENES AND C ELEGANS	04-01-98/03-31-99	COLUMBIA UNIV NEW YORK MORNINGSIDE	205,695
5R29AG14473-03	REBECK, GEORGE W APOE AND ITS RECEPTORS IN NORMAL AND ALZHEIMERS BRAIN	08-01-98/07-31-99	MASSACHUSETTS GENERAL HOSPITAL	115,953
5R01AG14474-02	SOUMERAI, STEPHEN B MEDICARE CAPITATION AND QUALITY OF CARE FOR ACUTE MI	03-01-98/02-28-99	HARVARD UNIVERSITY	248,557
1R15AG14477-01A1	MORGAN, DAVID L A COMPARISON OF INTERGENERATIONAL VIEWS ON AGING WELL	01-01-98/	PORTLAND STATE UNIVERSITY	
1R15AG14480-01A1	MARCELL, MICHAEL M CONFRONTATION NAMING OF EVERYDAY SOUNDS	05-15-98/	COLLEGE OF CHARLESTON	
5R29AG14487-02	MACKO, RICHARD F EXERCISE OF PATIENTS WITH HEMIPARETIC STROKE	05-15-98/04-30-99	UNIVERSITY OF MARYLAND BALT PROF SCH	104,358
1R01AG14541-01A1	FERNANDES, GABRIEL OMEGA 3 LIPIDS AND CALORIES EFFECT ON SLE AND AGING	04-15-98/03-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	231,034
5R01AG14554-07	MATTSON, MARK P B AMYLOID AND NEURONAL CALCIUM MISREGULATION	07-01-98/06-30-99	UNIVERSITY OF KENTUCKY	184,097
5R01AG14563-03	HUANG, XIN-YUN TYROSINE KINASES AND G PROTEIN SIGNALING	07-01-98/06-30-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	226,585
5R01AG14579-14	SOULES, MICHAEL R REPRODUCTIVE AGING IN NORMAL PREMENOPAUSAL WOMEN	09-30-98/08-31-99	UNIVERSITY OF WASHINGTON	227,696
5R01AG14580-03	GALE, KAREN N GLUTAMATE TRANSMISSION IN RHINAL CORTEX AND MEMORY	09-01-98/08-31-99	GEORGETOWN UNIVERSITY	302,616
3R01AG14580-03S1	GALE, KAREN N GLUTAMATE TRANSMISSION IN RHINAL CORTEX AND MEMORY	09-30-98/08-31-99	GEORGETOWN UNIVERSITY	40,663
5R01AG14582-03	RANDALL, WILLIAM R MOLECULAR BASIS FOR ACHR STABILITY	09-15-98/08-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	160,438
5R01AG14583-02	FORTINI, MARK E ACTIVITY OF THE ALZHEIMERS DISEASE PRESENILIN PROTEIN	05-01-98/04-30-99	UNIVERSITY OF PENNSYLVANIA	219,088

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG14584-03	CERNY, JAN REGULATION OF B CELL MEMORY	09-01-98/08-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	239,486
5R01AG14585-08	SANZ, IGNACIO E GENETIC AND FUNCTIONAL STUDY OF HUMAN CDR3 REGIONS	09-30-98/08-31-99	UNIVERSITY OF ROCHESTER	223,066
1R41AG14586-01A1	ARDITI, ARIES R ADJUSTABLE TYPOGRAPHY FOR OLDER VISION-IMPAIRED READERS	01-15-98/12-31-99	MARS PERCEPTRIX	99,999
3R01AG14587-02S1	FRENKEL, KRYSTYNA AUTOANTIBODIES AS BIOMARKERS OF BREAST CANCER	05-15-98/08-31-98	NEW YORK UNIVERSITY MEDICAL CENTER	78,326
5R01AG14587-03	FRENKEL, KRYSTYNA AUTOANTIBODIES AS BIOMARKERS OF BREAST CANCER	09-01-98/08-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	423,727
5R01AG14600-06	GIBSON, GARY E AGE/NUTRITION/GENES IN MODELS OF PSYCHIATIRC DISORDERS	09-01-98/08-31-99	WINIFRED MASTERSON BURKE REHAB HOSPI	258,491
5R01AG14601-02	STROM, BRIAN L EFFECTIVENESS OF RETROSPECTIVE DRUG UTILIZATION REVIEW	01-01-98/12-31-98	UNIVERSITY OF PENNSYLVANIA	288,395
1R43AG14605-01A1	KELLEHER-WALSH, BARBARA DEVELOPMENT OF AN ELDERLY DRIVER INJURY DATABASE	11-01-97/	HARTLEY ASSOCIATES, INC.	
1R43AG14614-01A1	CLARK, GLENN ACCESSING & ENHANCING SERVICES FOR THE SENIOR CITIZENS	11-01-97/	GOLDEN AGE PROVIDERS, INC.	
2R44AG14617-02	HYDE, JOAN J RESIDENT CENTERED INFORMATION SYSTEM FOR ASSISTED LIVING	09-30-98/08-31-99	HEARTHSTONE ALZHEIMER CARE, LTD	366,121
5R01AG14632-02	KAUFMAN, STEPHEN J ALPHA 7 BETA1 INTEGRIN AND MUSCLE INTEGRITY	01-01-98/12-31-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	234,369
5P01AG14633-03	HARDY, JOHN A PRESENILINS AND ALZHEIMERS DISEASE	09-30-98/08-31-99	MAYO CLINIC JACKSONVILLE	1,073,823
5R01AG14634-12	MITTELMAN, MARY S AD CAREGIVER WELL BEING--COUNSELING/INSTITUTIONALIZATION	09-01-98/08-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	216,320
1P60AG14635-01	STUDENSKI, STEPHANIE A KANSAS CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CTR	02-01-98/12-31-98	UNIVERSITY OF KANSAS MEDICAL CENTER	1,502,103
3P60AG14635-01S1	STUDENSKI, STEPHANIE A KANSAS CLAUDE D PEPPER OLDER AMERICANS INDEPENDENCE CTR	09-30-98/12-31-98	UNIVERSITY OF KANSAS MEDICAL CENTER	17,780

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG14637-02	ROGERS, TERRY B PHOSPHATASES IN EXCITATION/CONTRACTION COUPLING	12-01-97/11-30-98	UNIVERSITY OF MARYLAND BALT PROF SCH	234,964
1R43AG14639-01A1	KOESTER, ROBERT J DATABASE OF ALZHEIMER'S & RELATED DISORDERS WANDERERS	11-01-97/	DBS PRODUCTIONS	
1P60AG14640-01	LIPSCHITZ, DAVID A NUTRITIONAL & FUNCTIONAL REHABILITATION OF FRAIL ELDERLY	10-01-97/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
5R01AG14648-02	GREENAMYRE, JOHN T EXCITOTOXIC--BIOENERGETIC INTERACTIONS	06-01-98/05-31-99	EMORY UNIVERSITY	226,573
1R01AG14655-01A1	MAURER, TODD J WORKER AGE AND SELF EFFICACY FOR SKILL DEVELOPMENT	09-20-98/08-31-99	GEORGIA INSTITUTE OF TECHNOLOGY	429,160
5R01AG14656-02	BELSKY, JAY INTERGENERATIONAL RELATIONS IN ADULTHOOD	09-01-98/08-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	57,453
1P01AG14669-01A1	WEKSLER, MARC E IMMUNOBIOLOGY OF AGING	07-01-98/06-30-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	894,272
5R01AG14671-02	STERN, YAAKOV IMAGING COMPENSATION AND RESERVE IN ALZHEIMERS DISEASE	09-01-98/08-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	417,592
1R01AG14673-01A1	SCHUPF, NICOLE EPIDEMIOLOGY OF MENOPAUSE AND DEMENTIA IN DOWN SYNDROME	04-01-98/03-31-99	INSTITUTE FOR BASIC RES IN DEV DISAB	511,195
1P01AG14674-01A1	RICHARDSON, ARLAN G NUTRITIONAL PROBE OF THE AGING PROCESS	05-01-98/04-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	967,293
5R01AG14676-02	STELMACH, GEORGE E ALTERED MOVEMENT STRUCTURE IN THE ELDERLY	09-01-98/08-31-99	ARIZONA STATE UNIVERSITY	141,772
3R01AG14676-02S1	STELMACH, GEORGE E ALTERED MOVEMENT STRUCTURE IN THE ELDERLY	09-15-98/08-31-99	ARIZONA STATE UNIVERSITY	66,554
1R01AG14682-01A1	NORMAN, TIMOTHY L MECHANISMS OF CORTICAL BONE FRAGILITY	09-01-98/07-31-99	WEST VIRGINIA UNIVERSITY	150,242
5R01AG14684-02	OWSLEY, CYNTHIA VEHICLE CRASHES, INJURIES AND OLDER DRIVERS	09-01-98/08-31-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	176,806
1R01AG14687-01A1	KREGEL, KEVIN C HEAT SHOCK PROTEIN REGULATION WITH STRESS AND AGING	09-01-98/08-31-99	UNIVERSITY OF IOWA	293,428

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5R01AG14688-02	DE BEER, FREDERICK C SPLA2--INFLUENCE ON LIPOPROTEIN METABOLISM	06-01-98/	05-31-99	UNIVERSITY OF KENTUCKY	171,014
5R01AG14694-02	EPSTEIN, CHARLES J MITOCHONDRIAL FREE RADICALS AND AGING	08-01-98/	07-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	209,170
1R01AG14698-01A1	HORIUCHI, SHIRO QUANTITATIVE ANALYSIS OF AGING RATE PATTERNS	09-01-98/	07-31-99	ROCKEFELLER UNIVERSITY	179,761
5R01AG14699-02	ANDERSON, SHARON PATHOPHYSIOLOGY OF THE AGING KIDNEY	09-01-98/	08-31-99	OREGON HEALTH SCIENCES UNIVERSITY	261,896
5R01AG14701-13	GLIMCHER, MELVIN J NATURE OF BONE MINERAL--INCEPTION, MATURATION, AGING	12-01-97/	11-30-98	CHILDREN'S HOSPITAL (BOSTON)	352,056
1R29AG14703-01A1	PROCTOR, DAVID N OXYGEN TRANSPORT, MUSCLE MASS, AND EXERCISE IN AGING	07-01-98/		MAYO FOUNDATION	
1R01AG14708-01A1	MC CONATHA, JASMIN T ACCESSING CONTROL: COMPUTER USE IN LATER ADULTHOOD	07-01-98/		WEST CHESTER UNIVERSITY OF PENNSYLVA	
5R01AG14713-02	TANZI, RUDOLPH E MECHANISM OF PRESENILIN 1--ASSOCIATED CELL DEATH	08-01-98/	07-31-99	MASSACHUSETTS GENERAL HOSPITAL	368,860
5R29AG14715-02	GALLAGHER, DYMPNA SARCOPENIA--MUSCLE LOSS IN ELDERLY AFRICAN AMERICANS	09-30-98/	08-31-99	ST. LUKE'S ROOSEVELT HOSP CTR (NEW Y	63,106
5R29AG14726-03	CATALDO, ANNE M ENDOCYTIC PATHWAY IN ALZHEIMERS DISEASE	08-01-98/	07-31-99	NATHAN S. KLINE INSTITUTE FOR PSYCH	98,911
5R01AG14730-02	SCHWARTZ, LAWRENCE M GENETIC & BIOCHEMICAL ANALYSIS OF PROGRAMMED CELL DEATH	12-01-97/	11-30-98	UNIVERSITY OF MASSACHUSETTS AMHERST	151,641
1R01AG14734-01A1	SIMKIN, PETER A EXERCISING THE OLDER OA KNEE	07-01-98/		UNIVERSITY OF WASHINGTON	
1R01AG14742-01A1	COLDITZ, GRAHAM A BREAST CANCER AND FUNCTION IN AGING WOMEN	09-30-98/	08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	151,405
5R01AG14744-02	HYMAN, BRADLEY T PRESENILINS AND ALZHEIMERS DISEASE	08-01-98/	07-31-99	MASSACHUSETTS GENERAL HOSPITAL	214,037
1R01AG14745-01A1	PETITTI, DIANA B ALZHEIMERS DISEASE AND ESTROGEN REPLACEMENT	05-01-98/	03-31-99	KAISER FOUNDATION RESEARCH INSTITUTE	450,447

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5R01AG14748-02	SCHMIEDT, RICHARD A PHYSIOLOGICAL STUDIES OF AGE RELATED HEARING LOSS	09-01-98	08-31-99	MEDICAL UNIVERSITY OF SOUTH CAROLINA	153,134
5R01AG14749-02	KRAUSE, NEAL M RELIGION, AGING, AND HEALTH	07-01-98	06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	291,504
1R01AG14750-01	STANFORD, E PERCIL GRANDFOLKS - HEALTH IN JEOPARDY	10-01-97		SAN DIEGO STATE UNIVERSITY	
5P01AG14751-02	FINCH, CALEB E MODELS OF ESTROGEN INTERACTIONS WITH ALZHEIMERS DISEASE	08-01-98	07-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	856,916
1R01AG14753-01A1	KRISKA, ANDREA M ACTIVITY INTERVENTION IN WOMEN A DECADE LATER	08-01-98	07-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	301,930
1R01AG14759-01A1	BOOTH, SARAH L VITAMIN K INSUFFICIENCY--A RISK FACTOR FOR OSTEOPOROSIS	09-01-98	07-31-99	TUFTS UNIVERSITY BOSTON	333,049
1R01AG14766-01A1	PASINETTI, GIULIO M CYCLOOXYGENASE IN NEURODEGENERATION	08-01-98	07-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	240,704
5R01AG14767-02	WOLF, STEVEN L INTENSE TAI CHI EXERCISE TRAINING IN OLDER ADULTS	09-30-98	08-31-99	EMORY UNIVERSITY	563,186
1R01AG14768-01A1	SONNTAG, WILLIAM E INF ALPHA REG OF THE GROWTH HORMONE/IGF-1 AXIS WITH AGE	05-01-98	04-30-99	WAKE FOREST UNIVERSITY	219,972
7R01AG14769-02	COGGAN, ANDREW R AGING AND SKELETAL MUSCLE FATTY ACID METABOLISM	09-30-98	08-31-99	UNIVERSITY OF MARYLAND BALT PROF SCH	122,519
1R01AG14771-01A1	DEVENNY, DARLYNNE A MEMORY AND COGNITION IN AGING ADULTS WITH DOWN SYNDROME	06-15-98	05-31-99	INSTITUTE FOR BASIC RES IN DEV DISAB	283,470
1R01AG14783-01A1	RICHARDSON, BRUCE C SIGNIFICANCE OF AGE DEPENDENT CHANGES IN DNA METHYLATION	04-01-98	03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	273,498
1R01AG14784-01A1	CALLES-ESCANDON, JORGE FAT OXIDATION AND VISCERAL FAT MASS IN MENOPAUSE	09-30-98	08-31-99	UNIVERSITY OF VERMONT & ST AGRIC COL	218,402
5R01AG14785-02	PIETRAS, RICHARD J NEW ENDOCRINE THERAPY IN OLDER WOMEN WITH BREAST CANCER	07-01-98	06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	163,856
5R01AG14792-02	VAN-PETTEN, CYMA K COGNITIVE AND NEURAL BASES OF AGING AND MEMORY	08-15-98	07-31-99	UNIVERSITY OF ARIZONA	293,906

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
5R01AG14799-02	VELDHUIS, JOHANNES D AGING GH AXIS IN POSTMENOPAUSAL WOMEN	03-01-98	02-28-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	273,597
1R01AG14862-01A1	WOLPIN, KENNETH I ESTIMATING RETIREMENT MODELS USING SUBJECTIVE DATA	01-01-98	12-31-98	UNIVERSITY OF PENNSYLVANIA	163,910
1R03AG14878-01	SANZ, IGNACIO E AGING IN THE PREIMMUNE ANTIBODY REPERTOIRE	07-01-98	06-30-99	UNIVERSITY OF ROCHESTER	79,500
1R01AG14912-01A1	JEFFERIES, WILFRED A CHARACTERIZATION OF SOLUBLE AND GPI-ANCHORED P97	09-01-97		UNIVERSITY OF BRITISH COLUMBIA	
1R01AG14913-01A1	MURASKO, DONNA M PERSISTENT VIRUS INFECTION IN AGED MICE	04-15-98	03-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	303,179
7R01AG14917-02	ZAIDI, MONE OSTEOCLAST REGULATION BY IONIZED CALCIUM	01-01-98	12-31-98	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	81,497
5R03AG14925-02	ARMSTRONG, TRACY L PRIVATIZATION & ACCESS TO HEALTH SERVICES IN THE ELDERLY	09-01-98	07-31-99	UNIVERSITY OF MARYLAND COLLEGE PK CA	5,645
1R03AG14928-01A1	JOSEPH, LYNDON J WEIGHT LOSS, EXERCISE AND AGE--EFFECTS ON INSULIN ACTION	09-30-98	08-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	16,195
5R01AG14932-02	NELSON, JAMES F MELATONIN, FREE RADICALS, IMMUNE FUNCTION AND AGING	08-15-98	07-31-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	201,076
1R43AG14933-01A1	BARTON, SCOTT W NEW TOOL FOR PREVENTION THERAPY OF ALZHEIMERS DISEASE	01-01-98	09-30-98	MOLECULAR METROLOGY	100,000
1R43AG14937-01A1	STREISAND, SCOTT TREATMENT OF URINARY INCONTINENCE WITH HUMAN FIBRIN GLUE	07-01-98		INTERNATIONAL THERAPEUTICS, INC.	
1R43AG14955-01A1	DUNN, WILLIAM L DEVELOPMENT OF A MULTIDIMENSIONAL ASSESSMENT TOOL	03-01-98		QUANTUM RESEARCH SERVICES	
5R01AG14960-02	MASTERS, JOHN R CONDITIONAL IMMORTALIZATION OF HUMAN PROSTATE STEM CELLS	09-01-98	08-31-99	U OF L UNIVERSITY COLLEGE LONDON	60,636
5R01AG14961-02	ROSNER, WILLIAM PROSTATIC STEROIDS AND SECOND MESSENGERS	03-01-98	02-28-99	ST. LUKE'S-ROOSEVELT INST FOR HLTH S	225,699
5R01AG14963-02	DICKSON, ROBERT B APOPTOSIS & MALIGNANT PROGRESSION IN MAMMARY TUMOR CELLS	03-01-98	02-28-99	GEORGETOWN UNIVERSITY	261,094

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG14965-01A1	STAUBER, WILLIAM T INJURY SUSCEPTIBILITY OF AGING SKELETAL MUSCLES	07-01-98/	WEST VIRGINIA UNIVERSITY	
1R01AG14966-01	KRAMER, ARTHUR F AGING AND DUAL TASK PERFORMANCE--TRAINING INTERVENTIONS	01-01-98/12-31-98	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	166,972
1R01AG14970-01A1	SCHWARZMAN, ALEXANDER L PEPTIDE INHIBITORS OF AMYLOID FORMATION	08-01-98/07-31-99	STATE UNIVERSITY NEW YORK STONY BROO	216,000
1R29AG14971-01A1	DAVATZIKOS, CHRISTOS COMPUTATIONAL NEUROANATOMY OF AGING USING SHAPE ANALYSIS	08-01-98/07-31-99	JOHNS HOPKINS UNIVERSITY	123,695
1R01AG14972-01	TERASAWA, EI AGING OF THE NEUROENDOCRINE HYPOTHALAMUS	05-01-98/04-30-99	UNIVERSITY OF WISCONSIN MADISON	222,182
1R01AG14976-01	SCHROEDER, MARY NEUROIMAGING OF AGING AND DEMENTIA: ERP AND FMRI	12-01-97/	YESHIVA UNIVERSITY	
1R01AG14977-01A1	GOODMAN, CATHERINE C GRANDMOTHERS WHO PARENT--FAMILY RELATIONS AND WELL-BEING	09-01-98/04-30-99	CALIFORNIA STATE UNIVERSITY LONG BEA	243,812
1R01AG14980-01	NOVALES-LI, PHILIPP ANTE-MORTEM DIAGNOSTIC TEST FOR ALZHEIMER'S DISEASE	01-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG14984-01	WATSON, RONALD R HORMONE REPLACEMENT CYTOKINE & IMMUNE REG IN THE ELDERLY	09-01-97/	UNIVERSITY OF ARIZONA	
1R01AG14985-01	WOLF, STEWART G EFFECTS OF DHEA ON DISEASES OF AGEING	12-01-97/	TOTTS GAP MEDICAL RESEARCH LABORATOR	
1R01AG14986-01A1	ROBIN, DEBORAH W ESTROGEN METABOLISM IN POST MENOPAUSAL WOMEN	07-01-98/	VANDERBILT UNIVERSITY	
1R01AG14988-01	KISS, ZOLTAN ETHANOLAMINES: PHYSIOLOGICAL INHIBITORS OF CELL DEATH?	12-01-97/	UNIVERSITY OF MINNESOTA TWIN CITIES	
1R01AG14992-01A1	NEL, ANDRE E MAPKINASE CASCADES AND T CELL DECISION MAKING	08-01-98/07-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	221,316
1R01AG14993-01	ALBRIGHT, JULIA W EFFECTS OF SENESCENCE ON NATURAL KILLER CELLS	12-01-97/	GEORGE WASHINGTON UNIVERSITY	
1R29AG14995-01	LAPANE, KATE L EPIDEMIOLOGIC STUDIES OF BETA-BLOCKERS IN ELDERLY	01-01-98/	MEMORIAL HOSPITAL OF RHODE ISLAND	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG14996-01A1	BUXBAUM, JOSEPH D RAB5 AND APP PROCESSING AS RELATED TO AGING	06-15-98/05-31-99	MOUNT SINAI SCHOOL OF MEDICINE OF CU	240,109
1R01AG14997-01	BUCHWALD, DEDRA S NATIVE ELDERS PRIMARY CARE PROJECT: ANALYSIS SUPPORT	11-01-97/	UNIVERSITY OF COLORADO HLTH SCIENCES	
1R01AG14998-01	RAM, TRACY G ERBB CIRCUITS AND CELL GROWTH IN THE OLDER BREAST	12-01-97/	WASHINGTON STATE UNIVERSITY	
1R01AG14999-01A1	CRONIN-STUBBS, DIANE PSYCHOSOCIAL RISKS FOR DISABILITY: EPIDEMIOLOGY IN AGING	07-01-98/	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R01AG15001-01	BALIN, BRIAN J DYNAMIC ENZYMATIC MODIFICATIONS OF HUMAN CNS PROTEINS	12-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG15002-01	SCHELLENBERG, GERARD D THE GENETICS OF MICRONESIAN NEURODEGENERATIVE DISEASE	12-01-97/	UNIVERSITY OF WASHINGTON	
5R29AG15003-02	BARZILAI, NIR J DYSREGULATION OF GLUCOSE HOMEOSTATIS IN AGING	09-01-98/08-31-99	YESHIVA UNIVERSITY	100,800
1R01AG15004-01	COHN, LAWRENCE D A 20 YEAR LONGITUDINAL STUDY OF ADULT EGO DEVELOPMENT	01-01-98/	UNIVERSITY OF TEXAS EL PASO	
1R01AG15006-01	KOWALL, NEIL W BETA AMYLOID AND CELL DEATH IN ALZHEIMER'S DISEASE	12-01-97/	BOSTON UNIVERSITY	
1R01AG15007-01	ALBIN, ROGER L MGLURS IN AGING AND PARKINSONIAN STRIATUM	12-01-97/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R01AG15008-01A1	RASO, VICTOR A AMYLOID BETA PEPTIDE EQUILIBRIA IN 'ALZHEIMER'S MICE'	07-01-98/	BOSTON BIOMEDICAL RESEARCH INSTITUTE	
1R29AG15011-01	THWEATT, RAY STUDIES OF A SENESCENT GENE WITH INHIBITORY PROPERTIES	12-01-97/	WEST VIRGINIA UNIVERSITY	
1R01AG15012-01	SCHAEFFER, RICHARD C, JR AGE-RELATED CHANGES IN GLOMERULAR BARRIER FUNCTION	12-01-97/	UNIVERSITY OF ARIZONA	
1R01AG15013-01	HEINECKE, JAY W REACTIVE ALDEHYDES AND CARDIOVASCULAR AGING	01-01-98/12-31-98	WASHINGTON UNIVERSITY	243,705
1R01AG15015-01	SAVORY, JOHN APOPTOSIS & GENE EXPRESSION IN NEURODEGENERATION & AGING	01-01-98/	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15017-01	DYCK, DENNIS G NUTRITION/PHARMACY SERVICES IN AT-RISK COMMUNITY ELDERS	10-01-97/	WASHINGTON STATE UNIVERSITY	
1R01AG15018-01	STELMACH, GEORGE E AGE-RELATED CHANGES IN MOVEMENT PLANNING AND CONTROL	01-01-98/	ARIZONA STATE UNIVERSITY	
1R01AG15019-01A1	BLANCHARD-FIELDS, FREDDA H EVERYDAY PROBLEM SOLVING IN A SOCIAL CONTEXT AND AGING	08-15-98/07-31-99	GEORGIA INSTITUTE OF TECHNOLOGY	250,896
1R01AG15020-01	SACK, GEORGE H, JR THE AMYLOID A PROTEINS IN AGING AND INFLAMMATION	12-01-97/	JOHNS HOPKINS UNIVERSITY	
1R01AG15023-01	NORTH, WILLIAM G PROTECTION OF NEURONS IN AGING BY NEUROPEPTIDES	12-01-97/	DARTMOUTH COLLEGE	
1R29AG15024-01	HIGGINBOTHAM, JOHN C ETHNIC AND BEHAVIORAL FACTORS IN PSA RATIO AND VELOCITY	12-01-97/	UNIVERSITY OF MISSISSIPPI MEDICAL CE	
1R29AG15025-01	GUHA, AMALA CELLULAR EPIDEMIOLOGY OF AGE RELATED MALIGNANCY	12-01-97/	UNIVERSITY OF CONNECTICUT HEALTH CEN	
1R29AG15026-01	WANG, CHING-YUN MISSING DATA, MEASUREMENT ERROR AND APPLICATIONS	12-15-97/11-30-98	FRED HUTCHINSON CANCER RESEARCH CENT	119,347
1R01AG15027-01	KOHLMEIER, MARTIN EFFECT OF VITAMIN K ON BONE HEALTH IN ELDERLY PEOPLE	10-01-97/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
1R01AG15028-01	PERICAK-VANCE, MARGARET A THE GENETICS & EPIDEMIOLOGY OF ALZHEIMER DISEASE	12-01-97/	DUKE UNIVERSITY	
1R01AG15029-01A1	LAWLER, JOHN M OXIDATIVE STRESS AND E-C COUPLING IN THE AGING DIAPHRAGM	07-01-98/	TEXAS A&M UNIVERSITY-KINGSVILLE	
1R01AG15030-01	RINEHART, CLIFFORD A THE ROLE OF AGING IN BREAST CANCER	12-01-97/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
1R01AG15031-01A1	LOKHANDWALA, MUSTAFA F KIDNEY DOPAMINE RECEPTOR FUNCTION IN AGED	07-01-98/06-30-99	UNIVERSITY OF HOUSTON-UNIVERSITY PAR	225,135
1R01AG15034-01	LERTRATANANGKOON, KHINGKAN DNA METHYLATION LOSS IN AGING	12-01-97/	UNIVERSITY OF TEXAS MEDICAL BR GALVE	
1R29AG15035-01	SHIPP, MELVIN D DRIVER RELICENSING POLICIES AND FUNCTIONAL VISION STATUS	12-01-97/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R29AG15038-01	JACKSON, JEANNE M DAILY LIFE EVENTS IN CULTURALLY DIVERSE OLDER WOMEN	12-01-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG15040-01	BONA, CONSTANTIN A T-CELL CLONE SPECIFIC COGNITIVE PEPTIDE DURING AGING	12-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R01AG15041-01A1	ZHENG, BIAO Q GERMINAL CENTER REACTION IN AGING	07-01-98/	UNIVERSITY OF MARYLAND BALT PROF SCH	
1R01AG15042-01	BLOEBAUM, ROY D AGING EFFECTS ON THE BONE IN THE FEMALE FEMORAL NECK	12-01-97/	UNIVERSITY OF UTAH	
1R01AG15043-01A1	GORONZY, JORG J T CELLS AND AGING	08-15-98/06-30-99	MAYO FOUNDATION	196,531
1R01AG15044-01	DUNN, JULIE E BONE DENSITY/TURNOVER RESPONSE TO LOWFAT HIGHFIBER DIET	01-01-98/	NORTHWESTERN UNIVERSITY	
1R01AG15045-01	HENRETTA, JOHN C HEALTH, AGING & FAMILY SUPPORT IN THE US AND BRITAIN	01-01-98/	UNIVERSITY OF FLORIDA	
1R01AG15047-01A1	Park, Denise C MEMORY AGING AND CULTURE	09-15-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	335,900
1R01AG15049-01	ANTONUCCI, TONI C AGING IN AMERICA--A STUDY OF THREE COHORTS	04-20-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	169,463
1R01AG15052-01	WALSH, KENNETH REGULATION OF VESSEL WALL APOPTOSIS	01-01-98/12-31-98	ST. ELIZABETH'S MEDICAL CENTER OF BO	304,029
1R29AG15054-01	PATRICK, JULIE M GRANDMOTHERS AND GRANDCHILDREN: DYADIC INTERACTIONS	01-01-98/	BRADLEY UNIVERSITY	
1R01AG15055-01	PURICH, DANIEL L ROLE OF NEURONAL MAPS IN ALZHEIMER FILAMENT ASSEMBLY	12-01-97/	UNIVERSITY OF FLORIDA	
1R01AG15056-01	BLAU, HELEN M GENE THERAPY FOR CARDIOVASCULAR DISEASE	12-01-97/	STANFORD UNIVERSITY	
1R29AG15058-01	SAYLES, PETER C AGE-RELATED MUCOSAL IMMUNITY TO INTRACELLULAR INFECTION	12-01-97/	TRUDEAU INSTITUTE, INC.	
1R01AG15061-01	THEOFILOPOULOS, ARGYRIOS N CELL CYCLE AND APOPTOSIS GENES IN IMMUNOLOGIC SENESCENCE	01-01-98/12-31-98	SCRIPPS RESEARCH INSTITUTE	283,637

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FY: 98				
1R01AG15062-01A1	ALLMAN, RICHARD M MOBILITY AMONG OLDER AFRICAN AMERICANS AND WHITES	09-30-98/06-30-99	UNIVERSITY OF ALABAMA AT BIRMINGHAM	265,313
1R29AG15065-01	GRAY, MATHEW D CHARACTERIZATION OF THE WERNER SYNDROME PROTEIN	12-01-97/	UNIVERSITY OF WASHINGTON	
1R29AG15066-01A1	MARQUEZ-STERLING, NUMA R ENDOCYTOSIS OF NEURONAL APP IN ALZHEIMERS DISEASE	08-01-98/07-31-99	NORTHWESTERN UNIVERSITY	103,600
1R29AG15069-01	CHALLIS, JOHN H THE EXAMINATION OF CHANGES IN COORDINATION WITH AGING	01-01-98/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	
1R01AG15070-01	MARTIN, GEORGE M WRN HELICASE POLYMORPHISM, AGING AND CV DISEASE	12-01-97/	UNIVERSITY OF WASHINGTON	
1P01AG15072-01	GREENGARD, PAUL SYNAPSINS, SYNAPTOGENESIS AND ALZHEIMERS DISEASE	02-15-98/01-31-99	ROCKEFELLER UNIVERSITY	807,384
1R01AG15073-01	KIDA, ELIZABETH APOLIPOPROTEIN E	12-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R01AG15075-01	HOLLENBERG, NORMAN K AGE, BLOOD PRESSURE, ENVIRONMENT & GENES IN THE KUNA	12-01-97/	BRIGHAM AND WOMEN'S HOSPITAL	
1R29AG15076-01	MA, YING J NEUROENDOCRINOLOGY OF REPRODUCTION DURING AGING	12-01-97/	OREGON REGIONAL PRIMATE RESEARCH CEN	
1R29AG15077-01	ROEMMICH, JAMES N SEX STEROID & STRAIN-INDUCED MINERAL ACCRUAL: MECHANISMS	12-01-97/	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	
1R01AG15081-01A1	SCHREIBER, BARBARA M APOSAA & BRAIN LIPID METABOLISM IN ALZHEIMER'S DISEASE	07-01-98/	BOSTON UNIVERSITY	
1R01AG15083-01	REAME, NANCY E HYPOTHALAMIC AGING AND MENOPAUSE	01-01-98/12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	347,485
1R01AG15085-01	HARDY, JOHN A PRESENILIN FUNCTION IN C ELEGANS AND HUMAN CELLS	12-01-97/	MAYO CLINIC JACKSONVILLE	
1R01AG15086-01	ALLEN, ROBERT G EVALUATION OF SOD AND GPX IN CELLULAR SENESCENCE	12-01-97/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R29AG15088-01	KAPASI, ZOHER F EXERCISE-INDUCED IMMUNOMODULATION IN AGING	12-01-97/	EMORY UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15089-01	HEYMSFIELD, STEVEN B TOTAL BODY PROTEIN MASS: NEW BODY COMPOSITION MODELS	12-01-97/	ST. LUKE'S-ROOSEVELT INST FOR HLTH S	
1R01AG15091-01A1	MILLER, BAILA H DISENTANGLING THE CAREGIVER SUPPORT PROCESS	09-30-98/08-31-99	CASE WESTERN RESERVE UNIVERSITY	266,388
1R01AG15092-01	TORAN-ALLERAND, C DOMINIQUE ESTROGEN SIGNALING IN BRAIN DURING DEVELOPMENT AND AGING	01-01-98/12-31-98	COLUMBIA UNIVERSITY HEALTH SCIENCES	197,329
1R29AG15093-01A1	ANDRAWIS, NABIL S CHANGES IN THE VASCULAR RENIN ANGIOTENSIN SYSTEM	07-01-98/	GEORGETOWN UNIVERSITY	
1R01AG15095-01	JOHNSON, COLLEEN L FAMILY DIVERSITY AMONG MIDDLE-AGED AND OLDER BLACKS	01-01-98/12-31-98	UNIVERSITY OF CALIFORNIA SAN FRANCIS	161,562
1R13AG15097-01	HOFFMAN, PAULA L ASN CONFERENCE--AGING AND NEURODEGENERATIVE DISEASE	12-01-97/11-30-98	UNIVERSITY OF COLORADO HLTH SCIENCES	49,900
1R01AG15098-01A1	CLARK, DANIEL O NIDDM, EXERCISE REFERRAL, & OLDER AFRICAN AMERICAN WOMEN	09-01-98/07-31-99	INDIANA UNIV-PURDUE UNIV AT INDIANAP	248,913
1R01AG15101-01	BURSZTAJN, SHERRY DNA DAMAGE, APP AND EXCITOTOXICITY IN NEURODEGENERATION	12-01-97/	MC LEAN HOSPITAL (BELMONT, MA)	
1R01AG15102-01	SEEMAN, TERESA E ESTROGEN AND STRESS IN COGNITIVE AGING	12-01-97/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG15104-01	CALDWELL, STEVEN B WEALTH AND WELL-BEING DURING THE MIDDLE LATE YEARS	07-01-97/	CORNELL UNIVERSITY ITHACA	
1R01AG15106-01A1	ERIM, ZEYNEP MOTOR UNIT CONTROL AND AGING	07-01-98/	BOSTON UNIVERSITY	
1R01AG15107-01	DONAHUE, HENRY J STRETCH ACTIVATED CHANNELS IN CHONDROCYTES	01-01-98/12-31-98	PENNSYLVANIA STATE UNIV HERSHEY MED	211,065
1R29AG15108-01A1	KRAUS, VIRGINIA B METALLOPROTEINASES IN AGING AND OSTEOARTHRITIS	07-01-98/06-30-99	DUKE UNIVERSITY	117,139
1R01AG15109-01A1	POSNETT, DAVID N T CELL CLONAL EXPANSIONS ASSOCIATED WITH AGE	07-01-98/	WEILL MEDICAL COLLEGE OF CORNELL UNI	
5R01AG15110-02	GARBER, ALAN M DISUTILITY OF FUNCTIONAL LIMITATIONS IN THE ELDERLY	09-15-98/08-31-99	STANFORD UNIVERSITY	148,482

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R29AG15112-01	WALDSTEIN, SHARI R HYPERTENSION, COGNITION, AND THE BRAIN IN OLDER ADULTS	01-01-98/	12-31-98	UNIVERSITY OF MARYLAND BALT PROF SCH	105,161
1R29AG15113-01	LAZARIDIS, EMMANUEL N LONGITUDINAL PATTERNS OF PHYSICAL FUNCTIONING	12-01-97/		INDIANA UNIV-PURDUE UNIV AT INDIANAP	
1R01AG15114-01	ADES, PHILIP A RESISTANCE TRAINING IN OLDER WOMEN WITH CHD	04-01-98/	03-31-99	UNIVERSITY OF VERMONT & ST AGRIC COL	215,199
1R01AG15116-01	GROSSMAN, MURRAY CONCEPTUAL PROCESSING IN ALZHEIMERS DISEASE	12-15-97/	11-30-98	UNIVERSITY OF PENNSYLVANIA	326,449
1R29AG15117-01	FERKIN, MICHAEL H EFFECTS OF AGING ON BEHAVIOR	12-01-97/		UNIVERSITY OF MEMPHIS	
1R01AG15118-01	OLESKE, DENISE M THE MENOPAUSAL TRANSITION IN WOMEN SURVIVORS OF CANCER	12-01-97/		RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R01AG15119-01	HUESMANN, L ROWELL AGGRESSION & ASSOCIATED CHARACTERISTICS ACROSS ADULTHOOD	01-01-98/		UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R01AG15122-01	ORR, WILLIAM C GLUTATHIONE, OXIDATIVE STRESS, AND AGING	12-01-97/	11-30-98	SOUTHERN METHODIST UNIVERSITY	208,137
1R37AG15124-01	LIANG, JERSEY HEALTH AND WELL BEING AMONG OLDER-OLD US AND JAPAN	01-15-98/	12-31-98	UNIVERSITY OF MICHIGAN AT ANN ARBOR	318,998
1R01AG15125-01	PATTERSON, MARIAN B EXECUTIVE DYSFUNCTION MECHANISMS IN AGING & DEMENTIA	12-01-97/		CASE WESTERN RESERVE UNIVERSITY	
1R01AG15126-01	SATARIANO, WILLIAM A AGING AND LONG-TERM SURVIVORS OF BREAST CANCER.	12-01-97/		UNIVERSITY OF CALIFORNIA BERKELEY	
1R01AG15129-01	NELSON, JAMES F TRANSGENIC PROBE OF GLUCOCORTICOID INVOLVEMENT IN AGING	11-01-97/		UNIVERSITY OF TEXAS HLTH SCI CTR SAN	
1R01AG15130-01	ROBERTS, JEFFREY A ESTROGEN THERAPY AND NEURONAL PLASTICITY IN MACAQUES	12-01-97/		UNIVERSITY OF CALIFORNIA DAVIS	
1R01AG15132-01	FORGHANI, BAGHER ROLE OF HORMONE THERAPY IN AGING WOMEN ON HERPES ZOSTER	12-01-97/		PUBLIC HEALTH FOUNDATION ENTERPRISES	
1R01AG15133-01	DE FIGUEIREDO, RUI J P BRAIN SPECT PARAMETRIZATION ACROSS ALZHEIMER POPULATION	04-01-97/		UNIVERSITY OF CALIFORNIA IRVINE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15136-01	MONK, TIMOTHY H SIESTA NAPS IN OLDER PEOPLE	01-01-98/12-31-98	UNIVERSITY OF PITTSBURGH AT PITTSBUR	143,763
1R29AG15137-01	BERNARD, SHULAMIT L AGING IN PLACE: DEMENTIA VS NON-DEMENTIA	12-01-97/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
1R01AG15138-01A1	BUYSSE, DANIEL J CIRCADIAN PATTERNS OF SLEEP TENDENCY IN THE ELDERLY	07-01-98/06-30-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	223,940
1R01AG15139-01A1	HODIS, HOWARD N IMPROVED MEASUREMENT OF VASCULAR STIFFNESS IN AGING	09-30-98/08-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	325,559
1R01AG15140-01	LEWY, ALFRED J DOSE-RESPONSE CURVE FOR MELATONIN IN THE ELDERLY	01-15-98/12-31-98	OREGON HEALTH SCIENCES UNIVERSITY	297,254
5R01AG15141-02	WOOD, JAMES W BIODEMOGRAPHIC MODELS OF REPRODUCTIVE AGING	06-01-98/05-31-99	PENNSYLVANIA STATE UNIVERSITY-UNIV P	352,798
1R01AG15142-01	LANDAU, EMMANUEL M AMYLOID BETA PEPTIDE ACTIVATION OF THE PI PATHWAY	12-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R01AG15145-01A1	VEIT, CLAIRICE T AGE, ETHNICITY AND CLINICAL TRIAL PARTICIPATIONS	09-01-98/08-31-99	RAND CORPORATION	317,270
1R01AG15147-01	MEREDITH, MICHAEL J GSH AND THIOL OXIDATION IN PARKINSON'S	12-01-97/	OREGON HEALTH SCIENCES UNIVERSITY	
1R03AG15148-01	RUDBERG, MARK A NURSING HOME RESIDENT FUNCTIONAL TRANSITIONAL CORRELATES	07-15-98/05-31-99	UNIVERSITY OF CHICAGO	76,500
1R03AG15169-01	LARSEN, PAMELA L GENE EXPRESSION IN C ELEGANS	04-01-98/03-31-99	UNIVERSITY OF SOUTHERN CALIFORNIA	82,500
1R03AG15177-01	SONNTAG, WILLIAM E A TRANSGENIC RAT MODEL FOR ADULT-ONSET GH DEFICIENCY	09-01-97/	WAKE FOREST UNIVERSITY	
1R03AG15183-01	FRACKOWIAK, JANUSZ REGULATION OF ALZHEIMER'S VASCULAR BETA-AMYLOIDOSIS	09-01-97/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R03AG15188-01A1	MARTIN, LESLIE R ADULT PERSONALITY--CONSISTENCY AND GENDER DIFFERENCES	08-01-98/07-31-99	LA SIERRA UNIVERSITY	26,653
1R03AG15189-01	KELLOGG, DEAN L CARDIOVASCULAR CONSEQUENCES OF MENOPAUSE	12-15-97/11-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	66,898

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG15192-01	CAVANAGH, PETER R MUSCLE ATROPHY AND FOOT DEFORMITY IN DIABETIC ELDERLY	12-15-97/11-30-98	PENNSYLVANIA STATE UNIVERSITY-UNIV P	68,501
1R03AG15201-01	BRENNAN, MARK RELIGIOUSNESS AND SPIRITUALITY IN VISION IMPAIRED ELDERS	12-01-97/11-30-99	THE LIGHTHOUSE, INC.	66,299
1R01AG15208-01A1	MCKINLAY, JOHN B MEDICAL DECISIONS AND AGING PATIENTS: A US/UK COMPARISON	09-01-98/	NEW ENGLAND RESEARCH INSTITUTES, INC	
1R03AG15211-01A1	FINKEL, DEBORAH G CROSS SEQUENTIAL TWIN ANALYSIS OF FUNCTIONAL AGE	09-01-98/08-31-99	INDIANA UNIVERSITY BLOOMINGTON	62,220
1R03AG15220-01A1	MC CORMICK, KATHLEEN M MYONUCLEAR DEGENERATION IN AGING SKELETAL MUSCLE	07-01-98/06-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	75,533
1R03AG15223-01	SINGER, CLIFFORD M MECHANISM OF MELATONIN IN ALZHEIMER'S DISEASE	09-01-97/	OREGON HEALTH SCIENCES UNIVERSITY	
1R03AG15228-01	GREENBERG, JAMES A FEASIBILITY AND EFFECTS OF CALORIC RESTRICTION IN HUMANS	09-01-97/	BROOKLYN COLLEGE	
1R03AG15232-01	WILKIE, FRANCES L IMPACT OF HIV INFECTION AND AGING ON TASK PERFORMANCE	01-01-98/12-31-98	UNIVERSITY OF MIAMI	75,708
1R03AG15236-01	SILVERSTEIN, JEFFREY H AGE & ANESTHETIC EFFECTS IN STRESSED RATS	09-01-97/	MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R01AG15238-01	BORSON, SOO AGING AND NEUROTROPHISM IN LOCUS COERULEUS	12-01-97/	UNIVERSITY OF WASHINGTON	
5R01AG15239-07	GRANHOLM, ANN-CHARLOTTE E CNS NORADRENERGIC NEURONS--TROPHIC FACTORS	08-01-98/07-31-99	UNIVERSITY OF COLORADO HLTH SCIENCES	149,187
1R01AG15240-01	NOELKER, LINDA S CAREGIVER SERVICES AND MENTAL HEALTH IN A NEW PACE MODEL	11-01-97/	BENJAMIN ROSE INSTITUTE	
1R43AG15241-01	YANG, HONG NEW STRATEGY FOR MENOPAUSE: TRADITIONAL CHINESE MEDICINE	11-01-97/	NEW LIFE CLINIC	
1R41AG15242-01	MUELLER, JAMES L EVALUATING SIMULATIONS FOR TEACHING THE EFFECTS OF AGING	11-01-97/	J.L. MUELLER, INC.	
1R43AG15243-01	WALKER, BONNIE L SPIRITUALITY AMONG THE ELDERLY IN LONG TERM CARE	12-15-97/08-30-98	BONNIE WALKER AND ASSOCIATES	99,698

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1RO1AG15244-01	FELDMAN, MARTIN L MULTIMODAL NEURAL DEFICITS IN AGED MONKEYS	02-01-98/	BOSTON UNIVERSITY	
1R41AG15246-01	SAVAGE, HENRY C, JR TITLE OMITTED	07-01-98/06-30-99	APOLLO LIGHT SYSTEMS, INC.	100,000
1R43AG15247-01	ROSS, RICHARDUS ROTATION DIET FOODS FOR CLINICAL STUDIES OF SOY	11-01-97/	NUTROBICS INTERNATIONAL CORPORATION,	
1R43AG15248-01	TENNSTEDT, SHARON COMMUNICATING WITH OLDER PATIENTS--CD ROM FOR PHYSICIANS	12-01-97/12-31-98	NEW ENGLAND RESEARCH INSTITUTES, INC	97,197
1R43AG15249-01A1	CALKINS, MARGARET P MODELS OF CARE AND ORGANIZATIONAL CONGRUENCE IN SCUS	09-30-98/02-28-99	INNOVATIVE DESIGNS/ENVIRONMENT/AGING	100,000
5R03AG15250-02	JONES, MILDRED IMPACT OF EARLY HOSPITAL DISCHARGE IN THE AGED	09-30-98/08-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	16,655
1R43AG15254-01A1	SLESYNSKI, NEAL T REAGENTLESS DIAGNOSTICS FOR NUTRITIONAL ASSESSMENT	09-01-98/08-31-99	PRECISION RESEARCH, INC.	99,500
1R43AG15255-01	WEDDING, CAROL A SMART EMERGENCY ALERT SYSTEM	12-01-97/	IMAGINE SYSTEMS TECHNOLOGY	
1R43AG15256-01	CHEW, FIONA STRENGTH AND BALANCE: A TAICHI VIDEO SERIES	01-01-97/	COMMUNICATION MANAGEMENT RESEARCH	
1R43AG15257-01	CHEN, ROYEE C WORLD WIDE WEB SITE ON SERVICES FOR THE ELDERLY	11-01-97/	ORYX ASSOCIATES	
1R43AG15258-01	RASMUSSEN, LARRY L INTERACTIVE GUIDE TO ALCOHOL USE FOR OLDER AMERICANS	10-01-97/	SCOTT PUBLISHING COMPANY	
1R43AG15259-01	CHEN, JAN L NOVEL DRUG FOR URINARY INCONTINENCE	05-01-98/04-30-99	GLSYNTHESIS, INC.	100,000
1R43AG15260-01	CRAINE, BRIAN L NONINVASIVE TESTING OF GUT MOTILITY IN GERIATRICS	11-01-97/	WESTERN RESEARCH COMPANY, INC.	
1R43AG15261-01	LISS, S GUY DEVELOPMENT OF A HEALTH MANAGEMENT SYSTEM FOR SENIORS	11-01-97/	LMC HEALTH SYSTEMS, INC.	
1R43AG15262-01	D'AMBROSIO, CATHERINE P NURSING EDUCATION OF FAMILY CAREGIVERS OF OCTOGENERIANS	11-15-97/	CATHERINE D'AMBROSIO, RN, MSN & ASSO	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R43AG15263-01	BROWNE, ALLAN J ASSESSMENT PROTOCOL TO IDENTIFY HOME MODIFICATION NEEDS	03-15-98	11-15-98	EXTENDED HOME LIVING SERVICES, INC.	100,000
1R43AG15264-01	WRIGHT, PATRICIA J SENIOR CITIZEN EMPLOYEMENT AND TRAINING PROGRAM	11-01-97	/	SENIOR EXECUTIVE EMPLOYMENT SERVICE	
5P30AG15272-02	PEREZ-STABLE, ELISEO J RESOURCE CENTER FOR AGING RESEARCH IN DIVERSE POPULATIO	09-15-98	06-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	567,054
3P30AG15272-02S1	PEREZ-STABLE, ELISEO J RESOURCE CENTER FOR AGING RESEARCH IN DIVERSE POPULATION	09-30-98	06-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	55,676
1R43AG15273-01	HAWKINS, ROBERT E WHERE DID GRANDMA GO? LOCATING WANDERERS WITH DEMENTIA	02-01-98	01-31-99	CARE TRAK	99,996
1R43AG15274-01	GELIEBTER, JAN GENE THERAPY OF IMPOTENCE	11-01-97	/	ADVANCED RESEARCH SYSTEMS, INC.	
1R43AG15275-01	FOWLKES, DANA M MOLECULAR RECOGNITION OF CELL DEATH DOMAINS	01-01-98	06-30-98	NOVALON PHARMACEUTICAL CORPORATION	99,566
1R43AG15276-01	WONG, XIAOYUN H MUTATIONS OF MTDNA AS BIO-MARKER FOR PARKINSON DISEASE	11-01-97	/	LEADER, INC.	
1R43AG15277-01A1	LANE, STEPHEN S IMPROVED FALL DETECTOR	09-30-98	03-15-99	AMRON CORPORATION	95,320
1R43AG15278-01	NEENAN, WILLIAM J DEVELOPMENT OF DATABASE OF PHYSICAL THERAPY SKILLS	10-01-97	/	SUPPORT ENTERPRISES	
1R43AG15279-01A1	DAVID, DANIEL TELEMEDICAL HOME PREVENTION OF FALLS IN THE ELDERLY	05-01-98	/	CARDIOMEDIX, INC.	
5P30AG15281-02	JACKSON, JAMES S CENTER FOR URBAN AFRICAN AMERICAN AGING RESEARCH	09-15-98	06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	575,425
5P30AG15286-02	TILLEY, BARBARA C CENTER FOR AFRICAN AMERICAN AGING RESEARCH	09-15-98	06-30-99	CASE WESTERN RESERVE UNIV-HENRY FORD	712,473
3P30AG15286-02S1	TILLEY, BARBARA C CENTER FOR AFRICAN AMERICAN AGING RESEARCH	09-30-98	06-30-99	CASE WESTERN RESERVE UNIV-HENRY FORD	67,000
5R03AG15288-02	MALDONADO, TAMMY A BETA AMYLOID PLAQUES IN SALMON BRAIN	09-01-98	08-31-99	UNIVERSITY OF COLORADO AT BOULDER	16,200

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5P30AG15292-02	MANSON, SPERO M NATIVE ELDER RESEARCH CENTER	09-15-98/06-30-99	UNIVERSITY OF COLORADO HLTH SCIENCES	568,621
5P30AG15294-02	LANTIGUA, RAFAEL A COLUMBIA CENTER FOR THE ACTIVE LIFE OF MINORITY ELDERS	09-15-98/06-30-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	634,525
5R01AG15301-10	GRANT, IGOR ALZHEIMER CAREGIVER COPING--MENTAL AND PHYSICAL HEALTH	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	378,183
1R01AG15302-01	TURNER, MARILYN L LONGITUDINAL STUDY OF ADULT WORKING MEMORY AND COGNITION	12-01-97/	WICHITA STATE UNIVERSITY	
1R43AG15304-01	ALLEN, MAUREEN B LIVING WITH PARKINSONS DISEASE--AN INTERACTIVE CD ROM	04-01-98/02-28-99	CLINICAL TOOLS, INC.	99,873
1R43AG15305-01	SHALABY, SHALABY W DELIVERY OF TACRINE FOR TREATING ALZHEIMER'S DISEASE	10-15-97/	POLY-MED, INC.	
1R43AG15306-01	JOHNSON, DAVID A PORTABLE SLEEP APNEA MONITOR FOR OLDER PERSONS	10-15-97/	PINNACLE TECHNOLOGY, INC.	
1R43AG15307-01	VITEK, MICHAEL P ANIMAL MODEL OF ALZHEIMERS DISEASE PATHOLOGY	01-21-98/07-14-98	CERBERUS, INC.	100,000
1R43AG15308-01	GEISTFELD, JAMES G MOUSE MODELS FOR STUDIES OF AGING AND NEURONAL DISEASES	01-01-98/12-31-99	TACONIC FARMS, INC.	100,000
1R01AG15309-01	BIEMER, PAUL P INFORMED CONSENT PROCEDURES FOR SURVEYS OF THE ELDERLY	10-01-97/	RESEARCH TRIANGLE INSTITUTE	
1R01AG15310-01	DELONG, ELIZABETH R INFORMED CONSENT: MEETING THE CHALLENGE OF TIME	10-01-97/	DUKE UNIVERSITY	
1R01AG15311-01	FITTEN, JAIME L INFORMED CONSENT AND EARLY STAGE DEMENTIA	10-01-97/	HARBOR-UCLA RESEARCH & EDUC INST	
1R01AG15312-01	KOEPKE, KATHLEEN INFORMED CONSENT: CONTEXTUAL & INVESTIGATOR INFLUENCES	10-01-97/	WASHINGTON UNIVERSITY	
5R01AG15317-02	SACHS, GREG DEMENTIA RESEARCH: INFORMED, PROXY, AND ADVANCE CONSENT	09-30-98/08-31-99	UNIVERSITY OF CHICAGO	253,000
1R01AG15319-01	ZWAAN, ROLF A UNDERSTANDING AND USING INFORMED CONSENT INFORMATION	10-01-97/	FLORIDA STATE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG15321-02	WILLIAMSON, GAIL M CAREGIVER MENTAL HEALTH IMPAIRMENT--IMPACT ON ELDER CARE	09-01-98/07-31-99	UNIVERSITY OF GEORGIA	330,359
1R01AG15325-01	ALOIA, JOHN F VITAMIN D SUPPLEMENTATION IN POSTMENOPAUSAL WOMEN	09-15-98/07-31-99	WINTHROP-UNIVERSITY HOSPITAL	284,369
1R01AG15326-01	CHRISTAKIS, NICHOLAS A POPULATION BASED STUDY OF HOSPICE USE AND CONSEQUENCES	07-01-98/06-30-99	UNIVERSITY OF CHICAGO	295,487
1R13AG15329-01	ERSHLER, WILLIAM B SECOND INTERNATIONAL CONFERENCE ON IMMUNOLOGY AND AGING	03-01-98/02-28-99	INSTITUTE ADVANCED STUDIES/IMMUNO/AG	35,000
1R21AG15333-01	WESTRICH, GEOFFREY H OUTCOME ASSESSMENT IN TOTAL JOINT ARTHROPLASTY	10-01-97/	HOSPITAL FOR SPECIAL SURGERY	
1R01AG15335-01	PASSMORE, JOHN C AGING INDUCED RENAL DYSFUNCTION: G PROTEIN ACTIVITY	04-01-98/	UNIVERSITY OF LOUISVILLE	
1R01AG15336-01	SEBASTIAN, ANTHONY RENAL FUNCTION AND BONE AND MUSCLE LOSS IN THE ELDERLY	04-01-98/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R01AG15337-01	ROSENTHAL, ANN K TRANSGLUTAMINASE PROMOTES CPPD DISEASE IN AGING JOINTS	05-15-98/04-30-99	MEDICAL COLLEGE OF WISCONSIN	115,173
5R01AG15340-02	MANDELBLATT, JEANNE S COST EFFECTIVENESS OF HPV SCREENING FOR CERVIX CANCER	09-01-98/08-31-99	GEORGETOWN UNIVERSITY	346,885
1R01AG15341-01	HARKINS, STEPHEN W MECHANISMS OF AGE DIFFERENCES IN PAIN PERCEPTION	01-01-98/	VIRGINIA COMMONWEALTH UNIVERSITY	
1R01AG15343-01	ANDERSON, AILEEN J MECHANISMS AND PROFILES OF DNA DAMAGE AND REPAIR IN AD.	04-01-98/	UNIVERSITY OF CALIFORNIA IRVINE	
1R01AG15345-01	INSOGNA, KARL L ROLE FOR IL6 IN PTH INDUCED BONE RESORPTION	08-15-98/07-31-99	YALE UNIVERSITY	232,541
1R01AG15348-01	WOLF, NORMAN S CELLULAR MECHANISM IN MALE OSTEOPOROSIS	04-01-98/	UNIVERSITY OF WASHINGTON	
1R01AG15350-01	LEBOFF, MERYL S DHEA: EFFECT ON SKELETAL AGING IN WOMEN	04-01-98/	BRIGHAM AND WOMEN'S HOSPITAL	
1R01AG15351-01	PEREZ-POLO, JOSE R CHOLINERGIC REGULATION IN AGED RAT BRAIN	04-01-98/	UNIVERSITY OF TEXAS MEDICAL BR GALVE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15353-01	ZEC, RONALD F EXECUTIVE FUNCTIONING IN EARLY ALZHEIMER DISEASE	12-01-97/	SOUTHERN ILLINOIS UNIVERSITY CARBOND	
1R01AG15354-01	KRISTAL, BRUCE S DIETARY RESTRICTION SERUM MARKERS PREDICT HUMAN DISEASE	05-01-98/04-30-99	WINIFRED MASTERSON BURKE MED RES INS	244,500
1R01AG15357-01	MOE, KAREN E SLEEP IN OLDER WOMEN--EFFECTS OF ESTROGEN	05-01-98/04-30-99	UNIVERSITY OF WASHINGTON	318,261
1R01AG15359-01	BUCKWALTER, J GALEN DHEA AND COGNITIVE PERFORMANCE IN ELDERLY MEN AND WOMEN	04-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG15360-01	BLANK, THOMAS O EFFECTIVE FUNCTIONING AND ADAPTING WITH PROSTATE CANCER	04-01-98/	UNIVERSITY OF CONNECTICUT STORRS	
1R01AG15362-01	DUFFY, CHARLES J VISUAL MOTION PROCESSING IN AGING AND ALZHEIMER'S DIS.	04-01-98/	UNIVERSITY OF ROCHESTER	
1R13AG15365-01	GRODZICKER, TERRI I GENETICS OF AGING CONFERENCE	04-01-98/03-31-99	COLD SPRING HARBOR LABORATORY	25,732
1R01AG15368-01	MORLEY, JOHN E RURAL NATIVE AMERICAN WOMEN, AGE, STRENGTH AND FUNCTION	04-01-98/	ST. LOUIS UNIVERSITY	
1R13AG15369-01	FREI, BALZ B CONFERENCE--MECHANISMS OF ANTIOXIDANT ACTION	08-01-98/07-31-99	FEDERATION OF AMER SOC FOR EXPER BIO	15,000
1R01AG15370-01	MURPHY, PATRICIA J SEX HORMONES SLEEP AND CIRCADIAN RHYTHMICITY IN AGING	09-01-98/08-31-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	167,815
1R01AG15373-01	LEWIS, STEPHEN J REGULATION OF HINDLIMB VASCULAR RESISTANCE IN SENESCENCE	04-01-98/	UNIVERSITY OF IOWA	
1R29AG15376-01	NICHOLS, AMY WEIGHT REDUCTION, URINARY INCONTINENCE, QUALITY OF LIFE	04-01-97/	SAN FRANCISCO STATE UNIVERSITY	
1R01AG15378-01	LEE, WILLIAM T THE ROLE OF DUAL-RECEPTOR T-CELLS IN MEMORY GENERATION	04-01-98/	WADSWORTH CENTER	
1P01AG15379-01	Selkoe, Dennis J PRESENILIN BIOLOGY & THE MECHANISM OF ALZHEIMERS DISEASE	09-30-98/08-31-99	BRIGHAM AND WOMEN'S HOSPITAL	1,429,704
1R01AG15384-01	MC DOUGALL, GRAHAM J IMPROVING EVERYDAY MEMORY IN AT RISK ELDERLY	04-01-98/	CASE WESTERN RESERVE UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15386-01	KLINE, JENNIE K EPIDEMIOLOGY OF TRISOMY AND OVARIAN AGE	05-01-98/03-31-99	NEW YORK STATE PSYCHIATRIC INSTITUTE	430,167
1R01AG15387-01	RICCIO, PATRICIA A EFFECTS OF BRIGHT LIGHT ON SLEEP OF AD PATIENTS	04-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG15389-01	HAGBERG, JAMES M APO E GENOTYPE AND HDL CHANGES WITH EXERCISE TRAINING	06-01-98/05-31-99	UNIVERSITY OF MARYLAND COLLEGE PK CA	369,641
1R01AG15393-01	REED, JOHN C BAX INHIBITORY PROTEINS, BI1 AND BI2	06-01-98/05-31-99	BURNHAM INSTITUTE	262,043
1R29AG15395-01	CARR, DAVID B IMPROVING DRIVING SKILLS IN FRAIL OLDER DRIVERS	04-01-98/	WASHINGTON UNIVERSITY	
1R01AG15399-01	SUMIKAWA, KATUMI A RAT MODEL FOR OXIDATIVE STRESS AND APOPTOSIS IN AD	04-01-98/	UNIVERSITY OF CALIFORNIA IRVINE	
1R29AG15400-01	YU, CHANG-EN FUNCTIONAL ANALYSIS OF THE WERNER SYNDROME GENE PRODUCT	04-01-98/	UNIVERSITY OF WASHINGTON	
1R01AG15401-01	RADIC, MARKO Z REDUCING MACROPHAGE DAMAGE TO THE ARTERIAL WALL	04-01-98/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG15402-01	SALVESEN, GUY S INHIBITION OF PROTEASES BY IAPS	06-15-98/05-31-99	BURNHAM INSTITUTE	340,581
5R01AG15404-02	GUMERLOCK, PAUL H BPH--MOLECULAR BIOLOGY OF P53 AND BCL2 ALTERATIONS	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA DAVIS	199,845
1R01AG15405-01	SANDSTEAD, HAROLD H ZINC: NEUROPSYCHOLOGICAL PERFORMANCE OF OLDER WOMEN	04-01-98/	UNIVERSITY OF TEXAS MEDICAL BR GALVE	
1R01AG15408-01	WISNIEWSKI, THOMAS AMYLOID BETA PEPTIDE AND THEIR BINDING PROTEINS	08-01-98/07-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	208,672
1R29AG15409-01	LAFERLA, FRANK M TRANSGENIC MOUSE MODEL OF INCLUSION BODY MYOSITIS	04-15-98/03-31-99	UNIVERSITY OF CALIFORNIA IRVINE	105,193
1R01AG15411-01	KOVACS, SANDOR J QUANTITATION OF DIASTOLIC FUNCTION IN OLDER CHF PATIENTS	04-01-98/	BARNES-JEWISH HOSPITAL	
1R29AG15413-01	DOMINOV, JANICE A SKELETAL MUSCLE STEM CELLS, APOPTOSIS AND AGING MUSCLE	04-01-98/	MASSACHUSETTS GENERAL HOSPITAL	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R29AG15414-01	DYER, CARMEL B ELDER ABUSE: CHARACTERISTICS AND OUTCOMES	04-01-98/	BAYLOR COLLEGE OF MEDICINE	
1R01AG15415-01	VANDENBURGH, HERMAN H BIOARTIFICIAL MUSCLES FOR GENE THERAPY	04-15-98/03-31-99	MIRIAM HOSPITAL	287,588
1R01AG15416-01	DUKER, NAHUM J DNA OXIDATION AND MECHANISMS OF NEURAL CELL LOSS	04-01-98/	TEMPLE UNIVERSITY	
1R01AG15419-01	MENN, LISE PROPOSITION-LEND PRAGMATICS AFTER BRAIN DAMAGE	06-01-98/	UNIVERSITY OF COLORADO AT BOULDER	
1R01AG15420-01	SILBER, JEFFREY H POSTOPERATIVE PNEUMONIA: ETIOLOGY OF FAILURE-TO-RESCUE	04-01-98/	CHILDREN'S HOSPITAL OF PHILADELPHIA	
1R01AG15421-01	QUIST, EUGENE E SEX HORMONES INFLUENCE CA2+ CYCLING IN AGING MYOCARDIUM	04-01-98/	UNIVERSITY OF NORTH TEXAS HLTH SCI C	
1R01AG15422-01	LEE, KI-YOUNG NEURONAL CDC2-LIKE (NCLK) AND ALZHEIMER'S DISEASE	04-01-98/	UNIVERSITY OF CALGARY	
1R01AG15423-01	BOX, HAROLD C ALZHEIMER'S AND FLUORESCENT LIGHT-INDUCED DNA DAMAGE	04-01-98/	ROSWELL PARK CANCER INSTITUTE	
7R29AG15425-02	SEIFER, DAVID B BIOLOGICAL BASIS OF THE PERIMENOPAUSE	09-01-98/08-31-99	UNIV OF MED/DENT NJ-R W JOHNSON MED	111,300
5R01AG15428-05	BOUSFIELD, GEORGE R CARBOHYDRATE AND FSH SPECIFICITY DETERMINATION	08-01-98/07-31-99	WICHITA STATE UNIVERSITY	164,707
3R01AG15430-01S1	HAHN, KLAUS M RHO FAMILY GTPASES AND APOPTOTIC SIGNALING	12-15-97/07-31-98	SCRIPPS RESEARCH INSTITUTE	58,324
5R01AG15430-02	HAHN, KLAUS M RHO FAMILY GTPASES AND APOPTOTIC SIGNALING	08-01-98/07-31-99	SCRIPPS RESEARCH INSTITUTE	398,137
1R29AG15431-01	MOSLEY, RODNEY L T CELL REPERTOIRE SKEWING IN AGED MICE	04-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
7R01AG15432-02	HANLON, JOSEPH T SUBOPTIMAL DRUG USE AND HEALTH OUTCOMES	09-01-98/08-31-99	UNIVERSITY OF MINNESOTA TWIN CITIES	220,656
1R01AG15433-01	KWON, BYOUNG S ROLE OF CHEMOKINES IN ATHEROSCLEROSIS	04-01-98/	INDIANA UNIV-PURDUE UNIV AT INDIANAP	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1P01AG15434-01	CHAMBERLAIN, JEFFREY S GENETIC MODIFICATION OF STRIATED MUSCLES DURING AGING	05-01-98/04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	915,006
5R01AG15435-14	OSDOBY, PHILIP A CELL SURFACE AND OSTEOCLAST DEVELOPMENT	08-01-98/07-31-99	WASHINGTON UNIVERSITY	241,561
1R01AG15436-01	STUCKEY, JON C SPIRITUALITY, RELIGION & ADAPTATION THROUGH LIFE COURSE	04-01-98/	CASE WESTERN RESERVE UNIVERSITY	
1R01AG15437-01	ALWIN, DUANE F SOCIOECONOMIC FACTORS, AGING AND COGNITIVE FUNCTIONING	05-01-98/04-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	267,526
1R15AG15438-01	MUSIL, CAROL M HEALTH OF GRANDMOTHERS--A COMPARISON BY CAREGIVER STATUS	04-01-98/03-31-00	CASE WESTERN RESERVE UNIVERSITY	107,100
1R15AG15440-01	ADAMI, GUY R REGULATION OF P16INK4A AFTER DANA DAMAGE	04-15-98/	UNIVERSITY OF ILLINOIS AT CHICAGO	
1R15AG15441-01	VENABLE, MARK E ROLE OF CERAMIDE AND PLD IN ENDOTHELIAL SENESCENCE	06-01-98/	APPALACHIAN STATE UNIVERSITY	
1R01AG15442-01	LUPIEN, SONIA J GLUCOCORTICOIDS, STRESS AND HUMAN HIPPOCAMPAL AGING	10-01-97/	MC GILL UNIVERSITY	
1R01AG15443-01	PODUSLO, SHIRLEY E A GENETIC STUDY OF LATE ONSET ALZHEIMER'S DISEASE	04-01-98/	TEXAS TECH UNIVERSITY HEALTH SCIS CE	
1R29AG15444-01	THYAGARAJAN, SRINIVASAN PLASTICITY OF NEURAL-IMMUNE INTERACTIONS IN AGING	04-01-98/	UNIVERSITY OF ROCHESTER	
1R29AG15445-01	GRUBER-BALDINI, ANN L BEHAVIORAL PROBLEMS IN RESIDENTIAL CARE	04-01-98/	UNIVERSITY OF MARYLAND BALT PROF SCH	
1R01AG15446-01	KIMBLE, CHARLES E SELF-CARE DIET AND EXERCISE BEHAVIORS OF OLDER ADULTS	04-01-98/	UNIVERSITY OF DAYTON	
1R29AG15447-01	HAMANN, STEPHAN B EMOTIONAL MEMORY AND PERCEPTION IN ALZHEIMER'S DISEASE	04-01-98/	EMORY UNIVERSITY	
1R01AG15448-01	GLASGOW, RUSSELL E INTERNET-BASED PHYSICAL ACTIVITY PROGRAM FOR OLDER WOMEN	04-01-98/	OREGON RESEARCH INSTITUTE	
1R37AG15450-01	HOWARD, DARLENE V AGING AND THE IMPLICIT LEARNING OF SEQUENTIAL PATTERNS	06-15-98/05-31-99	GEORGETOWN UNIVERSITY	252,531

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
3R37AG15450-01S1	HOWARD, DARLENE V AGING AND THE IMPLICIT LEARNING OF SEQUENTIAL PATTERNS	09-30-98/05-31-99	GEORGETOWN UNIVERSITY	5,000
1R01AG15451-01	YOUNG, STEPHEN G METABOLISM OF SPONTANEOUSLY DAMAGED PROTEINS IN AGING	07-01-98/06-30-99	J. DAVID GLADSTONE INSTITUTES	311,529
1R01AG15452-01	RINEHART, CLIFFORD A THE ROLE OF AGING IN ENDOMETRIAL CANCER	04-01-98/	UNIVERSITY OF NORTH CAROLINA CHAPEL	
1R01AG15455-01	LAPANE, KATE EPIDEMIOLOGIC STUDIES OF DEPRESSION IN ELDERLY WITH CHD	07-01-98/	BROWN UNIVERSITY	
1R01AG15458-01	GRAFF-RADFORD, NEILL R PLASMA AB LEVELS MAY PREDICT ALZHEIMER'S DISEASE RISK	04-01-98/	MAYO CLINIC JACKSONVILLE	
1R01AG15460-01	WELBOURNE, TOMAS C GLUTAMATE TRANSPORT IN AGING INTESTINE	04-01-98/	LOUISIANA STATE UNIV MED CTR SHREVEP	
1R01AG15461-01	ANDERSON, JOHN P HEALTHY PEOPLE 2000: PROGRESS TOWARD WELL-YEAR GOALS	04-01-98/	UNIVERSITY OF CALIFORNIA SAN DIEGO	
1R01AG15462-01	STRATTON, JOHN R AGING TRAINING AND CARDIAC SYMPATHETIC FUNCTION	09-30-98/08-31-99	UNIVERSITY OF WASHINGTON	193,782
1R03AG15465-01	BANERJEE, PROBAL REGULATION OF APOPTOSIS BY THE SEROTONIN 1A RECEPTOR	03-15-98/02-28-99	COLLEGE OF STATEN ISLD WILLOWBROOK C	77,142
1R01AG15466-01	GROPLER, ROBERT J PET DETECTION OF THE EFFECTS OF AGING ON THE HUMAN HEART	05-01-98/03-31-99	WASHINGTON UNIVERSITY	513,917
1R01AG15469-01	RUBIN, CRAIG D TREATMENT OF AGE-RELATED OSTEOPOROSIS	04-01-98/	UNIVERSITY OF TEXAS SW MED CTR/DALLA	
1R01AG15474-01	RILEY, RICHARD L SENESCENE AND PREB CELL DEVELOPMENT	04-01-98/03-31-99	UNIVERSITY OF MIAMI	246,576
3R01AG15474-01S1	RILEY, RICHARD L SENESCENE AND PREB CELL DEVELOPMENT	09-30-98/03-31-99	UNIVERSITY OF MIAMI	75,074
1R01AG15475-01	SHERMAN, ALLEN C AGING AND ADJUSTMENT TO BREAST CA: A PROSPECTIVE STUDY	04-01-97/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
5R01AG15478-02	SINGER, DANIEL E EPIDEMIOLOGY OF ANTICOAGULATION IN ATRIAL FIBRILLATION	09-01-98/08-31-99	MASSACHUSETTS GENERAL HOSPITAL	683,978

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15479-01	CARP, RICHARD I ACCELERATED AGING: IS AN ENDOGENOUS VIRUS INVOLVED?	04-01-98/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R15AG15480-01	PRAWITZ, AIMEE D FACTORS IN PLANNING FOR ELDERS' HEALTH CARE NEEDS	05-16-98/	NORTHERN ILLINOIS UNIVERSITY	
1R01AG15481-01	HURD, MICHAEL D ECONOMIC AND DEMOGRAPHIC DETERMINANTS OF BEQUESTS	07-01-98/06-30-99	RAND CORPORATION	184,307
5R01AG15482-02	RASENICK, MARK M REGULATION OF G PROTEIN MEDIATED PHOSPHOLIPID SIGNALING	07-15-98/06-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	178,158
1R01AG15484-01	WOOD, W GIBSON AMYLOID-BETA PEPTIDE AND BRAIN MEMBRANE LIPID STRUCTURE	04-01-98/	UNIVERSITY OF MINNESOTA TWIN CITIES	
1R01AG15485-01	SZAKAL, ANDRAS K ANTIGEN-BINDING DENDRITIC CELLS IN IMMUNOSENESCENCE	04-01-98/	VIRGINIA COMMONWEALTH UNIVERSITY	
1R15AG15486-01	TRAPPE, SCOTT W SARCOPENIA AND EXERCISE--SINGLE MYOFIBER FUNCTION	09-15-98/08-31-00	BALL STATE UNIVERSITY	99,400
1R15AG15487-01	ELLINGROD, VICKI L GENDER AND METABOLIC EFFECTS ON CYP3A4 ENZYME ACTIVITY	04-01-98/	UNIVERSITY OF IOWA	
1R29AG15491-01	GLASS, THOMAS A SOCIAL INTEGRATION, AGING AND STROKE	09-01-98/08-31-99	HARVARD UNIVERSITY	106,162
1R15AG15494-01	RYBASH, JOHN M AGING, MEMORY, AND FRONTAL LOBE FUNCTION	09-30-98/08-31-00	HAMILTON COLLEGE	102,760
1R15AG15495-01	FINKELSTEIN, LISA M THE STRUCTURE OF AGE STEREOTYPES IN THE WORKPLACE	05-16-98/	NORTHERN ILLINOIS UNIVERSITY	
1R13AG15498-01	KIRKWOOD, THOMAS B 1998 GORDON CONFERENCE ON THE BIOLOGY OF AGING	03-01-98/02-28-99	GORDON RESEARCH CONFERENCES	40,000
5R01AG15500-02	COOKE, PAUL S MECHANISM OF ESTROGEN ACTION IN UTERUS AND VAGINA	09-01-98/08-31-99	UNIVERSITY OF ILLINOIS URBANA-CHAMPA	157,105
5P01AG15501-02	KRAFFT, GRANT A SUPRAMOLECULAR ABETA STRUCTURE--GLIAL/NEURONAL RESPONSE	09-30-98/08-31-99	EVANSTON NORTHWESTERN HEALTHCARE	603,470
1R03AG15507-01	STRAWBRIDGE, WILLIAM J SPIRITUALITY AND AGING IN THE ALAMEDA COUNTY STUDY	08-01-98/07-31-99	PUBLIC HEALTH INSTITUTE	59,900

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG15511-01	WEISS, CRAIG LEARNING AND MEMORY IN AGING MICE	04-01-98/03-31-99	NORTHWESTERN UNIVERSITY	74,000
1R03AG15517-01	GITLIN, LAURA N TOOL TO MEASURE HOME ENVIRONMENTS OF DEMENTIA PATIENTS	06-15-98/06-30-99	THOMAS JEFFERSON UNIVERSITY	80,924
7R03AG15525-02	JOHNSON, RICHARD W LABOR SUPPLY AT MIDLIFE AND THE CARE OF ELDERLY PARENTS	08-15-98/07-31-99	URBAN INSTITUTE	65,241
1R03AG15539-01	SU, MIN-YING L VASCULAR DYSFUNCTION IN AGED CANINE BRAIN	09-30-98/09-29-99	UNIVERSITY OF CALIFORNIA IRVINE	75,035
1R03AG15541-01	HATCH, ROBERT L REFINING AND TESTING A SPIRITUALITY SCALE IN THE ELDERLY	06-15-98/06-30-99	UNIVERSITY OF FLORIDA	72,252
1R55AG15542-01	ABRAMS, JOHN M PREVENTING APOPTOSIS IN A MODEL OF RETINAL DEGENERATION	09-30-98/09-29-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	62,500
1R03AG15545-01	TUCKER, JOAN S SOCIAL CONTROL AND SELF CARE AMONG OLDER ADULTS	07-01-98/06-30-99	BRANDEIS UNIVERSITY	75,465
1R03AG15547-01	BROWN, STANLEY P OXYGEN COST OF CYCLE ERGOMETRY IN CARDIAC PATIENTS	01-01-98/	UNIVERSITY OF MISSISSIPPI	
1R03AG15548-01	CHUBINSKAYA, SUSAN AGE RELATED DIFFERENCES IN CHONDROCYTE MMP-8	07-01-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	64,350
1R03AG15549-01	SELTZER, MARSHA M LIFE COURSE IMPACTS OF NONNORMATIVE PARENTING	03-15-98/02-29-00	UNIVERSITY OF WISCONSIN MADISON	72,000
1R03AG15552-01	SWISSHELM, KAREN L MAST CELLS IN AGING AND WERNER SYNDROME	03-15-98/02-28-99	UNIVERSITY OF WASHINGTON	73,304
1R03AG15555-01	SCHULZE, DAN H NA+/CALCIUM EXCHANGER FUNCTION IN CARDIOVASCULAR AGING	03-01-98/02-28-00	UNIVERSITY OF MARYLAND BALT PROF SCH	74,583
5R01AG15556-02	MA, JIANJIE RYANODINE RECEPTOR OF E/C COUPLING IN STRIATED MUSCLES	08-01-98/07-31-99	CASE WESTERN RESERVE UNIVERSITY	208,929
1R03AG15565-01	PERLS, THOMAS T FAMILIAL AGGREGATION OF LONGEVITY	06-01-98/05-31-99	BETH ISRAEL DEACONESS MEDICAL CENTER	87,000
1R03AG15568-01	TAFFET, GEORGE E ARTERIAL STIFFENING IN THE AGING MOUSE	05-01-98/04-30-99	BAYLOR COLLEGE OF MEDICINE	78,050

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG15574-01	THOMPSON, WESLEY J SCHWANN CELLS IN AGING MUSCLE	05-01-98/04-30-99	UNIVERSITY OF TEXAS AUSTIN	75,500
1R03AG15576-01	ALBECK, DAVID S MOLECULAR MECHANISMS FOR NGF DURING AGING	07-01-98/06-30-99	UNIVERSITY OF COLORADO HLTH SCIENCES	73,502
1R03AG15577-01	WRAY, LINDA A COGNITIVE FUNCTIONING IN LABOR FORCE TRANSITIONS	07-15-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	75,921
1R03AG15592-01	BERGER, MARK C SPOUSE HEALTH INSURANCE AND THE RETIREMENT DECISION	03-15-98/02-28-99	UNIVERSITY OF KENTUCKY	71,998
1R03AG15594-01	MOORE, RUSSELL L AGING AND CARDIOCYTE MITOCHONDRIAL CA++ HANDLING IN SITU	03-15-98/02-29-00	UNIVERSITY OF COLORADO AT BOULDER	72,684
1R03AG15596-01	FREEDMAN, VICKI A EXPLAINING TRENDS IN FUNCTIONING OF OLDER AMERICANS	03-15-98/02-28-99	RAND CORPORATION	86,235
1R03AG15599-01	SLEATH, BETSY L AGING AND DOCTOR-PATIENT COMMUNICATION ABOUT SELF-CARE	06-15-98/05-30-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	65,603
1R03AG15603-01	HUBBARD-SMITH, KAREN REGULATION OF GENE EXPRESSION DURING CELLULAR SENESCENCE	04-01-98/03-31-99	CITY COLLEGE OF NEW YORK	77,375
1R03AG15605-01	LECKA-CZERNIK, BEATA MOLECULAR CONTROL OF COMMITMENT OF BONE PROGENITORS	09-01-98/08-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	73,000
1R03AG15609-01	VITEK, MICHAEL P HUMANIZED ANIMAL MODEL OF OXYRADICAL PRODUCTION	03-15-98/02-28-99	DUKE UNIVERSITY	77,000
1R03AG15612-01	DAVIDSON, KARINA W AGE RELATED DIFFERENCES IN DEFENSE PROFILES	05-01-98/04-30-99	UNIVERSITY OF ALABAMA IN TUSCALOOSA	70,761
1R03AG15620-01	GERHARD, GLENN S MOLECULAR ANALYSIS OF DYSTROPHIC CARDIAC CALCIFICATION	03-15-98/02-28-00	PENNSYLVANIA STATE UNIV HERSHEY MED	69,410
1R03AG15621-01	SALTZMAN, WENDY ABSENCE OF ESTROGEN DEPLETION BONE LOSS IN MARMOSETS	04-01-98/03-31-99	UNIVERSITY OF WISCONSIN MADISON	62,000
1R03AG15622-01	MARSISKE, MICHAEL COLLABORATIVE COGNITION AND AGING--A PILOT STUDY	04-01-98/09-30-99	WAYNE STATE UNIVERSITY	70,814
1R03AG15623-01	CANCRO, MICAHEL P B LYMPHOCYTE PRODUCTION AND TURNOVER IN AGED MICE	04-01-98/03-31-99	UNIVERSITY OF PENNSYLVANIA	79,688

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R03AG15624-01	FRIED, TERRI R DISABILITY EFFECT ON HEALTHCARE UTILIZATION	03-15-98	02-28-99	YALE UNIVERSITY	64,400
1R03AG15626-01	KIANG, CHING-HWA AGE RELATED OXIDATION OF HUMAN GLUTAMINE SYNTHETASE	06-15-98	05-31-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	76,000
1R03AG15627-01	OSBORNE, BARBARA A PRESENILINS AND T CELL APOPTOSIS	04-15-98	03-31-99	UNIVERSITY OF MASSACHUSETTS AMHERST	77,000
1R03AG15628-01	TROEN, BRUCE R CATHEPSIN EXPRESSION IN OSTEOCLASTS DURING AGING	08-15-98	07-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	78,500
1R03AG15631-01	LEE, GLORIA NEW MOLECULAR INTERACTOR FOR TAU PROTEIN	05-15-98	05-14-99	BRIGHAM AND WOMEN'S HOSPITAL	84,750
1R03AG15638-01	CROFT, MICHAEL MODULATION OF OX-40 AND 4-1BB FUNCTION IN AGING	07-01-98	06-30-99	LA JOLLA INSTITUTE FOR ALLERGY/IMMUN	89,500
1R03AG15642-01	STEINER, MARION R LYSOPHOSPHATIDIC ACID--ASTROCYTES AND NEURONAL DEATH	07-15-98	06-30-99	UNIVERSITY OF KENTUCKY	73,000
1R03AG15645-01	MEARN, MARK G IN VIVO ANALYSIS OF THE ROLE OF FE65 IN AD	08-15-98	08-14-99	UNIVERSITY OF WASHINGTON	75,500
1R03AG15646-01	SAMMILLER, DARRELL R ADENOSINE SIGNALLING IN THE AGING HEART	01-01-98	/	UNIVERSITY OF MASSACHUSETTS MEDICAL	
1R03AG15647-01	MURAKAMI, SHIN LIFE EXTENSION MODULATED BY TYROSINE KINASE RECEPTOR	01-01-98	/	UNIVERSITY OF COLORADO AT BOULDER	
1R03AG15650-01	SCHMID, THOMAS M TYPE X COLLAGEN IN THE AGING SKELETON	03-01-98	02-28-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	68,040
1R03AG15651-01	THOMPSON, PAUL D EXOGENOUS TESTOSTERONE EFFECT ON ENDOTHELIAL FUNCTION	05-01-98	04-30-99	HARTFORD HOSPITAL	73,900
1R03AG15658-01	DAVISON, CATHY A AGE AND ESTROGEN EFFECT ON MECHANISMS OF VASODILATION	07-01-98	06-30-99	ALBANY MEDICAL COLLEGE OF UNION UNIV	77,500
1R03AG15659-01	WANG, YANYAN FUNCTIONAL ROLE OF TWO ISOFORMS OF DOPAMINE D2 RECEPTOR	09-01-98	08-31-99	UNIVERSITY OF PENNSYLVANIA	79,708
1R03AG15663-01	FALCONE, JEFF C ENDOTHELIN EFFECTS ON RENAL VASCULAR RESISTANCE WITH AGE	04-01-98	03-31-99	UNIVERSITY OF LOUISVILLE	72,125

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R55AG15667-01	CASTLE, NICHOLAS G CLOSURE OF NURSING HOMES	09-30-98/08-31-99	ATLANTICARE HEALTH SYSTEM	43,750
1R03AG15671-01	RANDO, THOMAS A FREE RADICAL INJURY AND AGE-RELATED MUSCLE ATROPHY	03-15-98/02-28-00	STANFORD UNIVERSITY	65,400
1R03AG15673-01	PALLONI, ALBERTO HEALTH CONDITIONS OF THE ELDERLY LATIN AMERICA	03-15-98/02-28-00	UNIVERSITY OF WISCONSIN MADISON	71,938
1R03AG15675-01	TEITELBAUM, DANIEL H NK1 T LYMPHOCYTE AND THE AGING MOUSE	04-01-98/03-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	75,960
1R03AG15677-01	EIDE, FERNETTE F ADENO ASSOCIATED VIRUS IN APOE DELIVERY	07-01-98/06-30-99	UNIVERSITY OF CHICAGO	76,500
1R03AG15680-01	LORTON, DIANNE SYMPATHETIC MODULATION OF IMMUNE FUNCTION IN AGING	01-01-98/	SUN HEALTH RESEARCH INSTITUTE	
1R03AG15681-01	POPPER, ARTHUR N DEVELOPMENT AND AGING IN A VERTEBRATE AUDITORY SYSTEM	04-01-98/03-31-99	UNIVERSITY OF MARYLAND COLLEGE PK CA	74,000
1R03AG15682-01	HUANG, CHI-MING AGING AND MOTOR PROCESSING--CEREBELLAR PARALLEL FIBERS	06-15-98/05-30-99	UNIVERSITY OF MISSOURI KANSAS CITY	72,500
1R03AG15686-01	AI, AMY L SPIRITUALITY AND ADJUSTMENT AFTER CARDIAC SURGERY	09-01-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	76,250
1R03AG15688-01	WU, DONGHAI CLONING OF THE HIGH AFFINITY CHOLINE TRANSPORTER	04-01-98/03-31-99	UNIVERSITY OF KENTUCKY	71,031
5R29AG15694-02	JURIVICH, DONALD A STRESS RESPONSES IN THE HUMAN IMMUNE SYSTEM DURING AGING	09-01-98/07-31-99	UNIVERSITY OF ILLINOIS AT CHICAGO	108,710
1R03AG15695-01	FLANAGAN, STEVEN D ETHNIC VARIANTS IN APOE--RISK FOR ALZHEIMERS DISEASE	07-01-98/06-30-99	BECKMAN RESEARCH INSTITUTE	88,000
1R03AG15696-01	DUNCOMBE, WILLIAM DO FISCAL FACTORS INFLUENCE ELDERLY MIGRATION DECISIONS	03-01-98/02-28-00	SYRACUSE UNIVERSITY	76,750
1R03AG15698-01	GAVRILOV, LEONID A BIODEMOGRAPHIC STUDY OF PARENTAL AGE EFFECTS ON LIFESPAN	05-01-98/04-30-99	NATIONAL OPINION RESEARCH CENTER	69,575
1R03AG15700-01	PAVLATH, GRACE K SKELETAL MUSCLE AND NFAT MEDIATED TRANSCRIPTION WITH AGE	04-01-98/03-31-99	EMORY UNIVERSITY	77,250

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R03AG15704-01	LESNEFSKY, EDWARD J REDUCTION OF AGING DEFECTS IN CARDIAC MITOCHONDRIA	01-01-98/		CASE WESTERN RESERVE UNIVERSITY	
1R03AG15708-01	MITCHELL, JANET B IMPACT OF COGNITIVE FUNCTION ON COSTS OF CARE	03-15-98/	02-27-00	CENTER FOR HEALTH ECONOMICS RESEARCH	68,188
7R01AG15709-03	ISAYA, GRAZIA NEW DETERMINANTS OF MTDNA INTEGRITY IN YEAST AND HEART	09-20-98/	07-31-99	MAYO FOUNDATION	183,337
5R01AG15710-02	ZASSENHAUS, HANS P ANIMAL MODEL WITH HIGH LEVELS OF MUTANT MTDNAS	08-01-98/	07-31-99	ST. LOUIS UNIVERSITY	259,000
1R01AG15712-01	MILLER, CAROL A MOTORNEURON DISEASE IN THE AGED: PROTEOGLYCANS AND NGF	07-01-98/		UNIVERSITY OF SOUTHERN CALIFORNIA	
1R43AG15715-01	RYABY, JOHN P LOW INTENSITY ULTRASOUND FOR WOUND HEALING IN THE AGED	04-01-98/		EXAGEN, INC.	
1R43AG15719-01	PETERSON, DE LYVA ANN URINARY TRACT INFECTIONS IN THE ELDERLY	04-01-98/		CARETRENDS HEALTH EDUCATION & RES IN	
5R01AG15720-02	KRONTIRIS, THEODORE G MAPPING INTERACTIVE CANCER SUSCEPTIBILITY LOCI	09-15-98/	07-31-99	BECKMAN RESEARCH INSTITUTE	1,104,280
1R03AG15721-01	PERRY, PAUL J TESTOSTERONE REPLACEMENT THERAPY IN ANDROPAUSE	01-01-98/		UNIVERSITY OF IOWA	
5R01AG15722-02	LANG, NICHOLAS P PROSTATE CANCER--EXPOSURE AND DNA ADDUCTS	09-01-98/	08-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	353,901
1R43AG15725-01	CREEDON, MICHAEL A THE FAMILY RESTRAINT OF ELDERS EDUCATION PROJECT (FREE)	03-01-98/		CARLOW INTERNATIONAL INC.	
1R43AG15726-01	ALBERT, FREDERICK G POTENT ANTIOXIDANTS FROM SUPEROXIC MICROBIAL MATS	04-01-98/		MONTANA BIOTECH CORPORATION	
1R43AG15727-01	VALENCIA, MIKE A EXERCISE FOR HEALTH PROMOTION AND DISEASE PREVENTION	11-01-97/		CAD FORCE	
1R43AG15728-01	RATHMACHER, JOHN A ENHANCEMENT OF MUSCLE FUNCTION IN ELDERLY MEN AND WOMEN	08-01-98/		METABOLIC TECHNOLOGIES, INC.	
1R43AG15729-01	MESERLIAN, DONALD EFFECT OF T'AI CHI ON BALANCE, STRENGTH & REACTION TIME	01-01-98/		JUST RELAX	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
5R01AG15730-02	LUBORSKY, MARK R MEANING OF SELF RATED HEALTH	07-01-98/06-30-99	WAYNE STATE UNIVERSITY	269,396
1R43AG15732-01	VITEK, MICHAEL P ANIMAL MODEL OF HUMAN OXIDATIVE STRESS	07-01-98/12-31-98	ORDER STATUS VEHICLE, INC. (OSV)	100,000
1R43AG15733-01	BARFIELD, DAVID A SECURITY NIGHT LIGHT AND ALARM SYSTEM FOR THE ELDERLY	03-01-98/	BARFIELD ERGONOMIC STRATEGIES & TECH	
1R43AG15734-01	YACOUT, ABDELFATAH M VALIDATION OF AN OCCUPATIONAL FUNCTIONAL SCREENING TEST	06-01-98/	QUANTUM RESEARCH SERVICES	
1R43AG15735-01	KORNHABER, MILA EFFECTIVE GRANDPARENTING VIDEO PROJECT	03-01-98/	GRANDPARENT PRODUCTIONS	
1R43AG15736-01	ACKROYD, TED J NATIONAL LONG TERM CARE ALLIANCE	04-01-98/	HEALTHCARE RESEARCH AFFILIATES, INC.	
2R44AG15737-02	COOK, MARY A ASSESSMENT OF DOCTOR ELDERLY PATIENT ENCOUNTERS	07-15-98/06-30-99	JVC RADIOLOGY AND MEDICAL ANALYSIS	456,512
3R44AG15737-02S1	COOK, MARY A ASSESSMENT OF DOCTOR ELDERLY PATIENT ENCOUNTERS	08-01-98/06-30-99	JVC RADIOLOGY AND MEDICAL ANALYSIS	30,600
1R41AG15740-01	HANIN, ISRAEL GLYCOSAMINOGLYCANS--TREATMENT FOR ALZHEIMERS DISEASE	09-30-98/09-29-99	NEURO-COGNITIVE RESEARCH LABORATORIE	99,551
5R01AG15745-02	ARMSTRONG, DAVID M INNOVATIVE NEURONAL TRACING IN AGING AND DISEASE	09-01-98/08-31-99	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	202,200
1R43AG15746-01	RASO, VICTOR A IMMUNOTHERAPY OF ALZHEIMERS DISEASE	04-15-98/09-30-99	BOSTON BIOTECHNOLOGY CORPORATION	99,489
5R01AG15749-02	ZHAO, LUE P RISK PREDICTION MODELS AND APPLICATIONS TO BREAST CANCER	09-01-98/08-31-99	FRED HUTCHINSON CANCER RESEARCH CENT	260,554
1R01AG15751-01	GRANDO, SERGEI A CHOLINERGIC MECHANISMS OF SKIN AGING	07-01-98/	UNIVERSITY OF CALIFORNIA DAVIS	
1R01AG15752-01	VAUX, D L REGULATION OF APOPTOSIS BY MAMMALIAN SNAIL-LIKE GENES	06-01-98/	WALTER AND ELIZA HALL INST MEDICAL R	
1R01AG15753-01	NAWATA, HAJIME CLONING OF THE DHEA RECEPTOR IN HUMAN ACTIVATED T-CELLS	07-01-98/	KYUSHU UNIVERSITY	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R13AG15754-01	JANICKI, MATTHEW P GUIDELINES FOR INTELLECTUALLY DISABLED ADULTS	07-15-98	06-30-99	UNIVERSITY OF ROCHESTER	34,700
9R01AG15756-09	ANVERSA, PIERO MYOCYTE CELL DEATH IN THE INFARCTED HEART	01-01-98	12-31-98	NEW YORK MEDICAL COLLEGE	347,200
1R01AG15757-01	ROSS, CATHERINE E ACTIVISM AND WELL-BEING AMONG WOMEN WITH BREAST CANCER	01-01-98	/	OHIO STATE UNIVERSITY	
1R01AG15760-01	HARLASS, FREDERICK E INCIDENCE OF OSTEOPOROSIS IN HISPANIC WOMEN	09-01-98	/	TEXAS TECH UNIVERSITY HEALTH SCIS CE	
1R01AG15761-01	LAM, DAVID A EVOLUTIONARY APPROACHES TO THE BIODEMOGRAPHY OF AGING	09-01-98	08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	73,653
1R01AG15762-01	PEZDEK, KATHY THE SUGGESTIBILITY OF MEMORY IN OLD AGE	07-01-98	/	CLAREMONT GRADUATE SCHOOL	
1R01AG15763-01	KRIPKE, DANIEL F VERIFICATION OF CIRCADIAN ABNORMALITIES IN AGING	09-01-98	08-31-99	UNIVERSITY OF CALIFORNIA SAN DIEGO	416,701
1R01AG15765-01	CLIMO, JACOB J AN ETHNOGRAPHY OF FAMILY ADJUSTMENT TO DISTANT LIVING	08-01-98	/	MICHIGAN STATE UNIVERSITY	
1R01AG15766-01	PRICE, JOEL M ALZHEIMER'S PEPTIDE BETA-AMYLOID.	07-01-98	/	UNIVERSITY OF SOUTH FLORIDA	
1RZ9AG15767-01	DAUBERT, CHRISTOPHER R PROTEIN-BASED THICKENERS FOR THE DYSPHAGIC ELDERLY	07-01-98	/	NORTH CAROLINA STATE UNIVERSITY RALE	
1R01AG15768-01	GUILAK, FARSHID VISCOELASTIC PROPERTIES OF NORMAL AND OA CHONDRONS	01-01-98	12-31-98	DUKE UNIVERSITY	244,173
1R01AG15771-01	DAVIDSON, HARRIET SELF-CARE LEARNING CENTERS FOR COMMUNITY-DWELLING ELDERS	07-01-98	/	BETH ISRAEL DEACONESS MEDICAL CENTER	
1RZ9AG15772-01	DAY, JONATHAN R TESTOSTERONE RETARDS THE PROGRESSION OF AD	07-01-98	/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	
1R01AG15773-01	HEANEY, ROBERT P BONY EFFECTS OF TRANSIENT NONSKELETAL ILLNESS	08-15-98	07-31-99	CREIGHTON UNIVERSITY	174,703
1R01AG15774-01	SALTIN, BENGT TRAINING EFFECTS ON SKELETAL MUSCLE, ADL, AND FALLS.	07-01-98	/	NATIONAL UNIVERSITY HOSPITAL	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15775-01	HAIG, ANDREW J PARASPINAL MUSCLE DENERVATION AND LUMBAR SPINAL STENOSIS	09-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1R01AG15779-01	SCHMUCKER, DOUGLAS L HOW AGING IMPAIRS THE INTESTINAL MUCOSAL IMMUNE RESPONSE	07-01-98/	NORTHERN CALIFORNIA INSTITUTE RES &	
1R01AG15780-01	WOLFE, ROBERT R MUSCLE PROTEIN METABOLISM AND NUTRITION IN THE ELDERLY	09-01-98/07-31-99	UNIVERSITY OF TEXAS MEDICAL BR GALVE	227,585
1R15AG15781-01	PARFITT, KAREN D AGE RELATED CHANGES IN CAMP MEDIATED SYNAPTIC PLASTICITY	08-01-98/07-31-01	POMONA COLLEGE	87,430
1R15AG15782-01	COX, ENID O THE ROLE OF CARE-RECEIVERS' IN THE ELDER CARE PROCESS	05-01-98/	UNIVERSITY OF DENVER	
1R01AG15793-01	D'ESPOSITO, MARK AGING AND MEMORY--FMRI STUDIES OF COMPONENT PROCESSES	09-15-98/07-31-99	UNIVERSITY OF PENNSYLVANIA	339,028
1R01AG15795-01	BINDER, ELLEN F REHABILITATION INTENSIFICATION POST HIP FRACTURE	08-01-98/05-31-99	WASHINGTON UNIVERSITY	224,039
1R01AG15796-01	BROWN, MARYBETH PREHAB VS REHAB FOR REDUCING BEDREST EFFECTS WITH AGING	09-01-98/07-31-99	WASHINGTON UNIVERSITY	147,824
1R21AG15797-01	ROUBENOFF, RONENN MUSCLE QUALITY IN SARCOPENIA	07-15-98/06-30-99	TUFTS UNIVERSITY BOSTON	144,833
1R29AG15798-01	DIMRI, GOBERDHAN P THE ROLE OF E2F1 IN CELLULAR AGING	07-01-98/	UNIVERSITY OF CALIF-LAWRENC BERKELEY	
1R01AG15799-01	ANDREASSON, KATRIN I CYCLOOXYGENASE IN MODELS OF ALZHEIMER'S DISEASE	07-01-98/	JOHNS HOPKINS UNIVERSITY	
1R15AG15803-01	WALLACE, DAVID R ENERGY METABOLISM AND DOPAMINE RECEPTORS	07-01-98/	COLLEGE OF OSTEOPATHIC MED/OK STATE	
1R01AG15804-01	ADAMS, JAMES D, JR NEURODEGENERATION, APOPTOSIS AND AGING	07-01-98/	UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG15806-01	KAYSER-JONES, JEANIE ETHNOGRAPHY OF DYING IN A LONG TERM CARE FACILITY	09-30-98/06-30-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	462,579
1R01AG15808-01	WASSERTHEIL-SMOLLER, SYLVIA WOMEN, WORK, HEALTH AND AGING	07-01-98/	YESHIVA UNIVERSITY	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15810-01	VORBRODT, ANDRZEJ W ENDOTHELIAL GROWTH FACTOR: EFFECT ON BARRIER	07-01-98/	INSTITUTE FOR BASIC RES IN DEV DISAB	
1R29AG15811-01	KELLY, KEVIN M SEIZURES AND CALCIUM CHANNELS IN AGED RAT BRAIN	07-01-98/	ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG15817-01	KWATRA, MADAN M AGING AND G PROTEIN COUPLED RECEPTORS IN HUMAN HEART	09-01-98/08-31-99	DUKE UNIVERSITY	269,422
1R01AG15819-01	BENNETT, DAVID A RISK FACTORS, PATHOLOGY, AND CLINICAL EXPRESSIONS OF AD	07-01-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	361,589
1R01AG15820-01	DELBONO, OSVALDO AGE DEPENDENT REGULATION OF E-C COUPLING	07-01-98/06-30-99	WAKE FOREST UNIVERSITY	177,712
1R21AG15821-01	MATTHEWS, DWIGHT E MECHANISM OF MUSCLE PROTEIN LOSS IN MENOPAUSE	09-01-98/08-31-99	UNIVERSITY OF VERMONT & ST AGRIC COL	149,478
1R01AG15822-01	FISHER, JANE E EXPERT SYSTEM FOR DIAGNOSIS OF DEMENTIA-RELATED BEHAVIOR	09-01-98/	UNIVERSITY OF NEVADA RENO	
1R01AG15824-01	DAYNES, RAYMOND A REDOX REGULATED SIGNAL TRANSDUCTION AND AGING	07-01-98/	UNIVERSITY OF UTAH	
1R41AG15827-01	ROSEN, JULES CD ROM CURRICULUM FOR NURSE AIDES IN LONG TERM CARE	01-01-98/02-28-99	FOX FARSIGHT PRODUCTIONS, INC.	99,986
1R01AG15828-01	MOUNTZ, JOHN D GENE THERAPY FOR THE PREVENTION OF CELL SENESCENCE	07-01-98/	UNIVERSITY OF ALABAMA AT BIRMINGHAM	
1R01AG15830-01	HANDA, ROBERT J REPRODUCTIVE AGING IN FETAL ALCOHOL EXPOSED FEMALES	07-01-98/	LOYOLA UNIVERSITY MEDICAL CENTER	
1R01AG15831-01	NAKAMOTO, TETSUO CHRONIC CAFFEINE EFFECTS ON BONE STRUCTURE DURING AGING	07-01-98/	LOUISIANA STATE UNIV MED CTR NEW ORL	
1R01AG15832-01	KOPERA-FRYE, KAREN F INTERGENERATIONAL CULTURE: ASSESSING RECIPROCAL EXCHANGE	07-01-98/	UNIVERSITY OF AKRON	
1R01AG15834-01	WALTRIP, ROYCE W BORNA DISEASE VIRUS AND COGNITIVE DECLINE	07-01-98/	UNIVERSITY OF MARYLAND BALT PROF SCH	
1R29AG15835-01	ASTHANA, SANJAY THERAPEUTIC ROLE OF ESTROGEN IN ALZHEIMER'S DISEASE	07-01-98/	UNIVERSITY OF WASHINGTON	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R29AG15838-01	KHORRAM, OMID A GROWTH HORMONE-RELEASING HORMONE IN AGING IMMUNE SYSTEM	07-01-98/		UNIVERSITY OF WISCONSIN MADISON	
1P50AG15839-01	STEWART, ANITA L HEALTHY AND ACTIVE AGING IN DIVERSE POPULATIONS	07-01-98/		UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R29AG15841-01	ZHDANOVA, IRINA HUMAN AGING AND THE EFFICACY OF EXOGENOUS MELATONIN	07-01-98/		MASSACHUSETTS INSTITUTE OF TECHNOLOG	
1R01AG15842-01	STEIN, CHARLES M MODULATION OF ADRENERGIC RESPONSE BY ESTROGEN	07-01-98/		VANDERBILT UNIVERSITY	
1R01AG15843-01	CARSON, DENNIS A AGING, IMMUNOSENESCENCE AND P16	07-01-98/		UNIVERSITY OF CALIFORNIA SAN DIEGO	
1R13AG15846-01	ZAKERI, ZAHRA MECHANISMS OF CELL DEATH	07-01-98/	06-30-99	QUEENS COLLEGE	15,350
1R01AG15850-01	BEEHLER, CONNIE J CHARACTERIZATION OF CNS AGING IN OXYGEN TOLERANT RATS	07-01-98/		UNIVERSITY OF COLORADO HLTH SCIENCES	
1R01AG15851-01	MCLEAN, ATHENA H PRESERVATION OF PERSONHOOD IN ALTERNATIVE DEMENTIA CARE	07-01-98/		CENTRAL MICHIGAN UNIVERSITY	
1R01AG15852-01	WINGFIELD, ARTHUR AGING AND THE TEMPORAL DYNAMICS OF SELF INITIATED RECALL	08-01-98/	07-31-99	BRANDEIS UNIVERSITY	157,407
1R01AG15853-01	SHIROMANI, PRIYATTAM J HOMEOSTATIC REGULATION OF SLEEP IN AGING	09-01-98/	08-31-99	HARVARD UNIVERSITY	191,539
1R01AG15854-01	WU-WILLIAMS, ANNA H GENETIC INFLUENCES ON HIP FRACTURE RISK	07-01-97/		UNIVERSITY OF SOUTHERN CALIFORNIA	
1R01AG15856-01	HOLMES, DOUGLAS TREATMENT OF DYING RESIDENTS IN NURSING HOMES	07-01-98/		HEBREW HOME FOR THE AGED AT RIVERDAL	
1R01AG15857-01	CHAUDHURI, GAUTAM ROLE OF NO AND ESTRADIOL IN AGING AND ATHEROGENESIS	07-01-98/		UNIVERSITY OF CALIFORNIA LOS ANGELES	
1R29AG15859-01	HICKNER, ROBERT C NO-DEPENDENT REGULATION OF MUSCLE BLOOD FLOW WITH AGING	07-01-98/		EAST CAROLINA UNIVERSITY	
1R01AG15861-01	KIVNICK, HELEN VITAL INVOLVEMENT PRACTICE: MAXIMIZING ELDERS' STRENGTHS	09-16-98/		UNIVERSITY OF MINNESOTA TWIN CITIES	

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R13AG15862-01	NELSON, JAMES F 1998GSA MEETING--BIOLOGY OF AGING	07-01-98/06-30-99	GERONTOLOGICAL SOCIETY OF AMERICA	32,170
1R29AG15865-01	AMBROSE, CATHERINE G BONE QUALITY IN HORMONE-DEFICIENT AND DISUSE OSTEOPENIA	07-01-98/	UNIVERSITY OF TEXAS HLTH SCI CTR HOU	
1R01AG15867-01	WILLIAMSON, ANNE EPILEPTOGENESIS IN THE AGED DENTATE GYRUS	07-01-98/	YALE UNIVERSITY	
1R29AG15869-01	KLEIN, JANET D PHOSPHORYLATION IN ALZHEIMER'S DISEASE	07-01-98/	EMORY UNIVERSITY	
1R01AG15870-01	OKAMOTO, TAKASHI ANALYSIS OF PRESENILIN FUNCTIONS	07-01-98/	CLEVELAND CLINIC FOUNDATION	
1R29AG15872-01	GUALBERTO, ANTONIO CONTROL OF VASCULAR SMOOTH MUSCLE CELL MITOSIS IN AGING	07-01-98/	CASE WESTERN RESERVE UNIVERSITY	
1R01AG15874-01	LUINE, VICTORIA N GONADOL HORMOMES AND LEARANING/MERMORY	07-01-98/	HUNTER COLLEGE	
1R01AG15875-01	FITZSIMONS, DANIEL P BASIS FOR DEPRESSED MYOCARDIAL CONTRACTION IN SENESCENCE	07-01-98/	UNIVERSITY OF WISCONSIN MADISON	
1R01AG15876-01	PASQUE, MICHAEL K GERIATRIC HEART FAILURE: DIASTOLIC STRESS-STRAIN INDICES	07-01-98/	WASHINGTON UNIVERSITY	
1R01AG15877-01	PETERSON, CHARLOTTE A PEA3 REGULATION OF MUSCLE REGENERATION DURING AGING	09-01-98/	UNIVERSITY OF ARKANSAS MED SCIS LTL	
1R29AG15878-01	SPRUNG, CARL N TRANSCRIPTIONAL SILENCING BY TELOMERIC CHROMATIN	07-01-98/	UNIVERSITY OF CALIFORNIA SAN FRANCIS	
1R29AG15879-01	NEZNANOV, NICKOLAY FUNCTIONAL CLONING OF SENESCENCE-SPECIFIC GENES	07-01-98/	UNIVERSITY OF ILLINOIS AT CHICAGO	
1R01AG15880-01	STEGMAN, MARY R HERITABILITY OF PEAK BONE MASS AND RATE OF BONE CHANGE	07-01-98/	CREIGHTON UNIVERSITY	
1R29AG15881-01	HILLIARD, TIMOTHY S GENDER AND AGE EFFECTS ON NEUROMOTOR CONTROL	09-01-97/	NORTHEASTERN UNIVERSITY	
1R29AG15882-01	KATZNELSON, LAURENCE BENEFITS OF TESTOSTERONE ON STRENGTH IN ELDERLY MEN	08-01-98/07-31-99	MASSACHUSETTS GENERAL HOSPITAL	102,439

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R01AG15883-01	FINDLEY, THOMAS W DIETARY INDUCED CHANGES IN LEFT VENTRICULAR STRESS	07-01-98/		UNIV OF MED/DENT NJ-SCH OSTEOPATHIC	
1P01AG15885-01	HOPPEL, CHARLES L AGING HEART--BASIS OF INCREASED ISCHEMIC/REFLOW INJURY	08-15-98/	07-31-99	CASE WESTERN RESERVE UNIVERSITY	763,905
1R01AG15887-01	KATO, IKUKO ENDOGENOUS ESTROGENS AND COGNITIVE IMPAIRMENT IN WOMEN	07-01-98/		NEW YORK UNIVERSITY MEDICAL CENTER	
1R01AG15889-01	ZEISEL, JOHN NONPHARMACOLOGICAL APPROACHES TO ALZHEIMER'S TREATMENT	07-01-98/		HEARTHSTONE ALZHEIMER CARE, LTD	
1P50AG15890-01	HUGHES, SUSAN L MIDWEST ROYBAL CENTER FOR HEALTH MAINTENANCE	09-15-98/	06-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	519,023
1R01AG15891-01	ALLEN, RONALD E SATELLITE CELL REGULATION IN AGING SKELETAL MUSCLE	07-01-98/		UNIVERSITY OF ARIZONA	
1R01AG15892-01	STRAUSS, MILTON E AFFECT EXPERIENCE & EXPRESSION IN ALZHEIMER DISEASE	07-01-98/		CASE WESTERN RESERVE UNIVERSITY	
1R01AG15894-01	KUWABARA, HIROTO AGING AND THE NEURAL SUBSTRATE OF WORKING MEMORY	07-01-98/		WEST VIRGINIA UNIVERSITY	
1R13AG15896-01	IQBAL, KHALID 6TH INTL CONF ON ALZHEIMER DISEASE AND RELATED DISORDERS	07-15-98/	06-30-99	INSTITUTE FOR BASIC RES IN DEV DISAB	46,140
1R01AG15900-01	MAGEE, WILLIAM J SELF CARE FOR PSYCHOSOMATIC ILLNESSES	04-01-98/		UNIVERSITY OF TORONTO	
1R01AG15901-01	FERREIRA, ADRIANA B LINKING A-BETA TO TAU PATHOLOGY	07-01-98/		NORTHWESTERN UNIVERSITY	
1R01AG15905-01	SHMOOKLER-REIS, ROBERT J ROLE OF HOMOLOGOUS RECOMBINATION IN CELL IMMORTALIZATION	07-01-98/		UNIVERSITY OF ARKANSAS MED SCIS LTL	
1R01AG15906-01	KAPLAN, HILLARD S EVOLUTIONARY APPROACHES TO THE BIODEMOGRAPHY OF AGING	09-01-98/	08-31-99	UNIVERSITY OF NEW MEXICO ALBUQUERQUE	87,659
1R29AG15907-01	DUAN, CHANGPING REMODELING OF AGED MUSCLE INDUCED BY ECCENTRIC EXERCISE	07-01-98/		ALLEGHENY UNIVERSITY OF HEALTH SCIEN	
1R01AG15908-01	RICHARDSON, ARLAN G TRANSGENIC MICE, AGING, CANCER, AND OXIDATIVE DAMAGE	07-15-98/	06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR SAN	153,610

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R01AG15910-01	TINKLENBERG, JARED R PREDICTORS OF AD RISK: A COMPREHENSIVE MODEL	07-01-98/		STANFORD UNIVERSITY	
1R01AG15912-01	HAMBERG, LEENA M PERFUSION OF ENTORHINAL CORTEX IN ALZHEIMER'S DISEASE	07-01-98/		MASSACHUSETTS GENERAL HOSPITAL	
1R01AG15913-01	GERHARD, GLENN S PATHOGENETICS OF DYSTROPHIC CARDIAC CALCIFICATION	07-01-98/		PENNSYLVANIA STATE UNIV HERSHEY MED	
1R01AG15914-01	BERGSTROM, THEODORE C EVOLUTIONARY APPROACHES TO THE BIODEMOGRAPHY OF AGING	09-01-98/	07-31-99	UNIVERSITY OF CALIFORNIA SANTA BARBA	28,037
1R01AG15915-01	HAJJAR, ROGER J STRATEGIES FOR GENE THERAPY IN THE AGING HEART	07-01-98/		MASSACHUSETTS GENERAL HOSPITAL	
1R01AG15916-01	BUXBAUM, JOEL N TRANSTHYRETIN DEPOSITION IN AGING TRANSGENIC MICE	08-01-98/	07-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	327,073
3R01AG15916-01S1	BUXBAUM, JOEL N TRANSTHYRETIN DEPOSITION IN AGING TRANSGENIC MICE	09-30-98/	07-31-99	NEW YORK UNIVERSITY MEDICAL CENTER	146,586
1R01AG15919-01	AVDULOV, NICOLAI A AMYLOID-BETAPEPTIDE AND BRAIN MEMBRANE LIPIDS	07-01-98/		UNIVERSITY OF MINNESOTA TWIN CITIES	
1R01AG15922-01	SANO, MARY ALZHEIMERS DISEASE PREVENTION TRIAL WITH ESTROGENS	09-01-98/	08-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	2,036,503
1R01AG15924-01	LUBORSKY, JUDITH L HYSTERECTOMY, IMMUNITY AND SYMPTOMS	07-01-98/		RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	
1R01AG15925-01	EFTHIMIOPOULOS, SPIROS PRESENILIN 1 MUTANTS ON AXOPLASMIC TRANSPORT'.	07-01-98/		MOUNT SINAI SCHOOL OF MEDICINE OF CU	
1R01AG15927-01	CRUTCHER, KEITH A MICROGLIA, TRUNCATED APOE AND ALZHEIMER'S DISEASE	07-01-98/		UNIVERSITY OF CINCINNATI	
1R01AG15928-01	KULLER, LEWIS H COGNITIVE TESTS, APOE, BRAIN MRI AND RISKS OF DEMENTIA	09-30-98/	07-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	2,198,079
1R01AG15929-01	ALLEN, LINDSAY H CAUSES & CONSEQUENCES OF VITAMIN B12 DEFICIT IN ELDERLY	07-01-98/		UNIVERSITY OF CALIFORNIA DAVIS	
1R01AG15931-01	CHUNG, SIU-WAH STEM CELL THERAPEUTICS LLC	07-01-98/		STEMCELL THERAPEUTICS, LLC	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15933-01	GRODSTEIN, FRANCINE TRIALS OF PREVENTION OF COGNITIVE DECLINE IN WOMEN	09-30-98/07-31-99	BRIGHAM AND WOMEN'S HOSPITAL	308,934
1R01AG15934-01	CORWIN, REBECCA L NUTRITION AND AGING: REGULATION OF ENERGY INTAKE	07-01-98/	PENNSYLVANIA STATE UNIVERSITY-UNIV P	
1R43AG15937-01	GUTKIN, CLAIRE E DYNAMIC ASSESSMENT FOR NURSING HOMES	01-01-98/12-31-98	METAMDS CORPORATION	99,889
1R01AG15941-01	REED, GABRIELLE PEER DELIVERY OF EXERCISE EXPERT SYSTEM FOR OLDER ADULTS	07-01-98/	WASHINGTON UNIVERSITY	
1R01AG15945-01	JOHNSON, MARY A NUTRITION, BONE, AND AUDITORY FUNCTION IN THE ELDERLY	07-01-98/	UNIVERSITY OF GEORGIA	
1R01AG15947-01	MARKOWSKA, ALICJA L ESTROGEN EFFECTS ON AGE RELATED COGNITIVE DECLINE	08-01-98/07-31-99	JOHNS HOPKINS UNIVERSITY	163,332
1R01AG15948-01	NESSE, RANDOLPH M QUESTIONS ABOUT BEREAVEMENT: ANSWERS FROM THE CLOC STUDY	07-01-98/	UNIVERSITY OF MICHIGAN AT ANN ARBOR	
1P50AG15949-01	COHEN-MANSFIELD, JISKA ENHANCING SOCIAL NETWORKS IN THE ELDERLY	07-01-98/	HEBREW HOME OF GREATER WASHINGTON	
1R03AG15951-01	CRIBBS, DAVID H CASPASE CLEAVAGE OF BRAIN FODRIN	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA IRVINE	74,361
1R01AG15952-01	ANZIANO, PAUL Q LINKAGE OF A NOVEL ISOFORM OF MNSOD TO MTDNA MUTATIONS	07-01-98/	UNIVERSITY OF NEVADA RENO	
1R01AG15953-01	DOWLING, PETER C FAS CELL DEATH MECHANISM IN MS CNS	07-01-98/	U.S. DEPT/VETS AFFAIRS MED CTR(E ORA	
1R55AG15955-01	GORODESKI, GEORGE I AGING EFFECTS ON TRANSVAGINAL TRANSPORT	09-30-98/08-31-00	CASE WESTERN RESERVE UNIVERSITY	100,000
1R01AG15956-01	BEATTY, WILLIAM W PRESERVED COGNITIVE SKILLS IN DEMENTIA	07-01-98/	UNIVERSITY OF OKLAHOMA HLTH SCIENCES	
1R01AG15959-01	WORTH, ANDREW J DIFFUSION TENSOR MRI IN NORMALS VS ALZHEIMER'S PATIENTS	08-01-98/	MASSACHUSETTS GENERAL HOSPITAL	
1R55AG15961-01	PIKE, CHRISTIAN J ESTROGEN IN ALZHEIMER DISEASE	09-30-98/08-31-99	UNIVERSITY OF CALIFORNIA IRVINE	100,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG15964-01	GRAMMAS, PAULA VASCULAR-MEDIATED NEURONAL DEATH IN ALZHEIMERS AND AGING	07-01-98/	UNIVERSITY OF OKLAHOMA HLTH SCIENCES	
1R01AG15965-01	MUKAMEL, DANA B NURSING HOME COPING STRATEGIES--QUALITY OF CARE EFFECTS	09-01-98/08-31-99	UNIVERSITY OF ROCHESTER	158,107
1R01AG15966-01	COX, WILLIAM R NUTRITIONAL ASSESSMENT AND INTERVENTION	07-01-98/	LANCASTER GENERAL HOSPITAL	
1R01AG15971-01	SIEGEL, KAROLYNN RELIGION AND COPING AMONG OLDER WOMEN WITH BREAST CANCER	07-01-98/	COLUMBIA UNIVERSITY HEALTH SCIENCES	
1R01AG15979-01	GURWITZ, JERRY H ADVERSE DRUG EVENTS IN THE AMBULATORY GERIATRIC SETTING	09-30-98/08-31-99	UNIVERSITY OF MASSACHUSETTS MEDICAL	429,915
1R01AG15983-01	KNODEL, JOHN E SOCIODEMOGRAPHIC IMPACT OF AIDS EPIDEMIC ON THE ELDERLY	09-30-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	163,208
1R01AG15984-01	POLLINA, LESLEE K PSYCHOSOCIAL RISKS FOR MALNUTRIION AMONG ELDERLY WOMEN	01-01-98/	SOUTHEAST MISSOURI STATE UNIVERSITY	
1R03AG15991-01	MONROE, JOHN G AGE DEPENDENT EFFECTS ON B CELL SELECTION	07-01-98/06-30-99	UNIVERSITY OF PENNSYLVANIA	79,750
1R55AG15996-01	MAY, CYNTHIA P AGE, MEMORY, AND EMOTION	09-30-98/09-29-99	UNIVERSITY OF ARIZONA	60,750
1R03AG15999-01	MAULDON, JANE GRANDPARENTS CORESIDING WITH GRANDCHILDREN	09-30-98/08-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	62,500
1R03AG16002-01	SCISNEY-MATLOCK, MARGARET S LIFESTYLE INTERVEN FOR MIDDLE AGED HYPERTENSIVE WOMEN	09-15-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	76,088
1R03AG16004-01	JUSTER, THOMAS T ENHANCING THE QUALITY OF FINANCIAL DATA	07-15-98/05-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	76,178
1R03AG16006-01	ALTER, GEORGE C EARLY LIFE CONDITIONS, MORTALITY, AND LONGEVITY	07-15-98/06-30-99	INDIANA UNIVERSITY BLOOMINGTON	73,500
1R03AG16007-01	MURAMATSU, NAOKO COMPENSATION FOR ADL LIMITATIONS IN OLDER ADULTS	07-15-98/07-14-99	UNIVERSITY OF ILLINOIS AT CHICAGO	69,640
1R03AG16013-01	TUMER, NIHAL ANGIOTENSIN II REGULATION OF TYROSINE HYDROXYLASE	06-01-98/	UNIVERSITY OF FLORIDA	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG16019-01	WHITE, RICHARD H THROMBOEMBOLISM AFTER ILLNESS OR SURGERY IN THE ELDERLY	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA DAVIS	68,457
1R03AG16022-01	SMITH, JAMES P CHANGES IN WEALTH OVER TIME	07-15-98/06-30-99	RAND CORPORATION	85,847
1R03AG16024-01	CS-SZABO, GABRIELLA AGE DEPENDENT EXPRESSION OF CARTILAGE PROTEOGLYCANS	07-01-98/06-30-99	RUSH-PRESBYTERIAN-ST LUKES MEDICAL C	68,778
1R55AG16026-01	COLTON, CAROL A MICROGLIAL MEDIATED REGULATION OF THE NMDA CHANNEL	09-30-98/09-29-99	GEORGETOWN UNIVERSITY	62,500
1R03AG16027-01	CARD, DAVID E CONSEQUENCES OF LATE PARENTING	08-01-98/07-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	70,856
1R03AG16028-01	MORI, SUSUMU MAGNETIC RESONANCE FIBER TRACKING IN ALZHEIMERS DISEASE	09-30-98/09-29-99	JOHNS HOPKINS UNIVERSITY	63,332
1R03AG16029-01	LIU, RIU-MING GLUTAMYLCYSTEUBE SYNTHETASE AND AGING	07-01-98/06-30-99	UNIVERSITY OF SOUTHERN CALIFORNIA	82,000
1R03AG16031-01	DISTERHOFT, JOHN F FMRI ANALYSIS OF EYE BLINK CONDITIONING IN AGING BRAIN	09-01-98/08-31-99	NORTHWESTERN UNIVERSITY	74,000
1R03AG16034-01	HECKMAN, TIMOTHY G IMPROVING COPING SKILLS IN OLDER PERSONS WITH HIV/AIDS	07-01-98/06-30-99	MEDICAL COLLEGE OF WISCONSIN	71,797
1R03AG16035-01	DRISCOLL, MONICA A NECROTIC CELL DEATH AND HELICASES AND C ELEGANS A	09-01-98/08-31-99	RUTGERS THE STATE UNIV NEW BRUNSWICK	74,972
1R03AG16040-01	GOTSHALL, ROBERT W ARTERIAL STIFFNESS AND SYSTOLIC HYPERTENSION IN AGED	06-15-98/05-31-99	COLORADO STATE UNIVERSITY	71,330
1R03AG16041-01	LEVY, JUDITH A HIV RISK AMONG OLDER DRUG INJECTORS	07-01-98/06-30-99	UNIVERSITY OF ILLINOIS AT CHICAGO	64,233
1R03AG16042-01	GOUX, WARREN J CONFORMATIONS OF ALZHEIMER PHF/TAU AND TAU PEPTIDES	08-01-98/07-31-99	UNIVERSITY OF TEXAS DALLAS	67,768
1R55AG16045-01	RHYMES, JILL DECISION MAKING IN THE MANAGED CARE SETTING	09-30-98/09-29-99	BAYLOR COLLEGE OF MEDICINE	62,500
1R03AG16048-01	FARKAS, GASPAR A SLEEP DISORDERED BREATHING IN AGING ZUCKER RATS	07-01-98/06-30-99	STATE UNIVERSITY OF NEW YORK AT BUFF	74,300

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GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG16053-01	LAPOLT, PHILIP S AGING EFFECTS ON GONADOTROPIN STRUCTURE/FUNCTION	09-15-98/08-31-99	CALIFORNIA STATE UNIVERSITY LOS ANGE	67,871
1R03AG16054-01	MROCZEK, DANIEL K INTRAINDIVIDUAL PERSONALITY CHANGE IN ADULTHOOD	07-01-98/06-30-99	FORDHAM UNIVERSITY	80,308
1R03AG16056-01	CAREY, TIMOTHY S TRENDS IN GASTROSTOMY USE AT THE END OF LIFE	07-15-98/06-30-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	72,238
1R03AG16059-01	EFFROS, RITA B POSTMENOPAUSAL HORMONE REPLACEMENT THERAPY AND IMMUNITY	07-01-98/06-30-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	76,000
1R03AG16065-01	WANG, RONG MOLECULAR BASIS OF GAMMA-SECRETASE IN GENERATING AB-PRO	07-01-98/06-30-99	ROCKEFELLER UNIVERSITY	82,500
1R03AG16067-01	KOVACS, ELIZABETH J AGING, MACROPHAGE MEDIATORS, AND BURN TRAUMA	07-01-98/06-30-99	LOYOLA UNIVERSITY MEDICAL CENTER	77,500
1R03AG16071-01	SEALS, DOUGLAS R ENDOTHELIAL FUNCTION--AGING AND PHYSICAL ACTIVITY	07-01-98/06-30-99	UNIVERSITY OF COLORADO AT BOULDER	72,750
1R03AG16072-01	ACKERMAN, SUSAN L GENETIC CONTROL OF NEURODEGENERATION	07-01-98/06-30-99	JACKSON LABORATORY	82,500
1R03AG16073-01	FINE, JACQUELINE B GRADED CALORIC RESTRICTION, AGE AND REGIONAL BODY FAT	07-01-98/06-30-99	EMORY UNIVERSITY	77,250
1R03AG16074-01	HAMMEL, EUGENE A HERITABILITY OF LONGEVITY IN HISTORICAL PEASANT EUROPE	09-01-98/08-31-99	UNIVERSITY OF CALIFORNIA BERKELEY	72,910
1R03AG16076-01	WOLF, NORMAN S TELOMERASE RESTORING DNA, CELL REPLICATION AFTER ROS	07-01-98/06-30-99	UNIVERSITY OF WASHINGTON	75,500
1R03AG16079-01	BRODY, CHARLES J RELIGION, HEALTH, AND AGING--QUANTITATIVE ISSUES	08-15-98/08-14-99	TULANE UNIVERSITY OF LOUISIANA	70,213
1R03AG16080-01	ZHDANOVA, IRINA PRIMATE MODEL FOR THE HYPNOTIC EFFECTS OF MELATONIN	07-15-98/06-30-99	MASSACHUSETTS INSTITUTE OF TECHNOLOG	81,740
1R03AG16081-01	JACKSON, IVOR M TRH AND NEURONAL APOPTOSIS	07-01-98/06-30-99	RHODE ISLAND HOSPITAL (PROVIDENCE, R	77,500
1R03AG16083-01	TILLY, JONATHAN L BAX-AND BAD-NULL MICE AS MODELS FOR MENOPAUSE STUDIES	04-01-98/	MASSACHUSETTS GENERAL HOSPITAL	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG16085-01	BEHAN, MARY SEROTONIN, AGING AND PLASTICITY--SLEEP BREATHING	08-01-98/07-31-99	UNIVERSITY OF WISCONSIN MADISON	72,000
1R03AG16088-01	SPEER, DAVID C CME: DIAGNOSIS OF HIV AMONG OLDER ADULTS	06-01-98/	UNIVERSITY OF SOUTH FLORIDA	
1R03AG16093-01	PANG, KEVIN C AGING, ATTENTION AND THE BASALOCORTICAL PATHWAY	09-01-98/08-31-99	BOWLING GREEN STATE UNIV BOWLING GRE	77,000
1R03AG16097-01	LIN, GE GEOGRAPHIC DYNAMICS OF ELDERLY MIGRATION IN THE US	09-01-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	68,625
1R03AG16099-01	RAINEY, WILLIAM E ADRENAL EXPRESSION OF 3 BETA HSD IN AGING	09-01-98/08-31-99	UNIVERSITY OF TEXAS SW MED CTR/DALLA	78,000
1R03AG16101-01	BROWN, ABRAHAM M TRANSMEMBRANE APP PROCESSING BY GAMMA-SECRETASE	07-01-98/06-30-99	WINIFRED MASTERSON BURKE MED RES INS	76,640
1R03AG16103-01	RANEY, KEVIN D MOLECULAR PROBES FOR STUDYING TELOMERASE	06-01-98/05-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	70,238
1R03AG16105-01	MURTAUGH, CHRISTOPHER M TRANSITIONS AMONG POSTACUTE AND LONG TERM CARE SETTINGS	09-30-98/08-31-99	VISITING NURSE SERVICE OF NEW YORK	53,591
1R55AG16107-01	DIEHL, MANFRED STABILITY OF OLDER ADULTS SELF REPRESENTATIONS	09-30-98/09-29-99	UNIVERSITY OF COLORADO AT COLORADO S	62,500
1R03AG16111-01	TRAPHAGAN, JOHN W RELIGION, WELL BEING, AND AGING IN JAPAN	09-30-98/08-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	76,250
1R03AG16113-01	GOEL, NAMNI SENSORY STIMULI EFFECTS ON HUMAN CIRCADIAN RHYTHMS	09-30-98/08-31-99	WEILL MEDICAL COLLEGE OF CORNELL UNI	68,704
1R03AG16120-01	STOUT, ROBERT D T CELL-MACROPHAGE INTERACTIONS IN AGED MICE	07-01-98/06-30-99	EAST TENNESSEE STATE UNIVERSITY	49,755
1R03AG16121-01	SUZUKI, YUICHIRO AGING EFFECTS ON CALCIUM ACTIVATION OF OXIDANT SIGNA	08-01-98/07-31-99	TUFTS UNIVERSITY BOSTON	85,798
1R03AG16127-01	PIENTA, AMY M CHRONIC HEALTH PROBLEMS AND RETIREMENT	07-15-98/06-30-99	WAYNE STATE UNIVERSITY	75,000
1R03AG16130-01	TOWARD, JEFFREY I PERSONS WITH EARLY STAGE DEMENTIA--INSIGHT AND AWARENESS	07-01-98/06-30-99	UNIVERSITY OF TEXAS HLTH SCI CTR HOU	74,750

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R55AG16134-01	TAYLOR, DONALD H LINKING PROBATE DATA TO AN ELDERLY COHORT	09-30-98/09-29-99	DUKE UNIVERSITY	62,500
1R03AG16135-01	ANGEL, JACQUELINE L AGING IMMIGRANTS, NATIVITY AND DECLINING HEALTH	08-15-98/07-31-99	UNIVERSITY OF TEXAS AUSTIN	73,807
1R03AG16138-01A1	GAVRILOVA, NATALIA S FAMILIAL TRANSMISSION OF HUMAN LONGEVITY	09-30-98/08-31-99	NATIONAL OPINION RESEARCH CENTER	71,150
1R03AG16141-01	FAURON, CHRISTIANE M MODULATION OF ENERGY METABOLISM IN CELLULAR SENESCENCE	07-01-98/06-30-99	UNIVERSITY OF UTAH	74,663
1R03AG16143-01	KIMBALL, MILES SURVEY MEASURES OF PREFERENCE PARAMETERS	07-15-98/06-30-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	75,994
1R03AG16145-01	SCHLINGER, BARNETT A ESTROGENS, MEMORY AND THE BRAIN--A NEW ANIMAL MODEL	07-15-98/07-14-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	76,000
1R03AG16148-01	LEVENTHAL, AUDIE G AGING UPON CORTICAL FUNCTION IN MONKEYS	07-01-98/06-30-99	UNIVERSITY OF UTAH	74,750
1R29AG16151-01	GRUMAN, CYNTHIA A OUTCOME MEASURES FOR CASE MANAGEMENT PRACTICE	01-07-98/	INSTITUTE OF LIVING	
1R43AG16152-01	BELL-GREENSTREET, DARYL L AUTOMATIC PILL DISPENSER & REMINDER	07-01-98/	DAJALA ENGINEERING	
1R43AG16153-01	RIDGEWAY, DONALD G AUTOMATED TELEHEALTH COMPLIANCE SUPERVISION	07-15-98/	TARGET MICROSYSTEMS, INC.	
1R43AG16155-01	ACKROYD, TED J RUFFNER LIVING WILL REGISTRY	08-01-98/	HEALTHCARE RESEARCH AFFILIATES, INC.	
1R43AG16157-01	KOLLODGE, MARVIN K PROLONGED ELDERLY INDEPENDENCE BY WEB MONITORING	07-01-98/	ADVANCED MEDICAL ELECTRONICS CORPORA	
1R43AG16158-01	TOMPOROWSKI, PHILLIP D A COGNITIVE-TRAINING DEVICE FOR SENIORS	07-01-98/	SENIOR CHALLENGE	
1R43AG16159-01	HERMSMEYER, R KENT HORMONE REPLACEMENT THERAPY--PROGESTERONE SKIN CREAM	08-13-98/01-31-00	ASTRALL, LLC	100,000
1R43AG16160-01	DAVIS, HOWARD P A NOVEL BALANCE AND PERTURBATION MONITORING SYSTEM	07-01-98/	SCIENTECH, INC.	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET START	DATES END	INSTITUTION	TOTAL
FY: 98					
1R43AG16162-01	DUGAN, ELIZABETH HEALTH GUIDE TO OPTIMIZE THE HEALTH OF OLDER ADULTS	09-30-98	02-28-99	TANGLEWOOD RESEARCH, INC.	99,654
1R43AG16163-01	CLANCY, JEFFREY J TEMPERATURE ALERT DEVICE	07-01-98	/	COLMAR ENTERPRISES, INC.	
1R01AG16166-01	MALTESE, WILLIAM A RAB GTPASES AND TRAFFICKING OF BETA AMYLOID PROTEINS	02-01-98	01-31-99	PENNSYLVANIA STATE UNIV HERSHEY MED	209,950
1R44AG16168-01	GARGANO, DIANE A NOVEL ANESTHETIC DRUG DELIVERY SYSTEM	09-30-98	08-31-99	HARVARD CLINICAL TECHNOLOGY, INC.	53,185
1R41AG16169-01	WRIGHT, HARLAN T RECOMBINANT ALZHEIMER'S AMYLOID PEPTIDE AB1-42	07-01-98	/	BIOCACHE, LLC	
1R43AG16176-01	TULJAPURKAR, SHRIPAD D MORTALITY ANALYSIS TOOLKIT FOR AGING RESEARCH	09-01-98	02-28-99	MOUNTAIN VIEW RESEARCH	99,999
1R43AG16178-01	STERNS, RONNI S PATIENT INFORMATION RESOURCE LIBRARY (PIRL)	07-01-98	/	CREATIVE ACTION, INC.	
1R43AG16180-01	TULJAPURKAR, SHRIPAD D SIMULATION SOFTWARE FOR PUBLIC RETIREMENT SYSTEMS	09-01-98	02-28-99	MOUNTAIN VIEW RESEARCH	99,999
1R43AG16181-01	HUTH, JOHN H IMPROVING EMPLOYMENT OPPERTUNITIES FOR SENIORS	07-01-98	/	DIVERSE TECHNOLOGIES CORPORATION	
1R43AG16182-01	SNYDER, BARBARA H ENHANCING PHYSICIAN-PATIENT PARTNERSHIPS	07-01-98	/	MAKING CHANGE	
1R43AG16184-01	NIMITZ, JONATHAN S ELDERLY ESTATE C	06-01-98	/	ENVIRONMENTAL TECHNOLOGY & EDUCATION	
1R13AG16229-01	SHUMAKER, SALLY A ADHERENCE TO BEHAVIORAL & PHARMACOLOGICAL INTERVENTIONS	09-30-98	09-29-99	WAKE FOREST UNIVERSITY	21,758
1R03AG16237-01	BOX, HAROLD C SEVEN BIOMARKERS OF ROS ACTIVITY IN DNA	05-01-98	04-30-99	ROSWELL PARK CANCER INSTITUTE	71,857
1R03AG16274-01	LIPSCOMB, ELAINE R SOYBEANS AND CALCIUM METABOLISM IN POSTMENOPAUSAL WOMEN	09-30-98	08-31-99	PURDUE UNIVERSITY WEST LAFAYETTE	16,200
1R03AG16277-01	JOWERS, ESBELLE S EXERCISE ADHERENCE DETERMINANTS IN PEOPLE AGED 40-80	09-30-98	09-29-99	UNIVERSITY OF TEXAS AUSTIN	21,262

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG16280-01	LI, MIN VARIATION AMONG AGED RACIAL GROUPS IN LONG TERM CARE	09-30-98/09-29-99	UNIVERSITY OF ILLINOIS AT CHICAGO	19,231
1R03AG16281-01	KIM, KYUNG A ADAPTABILITY EFFECT ON MEMORY PROBLEMS AND WELL BEING	09-30-98/09-29-99	INDIANA UNIVERSITY BLOOMINGTON	18,925
1R03AG16285-01	JUREIDINI-WEBB, FERN AFRICAN AMERICAN ACCULTURATION AND QUALITY OF LIFE	09-30-98/08-31-99	UNIVERSITY OF SOUTH FLORIDA	14,800
1R03AG16326-01	MCGEE, DANIEL L PATTERNS OF MULTIPLE CAUSES OF DEATH IN THE US ELDERLY	09-30-98/08-31-99	LOYOLA UNIVERSITY MEDICAL CENTER	75,983
1R03AG16368-01	CASS, WAYNE A AGING AND VULNERABILITY TO 6HYDROXYDOPAMINE	09-30-98/09-29-99	UNIVERSITY OF KENTUCKY	72,949
1R25AG16372-01	JONES, JAMES M NETWORK FOR MINORITY AGING RESEARCH IN PSYCHOLOGY	09-30-98/07-31-99	AMERICAN PSYCHOLOGICAL ASSOCIATION	65,000
1R25AG16373-01	HAROOTYAN, LINDA K PREPARING EMERGING MINORITY SCHOLARS IN AGING	09-30-98/07-31-99	GERONTOLOGICAL SOCIETY OF AMERICA	55,524
1R25AG16375-01	TEPPER, LYNN M PROJECT--AGELINK	09-30-98/07-31-99	MERCY COLLEGE	62,686
1R25AG16376-01	JACKSON, JAMES S AFRICAN AMERICAN AGING RESEARCH TRAINING NETWORK	09-30-98/07-31-99	UNIVERSITY OF MICHIGAN AT ANN ARBOR	64,936
1R03AG16424-01	BLIXEN, CAROL E SELF MANAGEMENT PROGRAM FOR ELDERS WITH OSTEOARTHRITIS	09-30-98/08-31-99	CLEVELAND CLINIC FOUNDATION	71,240
1R03AG16435-01	LUER, MARK S AGE RELATED CHANGES IN BBB P GLYCOPROTEIN FUNCTION	09-30-98/08-31-99	UNIVERSITY OF ARKANSAS MED SCIS LTL	72,927
1R03AG16444-01	PACK, ALLAN I DOWN REGULATORY CYTOKINES, AGING AND SLEEP	09-30-98/08-31-99	UNIVERSITY OF PENNSYLVANIA	79,667
1R03AG16451-01	USITA, PAULA M SOCIAL ECOLOGICAL INFLUENCES OF IMMIGRANT WOMENS LIVES	09-30-98/09-29-99	PURDUE UNIVERSITY WEST LAFAYETTE	73,065
1R03AG16458-01	ROGERS, JACK T COREGULATION OF APP AND FERRITIN MRNAS AND APP FUNCTION	09-30-98/09-29-99	BRIGHAM AND WOMEN'S HOSPITAL	84,750
1R03AG16462-01	HARRIS, DAVID A CELLULAR PRION PROTEIN AND COPPER UPTAKE	09-30-98/08-31-99	WASHINGTON UNIVERSITY	78,000

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R03AG16469-01	ZAUSZNIEWSKI, JACLENE A SOCIAL COGNITIVE FACTORS AFFECTING THE HEALTH OF ELDERS	09-30-98/09-29-99	CASE WESTERN RESERVE UNIVERSITY	73,440
1R03AG16480-01	ROLIH, CATHERINE A ESTROGEN, CYTOKINES, AND NEUROGLIA--AN IN VITRO MODEL	09-30-98/09-29-99	WAKE FOREST UNIVERSITY	72,180
1R03AG16508-01	LARSON, JOHN R CELLULAR MANIFESTATIONS OF AGING IN RAT OLFACTORY CORTEX	09-30-98/09-29-99	UNIVERSITY OF ILLINOIS AT CHICAGO	76,442
1R01AG16522-01	BASERGA, RENATO L IGF-1R ANTISENSE INDUCTION OF TUMOR RESISTANCE	05-01-98/04-30-99	THOMAS JEFFERSON UNIVERSITY	237,583
1R03AG16546-01	FERRIS, HOWARD AGING DATABASE AND BIODEMOGRAPHIC ANALYSIS OF C ELEGANS	09-30-98/08-31-99	UNIVERSITY OF CALIFORNIA DAVIS	50,000
1R03AG16558-01	NORTON, EDWARD C INFORMAL CARE AND ELDERLY HEALTH	09-30-98/08-31-99	UNIVERSITY OF NORTH CAROLINA CHAPEL	70,234
1R01AG16583-01	OBEID, LINA M CERAMIDE AND CHEMOTHERAPY INDUCED APOPTOSIS	07-01-98/06-30-99	MEDICAL UNIVERSITY OF SOUTH CAROLINA	158,400
1R01AG16601-01	GOTAY, CAROLYN C WELL BEING IN LONGTERM MULTIETHNIC PROSTATE CA SURVIVORS	08-01-98/05-31-99	UNIVERSITY OF HAWAII AT MANOA	257,179
1R01AG16602-01	PASKETT, ELECTRA D ISSUES OF SURVIVORSHIP AMONG BREAST CANCER SURVIVORS	08-01-98/05-31-99	WAKE FOREST UNIVERSITY	122,496
7R01AG16606-02	DOEGE, KURT J AGGRECAN STRUCTURAL VARIANTS--MATRIX AND OSTEOARTHRITIS	01-01-99/07-31-99	UNIVERSITY OF SOUTH FLORIDA	103,395
1R01AG16617-01A1	HERNDON, JAMES G ONSET OF AGE-RELATED COGNITIVE DECLINE IN RHESUS MONKEYS	07-01-98/	EMORY UNIVERSITY	
1R01AG16648-01	ACKERMAN, PHILLIP L KNOWLEDGE STRUCTURES AND ADULT INTELLECTUAL DEVELOPMENT	07-15-98/06-30-99	GEORGIA INSTITUTE OF TECHNOLOGY	165,030
9R01AG16656-06	KEETING, PHILIP E EARLY RESPONSE PATTERNS IN DIFFERENTIATING OSTEOBLASTS	08-15-98/07-31-99	WEST VIRGINIA UNIVERSITY	173,763
1R01AG16658-01	HARVEY, ROBERT D ALPHA ADRENERGIC REGULATION OF CARDIAC ION CHANNELS	09-01-98/08-31-99	CASE WESTERN RESERVE UNIVERSITY	217,037
1R01AG16663-01	DALKIN, ALAN C PROSTATE CANCER--THE ROLE OF ACTIVIN AND FOLLISTATIN	08-15-98/07-31-99	UNIVERSITY OF VIRGINIA CHARLOTTESVIL	211,644

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
9R01AG16690-05	OSBORNE, BARBARA A MOLECULAR ANALYSIS OF APOPTOSIS IN T CELLS	09-01-98/08-31-99	UNIVERSITY OF MASSACHUSETTS AMHERST	252,220
1R01AG16692-01	MULLER, MARK T TOPOISOMERASE II AND TELOMERESE IN CANCER AND AGING	08-15-98/07-31-99	OHIO STATE UNIVERSITY	231,548
1R43AG16738-01	POU, SOVITJ ANTITHROMBOTIC SYNTHETIC VASCULAR GRAFTS	09-30-98/03-31-99	NOVOVASC, LLC	99,779
9R01AG16824-18	GETCHELL, MARILYN ODORANT/RECEPTOR INTERACTIONS IN OLFACTORY NEURONS	09-15-98/08-31-99	UNIVERSITY OF KENTUCKY	165,606
1R21AG16825-01	JAMIESON, BETH RECONSTITUTION POTENTIAL OF THE ADULT THYMUS	09-30-98/09-29-99	UNIVERSITY OF CALIFORNIA LOS ANGELES	223,150
1R21AG16826-01	HALE, LAURA P MECHANISMS OF AGE RELATED THYMIC INVOLUTION	09-30-98/09-29-99	DUKE UNIVERSITY	228,840
1R03AG16868-01	MELLOR, JENNIFER M LONGTERM CARE INSURANCE IN THE AHEAD SURVEY	09-01-98/08-31-99	COLLEGE OF WILLIAM AND MARY	66,364
1R01AG16870-01	DAHIYA, RAJVIR AGING AND PROSTATE GROWTH	09-01-98/07-31-99	NORTHERN CALIFORNIA INSTITUTE RES &	244,637
1R01AG16926-01	VIJG, JAN A TWO-DIMENSIONAL GENE SCANNING FOR FUNCTIONAL VARIATION	10-01-98/	BETH ISRAEL DEACONESS MEDICAL CENTER	
1R01AG16927-01	HAY, NISSIM MECHANISM OF SERINE/THREONINE KINASE SURVIVAL PROMOTION	09-01-98/07-31-99	UNIVERSITY OF ILLINOIS AT CHICAGO	209,191
1R03AG16987-01	ISCHIROPOULOS, HARRY PLASMA PROTEIN MODIFICATIONS AS BIOMARKERS OF OXIDATIVE	09-15-98/08-31-99	CHILDREN'S HOSPITAL OF PHILADELPHIA	87,500
1R01AG16989-01	WEEKS, DANIEL E ROBUST INTEGRATED SYSTEM FOR MAPPING COMPLEX DISEASES	09-30-98/07-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	328,639
1R03AG16991-01	SMITH, CHERYL F BODY COMPOSITION AND CHEMOSENSES IN BLACK AMERICAN WOMEN	09-15-98/09-14-99	UNIVERSITY OF MINNESOTA TWIN CITIES	67,814
1R01AG16992-01	O'CONNELL, JEFFREY R RAPID MULTIPOINT METHODS FOR MAPPING COMPLEX DISEASES	09-30-98/07-31-99	UNIVERSITY OF PITTSBURGH AT PITTSBUR	167,278
1R01AG16993-01	ANVERSA, PIERO MYOCYTE DEATH IN THE FAILING HEART: EFFECTS OF GENDER AN	09-01-98/	NEW YORK MEDICAL COLLEGE	

GRANT NUMBER	PRINCIPAL INVESTIGATOR TITLE	BUDGET DATES START END	INSTITUTION	TOTAL
FY: 98				
1R01AG16994-01	D'ARMIENTO, JEANINE M ALTERED MATRIX METALLOPROTEINASES IN HEART FAILURE	09-30-98/08-31-99	COLUMBIA UNIVERSITY HEALTH SCIENCES	298,375
1R01AG16998-01	EPSTEIN, CHARLES J AGE RELATED DEGENERATION	09-20-98/07-31-99	UNIVERSITY OF CALIFORNIA SAN FRANCIS	602,882
1R01AG16999-01	MOBLEY, WILLIAM C NGF SIGNALING IN MODELS OF AGE RELATED NEURODEGENERATION	09-15-98/08-31-99	STANFORD UNIVERSITY	305,676
1R01AG17008-01	IZUMO, SEIGO MOLECULAR MECHANISMS OF APOPTOSIS IN MYOCARDIAL ISCHEMIA	09-30-98/08-31-99	BETH ISRAEL DEACONESS MEDICAL CENTER	435,000
1R01AG17021-01	CHEN, QIAN BIOPHYSICAL REGULATION OF CHONDROCYTE DIFFERENTIATION	09-30-98/08-31-99	PENNSYLVANIA STATE UNIV HERSHEY MED	198,319
1R01AG17022-01	MARGULIES, KENNETH B MECHANISMS OF IMPROVED DIASTOLIC FUNCTION IN HUMAN HEART	09-30-98/08-31-99	TEMPLE UNIVERSITY	300,834
1R55AG17025-01	CARTER, SUSAN HISTORY AND THE ECONOMICS OF AGING--COHORT INDICATORS	09-30-98/08-31-99	UNIVERSITY OF CALIFORNIA RIVERSIDE	56,250
1R13AG17026-01	JANEWAY, CHARLES A, JR 10TH INTERNATIONAL CONGRESS OF IMMUNOLOGY	09-30-98/09-29-99	AMERICAN ASSOCIATION OF IMMUNOLOGIST	33,000
				426,656,758
				2,513
				816,934,634
				4,657

ITEM 7—DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

U.S. HOUSING FOR THE ELDERLY—FISCAL YEAR 1997 AND 1998

The Department of Housing and Urban Development is committed to providing America's elderly with decent affordable housing appropriate to their needs. The Department's goal is to provide a variety of approaches so that older Americans may be able to maintain their independence, remain as part of the community, have access to supportive services, and live their lives with dignity and grace.

I. HOUSING

A. SECTION 202—CAPITAL ADVANCES FOR SUPPORTIVE HOUSING FOR THE ELDERLY AND SECTION 811 SUPPORTIVE HOUSING FOR PERSONS WITH DISABILITIES

The National Affordable Housing Act of 1990 authorized a restructured Section 202 program while separating out and creating the new Section 811 program for Housing for Persons with Disabilities. Funding for both programs is provided by a combination of interest-free capital advances and project rental assistance. Project rental assistance replaces Section 8 rent subsidies. The annual project rental assistance contract amount is based on the cost of operating the project. The 30 percent maximum tenant contribution remains unchanged.

Since the passage of the National Affordable Housing Act of 1990, there have been 49,363 units approved under the Section 202 program and 14,210 units approved under the Section 811 program. Of those amounts 6,006 Section 202 units and 1,169 Section 811 were approved in Fiscal Year 1997. In FY 1998 there were 6,563 additional units approved under Section 202 for $464,251,000 and 1,650 more units approved under Section 811 for $108,714,400.

B. SECTION 231—MORTGAGE INSURANCE FOR HOUSING FOR THE ELDERLY

Section 231 of the National Housing Act authorized HUD to insure lenders against losses on mortgages used for construction or rehabilitation of market rate rental accommodations for persons aged 62 years or older, married or single. Nonprofit as well as profit-motivated sponsors are eligible under this program. The program is largely inactive since most sponsors and lenders prefer to use the Section 221(d)(3) and 221(d)(4) programs instead.

C. SECTION 221(d)(3) AND (4)—MORTGAGE INSURANCE PROGRAM FOR MULTIFAMILY HOUSING

Sections 221(d)(3) and (4) authorized the Department to provide insurance to finance the construction or rehabilitation of market rate rental or cooperative projects. The programs are available to non-profit and profit-motivated mortgagors as alternatives to the Section 231 program. While most projects under the programs have been developed for families, projects insured under Section 221 may be designed for occupancy wholly or partially for the elderly, and the mobility impaired of any age.

D. SECTION 232—MORTGAGE INSURANCE FOR NURSING HOMES, INTERMEDIATE CARE FACILITIES, AND BOARD AND CARE HOMES, AND ASSISTED LIVING FACILITIES

The Section 232 program assists and promotes the construction and rehabilitation (or purchase or refinance of existing projects) of nursing homes, intermediate care facilities, board and care homes, and assisted living facilities by providing mortgage insurance to finance these facilities. The vast majority of the residents of such facilities are the frail elderly. In FY 1997 HUD insured 179 projects worth $1.5 billion. In FY 1998 HUD insured 155 projects worth $896 million containing 76 nursing homes, 53 assisted living facilities, and 26 board and care homes.

E. SECTION 8—NEW CONSTRUCTION

The Section 8 program sponsored the new construction of housing for families and for the elderly by attaching subsidies to the units being developed. That way the landlord was guaranteed a stream of income that would facilitate finding financing and that would guarantee the ability to make payments and operate the developments. The new construction program was active from 1974 until the mid-1980s. There are 1.4 million private, project-based Section 8 units, about 47 percent of which serve elderly households. About 193,000 of these 658,000 units were built under the Section 202 program before the restructuring of that program in 1990. That means that about 465,000 units developed with Section 8 project-based assistance serve elderly households. The Section 8 new construction program is no longer in operation.

F. SERVICE COORDINATORS IN ASSISTED HOUSING

The National Affordable Housing Act authorized funding for service coordinators under the Section 202 program in 1990. Eligibility was expanded to cover Sections 8, 221(d)(3), and 236 projects in 1992. A service coordinator is a social service staff person who is part of the project's management team. That individual is responsible for ensuring that the residents of the project are linked with the supportive services they need from agencies in the community to assure that they can remain independently in their homes and avoid premature and institutionalization as long as possible.

In FY 1997, HUD awarded $8,885,025 to 65 projects, 55 of which were Section 202 projects; the remainder were Section 8, 2219(d)(3) or 236.

In FY 1998, HUD funded 51 projects for $6.5 million in new grants, 24 of which were 202s, 10 were Section 8, 3 were Section 221(d)(3) and 14 were Section 236. An additional 34 new grants were funded with $4,447,985 in FY 1997 carryover dollars. Of these 1 was a Section 202 project and 33 were Sections 8, 221(d)(3) and 236 projects.

G. THE CONGREGATE HOUSING SERVICES PROGRAM

The Congregate Housing Services Program (CHSP), initially authorized in 1978 and revised in 1990, provides direct grants to States, Indian tribes, units of general local government and local non-profit housing sponsors to provide case management, meals, personal assistance, housekeeping, and other appropriate supportive services to frail elderly and non-elderly disabled residents of HUD public and assisted housing, and for the residents of Section 515/8 projects under the Department of Agriculture's Rural Housing and Community Development Service.

In FY 1998, HUD extended 10 existing grantees for an additional year. There were no funds appropriated for new grants in FY 1997 or FY 1998.

H. FLEXIBLE SUBSIDY AND LOAN MANAGEMENT SET ASIDE (LMSA) FUNDING

The Flexible Subsidy Program (Flex) provides funding to correct the financial and physical health of HUD subsidized properties, including those which house the elderly. Flex provides funds for projects insured under Section 221(d)(3), Section 236, and funded under the 202 program (once they have reached 15 years old). Flex has been limited to Section 202 since FY 1995. In FY 1997, HUD funded 37 projects for $19,420,277. In FY 1998, Flex funded 30 projects for $9,273,177.

The Loan Management Set Aside (LMSA) Program provides Project-based Section 8 funding to HUD-insured and HUD-held projects and projects funded under the 202 program, which need additional financial assistance to preserve the long term fiscal health of the project. Funding has not been available for this program in several years.

I. MANUFACTURED HOME PARKS

The Housing and Urban-Rural Recovery Act (HURRA) of 1983 amended Section 207 of the National Housing Act to permit mortgage insurance for manufactured home parks exclusively for the elderly. The program has been operational since the March 1984 publication of a final rule implementing the legislation, although HUD insures very few manufactured home parks.

J. TITLE I PROPERTY IMPROVEMENT LOAN INSURANCE

Title I of the National Housing Act authorizes HUD to insure lenders against loss on property improvement loans made from their own funds to creditworthy borrowers. The loan proceeds are to be used to make alterations and repairs that substantially protect or improve the basic livability or utility of the property. There are no age or income requirements to qualify for a Title I loan.

HUD funded 87,648 loans in FY 1997 and an estimated 60,065 loans in FY 1998.

K. TITLE I MANUFACTURED HOME LOAN INSURANCE

Title I of the National Housing Act authorizes HUD to insure lenders against loss on manufactured home loans made from their own funds to creditworthy borrowers. The loan proceeds may be used to purchase or refinance a manufactured home, a developed lot on which to place a manufactured home, or a manufactured home and lot in combination. The home must be used as the principal residence of the borrower. There are no age or income requirements to qualify for a Title I loan. HUD funded 2,303 loans in FY 1997 and 552 loans in FY 1998.

L. HOME EQUITY CONVERSION MORTGAGE INSURANCE PROGRAM

The Department has implemented a program to insure Home Equity Conversion Mortgages (HECM), commonly known as "reverse mortgages." The program is designed to enable persons aged 62 years or older to convert the equity in their homes to monthly streams of income and/or lines of credit. HUD funded 5,192 loans in FY 1997 and 7,898 loans in FY 1998.

II. PUBLIC AND INDIAN HOUSING

A. SECTION 8 RENTAL CERTIFICATES AND RENTAL VOUCHERS

Section 8 of the U.S. Housing Act of 1937 authorizes housing assistance payments to aid low-income families in renting decent, safe, and sanitary housing that is available in the existing housing market.

About 17 percent of Section 8 certificate and voucher recipients are being used by the elderly. This represents 237,800 units.

B. ELDERLY/DISABLED SERVICE COORDINATORS

Section 673 of the Housing and Community Development Act of 1992 authorized the Department to fund services coordinators in public housing developments to assure the elderly and non-elderly disabled residents have access to the services they need to live independently. From FY 1994 to 1998, the Department awarded 227 grants totaling approximately $62.8 million for public housing authorities to hire service coordinators for their elderly and non-elderly disabled residents to provide general case management and referral services, connect residents with the appropriate services providers, and educate residents on service availability.

C. TENANT OPPORTUNITY PROGRAM

Section 20 of the U.S. Housing Act of 1937, as amended, authorized the Tenant Opportunities Program (TOP). The program enables resident entities to establish priorities and training programs for their specific public housing communities that are designed to encourage economic development, stability, and independence. The program began in 1988 and to date has awarded about 986 grants totaling approximately $80 million. Public housing developments

with elderly residents are eligible to participate and perhaps 7 percent are primarily elderly grantees.

D. PUBLIC HOUSING DEVELOPMENT PROGRAM

The Public Housing Development Program was authorized by Sections 5 and 23 of the U.S. Housing Act of 1937 to provide adequate shelter in a decent environment for families that cannot afford such housing in the private market.

In 1997, 267 additional units of public housing and Indian housing for the elderly were reserved, 115 were under construction, and 441 became available for occupancy. In 1998 no additional units were reserved, 165 were under construction, and 324 became available for occupancy. The following statistics are provided for the elderly low income population of public and Indian housing:

Public and Indian Housing	371,400
Public Housing residents	360,000
Indian housing	11,400

III. COMMUNITY PLANNING AND DEVELOPMENT

A. COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) ENTITLEMENT COMMUNITIES PROGRAM

The CDBG Entitlement Communities program is HUD's major source of funding to large cities and urban counties for a wide range of community development activities. These activities primarily help low- and moderate-income persons and households, however, they can also be used to help eliminate slums and blight or meet other urgent community development needs.

The Department normally does not ask grantees to report program beneficiaries by age. The Department estimates, based on the 1995 Grantee Performance Report (the most recent performance report for which the Department has reliable information) that grantees spent about 1 percent of their program funds (about $30 million) each year for public services that were specifically targeted to senior citizens and about 0.6 percent of their funds (about $18 million) for public facilities for senior citizens. In addition, HUD staff are aware that senior citizens frequently benefit from local housing rehabilitation programs that are funded by CDBG. What is not known is how many of those benefiting from rehabilitation projects are elderly. It has been the experience of the Department that the percentage of CDBG funds spent on these activities by grantees has not varied much from year to year.

No further information is available at this time.

B. CDBG STATE-ADMINISTERED AND HUD-ADMINISTERED SMALL CITIES PROGRAMS

The CDBG State-administered program and the HUD-administered Small Cities program for the States of New York and Hawaii are HUD's principal vehicles for assisting communities with under 50,000 population that are not central cities of metropolitan areas. States and small cities/counties use the CDBG funds to undertake a broad range of activities and structure their projects to give priority to eligible activities that they wish to emphasize. As is also true with the Entitlement Communities program, these activities

must primarily help low- and moderate income persons and households, however they can also be used to help eliminate slums and blight or meet other urgent community development needs.

The Department has no specific information on the extent of benefit from these programs for the elderly, however HUD staff are aware that elderly persons and households who live in these small cities and counties are benefiting from CDBG-funded activities.

No further information is available at this time.

C. HOME INVESTMENT PARTNERSHIP

The HOME Program continues to serve as a major resource for elderly housing assistance, particularly for the rehabilitation of deteriorating properties of low-income elderly homeowners, allowing them to remain in their own homes and keep those homes in standard condition. The figures below represent the number of HOME-assisted units completed in FY 1997 and FY 1998 that are occupied by elderly residents, and the percentage of units in that category that this figure represents. For example, in FY 1998 HOME funds assisted 4,883 elderly homeowners rehabilitate their homes; this is 41.4 percent of all HOME-assisted homeowner rehabilitations completed in that year.

Tenure type	Fiscal year		
	1998	1997	Cumulative
Homeowner Rehabilitation	4,883 or 41.4%	5,547 or 41.7%	25,663 or 42.9%.
Rental Units	2,902 or 16%	2,470 or 12.3%	8,604 or 16.8%.
New Homebuyers	732 or 3%	777 or 3.4%	2,287 or 3.1%
Total elderly units	8,517	8,794	36,554

To date, HOME has assisted 36,554 low-income elderly households. This constitutes an investment of over $594,075,000 in HOME funds, which have leveraged another $891,113,000 in private investment and other non-HOME funds to provide housing for the elderly (estimates based on a weighted average of $16,252/per unit HOME investment in for production, and conservative estimate of $1.50 per $1.00 of HOME as leverage).

For data collection purposes, the HOME Program defines elderly as 62 or older. Therefore the above numbers do not reflect projects which are designed for seniors between 55 and 62.

D. EMERGENCY SHELTER GRANTS PROGRAM

The Emergency Shelter Grants Program provides funds to States, metropolitan cities, urban counties, Indian tribes, and territories to improve the quality of emergency shelters, make available additional shelters, meet the cost of operating shelters, provide essential social services to homeless individuals, and help prevent homelessness.

No further information is available at this time.

E. SUPPORTIVE HOUSING DEMONSTRATION PROGRAM

The Supportive Housing Program funds may be used to provide: (i) transitional housing designed to enable homeless persons and families to move to permanent housing within a 24 month period,

which may include up to 6 months of follow-up services after residents move to permanent housing; (ii) permanent housing provided in conjunction with appropriate supportive services designed to maximize the ability of persons with disabilities to live as independently as possible within permanent housing; (iii) innovative supportive housing; or (iv) supportive services for homeless persons not provided in conjunction with supportive housing.

A sample of grantees annual reports indicates that 4.1 percent of SHP participants were over 51 years of age, the only breakout for which data are available.

IV. Fair Housing and Equal Opportunity (FHEO)

A. THE FAIR HOUSING ACT

The Fair Housing Act prohibits discrimination in housing based on race, color, religion, sex, national origin, handicap, or familial status. The Act exempts from its provisions against discrimination based on familial status "housing for older persons," which is defined as housing intended and operated for occupancy by elderly persons. The statutory exemption of "housing for older persons" comprises three categories of housing: (1) housing provided under any State or Federal program that the Secretary of HUD determines is specifically designated and operated to assist elderly persons; (2) housing intended for and solely occupied by residents 62 years of age and older; and (3) housing intended for and solely occupied by, at least one person 55 years of age or older per unit, provided various other criteria are met.

B. THE HOUSING FOR OLDER PERSONS ACT OF 1995

The Housing for Older Persons Act (HOPA) of 1995 amends the "55 and older" housing exemption to the Fair Housing Act's prohibition against discrimination based on familial status. HOPA eliminates the requirement that "housing for 55 and older persons" have significant services and facilities and establishes a good faith reliance defense from monetary damages based on a legitimate belief that the housing was entitled to an exemption. In order to qualify for the "55 and over housing" exemption a housing community or facility must: (1) have at least 80 percent of its occupied units occupied by at least one person 55 years of age or older; (2) adhere to policies and procedures which demonstrate an intent by the owner or manager to provide housing for persons 55 and older; and (3) verify the age of its residents through reliable surveys and affidavits.

The Department published a proposed rule to implement the Housing for Older Persons Act of 1995 on January 14, 1997, with a 60-day public comment period. HUD received approximately 130 public comments. The final rule, "Implementation of the Housing for Older Persons Act of 1995," has been cleared within the Department and is currently with the Office of Management and Budget for review under the Paperwork Reduction Act. After OMB completes its review, the final rule will be published in the Federal Register.

C. AGE DISCRIMINATION ACT

The Department's regulations implementing the Age Discrimination Act became effective on April 10, 1987, and are codified at 24 CFR Part 146.

During FY 1996, the Department received five complaints alleging age discrimination, of which were referred to the Federal Mediation and Conciliation Services (FMCS). Two of these complaints were successfully mediated and agreements were reach. Three were unsuccessfully mediated, and may be administratively closed out at a later date. Data on 1997 activity is expected in March 1999.

D. DESIGNATED HOUSING

The 1992 Housing and Community Development Act authorized HUD to approve Public Housing Authority plans to designate mixed population housing units (serving elderly and persons with disabilities) for elderly families only, if the plans met certain statutory requirements. The Housing Opportunities Program Extension Act of 1996 simplified and streamlined those requirements, but continued to require HUD to review and approve or disapprove designate housing plans.

For FY 1998 25 housing authorities received approval to designate 4,953 units for elderly families. For FY 1997 44 housing authorities designated 8,289 units.

V. Office of Policy Development and Research

A. AMERICAN HOUSING SURVEY

The American Housing Survey for the United States, Current Housing Reports H150 for the year 1995 contains special tabulations on the housing situations of elderly households in the United States. (Data for 1997 will be available soon.) Chapter 7 of the regular report provides detailed demographic and economic characteristics of elderly households, detailed physical and quality characteristics of their housing units and neighborhoods and the previous housing of recent movers, and their opinions about their house and neighborhood. The data are displayed for the four census regions, and for central cities, suburbs, and non-metropolitan areas, and by urban and rural classification. The non-elderly chapters (total occupied, owner, renter, Black, Hispanic, central cities, suburbs, and outside MSAs) as well as the publications for the 47 largest metropolitan areas individually surveyed over four- to six-year cycles. Current Housing Reports H170, also contain data on the elderly.

An elderly household is defined as one where the householder, who may live alone or head a larger household, is aged 65 years or more. Special information in these publications is provided on households in physically inadequate housing or with excessive cost burden, and on households in poverty.

B. EVALUATION OF THE CONGREGATE HOUSING SERVICES PROGRAM (CHSP)

The New Congregate Housing Services program was authorized under the National Affordable Housing Act of 1990 and amended by the Housing and Community Development Act of 1992.

The CHSP combines project-based rental assistance with community-based supportive services to help low-income frail elderly and non-elderly persons with disabilities maintain independence and avoid institutionalization. In addition to rental assistance, HUD pays 40 percent of the supportive services cost, the grantees pay 50 percent of the cost, and the participants pay 10 percent, if they are able. To be eligible for the program, residents must need assistance with at least three activities of daily living (ADL) as defined by HUD or, if they are non-elderly, they must have temporary or permanent disabilities.

Data for the evaluation was collected over a two-year period. The data collection phase has been completed. The final report, which is Congressionally mandated, is being written. It is expected that the report will be available by March 1999.

Preliminary results show that the program was implemented in many community settings ranging from small non-metropolitan areas to large cities and metropolitan areas. Participants were interviewed initially to obtain a baseline and again at 12 months and 24 months. Preliminary data shows that CHSP appears to be targeted to those at risk of being institutionalized and who are likely to be appropriately served by community-based options.

CHSP participants are older and much frailer (in terms of ADL criteria) than elderly persons in the general population, but they are somewhat similar to residents of more restrictive environments such as board and care homes and, in some cases, nursing homes. The average age of CHSP participants is 81 years. CHSP participants require a broad range of services, including help with housework, meals, transportation, and other types of personal care assistance. CHSP participants receive on average four services from the program and outside service providers in addition to help from family and informal sources.

Because the CHSP participants are so frail and old, many are not able to continue to live independently, even with CHSP services. Overall about half of the participants left CHSP. Of those who left the program, 38 percent moved to a more restrictive environment or died. Those who left the program are more likely to be older, have more ADL impairments, and be males. Those who stayed are more likely to be satisfied with program services and have less interaction with family.

Comparison of HOPE IV and CHSP

Comparisons based on preliminary data analysis show that both programs appear to be targeted to those at risk of being institutionalized who are likely to be appropriately served by community-based options.

The two populations are very similar in most respects, except that the HOPE IV participants are frailer at a younger age. In general, elderly participants in both programs are much frailer (in terms of ADL criteria) than elderly persons in the same age range in the general population. At the end of the two-year study period (covering the initial and follow up interviews) a little over half of the participants remain in the respective programs. A relatively small number have died—13 percent for HOPE IV and 15 percent for CHSP. More CHSP participants (25 percent) than HOPE IV

participants (9 percent) moved to a higher level of care. The rate for CHSP is high relative to national data for the frail-elderly.

Although the overwhelming majority of participants receiving services say they are satisfied with the programs, some of the participants in these programs say that they need more services to remain independent. However, these programs are not intended to serve the elderly who have aged in place and have gotten progressively more frail in a nursing home like setting. The need for transition to a higher level of care will be a reality for many who are frail and elderly.

The final report is scheduled to be completed in March 1999.

C. EVALUATION OF THE HOPE FOR ELDERLY INDEPENDENCE DEMONSTRATION PROGRAM

The program was conceived as an alternative to the Congregate Housing Services Program (CHSP). The major difference between the two programs is that HOPE IV is a tenant based program implemented by the PHAs. Beyond specifying minimum age, level of frailty and income requirements, HUD has allowed considerable flexibility in local implementation of the HOPE IV program. HUD expected the grantee to recruit and assess the candidates with the help of a service coordinator, obtain matching funds for its share of the cost of services, and serve as a contractor for service delivery.

The evaluation has been completed and the final report is in the process of being cleared through HUD for publication. The evaluation shows that the HOPE IV Program was appropriately targeted to clients at risk of being institutionalized. The level of assistance necessary to maintain independence corresponded to the level of frailty and impairment of the program participant.

At the end of the of the two-year period of the study, 40 percent of the HOPE IV elderly either died, went to nursing homes, moved to other locations, left HOPE IV but retained their Section 8 rental assistance, or left for unspecified reasons. The impact of the HOPE IV program was most noticeable in the quality of life and care of the participants. Despite increased frailty and worsening health conditions, 90 percent of the participants were satisfied with the HOPE IV Program. In addition, about half of those in the program said they were satisfied with their lives, liked their neighborhoods and living arrangements, were confident and had few worries, had good appetites, and were in control of their lives. This suggests that even the frailest elderly, who are also low income, and have few or no support systems, are able to live independently in a service rich environment that includes case-management.

ITEM 8—DEPARTMENT OF THE INTERIOR

DEPARTMENTAL OFFICE FOR EQUAL OPPORTUNITY

The Department of the Interior's (DOI) age discrimination regulation applies to its federally assisted programs and activities other than those that are of an insurance or guarantee nature. The rule is codified in the *Code of Federal Regulations* at 43 CFR 17, Subpart C. These rules and regulations are proactively enforced throughout all aspects of DOI's operations.

In 1998, DOI conducted a total of 1,121 civil rights compliance reviews under the authority of its age discrimination regulations. These compliance reviews covered, in part, whether or not recipients were in compliance with the requirements of the Act. These reviews were initiated and completed in 1998. DOI ensures compliance with the Act through established civil rights compliance and enforcement programs in its various bureaus and offices. To this effect, each of DOI's bureaus and offices is responsible for ensuring compliance with the Act in federally assisted programs and activities that they administer. In terms of policy development, direction, and the provision of technical assistance and training in furtherance of the requirements of the Act, the Departmental Office for Equal Opportunity serves as the focal point for this responsibility. All 1,121 of DOI's civil rights compliance reviews considered age discrimination compliance issues. These compliance reviews were conducted of public park and recreation programs, including fishing and hunting activities throughout the United States.

In 1998, the Departmental Office for Equal Opportunity developed detailed civil rights complaint processing procedures for the benefit of DOI's bureaus and offices. The procedures explain how to process and investigate age discrimination complaints. They describe DOI's role and the Federal Mediation and Conciliation Service's responsibilities in handling age discrimination complaints. The procedures also describe time limits for filing complaints and steps to be taken by both DOI and its recipients in conducting "informal" and "formal" complaint investigations under the Act.

DOI's civil rights working group remains in place. The group includes equal opportunity specialists from all bureaus and offices including the Departmental Office for Equal Opportunity The group meets frequently throughout the year for civil rights training purposes. The group operates as a "cross-bureau" team in addressing a variety of complex civil rights compliance issues including those faced by older Americans.

The public is informed of how to file age discrimination complaints through an established public notification program. This public notification program entails nationwide dissemination of civil rights posters which DOI requires to be prominently posted in

reasonable numbers and places throughout all areas of the recipient's operations. The poster describes the procedures for filing age discrimination complaints against DOI's recipients. The public is also informed of DOI policies regarding the Act through civil rights compliance reviews, complaint investigations, and written correspondence to recipients and potential and actual program beneficiaries. Additionally, DOI developed and established an electronic "diversity" website that proclaims to the public DOI's various nondiscrimination policies including requirements of the Act. The Department's website address is as follows: "http://www.doi.gov/diversity/."

DOI has taken steps to develop a new civil rights assurance form. In part, the assurance form covers the nondiscrimination requirements of the Act. This civil rights assurance form will be more comprehensive than DOI's current civil rights assurance. DOI's new civil rights assurance form, for the first time, will require DOI's applicants and recipients of Federal assistance to collect and maintain "age" data on potential and actual program beneficiaries. This information is being sought from federally assisted entities to enhance DOI's capabilities in more readily identifying instances of noncompliance with the Act. A draft version of DOI's new assurance form was submitted to the U. S. Department of Health and Services for review and comment purposes.

The Secretary of the Interior's "Zero Tolerance Policy" regarding discriminatory practices throughout DOI's operations remains in effect. The policy addresses, among other concerns, the elimination of discrimination based on age in DOI's federally assisted programs.

DOI had a total of three (3) age discrimination complaints in 1998, in its complaints inventory. One of the three complaints was received in FY 1998, the other two were carry over complaints from previous fiscal years. To date, two of the three age complaints that were in DOI's complaints inventory have been closed. The complaints in question were filed against federally assisted fish and wildlife management programs that are carried out by State governments. DOI did not refer any of the three complaints to the Federal Mediation and Conciliation Service because each of them merely required an interpretation of the requirements of the Act.

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (Service) provides opportunities for all employees regardless of their age and ensures that older individuals participate in special programs, volunteer programs, and employment opportunities. The following are the Service reports on aging for 1997 and 1998.

Calendar Year 1997.—The Service employed a total of 6,987 individuals. There were 4,851 (69%) of Service employees over the age of 40, which was an increase of 303 employees from the previous year. Of the Service employees over the age of 40, 280 (6%) were over the age of 60; a increase of 50 employees from the previous year.

The majority of the Service's mission related occupations, which include biologists, was in professional positions. Demographic infor-

mation regarding Service employees over the age of 40 is as follows:

- 2,228 (46%) were in professional positions, 83 (4%) of whom were over the age of 60;
- 974 (20%) were in administrative positions; 48 (5%) of them over the age of 60;
- 688 (14%) were in technical positions; 49 (7%) of them over the age of 60;
- 380 (8%) were in clerical positions; 38 (10%) of them over the age of 60;
- 22 (4%) were in other positions; none of them over the age of 60;
- 559 (12%) were in wage grade positions; 62 (11%) of them over the age of 60.

In 1997, there were 38 employment related discrimination complaints filed Servicewide. Of those, 10 were filed alleging discrimination on the basis of age (40 and above). Additionally, the Service had 25 federally assisted program related complaints filed during Fiscal Year 1976. Of those, three were filed alleging discrimination on the basis of age (40 and above).

A total of 8,000 Golden Age Passports were issued Servicewide in 1997. The Golden Age Passport Program provides free entrance or lower entrance fees to most national parks, monuments, historic sites, recreation areas and national wildlife refuges for any individual over the age of 62.

The Service utilized numerous individuals in its volunteer program. There were more than 30,000 volunteers Servicewide including 4,148 individuals over the age of 61.

There were 97 Service employees over the age of 40 who were recognized for their exceptional contributions through the Service's Outstanding Performance Awards Program during Fiscal Year 1997. Additional 14 Service employees over the age of 40 were recognized for their outstanding commitment to the Service's Human Resources Program through the Director's Equal Employment Opportunity Awards during Fiscal Year 1997.

Calendar Year 1998.—The Service employed a total of 7,390 individuals. There were 5,103 (69%) Service employees over the age of 40, which is an increase of 252 employees from the previous year. Of the Service employees over the age of 40, there were 302 (6%) over the age of 60; an increase of 22 employees from the previous year.

The majority of the Service's mission related occupations, which include biologists, continues to be professional positions. Demographic information regarding Service employees over the age of 40 is as follows:

- 2,351 (32%) were in professional positions; 84 (4%) of them over the age of 60;
- 1,055 (21%) were in administrative positions; 56 (5%) of them over the age of 60;
- 717 (7%) were in technical positions; 55 (8%) of them over the age of 60;
- 372 (7%) were in clerical positions; 39 (10%) of them over the age of 60;

• 22 (4%) were in other positions; none of them over the age of 60;

• 586 (11%) were in wage grade positions; 68 (12%) of them over the age of 60.

During Fiscal Year 1998, there were 36 employment related discrimination complaints filed Servicewide. Of those, 22 were filed alleging discrimination on the basis of age (40 and above). Additionally, the Service had 32 Federally Assisted Program related complaints filed during Fiscal Year 1998. Of those, one was filed alleging discrimination on the basis of age (40 and above).

A Total of 8,237 Golden Age Passports was issued Servicewide in 1998. The Golden Age Passport Program provides free or lower entrance fees to most national parks, monuments, historic sites, recreation areas and national wildlife refuges for any individual over the age of 62.

The Service utilizes numerous individuals in its volunteer program. There were more than 321,000 volunteers Servicewide, including 40,995 individuals over the age of 61.

The Service recognizes the numerous contributions of older individuals through various awards programs. There were 146 Service employees over the age of 40 who were recognized for their exceptional contributions through the Service's Outstanding Performance Awards during Fiscal Year 1998. Additionally, nine Service employees over the age of 40 were recognized for their outstanding commitment to the Service's Human Resources Program through the Director's Equal Employment Opportunity Awards Program during Fiscal Year 1998.

BUREAU OF RECLAMATION

Human Resources.—The Bureau of Reclamation conducts many activities throughout the year that affect and benefit aged individuals. Personnel Offices maintain contacts and provide services to many retirees who need advice or have questions concerning their retirement and health benefits. In addition, retirees and their spouses attend annual health insurance fairs where representatives from insurance carriers are available to discuss the provisions of, or changes to their respective medical plans. Several of Reclamation's regional offices continue to mail out a monthly newsletter to all retirees. The newsletter contains information on Reclamation's, current employees, past employees, and is highly regarded by retirees as a way to keep in touch. Additionally, pre-retirement briefings and seminars are held for all interested employees as part of retirement planning.

The Bureau of Reclamation established a Work and Family Team (WAFT) in September 1995 to implement the President's directive on Family-Friendly Federal Work Arrangements. Initiatives taken on behalf of older Americans and their families are principally addressed in this arena. The alternative work schedules in place throughout Reclamation allow employees to construct their work schedules to accommodate family needs. This is in addition to its telecommuting initiative already in place and vigorous support of the Family and Medical Leave Acts.

Employment and Job Corps Centers Opportunities.—Reemployed annuitants are hired to perform special projects or provide assist-

ance in specialized technical areas of work since they are able to offer invaluable experience and expertise to these assignments.

Reclamation's Weber Basin Job Corps Civilian Conservation Center in Ogden, Utah, continued its agreement with the U. S. Forest Service, consistent with Title V of the Older Americans Community Service Employment Act of 1973. The purpose of this agreement is to foster and promote useful part-time work opportunities in community service activities for unemployed low-income persons who are 55 years of age or older. During 1997 and 1998 Weber Basin employed four older Americans under this agreement in positions as teachers' aides, warehouse workers, drivers, maintenance helpers, and clericals.

An established Host Agency Agreement between Green Thumb, Inc., and the Bureau of Reclamation's Collbran Job Corps Civilian Conservation Center, Collbran, Colorado, continued to be utilized to employ older Americans at the Center. Green Thumb, Inc., administers a Senior Community Service Employment Program by virtue of a grant with the U. S. Department of Labor. During 1997 and 1998, Collbran Job Corps Center hired two employees to perform clerical and warehouse duties.

Accessibility.—The Architectural Barriers Act of 1968 and section 504 of the Rehabilitation Act of 1973, as amended, require the provision of accessible facilities, programs and services to the persons with disabilities. This effort directly benefits all people, including the elderly, providing improved access to Reclamation facilities and programs.

Reclamation has actively pursued compliance with the Architectural Barriers Act of 1968 and section 504 of the Rehabilitation Act of 1973, as amended, since 1990 and is in the process of evaluating all of its facilities, services and programs. The following chart illustrates the total number of Reclamation sites and components that were evaluated for accessibility purposes, as of January 11, 1999.

TOTAL SITE AND COMPONENT EVALUATIONS RECLAMATION-WIDE AS OF JANUARY 11, 1999

Region	Sites		Components	
	Inventoried	Evaluated	Inventoried	Evaluated
Great Plains	110	28	4495	4486
Lower Colorado	56	9	326	221
Mid-Pacific	174	0	0	0
Pacific NW	224	73	2170	1400
Upper Colorado	216	31	1696	786
Totals	800	141	8685	2893

In addition, progress toward full accessibility has resulted in modification of Reclamation offices, visitor facilities, restrooms, campgrounds, administrative offices, boating facilities, and picnic areas to provide access for people with disabilities and older Americans who experience some degree of disability.

These modifications provide structural access elements, which include: (1) access ramps; (2) handrails; (3) alteration of walkways and trail gradients; and (4) restroom and doorway modifications. In addition, modifications to Reclamation programs have resulted in captioned videos, brochures with large point print, audio descrip-

tion of videos and films and the use of graphics to identify restroom locations and information retrieval from brochures and displays.

These changes provide the elderly easier access to Reclamation facilities and greatly improved information about the availability and location of Reclamation programs, activities, facilities and services. In 1998, Reclamation evaluated 62 of a total of 213 work sites to determine whether or not they were readily accessible to people with disabilities, older employees and visitors. The following chart illustrates, by region, the total places of employment evaluated Reclamationwide:

TOTAL PLACES OF EMPLOYMENT EVALUATED RECLAMATION-WIDE

Region	Sites		Components	
	Inventoried	Evaluated	Inventoried	Evaluated
Great Plains	40	10	489	105
Lower Colorado	21	6	239	145
Mid-Pacific	67	0	0	0
Pacific NW	32	11	344	177
Upper Colorado	56	10	501	285
Totals	213	62	1573	712

The Great Plains Region.—The Region continues to conduct a program which considers the potential employment contributions of older citizens and continues to work to make facilities accessible to those having physical limitations, many of whom are senior citizens. The following activities are representative of actions taken in 1998.

1. In 1998, the Great Plains Region employed a total of 257 employees over 50 years of age. Of those employees, 15 were 62 years or older. A breakdown by age group is shown below:

Age Group	*Number of Employees*
51–54 years	149
55–59 years	80
60–70 years	15

In addition, in 1998, the Region employed one reemployed annuitant who was still employed at the end of the fiscal year.

2. Efforts continue with regard to enhancing recreational opportunities at many reservoirs and recreational areas which have traditionally attracted many senior citizens and retired individuals.

3. Many of the Bureau of Reclamation's volunteers from the outside public are retirees who wish to enhance their skills in various areas, and therefore, gain some experience through the volunteer program.

4. The Region has accessibility coordinators in each area office to assure compliance with the American Disabilities Act. There have been few, if any, complaints concerning reasonable accommodations.

Lower Colorado Region.—Hoover Dam has a Visitor Center Volunteer Program with a staff of 40 to 50 volunteers, most of whom are from the local senior population. The volunteers' contributions include monitoring the three-way revolving theater, helping visitors find their way around, answering questions about Dam tours and escorting groups from the parking area. Volunteers are given op-

portunities to go on tours, enjoy a walk across the Dam, view the new exhibits, and socialize with fellow volunteers.

During the reporting period, the Boulder Canyon Operations Office developed "WEB" pages for the benefit of older Americans including individuals with hearing impairments who need special equipment to obtain information about Lake Mead and the Colorado River. This information resource is used for general information purposes and/or for determining a good time to go fishing.

The Bolder Canyon Operations Office contracted with a retired employee to utilize his vast knowledge about the Colorado River which he had gained over a 30 year career.

Mid-Pacific Region.—The Mid-Pacific Region continues to make use of the Senior Community Service Employment Program (SCSEP). The program provides temporary work experience for people aged 55 and older with limited financial resources. It is sponsored by the American Association of Retired Persons. SCSEP gives clients the opportunity to sharpen and develop skills while searching for a permanent job.

The Mid-Pacific Region has an employee organization called the Federal Reclamation Employees' Association (FREA). It was formed to maintain and advance the general and social welfare of the employees, foster unity, cooperation, and advance the public regard and respect for the personnel activities of the Mid-Atlantic Region. Employees who are members of FREA at the time of retirement are granted an Honorary Lifetime Membership. This affords the retirees the opportunity to attend all functions held throughout the year, which hopefully give them a sense of belonging to the Mid-Atlantic Region.

The Federal building which houses the Mid-Atlantic Region office employees has gone through a major retrofit. These modifications provide structural access elements, which include: access ramps, handrails, alteration of walkways, and restrooms and doorway modifications. These changes provide the elderly easier access to the facilities.

Pacific Northwest Region.—The Region continues to utilize older and retired citizens as Camp or Park Hosts each year.

An Area Office hired an elderly volunteer in one office to help set up files in several program areas. She was eventually hired on a temporary appointment to continue that effort.

The Memorandum of Agreement with the State of Idaho, Department of Health and Welfare remains current, however it was not utilized during 1998.

The Upper Colorado Region.—The Upper Colorado Region utilized two senior volunteers from the Green Thumb, Inc., organization during 1997 and 1998. In addition, the Region utilized four older Americans through SCSEP (Senior Community Service Employment Program) to work in the Weber Basin Job Corps (24 hours weekly).

Recreation facilities in the Upper Colorado Region continue to be upgraded to improve accessibility to those with physical impairments due to disabilities and aging. This past year the following facilities have been renovated or constructed to improve access: Crawford Reservoir, Colorado; Navajo Reservoir, New Mexico; Deer Creek Reservoir, Utah; and Scofield Reservoir, Utah.

Reclamation will continue its efforts to improve access for the elderly and disabled through an ongoing program established to provide access for all individuals.

BUREAU OF INDIAN AFFAIRS

During the reporting period, Calendar Years 1997 and 1998, the Bureau of Indian Affairs continued to administer initiatives and programs to benefit older American Indian and Alaskan Native citizens. The Bureau's Division of Social Services has provided and financed adults with custodial and protective care services. These services have been provided in homes, group homes and nursing care facilities for elderly persons who lack financial and physical and/or mental capability to care for themselves. Other aging citizens have received protective and counseling services without custodial care payments. They coordinate intensive skill nursing needs for aging residents through referrals to other Federal, State or local agencies. The Bureau of Indian Affairs is currently establishing standards that will upgrade custodial care facilities making them eligible to receive Medicare/Medicaid payments and provide better subsequent custodial care to eligible aging American Indian and Alaskan Native citizens. The Division administers a Housing Improvement Program that makes existing housing repairs and renovations and some new home constructions on Indian communities. This program is a grant program designed to improve housing standards for citizens who are not qualified/eligible under conventional housing assistance activities. Program recipients are selected from weighted variables that favor low income persons with disabilities and elderly applicants; many program recipients include elderly persons. Further, Tribal entities are using "638 Contracts" to meet specific housing needs with emphasis on elderly residents.

The Bureau of Indian Affair's Office of Indian Education Programs, in concert with other associations (local and national) has developed and administers a Family and Child Education Program, a family literacy program, that serves young children and their parents, which often includes elderly American Indian and Alaskan Native guardians with responsibility for minor children. The program includes early childhood, parent and child time, parenting skills and adult education activities in their home and a center provided by local schools. These services enable elderly guardians to become more efficient in providing parenting skills to children in their custody. The Bureau's Office for Equal Employment Opportunity Programs continues to vigorously enforce the Age Discrimination in Employment Act to eliminate age discrimination throughout the Bureau of Indian Affairs. These efforts ensure that elderly employees may continue in their careers, uninhibited, until they decide to retire.

MINERAL MANAGEMENT SERVICE

The Minerals Management Service (MMS) continues to work to support programs for older Americans. MMS's work force statistics show that:

- Eight-one percent of the MMS's work force is comprised of employees that are age 40 and over (1,388 of 1,719).

- Older employees are well represented in a variety of occupations within the MMS, including accountants, auditors, computer specialists, engineers, geologists, geophysicists, and physical scientists,
- The MMS has implemented and continues to implement effective personnel management policies to ensure that equal opportunity is provided to all employees and applicants including the aged. Older workers are a source of valuable knowledge and experience and a significant factor in the success of the MMS's mission.

The MMS continues to explore and implement initiatives to assist employees to care for elderly parents. Examples of recent innovations are the establishment of family support rooms in the Herndon, Virginia, and Lakewood, Colorado offices. Rooms are available for employees to bring their elderly parents for short term care on an occasional basis when necessary, in order to facilitate such events as ease in keeping medical appointments. Other family friendly initiatives such as leave share and the Family and Medical Leave Act, have been implemented and used to benefit workers who have older relatives with medical situations.

The MMS continues to perform its mission related functions with diligence and appreciation of the importance of its actions. A major mission responsibility affecting large numbers of citizens is the approval of mineral royalty payments to various landholders, including numerous older Americans who often depend heavily on these payments to meet their basic human needs and rely on the ability of the MMS to effectively discharge their financial responsibilities.

The MMS offshore mission has the ultimate objective of increasing domestic mineral (oil and gas) production through offshore resources, thereby decreasing the dependence on foreign imports. Such activities have a significant effect on the economic well-being of all Americans, especially older Americans.

Office of Surface Mining Reclamation and Enforcement

The Office of Surface Mining Reclamation and Enforcement is committed to ensuring that all persons are provided equal opportunity in all employment matters. During calendar years 1997 and 1998 a policy statement from the Director of the Office of Surface Mining Reclamation and Enforcement (OSM) was in effect which states that discrimination based on age, 40 and older, will not be tolerated. In addition, during calendar year 1997 a Diversity Policy statement was issued committing OSM to creating and maintaining a diverse workforce that would be inclusive of elderly persons. Older workers are represented in most of OSM's occupational series. In fact, over half (59.5%) of OSM's workforce will be eligible to retire within the next 10 years.

In 1998, OSM opened a Family Support Room. This room was designed to give parents and primary care providers options in managing responsibilities of family and work. This room has been very helpful in assisting persons with elderly parents who were sick or had doctors appointments near the work site.

Awards for 25, 30, and 35 years of service were given to many OSM employees in calendar years 1997 and 1998.

UNITED STATES GEOLOGICAL SURVEY

Geological Survey (USGS) provides opportunities to all individuals throughout its work force and ensures that the skills of older individuals are utilized through special programs, volunteerism, and employment opportunities.

In 1997, USGS employed a total of 10,681 individuals in permanent and temporary jobs. There were 6,827 USGS employees age 40 and over. Of USGS employees age 40 and over, there were 413 (7%) employees who were 60 years of age and older, and one employee over 80 years old.

The majority of USGS' mission related occupations, which include occupations such as hydrologists, geologists, cartographers, and biologists are in the professional category. Of the 6,827 USGS employees age 40 and over, there were 3,546 (52%) in professional positions, 240 (7%) of whom were age 60 and over, and one employee over 80. Other demographic information regarding USGS employees age 40 and over was as follows:

- 998 (15%) were in administrative positions with 32 (3%) of them age 60 or over;
- 1,763 (26%) were in technical positions with 93 (5%) of them age 60 or over;
- 359 (5%) were in clerical positions with 44 (11%) of them age 60 or over;
- 13 (0.2%) were in other positions with none of them 60 or over;
- 148 (2%) were in wage grade positions with 7 (5%) of them age 60 or over.

In 1997, there were 14 equal employment complaints filed by USGS employees alleging discrimination based on age.

In 1998, the USGS experienced a decrease in the number of people it employed. In, 1998, USGS employed a total of 10,486 individuals in permanent and temporary jobs. There were 6,618 (63%) USGS employees age 40 and over. Of USGS employees age 40 and over, there were 426 (6%) employees who were 60 years of age and older, and there were two employees over the age of 80.

USGS' mission related occupations include positions such as hydrologists, geologists, cartographers, and biologists, are in the professional category. Of the 6,618 USGS employees age 40 and over, there were 3,515 (53%) in professional positions, 260 (7%) of whom were age 60 and over, and two employees over the age of 80. Other demographic information regarding USGS employees age 40 and over was as follows:

- 989 (15%) were in administrative positions with 38 (4%) of them age 60 or over;
- 1,657 (25%) were in technical positions with 94 (6%) of them age 60 or over;
- 308 (5%) were in clerical positions with 31 (10%) of them age 60 or over;
- 21 (0.3%) were in other positions with none of them age 60 or over;
- 127 (2%) were in wage grade positions with 3 (2%) of them age 60 or over.

In 1998, there were 7 equal employment complaints filed by USGS employees based on age. In addition to the full time employees, USGS also has many volunteers. These individuals provide outstanding services to USGS and the public nationwide in a variety of capacities.

The various types of volunteer opportunities and the number of individuals involved were:

Categories	1997	1998
USGS Retirees	53	69
Other Retirees	310	320
Lecturers	6	7
Scientists Emeritus	255	260
Totals	624	656

The USGS Scientists Emeriti are welcomed back to the USGS after retirement to continue important scientific research. The USGS benefits immeasurably from the accumulated knowledge, experience, and dedication of over 250 Scientists Emeriti.

The following are examples of some of the activities in which USGS volunteers are involved:

—Two retirees from outside the Federal sector donate their time in Reston, Virginia, to provide critical assistance to the development and management of the USGS Earth Science Corps, a project that utilizes hundreds of citizens across the country to update USGS maps. It is estimated that within the Earth Science Corps contingent, there are over 300 volunteers aged 60 and above. These volunteers make valuable contributions to the USGS and the nation by providing accurate, up-to-date geographic information about their communities.

—USGS retirees serve as lecturers in the National Center Visitors Center, leading tours and providing information about the USGS to groups from pre-school age to senior citizens.

—Scores of senior citizens volunteer nationwide for the Water Resources Division collecting and analyzing water quality data in their communities.

—Two retirees served as volunteers on a special project in Alaska to investigate the movement and impact of the Bering Glacier. Working under rugged conditions, the volunteers' help made it possible for USGS scientists to complete numerous studies and advance USGS' understanding of this significant glacier.

—Senior citizens and retirees with backgrounds in mathematics and computer science volunteer to instruct employees on software applications, enter data and evaluate software and hardware upgrades.

Summary of Contributions Made by Older Americans.—During the reporting period, older Americans made the following contributions to USGS operations:

- Worked on surface-water and quality-water records;
- Compiled *The Water Resources Division History, Volume VII –1966–1979, and South Dakota History, Volume 7;*
- Reviewed sediment laboratories for the Office of Surface Water, examining method consistencies of Water Resources Di-

vision sediment laboratories, and providing insight to the Sediment Action Laboratory Subcommittee;

- Provided assistance in making discharge measurements and checking gauges.
- Assisted USGS in accomplishing the "Extreme Storm Study;"
- Prepared information for and attended the International Records annual meeting in Maple Creek, Saskatchewan, Canada;
- Assisted with the collection of water resources data and processing in the Data Unit;
- Consulted on sediment transport, data collection and interpretation of data and on improved instrumentation projects;
- Reviewed the proposal SC94K, *Simulation of Dissolved Oxygen in the Lower Catawba River;*
- Assisted the Water Resources Division in the development of the personnel history of the Hawaii District Office and the collection of field data in Hawaii and the Western Pacific;
- Performed stream flow analysis and reviewed District and Pacific Northwest Area records; reviewed international water records and other quality assurance aspects pertaining to surface water;
- Reviewed reports, assisted as resources in project planning, assisted in training workshops, attended conferences for NAWQA Puget Sound, and as needed for the Washington District;
- Helped USGS complete two reports for the Washington District Office;
- Assisted in various activities pertaining to field studies of juvenile fall and spring chinook salmon, e.g., Radio telemetry activities included using boats to track radio-tagged juvenile salmon in Lower Granite and Little Goose Reservoirs, downloading fixed radio telemetry receivers, collecting juvenile salmon using trawls and purse seines in Snake River Reservoirs, and collecting velocity and temperature data. Near shore habitat activities included collecting fish with beach seines and electrofishing, taking part in surveys for stranded fish in the Handford Reach of the Columbia River, and collecting physical habitat data such as water velocity, temperature, turbidity, light intensity, and substrate classification. General duties include hauling live fish, transporting equipment to study sites, and hauling travel trailers to study sites;
- Reorganized a histology slide collection; and
- Assisted in editing the second edition of *"Fish Hatchery Management, the Encyclopedia of Aquaculture," and the Second U.S.-USSR Symposium Reproduction, Rearing and Management of Anadromous Fish.*

ITEM 9—DEPARTMENT OF JUSTICE

INITIATIVES RELATED TO OLDER AMERICANS

INTRODUCTION

As the largest law firm in the nation, the Department of Justice (DOJ) serves as counsel for its citizens. Through its lawyers, investigators, and agents, the Department plays a key role in protecting the nation against criminals and subversion, ensuring healthy competition of business in our free enterprise system, safeguarding the consumer, and enforcing drug, immigration, and naturalization laws. The Department also plays a significant role in protecting citizens through its efforts to improve public safety.

In addition, the Department conducts all suits in the Supreme Court in which the United States is concerned. It represents the Government in legal matters generally, rendering legal advice and opinions, upon request, to the President and to the heads of the executive departments. The Attorney General supervises and directs these activities, as well as those of the U.S. Attorneys and U.S. Marshals in the judicial districts around the country.

Within the Department, the Civil Rights Division, the Civil Division, the Criminal Division and the Office of Justice Programs conduct activities related to older Americans.

CIVIL RIGHTS DIVISION

The Civil Rights Division was established in 1957 to secure effective Federal enforcement of civil rights. The Division is the primary institution within the Federal Government responsible for enforcing Federal statutes prohibiting discrimination on the basis of race, sex, disability, religion, and national origin. In 1997, the Division created a Nursing Home Working Group to develop a coordinated approach and concerted effort within the Division to address a variety of civil rights violations that currently exist in the nation's nursing homes. Staff from the Criminal, Disability Rights, Housing, and Special Litigation Sections participate in the Working Group to combat abuse and discrimination in nursing homes and to raise public awareness about civil rights in these facilities. Listed below is an overview of the authority and recent activities of each Civil Rights Division Section to protect the rights of nursing home residents.

Civil Rights of Institutionalized Persons Act (CRIPA) Enforcement.—The Division's Special Litigation Section has responsibility under CRIPA to investigate conditions in public facilities, including nursing homes, and to file suits where there is a pattern or practice of violation of the constitutional or Federal statutory rights of

residents. During 1997 and 1998, the Section was active in a number of CRIPA investigations and cases involving conditions in nursing homes across the nation, including some of the largest public nursing homes in the United States. As a result of the Section's CRIPA efforts, thousands of nursing home residents who were living in dire, often life-threatening, conditions now receive adequate care and services and are protected from harm. For example, during August 1998, the Section settled a CRIPA case involving unlawful conditions of confinement in a Pennsylvania nursing home. This settlement represents the first case stemming from a joint investigation under CRIPA and the False Claims Act. The settlement, which was a cooperative effort by the Special Litigation Section, the U.S. Attorney for the Eastern District of Pennsylvania, the Civil Division, and the Office of the Inspector General of the U.S. Department of Health and Human Services, covers both the injunctive relief necessary to remedy deficiencies in the nursing home, as well as monetary penalties to reimburse the Federal Government for fraudulent Medicare billings for inadequate care. The settlement requires improvements in conditions at the Pennsylvania nursing home to ensure that its elderly and disabled residents are free from abuse and neglect and that they receive adequate care and treatment. As a result of alleged false billing practices, the defendants agreed to pay civil monetary penalties to the Federal Government under the False Claims Act and restitution to the residents by establishing a fund for a special project, authorized by the United States, that will improve the quality of life for residents at the nursing home. In addition, the settlement provides for a Federal monitor who will oversee compliance with the terms of the agreement.

During 1997, the Section settled another CRIPA case involving a Virginia nursing home for elderly persons with mental illness. Under the terms of the settlement, Virginia must take adequate steps to remedy deficiencies in medical care, psychiatric treatment, use of restraints, and protection from harm. The Section also brought another CRIPA case to a successful close involving a nursing home operated by the District of Columbia that housed elderly and chronically ill adults and physically and mentally disabled children. During the course of the litigation, the Section obtained court orders to remedy dire conditions at the nursing home, including inadequate food and medical supplies, untreated pressure sores resulting in death and amputation, and undue restraint. When the District decided to close the nursing home, the court required a court monitor to provide technical assistance and oversight to assess the needs of the residents and develop appropriate alternative placements for them. When the court monitor certified that all residents had been transferred to safe and appropriate alternative placements, the court dismissed the case in May 1997.

Throughout 1997 and 1998, the Section also was active in public awareness and education activities to provide information about its nursing home activities. The Section organized meetings and participated in conferences with other Federal agencies and consumer groups to educate them about its CRIPA authority and activities.

The Fair Housing Act.—The Housing Section is responsible for addressing discriminatory practices on the basis of race, color, reli-

gion, sex, national origin, familial status, or disability in private and public nursing homes and discriminatory practices in zoning practices that pose barriers to creating adult foster homes, group homes, and other community living arrangements for individuals who are inappropriately placed in nursing homes. During 1997 and 1998, the Housing Section brought several cases against nursing homes that discriminated on the basis of race and disability in their admissions policies. The Section also was active in using the Fair Housing Act to combat zoning ordinances that discriminate against adult foster care homes in residential areas.

Americans with Disabilities Act (ADA).—The Division's Disability Rights Section implements and enforces the ADA. The ADA is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA affects six million businesses and nonprofit agencies, 80,000 units of state and local government, and 54 million people with disabilities. Census data indicate that more than half of the people who are over the age of 65 have disabilities. Thirty-four percent of these individuals characterize their disabilities as "severe."

The Division's responsibilities under the ADA are to publish, implement, and enforce the regulations that prohibit discrimination based on disability in the programs, activities, and services of state and local governments, and in the operations of places of public accommodation, such as hotels, restaurants, theaters, retail sales establishments, health care facilities, nursing homes, and social service providers. Through lawsuits and both formal and informal settlement agreements, the Division has achieved greater access for individuals with disabilities in hundreds of cases. During 1997 and 1998, the Disability Rights Section investigated several complaints about practices in nursing homes that allegedly discriminated against residents based upon their disabilities.

In addition, the Division has established a comprehensive technical assistance program to educate people with disabilities about their rights under the ADA and to assist covered entities to understand their responsibilities. The ADA Technical Assistance Program provides up-to-date information about the ADA and how to comply with its requirements. The Division also undertakes outreach initiatives to increase awareness and understanding of the ADA and operates an ADA technical assistance grant program to develop and target materials to reach specific audiences at the local level, including small businesses and other small entities. Each year more than one million people are assisted by the Division and its grantees.

The technical assistance program includes an ADA homepage that permits members of the public to use the Internet to gain access to the Department's regulations, technical assistance materials, status reports, and settlement agreements. The ADA homepage receives 3 million "hits" per year. In addition, the technical assistance program operates a toll-free ADA information line (1–800/514–0301) that operates 24 hours-per-day to allow members of the public to order ADA public information and educational materials. The ADA Information Line receives over 160,000 calls per year.

Criminal Civil Rights Violations.—The Criminal Section has authority under criminal civil rights statutes to prosecute public servants—persons acting "under color of law"—from intentionally violating the Federal constitutional or statutory rights of the individuals they serve. In the nursing home context, the Section can prosecute nursing home staff acting under color of law who willfully deprive residents of their civil rights.

Further information about the activities of the Civil Rights Division is available online at www.usdoj.gov/crt or by calling the Department of Justice's Office of Public Affairs at 202/514–2008.

CIVIL DIVISION—COMMERCIAL LITIGATION BRANCH

The Civil Division represents the United States, its departments and agencies, Members of Congress, Cabinet officers, and other Federal employees. The Division confronts significant policy issues, which often rise to constitutional dimensions, in defending and enforcing various Federal programs and actions.

Through its efforts to combat health care fraud, the Commercial Litigation Branch of the Civil Division each year returns significant funds to the Medicare Trust Fund for the benefit of elderly Americans. The chief legal tool used by the Commercial Litigation Branch in this area is the civil False Claims Act, which imposes treble damages and statutory penalties on those who knowingly submit false claims to the government, and provides for a private right of action for whistle blowers who may file actions on behalf of the United States and share in the United States' recovery.

The Federal Government's resources to address health care fraud were considerably enhanced by the appropriations and new legal tools made available through Congress' enactment of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). In the two fiscal years since HIPAA, the Commercial Litigation Branch, together with the Offices of United States Attorneys, secured settlements and judgments of over $1.26 billion in matters involving health care providers alleged to have violated the civil False Claims Act.

Importantly, the Commercial Litigation Branch's successful use of the False Claims Act accomplishes much more for elderly Americans than simply restoring lost funds to the Medicare Trust Fund: it acts as a powerful deterrent against future financial fraud on Medicare and the provision of inadequate and harmful health care. For example, following several years of diligent efforts by the Department of Justice to pursue hospitals for false claims against Medicare, the Health Care Financing Administration in 1998 reported a first-time ever drop in the complexity of cases billed by hospitals participating in Medicare's prospective payment system (PPS). 1998 is the first year that this "case-mix index" has dropped since the beginning of PPS in 1984, fourteen years ago, suggesting that hospitals are now less aggressive in billing Medicare.

The civil False Claims Act was also used during the past year in cases against nursing homes that defrauded Medicare by providing grossly inadequate nutrition and care, and against psychiatric hospitals that arranged with nursing homes for the transfer of patients with Alzheimer's and other organic brain disorders so that unnecessary psychiatric care could be billed to the Federal Govern-

ment. The Deputy Attorney General has made it well known to the health care industry at industry events that it is a top priority for the Department of Justice to use the False Claims Act to address the knowing denial of needed care by nursing homes and managed care organizations.

Further information about the activities of the Civil Division is available online at www.usdoj.gov/civil or by calling the Department of Justice's Office of Public Affairs at 202/514–2008.

CRIMINAL DIVISION

The Criminal Division develops, enforces, and supervises the application of all Federal criminal laws except those specifically assigned to other divisions. The Criminal Division and the 93 U.S. Attorneys have the responsibility for overseeing criminal matters under the more than 900 statutes, as well as certain civil litigation. In addition to its direct litigation responsibilities, the Division formulates and implements criminal enforcement policy and provides advice and assistance.

Since 1994, the Criminal Division has been responsible for conducting three initiatives relating to older Americans:

National Telemarketing Fraud Initiative.—Established in 1994, this initiative enabled the Criminal Division to provide nationwide coordination for the Department on two major undercover operations directed at telemarketing fraud. The first operation, Operation Senior Sentinel, involved the use of active-duty and retired Federal agents and senior volunteers, recruited through the American Association of Retired Persons, who tape-recorded telephone solicitations by fraudulent telemarketers. After the FBI and other agencies took over the telephone lines of a number of people who had been repeatedly victimized by telemarketing schemes, the agents and volunteers pretended to be the victims when telemarketers continued to call the victims' telephone numbers. From its early stages in 1993 through July 1996, Operation Senior Sentinel resulted in the conviction of 598 individuals, the execution of 104 search warrants, and the investigation of 180 telemarketing "boiler rooms." Leaders of telemarketing schemes who were federally prosecuted typically received multi-year prison sentences, and some received prison sentences exceeding 10 years.

The second operation, Operation Double Barrel, built upon this undercover technique in expanding coordination on enforcement operations to include state attorneys general and Federal regulatory agencies. Operation Double Barrel, which Attorney General Janet Reno announced in December 1998, involved close cooperation between the FBI, 35 state attorneys general, and Federal prosecutors between July 1996 and December 1998. During that 30–month period, Federal authorities charged 795 individuals in 218 Federal criminal cases, and 14 state attorneys general charged 194 individuals in 100 state criminal investigations. In addition, 255 civil complaints were lodged against 394 individuals.

International Telemarketing Fraud Initiative.—Created in 1997, this initiative established a basis for the Criminal Division to provide nationwide coordination for the Department in implementing recommendations of the United States-Canada Working Group on Telemarketing Fraud. The Working Group, created in response to

a directive by President Clinton and Canadian Prime Minister Jean Chretien, issued a report with a number of recommendations on legal structures, public education and prevention measures, and strategy and coordination approaches to combat cross-border telemarketing fraud more effectively. The initiative has also provided travel funding for U.S. victims of Canadian-based telemarketing schemes who are needed for testimony in Canadian criminal prosecutions of those schemes.

Fraud Prevention Initiative.—Established by the Attorney General in May 1998, the Fraud Prevention Initiative is comprised of four components intended to improve the government's ability to prevent all major types of fraud (with the exception of health care fraud, which is already being addressed through the Department's existing healthcare enforcement efforts). First, the initiative has established a system of reporting for Federal prosecutors and agents to identify systemic weaknesses in Federal statutes, regulations, or policies that may adversely affect the prosecution of various types of fraud. Second, the Department will provide Federal law enforcement authorities with reference materials on "exemplary practices," such as fraud prevention and education projects and "reverse boiler rooms" that law enforcement can establish in various regions of the country to provide improved community outreach and education on fraud issues. Third, the Department is expanding its Website to include Webpages on all major areas of fraud, including frauds such as telemarketing and investment fraud that can have a major impact on older Americans. These Webpages are intended to inform the public about prevalent frauds and explain how they can report possible fraud schemes or learn how to handle such schemes. Fourth, the Department is establishing an annual award for fraud prevention to ensure that significant fraud prevention efforts by government and private-sector organizations can receive suitable public recognition.

In addition to these initiatives, the Criminal Division also provides coordination for Federal and state agencies through interagency Working Groups that Criminal Division representatives chair. These include the Health Care Fraud Working Group, the Securities and Commodities Fraud Working Group, and the Telemarketing and Internet Fraud Working Group.

Further information about the activities of the Criminal Division is available online at www.usdoj.gov/criminal or by calling the Department of Justice's Office of Public Affairs at 202/514–2008.

OFFICE OF JUSTICE PROGRAMS

Since 1984, the Office of Justice Programs (OJP) has provided Federal leadership in developing the nation's capacity to prevent and control crime and delinquency, improve the criminal and juvenile justice systems, increase knowledge about crime and related issues, and assist crime victims. OJP is comprised of five program bureaus and six program offices. The five bureaus are:

The Bureau of Justice Assistance (BJA) provides funding, training, and technical assistance to state and local governments to combat violent and drug-related crime and help improve the criminal justice system. Its programs include the Edward Byrne Memorial State and Local Law Enforcement Assistance formula and dis-

cretionary programs and the Local Law Enforcement Block Grants (LLEBG) program.

The Bureau of Justice Statistics (BJS) collects and analyzes statistical data on crime, criminal offenders, crime victims, and the operation of justice systems at all levels of government. It also provides financial and technical support to state statistical agencies and administers special programs that aid state and local governments in improving their criminal history records and information systems.

The National Institute of Justice (NIJ) supports research and development programs, conducts demonstrations of innovative approaches to improve criminal justice, develops new criminal justice technologies, and evaluates the effectiveness of OJP-supported and other justice programs. NIJ also provides primary support for the National Criminal Justice Reference Service, a clearinghouse of criminal justice-related publications, articles, videotapes, and online information.

The Office of Juvenile Justice and Delinquency Prevention (OJJDP) provides Federal leadership in preventing and controlling juvenile crime and improving the juvenile justice system at state and local levels. OJJDP also provides grants and contracts to states to help them improve their juvenile justice systems and sponsors innovative research, demonstration, evaluation, statistics, replication, technical assistance, and training programs to help improve the Nation's understanding of and response to juvenile violence and delinquency.

The Office for Victims of Crime (OVC) provides Federal leadership in assisting victims of crime and their families. OVC administers two grant programs created by the Victims of Crime Act of 1984 (VOCA). The Victims Assistance Program gives grants to states to support programs that provide direct assistance to crime victims. The Victims Compensation Program provides funding to state programs that compensate crime victims for medical and other uncompensated expenses resulting from a violent crime. OVC also provides funding, training, and technical assistance to victim service organizations, criminal justice agencies, and other professionals to improve their response to crime victims and their families. OVC's programs are funded through the Crime Victims Fund, which is derived from fines and penalties collected from federal criminal offenders, not taxpayers.

OJP's program office responsible for initiatives related to older Americans is:

The Violence Against Women Office (VAWO) administers grant programs to help prevent, detect, and stop violence against women, including domestic violence, sexual assault, and stalking. VAWO is also responsible for coordinating the Department of Justice's public outreach and other initiatives relating to violence against women.

The other five OJP program offices are: the Corrections Program Office (CPO), the Drug Courts Program Office (DCPO), the Executive Office for Weed and Seed (EOWS), the Office for State and Local Domestic Preparedness Support (OSLDPS), and the Office of the Police Corps and Law Enforcement Education (OPCLEE).

Also within OJP, the American Indian and Alaska Native Desk (AI/AN) improves outreach to tribal communities. AI/AN works to

enhance OJP's response to tribes by coordinating funding, training, and technical assistance and providing information about available OJP resources.

The following describes OJP's major activities on behalf of older Americans:

Focus Group on Crime Victimization of the Elderly.—In the spring of 1998, OJP's bureaus and offices sponsored a focus group on issues related to the crime victimization of older persons. Participants included representatives from: the Administration on Aging; the National Institute on Aging at the National Institute of Health; American Association of Retired Persons; National District Attorneys Association; National Association of Attorneys General; the National Sheriffs' Association; the National Association of Adult Protective Services; the National Committee for the Prevention of Elder Abuse; the National Indian Council on Aging; and state criminal justice and victims assistance agencies in California, Pennsylvania, and Florida.

Participants cited three primary areas where states and local jurisdictions need more support: public education and awareness; training and technical assistance related to identifying and addressing elderly victimization for criminal justice and social service agencies, both within and across agencies and disciplines; and research. The recommendations of the focus group have guided planning for FY 1999.

Telemarketing Fraud.—The goal of the Telemarketing Fraud Prevention and Public Awareness Program is to support federal, state, and local efforts among law enforcement, crime prevention, victim assistance, consumer protection, adult protective services, and senior citizen programs in implementing public education and training efforts. In December 1997, OVC awarded four grants totaling $600,000 to the Oregon Senior and Disabled Services Division; the Baltimore County Department of Aging; the National Sheriffs' Association (NSA); and the National Hispanic Council on Aging. These funds were supported by a $600,000 transfer from BJA, as part of a $2,000,000 Congressional earmark to address elder abuse. Funding under this program enabled the grantees to do the following:

- The Oregon Senior and Disabled Services Division provided training and information on fraud for bank personnel throughout Oregon and created services for senior fraud victims.
- The Baltimore County Department of Aging produced and distributed a booklet aimed at preventing telemarketing and telephone fraud. The booklet was also used as an insert in a Sunday edition of the Baltimore Sun, at the newspaper's expense.
- The National Sheriffs' Association used the funds for "Operation Fraudstop," a national, coordinated public education and awareness and training effort among NSA and a range of agencies and corporations, including the American Association of Retired Persons, the National Association of Attorneys General, the National District Attorneys Association, TRIAD, state sheriffs' associations, and Radio Shack. A pilot will also be con-

ducted in Maryland, Montana, Virginia, and Washington, with replication planned nationwide.

- The National Hispanic Council on Aging funded a public education campaign to combat telemarketing fraud in the Latino community, which included distribution of material and meetings of small groups of seniors in South Texas and the Washington, D.C. area to discuss telemarketing fraud issues and the development of a senior peer counseling program to provide victim assistance.

BJA's Telemarketing Fraud Curriculum Initiative is supported by a Congressional earmark for "programs to assist law enforcement in preventing and stopping marketing scams against senior citizens." Under this initiative, the National District Attorneys Association's (NDAA) American Prosecutors Research Institute (APRI), in cooperation with the National Association of Attorneys General (NAAG), working with the American Association of Retired Persons (AARP), and the National White-Collar Crime Center (NWCCC), is developing a training curriculum for prosecutors and investigators to help address these crimes. With BJA funding, the AARP is working in coordination with the NAAG, APRI, and NWCCC to provide training and education to state and local investigators and prosecutors and other related professionals to prevent and effectively prosecute telemarketing fraud cases.

Publications.—In April 1998, OJJDP released "Guidelines for the Screening of Persons Working with Children, the Elderly, and Individuals with Disabilities in Need of Support." These guidelines, which were prepared by the American Bar Association's Center on Children and the Law under a grant from OJJDP, help different types of organizations screen caregivers by focusing on variables such as the type of contact the caregiver would have with the client, whether the care is supervised or unsupervised, and the age and condition of the client. The guidelines also provide recommendations for how states can strengthen their efforts by: encouraging abuse prevention training for all workers at service agencies, organizations, and facilities for children and dependent adults; allowing greater access to state criminal record and sex offender information; and creating central abuse and neglect registries for children and elderly or dependent adults.

BJS is developing a statistical report on elderly victimization using data from the National Crime Victimization Survey for release in 1999. These statistics will include comparisons of victimization of senior citizens with that of other age groups, patterns of victimization that are different among the elderly than other groups in the population, and some statistics on violence committed against senior citizens by relatives and others who are well-known to the victim.

In February 1999, the National Institute of Justice released its study, Fraud Control in the Health Care Industry: Assessing the State of the Art , which examines the policies, procedures, and control systems concerning the unusually high levels of criminal fraud within the health care industry. The NIJ study revealed the extent to which certain factors make controlling fraud and abuse in the health care industry particularly challenging, including the acceptability of government and insurance companies in our society as

violators, and the level of trust given to health care providers. One factor highlighted in the study revealed that many fraud schemes deliberately target vulnerable populations, such as the elderly or Alzheimer's patients, who are less willing or able to complain or alert law enforcement. This study also focused on criminal fraud rather than abuse because fraud controls are aimed at an entirely different audience. For instance, controls may work well in revealing billing errors to well-intentioned doctors, but those same control systems may not offer an effective defense against skilled criminals. This report is available on the Internet at http://www.ojp.usdoj.gov/nij, or from the National Criminal Justice Reference Service (NCJRS) by calling toll-free, 1–800/851–3420.

Criminal Justice System Responses to Senior Citizens.—BJA included a topic area, "Criminal Justice System Responses to Senior Citizens," in its FY 1998 Open Solicitation, which invited communities to submit proposals for strategies to address issues presented by senior citizens as victims, witnesses, defendants, offenders, or volunteers. BJA received a total of 120 concept papers under this topic area and expects to make awards to the Spokane County Prosecuting Attorney's Office, Spokane, Washington, the City of San Juan, Puerto Rico, Riverside County District Attorney, Riverside, California, and the Illinois State Police, Springfield, Illinois. The grantees will do the following under this topic area:

- The Spokane County Prosecuting Attorney's Office will develop an Elder Abuse Prosecution Team (EAPT) to aggressively prosecute perpetrators of physical abuse and neglect against elders; educate the community to recognize signs and symptoms of abuse; and increase response to reported crime with knowledgeable investigators, who conduct intensive and professional investigations and work in partnership with community organizations to develop prevention strategies.
- The Municipality of San Juan, Office for the Integral Development of Women will provide regularly scheduled visits to elderly women living in rural and marginal areas of San Juan. The visits will include individual counseling, crisis intervention, and legal orientation and assistance aimed to prevent crime, discrimination, physical and emotional abuse, abandonment, and other situations affecting elderly women.
- The Riverside District Attorney's Office will establish an Elder Abuse Prevention Unit (EAPU) and participate in a multi-agency effort to aggressively address incidents of elder abuse. The project will serve as a national model for the role of the district attorney in providing leadership in addressing this issue. The EAPU will ensure the prosecution of approximately 50 elder abuse cases and provide supportive services to elder victims.
- The Illinois State Police will develop a Financial Exploitation of the Elderly Unit to respond to requests for assistance and provide training in the investigation and prosecution of statewide financial exploitation cases against the elderly.

Home Improvement Fraud.—In 1998, BJA awarded a grant to the American Prosecutors Research Institute (APRI) for the Home Improvement Fraud Against Seniors Program. APRI provides training and technical assistance to local prosecutors to protect

senior citizens from home improvement fraud through increased prosecution, prevention, and education. APRI also aids local prosecutors in their fight against home improvement fraud by showing them successful and cost effective ways to gain evidence needed, establish proof, communicate with other prosecutors, and develop education and prevention efforts to protect senior citizens.

Grants to Encourage Arrest Policies and the Technical Assistance Program.—The VAWO FY 1998 applications for the Grants to Encourage Arrest Policies and the Technical Assistance Program included a number of special interest areas, one of which was "community-driven initiatives to address violence against women among diverse, traditionally under-served populations," including elderly women. Under its Technical Assistance Program, VAWO awarded a grant to the American Bar Association's Commission on Domestic Violence and Legal Problems of the Elderly to provide training and technical assistance on issues related to older battered women to current recipients of OJP grants under the Violence Against Women Act.

TRIAD.—TRIAD is a national program cosponsored by the National Sheriffs' Association, the International Association of Chiefs of Police, and the American Association of Retired Persons. TRIAD combines the efforts and resources of law enforcement, senior citizens and organizations that represent them, and victim assistance providers. Activities include educating communities about elder abuse; strengthening the criminal justice system's process of prevention, detection, and assistance for elderly crime victims; implementing reassurance programs for homebound and isolated elders; and providing technical assistance for new and existing TRIADs. There are now 436 TRIAD programs in 46 states, Canada, and England.

In FY 1999, funds will be provided to adapt TRIAD for use in Indian country. OVC will provide funding for a demonstration program on one Indian reservation under federal criminal jurisdiction. The purpose of this program is to provide a coordinated response to crime against the elderly by adapting the TRIAD program approach to Indian country.

American Bar Association.—OVC awarded two grants to the American Bar Association (ABA) in FY 1998. Funding from the first award went to the ABA's Commission on Domestic Violence and Commission on Legal Problems of the Elderly to jointly develop a curriculum for lawyers about domestic violence and elder abuse. The second grant was awarded to the ABA's Commission on Legal Problems of the Elderly to develop a curriculum on elder abuse for victim assistance professionals.

For More Information about OJP programs or activities on behalf of older Americans, contact OJP's Office of Congressional and Public Affairs at 202/307–0703 or access the OJP homepage at www.ojp.usdoj.gov. Funding information is available from the Department of Justice Response Center at 1–800/421–6770. OJP and other criminal and juvenile justice-related publications are available from the National Criminal Justice Reference Service by calling toll-free, 1–800/851–3420, or online at www.ncjrs.org.

ITEM 10—DEPARTMENT OF LABOR

The welfare of our Nation's older citizens is a matter of substantial concern to the Department of Labor. The Department of Labor is pleased to provide this summary of the programs it administers which can provide helpful assistance to older citizens. These include—job training and related services, dislocated worker services, and other employment services, under programs administered by the Department of Labor's Employment and Training Administration; a public information and assistance program on matters relating to certain pension and welfare plans under programs administered by the Pension and Welfare Benefits Administration; the Bureau of Labor Statistics' statistical programs providing employment and unemployment data for older persons; protection for certain employees to take unpaid, job-protected leave to provide care for sick, elderly parents under a program administered by the Employment Standards Administration; and a Clearinghouse administered by the Women's Bureau which provides information and resources to workers and employers interested in developing or implementing family-friendly policies such as elder care and child care. These programs and services are addressed more fully in the following discussion.

EMPLOYMENT AND TRAINING ADMINISTRATION

INTRODUCTION

The Department of Labor's (DOL's) Employment and Training Administration (ETA) provided a variety of training, employment and related services for the Nation's older individuals during Program Years 1996 (July 1, 1996–June 30, 1997) and 1997 (July 1, 1997–June 30, 1998) through the following programs and activities: the Senior Community Service Employment Program (SCSEP); programs authorized under the Job Training Partnership Act (JTPA); and the Federal-State Employment Service system.

SENIOR COMMUNITY SERVICE EMPLOYMENT PROGRAM

SCSEP, authorized by Title V of the Older Americans Act, employs low-income persons age 55 or older in a wide variety of part-time community service activities such as health care, nutrition, home repair and weatherization, child care, and in beautification, conservation, and restoration efforts. Program participants work an average of 20 hours per week in schools, hospitals, parks, community centers, and in other government and private, non-profit facilities. Participants also receive personal and job-related counseling, are offered annual physical examinations, job training, and in many cases, referral to private sector jobs.

About 80 percent of the participants are age 60 or older, and about 60 percent are age 65 or older. Almost three-fourths are female; about 40 percent have not completed high school. All participants are economically disadvantaged.

Table I below shows SCSEP enrollment and participant characteristics for the program year July 1, 1996, to June 30, 1997, in Column 1 and July 1, 1997, to June 30, 1998, in Column 2.

TABLE 1.—SENIOR COMMUNITY SERVICE EMPLOYMENT PROGRAM (SCSEP): CURRENT ENROLLMENT AND PARTICIPANT CHARACTERISTICS—PROGRAM YEARS JULY 1, 1996, TO JUNE 30, 1997, (PY96) AND JULY 1, 1997, TO JUNE 30, 1998 (PY97)

	Program years	
	1996	1997
Enrollment:		
Authorized positions established	60,500	61,307
Unsubsidized employment rate (Percent)	26.1	29.7
Characteristics (Percent):		
Sex:		
Male	27.2	26.9
Female	72.4	73.0
Educational status:		
8th grade and less	18.3	17.5
9th grade through 11th grade	19.1	18.6
High School graduate or equivalent	39.3	39.9
1–3 years of college	15.9	16.4
4 years of college or more	7.3	7.3
Veterans	12.9	12.4
Ethnic Groups: [1]		
White	59.6	58.8
Black	24.6	25.0
Hispanic	9.8	9.9
American Indian/Alaskan Native	1.8	1.9
Asian/Pacific Island	4.1	4.2
Economically disadvantaged	100.0	100.0
Poverty level or less	85.7	86.0
Age groups: [1]		
55–59	17.0	16.7
60–64	22.9	22.8
65–69	24.8	24.4
70–74	19.8	19.7
75 and over	15.5	16.1

[1] Figures may not add to 100% due to rounding.
Source: U.S. Department of Labor, Employment and Training Administration.

JOB TRAINING PARTNERSHIP ACT PROGRAMS

The Job Training Partnership Act (JTPA) provides job training and related assistance to economically disadvantaged individuals, dislocated workers, and others who face significant employment barriers. The ultimate goal of JTPA is to move program participants into permanent, self-sustaining employment. Under JTPA, Governors have the approval authority over locally developed plans and are responsible for monitoring local program compliance with the Act. JTPA functions through a public/private partnership which plans, designs and delivers training and other services. Private Industry Councils (PICs), in partnership with local governments in each Service Delivery Area (SDA), are responsible for providing guidance for, and oversight of, job training activities in the area.

Amendments to JTPA became effective July 1, 1993. These amendments target program services to those with serious skill de-

ficiencies; and individualize and intensify the quality of services provided. Five percent of the funds appropriated for the adult program (Title II–A) must be used by States in partnership with SDAs for older workers. The amendments also require Governors to ensure that services under the adult program are provided to older workers on an equitable basis.

BASIC JTPA GRANTS

Title II–A of JTPA authorizes a wide range of training activities to prepare economically disadvantaged adults for employment. Training and training-related services available to eligible older individuals through the basic Title II–A grant program include vocational counseling, jobs skills training (either in a classroom or on-the-job), literacy and basic skill training, job search assistance, and job development and placement. Table 2 below shows the number of persons 55 years of age and over who terminated from the Title II–A program during the period July 1, 1996, through June 30, 1997, and during the period July 1, 1997, through June 30, 1998. (The data do not include the 5 percent set-aside for older individuals, which is discussed separately.)

TABLE 2.—JTPA DATA JULY 1, 1996—JUNE 30, 1998

[Title II–A]

Item	Number served		Percent
	PY96	PY97	
Total Adult Terminees	151,155	198,033	100
55 years and over	3,054	3,067	2

Source: U.S. Department of Labor, Employment and Training Administration.

SECTION 204 SET-ASIDE

The 1992 JTPA amendments require 5 percent of the Title II–A allotment of each State to be made available for the training and placement of older individuals in private sector jobs. Only economically disadvantaged individuals who are 55 years of age or older are eligible for services under this State set-aside.

Governors have wide discretion regarding use of the JTPA 5 percent set-aside. Two basic patterns have evolved. One is adding set-aside resources to Title II–A to ensure that a specific portion of older persons participates in the basic Title II–A program. The other is using the resources to establish specific projects targeted to older individuals which operate independently of the basic job training program for disadvantaged adults. Likewise, States are required to provide "equitable services to older individuals throughout the State, taking into consideration the incidence of such workers in the population." Some States distribute all or part of the 5 percent set-aside by formula to local SDAs; other States retain the resources for State administration or model programs.

Governors are expected to coordinate services as much as possible with those provided under Title V of the Older Americans Act—Senior Community Service Employment Program. There are two separate provisions for older individual programs as they relate to Title V of the Older Americans Act. First, under the Title II–A program, up to ten percent of the participants may be individ-

uals who are not economically disadvantaged, but who have a serious barrier to employment. Second, when a JTPA grantee and Title V sponsor establish joint projects, individuals eligible under Title V of the Older Americans Act "shall be deemed to satisfy the requirements" of JTPA. These joint (JTPA–SCSEP) projects may include co-enrollment of Title V participants in Title II–A activities. Joint programs must have a written agreement, which may be financial on nonfinancial in nature, and may include a broad range of activities. For Program Year 1996 (July 1, 1996, through June 30, 1997), 14,587 participants were enrolled in the State set-aside program for economically disadvantaged individuals 55 years of age and older. For Program Year 1997 (July 1, 1997, through June 30, 1998), 13,204 participants were enrolled in the State set-aside program for economically disadvantaged individuals 55 years of age and older.

PROGRAMS FOR DISLOCATED WORKERS

Title III of JTPA authorizes a State and locally-administered dislocated worker program that provides retraining and readjustment assistance to workers who have been, or have received notice that they are about to be, laid off due to a permanent closing of a plant or facility; laid off workers who are unlikely to be able to return to their previous industry or occupation; and the long-term unemployed with little prospect for local employment or reemployment. Those older dislocated workers eligible for the program may receive such services as job search assistance, retraining, pre-layoff assistance and relocation assistance. During the period July 1, 1996, through June 30, 1997, approximately 28,351 individuals 55 years of age and over exited the program (10 percent of the program terminations). During the period July 1, 1997, through June 30, 1998, approximately 26,544 individuals 55 years of age and over left the program (8 percent of the program terminations).

THE FEDERAL-STATE EMPLOYMENT SERVICE SYSTEM

The State-operated public employment service (ES) offices offer employment assistance to all job seekers, including middle-aged and older persons. A full range of basic labor exchange services are provided, including counseling, testing, job development, job search assistance and job placement. In addition, labor market information and referral to relevant training and employment programs are also available.

Federal reporting requirements for State employment service agencies (SESAs) were revised effective July 1, 1992, to capture additional information on applicant characteristics, including data on the age of all ES applicants and those placed in employment. During the period July 1, 1996 through June 30, 1997 over 1,206,000 ES applicants were age 55 and over. Approximately 84,000 of the ES applicants age 55 and over were placed in jobs during this period. During the period July 1, 1997 through June 30, 1998 over 1,200,000 ES applicants were age 55 and over. Approximately 83,000 of the ES applicants age 55 and over were placed in jobs during this period.

PENSION AND WELFARE BENEFITS ADMINISTRATION

INTRODUCTION

The Pension and Welfare Benefits Administration (PWBA) is responsible for enforcing the Employee Retirement Income Security Act (ERISA). PWBA's primary responsibilities are for the reporting, disclosure and fiduciary provisions of the law.

Employee benefit plans maintained by employers and/or unions generally must meet certain standards, set forth in ERISA and the Internal Revenue Code, designed to ensure that employees actually receive promised benefits. Employee benefit plans exempt from ERISA include church and Government plans.

The requirements of ERISA differ depending on whether the benefit plan is a pension or a welfare plan. Pension plans provide retirement benefits, and welfare plans provide a variety of benefits, such as employment-based health insurance and disability and death benefits. Both types of plans must comply with provisions governing reporting to the government and disclosure to participants (Title I, Part 1) and fiduciary responsibility (Title I, Part 4). Pension plans must comply with additional ERISA and Internal Revenue Code standards (contained in both Title I, Parts 2 and 3, and Title II), which govern membership in a plan (participation); nonforfeitability of a participant's right to a benefit (vesting); and financing of benefits offered under the plan (funding). Welfare plans providing medical care must comply with ERISA continuation of coverage requirements and medical child support orders (Title I, Part 6).

The Departments of Labor and Treasury have responsibility for administering the provisions of Title I and Title II, respectively, of ERISA. The Pension Benefit Guaranty Corporation (PBGC) is responsible for administering Title IV, which established an insurance program for certain benefits provided by specified ERISA pension plans. On a regular basis, PWBA meets and coordinates closely with the Internal Revenue Service (IRS) and PBGC on matters concerning pension issues.

PWBA emphasized its commitment to customer service by increasing the resources devoted to this area. The number of inquiries it handled increased to over 155,000 for FY 1998. Through these effort staff increased its recoveries to over $42 million in this year.

In FY 1996, PWBA worked to advance the Health Insurance Portability and Accountability Act (P.L. 104–91), enacted August 21, 1996, which amended ERISA to provide increased access to health care benefits, to provide increased portability of health care benefits, and to provide increased security of health care benefits. The Newborns' and Mothers' Health Protection Act and the Mental Health Parity Act, enacted on September 26, 1996 (P.L. 104–204), added to ERISA mental health parity provisions and provisions regarding minimum mandatory hospital stays for newborns and mothers. Implementation of these laws requires PWBA's continuing attention.

In FY 1997, PWBA worked to advance the Taxpayer Relief Act (P.L. 105–33), and the Savings Are Vital to Everyone's Retirement Act ("Saver") (P.L. 105–92). The Taxpayer Relief Act provided in-

centives for and thus encouraged the establishment and maintenance of qualified pension plans. "Saver" emphasized the importance of retirement planning, and the government's role in helping to educate consumers on this important issue.

PWBA also worked to advance the Administration's Retirement Savings and Security Act. Many of its provisions were incorporated in the Small Business Jobs Protection Act (P.L. 104–188) (SBJPA) enacted on August 20, 1996. The SBJPA created a new simplified retirement plan for small businesses, and simplified plan distribution and nondiscrimination rules.

ERISA's rules concerning how a claim for benefits must be processed were put in place in 1977, prior to the advent of managed care. In order to assess whether it should revisit these rules, PWBA published a notice in the Federal Register in September 1997, requesting information from the public concerning whether the claims rules are still functioning appropriately. After reviewing the many comments received, PWBA issued a notice of proposed rulemaking regarding these rules.

Because of the risk of abuse or loss (e.g., from employer's bankruptcy), many employees have raised questions about the time period during which employers must transmit participant contributions to employee benefit plans. To address their concerns, PWBA issued a rule under Title I of ERISA which substantially shortens the time period during which covered private sector employers may hold employees' contributions to pension plans, including 401(k) plans, before depositing the funds in the plans. Under the new rule, for example, an employer that sponsors a 401(k) plan must deposit its employees' contributions in the plan as soon as the contributions can reasonably be segregated from the employers' general assets, but not later than 15 business days following the month in which the employer withholds the money from employees' paychecks, or receives employees' checks for the amount of the contributions.

With the growth of participant-directed individual account pension plans, more employees are directing the investment of their pension plan assets and, thereby, assuming more responsibility for ensuring the adequacy of their retirement income. In order to help employers address the need of participants for more investment information, PWBA issued an interpretive bulletin providing guidance to plan sponsors, fiduciaries, participants and beneficiaries concerning the circumstances under which the provision of investment related educational information, programs and materials to plan participants and beneficiaries will not give rise to liability under ERISA.

Another critical factor which affects the amount an employee has at retirement are the fees charged to 401(k) plans. In order to increase employees' awareness, and to encourage plan sponsors to more closely examine such fees, PWBA held a hearing on 401(k) fee practices and subsequently published a booklet which answers commonly asked questions regarding plan fees.

In fiscal year 1998, PWBA continued its program of research directed toward improving the understanding of the employment-based pension and health benefit systems. PWBA published comprehensive statistics on private pension participation, finances and

investments in its annual "Private Pension Plan Bulletin." It published "Health Benefits and the Workforce, Volume 2," a compendium of sixteen major PWBA-funded research studies. PWBA also completed new major research projects on topics including 401(k) fees, small-group health insurance markets, and health plan liability under ERISA, and funded eight new small research projects.

INQUIRIES

PWBA publishes literature and audio-visual materials which, in some depth, explain provisions of ERISA, procedures for plans to ensure compliance with the Act and the rights and protections afforded participants and beneficiaries under the law. In addition, PWBA maintains a public information and assistance program, which responds to many inquiries from older workers and retirees seeking assistance in collecting benefits and obtaining information about ERISA. Further, PWBA established an 800 number to facilitate distribution of publications, and implemented an intense outreach program which disseminated information utilizing the various media. Among the publications disseminated, the following are designed exclusively to assist the public in understanding the law and how their pension and health plans operate: Top Ten Ways to Beat the Clock and Prepare for Retirement; Women and Pensions—What Women Need to Know and Do; What You Should Know About Your Pension Rights; Protect Your Pension—A Quick Reference Guide; How to File a Claim for Your Benefits; How to Obtain ERISA Plan Documents from the Department of Labor; Handling Inquiries on Pension and Welfare Benefits; Guide to Summary Plan Description Requirements; Reporting and Disclosure Guide for Employee Benefit Plans; Trouble Shooter's Guide to Filing the ERISA Annual Report; Exemption Procedures under Federal Pension Law; Health Benefits under COBRA; Multiple Employer Welfare Arrangements under ERISA (MEWAs); Customer Service Standards—Our Commitment to Quality; How Did We Measure Up; Questions and Answers on Recent Changes in Health Care Law; Can the Retiree Health Benefits Provided by your Employer Be Cut; A Look at 401(k) Plan Fees; QDROs: The Division of Pensions Through Qualified Domestic Relations Orders.

EMPLOYMENT STANDARDS ADMINISTRATION

The Family and Medical Leave Act of 1993 became effective on August 5, 1993, for many employers. This statute provides potential benefit to the elderly in that it empowers eligible employees of covered employers to take up to 12 weeks of unpaid, job-protected leave in any 12-month period to provide care for a parent who has a serious health condition. In the past, the employee had to make a decision in many instances of whether or not to give up their job to provide care to a sick, elderly parent.

BUREAU OF LABOR STATISTICS

The Department of Labor's Bureau of Labor Statistics (BLS) regularly issues a wide variety of statistics on employment and unemployment, prices and consumer expenditures, compensation including wages and benefits, productivity, economic growth, and occupa-

tional safety and health. Data on the labor force status of the population, by age, are prepared and issued on a monthly basis. Data on consumer expenditures, classified by age groupings, are published annually. In 1994 BLS published the first results of the redesigned survey of occupational injuries and illnesses; these data are now available by age, race, and gender, providing important new information on this aspect of the labor market experiences of older Americans. In addition to regularly recurring statistical series, BLS undertakes special studies as resources permit. In May 1994 BLS published a report on an experimental series that reweighted the official Consumer Price Index using expenditure data for older Americans. This report updated a portion of a study originally performed by BLS in response to the Older Americans Act Amendments of 1987. BLS continues to compute the reweighted index each month.

THE WOMEN'S BUREAU

THE WOMEN'S BUREAU NATIONAL RESOURCE AND INFORMATION CENTER (NRIC)

(Formerly the Women's Bureau Clearinghouse)

Established by the Women's Bureau of the U.S. Department of Labor in 1989, the Clearinghouse is a computerized database and resource center responsive to dependent care and women's workplace issues. Services help employers and employees make informed decisions about which programs and services help in balancing work and family. The NRIC offers information in five broad option areas for child care and elder care services: direct services, information services, financial assistance, flexible leave policies, and public-private partnerships.

The workforce quality component of the NRIC offers information and guidance on the rights of women workers in such matters as age and wage discrimination, the Family and Medical Leave Act (FMLA), pregnancy discrimination, and sexual harassment. In addition, information is available about the Federal agencies that enforce laws covering these topics. Within each of these areas customers can be provided with model programs from other companies, implementation guides, national and State information sources and bibliographic references.

The NRIC continues to receive requests for information on worksite elder care program options. Information provided included flexible work schedules, adult day care, case management, decision making, information and referral, respite care, and transportation services.

The NRIC can be accessed through 1–800–827–5335.

WORK AND ELDER CARE FACT SHEET

Facts for Caregivers and Their Employers

Published in May 1998, this fact sheet gives an introduction which discusses statistics on the aging population, women workers, and elder care.

The second section discusses the types of elder care assistance: geriatric care managers; homemakers and home health aides; companions/friendly visitors; telephone reassurance systems; respite care; daily money managers; home-delivered meals; chore and repair; legal assistance or resources; family and medical leave; and assistance with financing care.

The third section discusses ways employers/labor organizations are helping/can help employees with elder care: needs surveys; elder care resource and referral; seminars; support groups; employee assistance programs; caregiver fairs; counseling; long-term care insurance; visiting nurse services; adult day care, including intergenerational day care; emergency care; elder care pager programs; flexible spending or dependent care accounts; flexible schedules and leaves of absence; case management; and transportation.

ITEM 11—DEPARTMENT OF STATE

The Department is pleased to report that we continue to expand services for aging Americans. Not only are employees working longer (the mandatory retirement age for Foreign Service is 65, and there is no mandatory retirement age for Civil Service), but employee responsibilities for caring for aging family members have grown significantly. In recognition of this, in 1995 the Office of Medical Services, Education and Wellness Programs, conducted a panel discussion on a variety of topics focused on older persons. That office hosted a health fair and offered several medical tests aimed at identifying diseases found primarily in older persons, such as prostate, cholesterol, and blood pressure screenings. The Office of Medical Services also hosted a panel of experts from the Washington metropolitan area to describe long-term care programs in local jurisdictions. Seminars were offered on Alzheimer's disease, living wills, osteoporosis and menopause. The Office of Employee Consultation Services, staffed by licensed clinical social workers, arranged support groups and special presentations on topics such as caring for elderly parents and dementia.

The Office of Work and Family Programs in the Bureaus of Personnel was established in 1995 as a focal point for work and family programs. This office assists employees with questions on locating elder care services and recently hosted a monthly series of noontime sessions on family related topics, including elder care. The Work and Family Program Coordinator represented the Department on the Office of Personnel Management's Interagency Working Group on Adult Dependent Care.

In support of the Foreign Service's employees based overseas, the family Liaison Office continued to provide Foreign Service families with oral and written information on caring for elderly parents, medical insurance, and procedures for taking an elderly relative to overseas posts. In addition, they make referrals, upon request for information on payment options for long-term care and legal issues.

In 1996, the Department's Work and Family Programs office expanded its outreach efforts. It held seminars for grandparents who are primary caretakers for their grandchildren and repeated its most popular seminar topics, i.e., caring for aging parents and the diseases most common in the elderly. In addition, the Office of Employee Consultation Services hired an additional clinical social worker who had a specialty in geriatrics.

Thank you for your continuing interest in this issue. The Department continues to identify ways to adapt or expand our current elder care services to help employees balance their work and family responsibilities.

ITEM 12—DEPARTMENT OF TRANSPORTATION

SUMMARY OF ACTIVITIES TO IMPROVE TRANSPORTATION SERVICES FOR THE ELDERLY[1]

INTRODUCTION

The following is a summary of significant actions taken by the U.S. Department of Transportation during calendar years 1997 and 1998 to improve transportation for elderly persons.[2]

DIRECT ASSISTANCE

FEDERAL RAILROAD ADMINISTRATION (FRA)

The National Railroad Passenger Corporation (Amtrak) continued throughout calendar years 1997 and 1998 to provide discounted fares, accessible accommodations, and special services, including assistance in arranging travel for older citizens and passengers with disabilities. These passengers continue to represent a substantial part of Amtrak's ridership—in recent years, 28 percent of long-distance passengers were 62 or older.

Discounted Fares.—Amtrak has a systemwide policy of offering to elderly persons and persons with disabilities a 15 percent discount on one-way ticket purchases. This 15 percent discount cannot be combined with any other discounts.

Accessible Accommodations.—Amtrak provides accommodations that are accessible to elderly persons and passengers with disabilities, including those using wheelchairs, on all of its trains. Long-distance trains include accessible sleeping rooms. Short-distance trains, including Northeast Corridor trains, have accessible seating and bathrooms. Many existing cars are being modified to provide more accessible accommodations and all new cars will provide enhanced accessibility for passengers, with mobility and other types of disabilities.

Mechanical lifts operated by train or station staff provide passengers with access to single-level trains from stations with low platforms and short plate ramps provide access to bi-level equipment. An increasing number of Amtrak stations are fully accessible, particularly key intermodal stations that provide access to commuter trains and other forms of transportation.

Special On-Board Services.—Amtrak continues to provide special on-board services to elderly persons and passengers with disabilities, including aid in boarding and deboarding, special food service,

[1] "Prepared for the U.S. Senate Special Committee on Aging—February 1999.

[2] Many of the activities highlighted in this report are directed toward the needs of persons with disabilities. However, one-third of the elderly are persons with disabilities and thus will be major beneficiaries of these activities.

special equipment handling, and provisions for wheelchairs. Amtrak has also improved training of its employees to enable them to respond better to passengers with special needs. It is recommended that passengers advise Amtrak of any special needs they may have in advance of their date of departure.

Assistance in Making Travel Arrangements.—Persons may request special services by contacting the reservations office at 1–800–USA-Rail. This office is equipped with text telephone (TTY) service for customers who are deaf or hard of hearing. To ensure that passengers receive the assistance they need, Amtrak maintains a Special Services Desk, which supports its reservations agents seven days a week. This desk has completed successful responses to nearly 100,000 requests for special services. Passengers may also inform their travel agent or the station ticket agent of their assistance requirements when making travel reservations.

FEDERAL TRANSIT ADMINISTRATION (FTA)

Under 49 USC 5310, the FTA provides assistance to private nonprofit organizations and certain public bodies for the provision of transportation services for the elderly and persons with disabilities. In FY 1997, $55.3 million was used to assist 1,250 local providers purchase 1,635 vehicles, and in FY 1998, $62.2 million was used to assist 1,400 local providers purchase approximately 1,850 vehicles for the provision of transportation services for the elderly and individuals with disabilities. Most of the agencies funded under this program are either disability service organizations or elderly service organizations, and service provided under the program is nearly equally divided between the two. Those agencies serving the elderly are, however, more dependent on funding from the elderly and persons with disabilities program as 53 percent of their vehicles are purchased with Section 5310 funds compared to 42 percent of vehicles purchased by agencies serving persons with disabilities. Vehicles purchased with these funds may also be used for meal delivery to the homebound as long as such use does not interfere with the primary purpose of the vehicles.

Under 49 USC 5311, the FTA obligated $115.1 million in FY 1997 and $134.1 million in FY 1998. These funds were used for capital, operating, and administrative expenditures by state and local agencies, nonprofit organizations, and operators of transportation systems to provide public transportation services in rural and small urban areas (under 50,000 population). The nonurbanized area program funds are also used for intercity bus service to link these areas to larger urban areas and other modes of transportation. An estimated 36 percent of the ridership in nonurbanized systems is elderly, which represents nearly three times their proportion of the rural population.

Under 49 USC 5307, the FTA obligated $2.5 billion in FY 1997 and $2.4 billion in FY 1998. These funds were used for capital and operating expenditures by transit agencies to provide public transportation services in urbanized areas. While these services must be open to the general public, a significant number of passengers served are elderly.

RESEARCH

DEPARTMENT-WIDE AGING INITIATIVE

National Agenda for the Transportation Needs of an Aging Society.—As a follow-up to its January 1997 study of how well the Nation's transportation system will accommodate the growing cohort of older adults, and its proposed theme of Safe Mobility For Life, the Department has initiated a project to structure a National Agenda for the Transportation Needs of an Aging Society. This will include a national dialogue on the transportation needs of older adults, where the system is falling short, and what remedial measures are viable. Included in this dialogue will be practitioners and authorities as well as older people and their advocacy groups such as the AARP, the AAA, and the private sector. The effort is in three parts:

(1) Developing with the Transportation Research Board a plan for necessary future research on the transportation problems of the elderly, reflecting the research that has been accomplished, the new safety needs that have been identified, and the new priorities that should be established. That report will be published in the year 2000.

(2) Conducting a series of seminars on the special needs of older persons, with transportation professionals, planners, social service and medical providers—followed up by focus group sessions with older persons and their lay care-givers on how they see their transportation needs, and

(3) Taking the results of (1) and (2) to develop a National Agenda for the next decade and beyond for meeting the needs of the coming surge in aging Americans. Included in this work will be an international conference on these issues in November 1999.

FEDERAL AVIATION ADMINISTRATION (FAA)

The Office of Aviation Medicine's Civil Aeromedical Institute has contributed to the following research related to the needs and concerns of the aging population in aviation transportation.

Cognitive Function Test.—An automated cognitive function test (CogScreen) was developed to permit the more sensitive and specific evaluation of pilots after brain injury and disease. Administration of CogScreen to groups of pilots led to the establishment of a database that could be used to assess fitness to perform flying duties in relation to the age of the subject being evaluated. A report describing age-related changes in CogScreen for non-pilots has been completed. Throughout repeated administrations of selected components of the CogScreen test battery, the performance of older subjects remained slower and poorer than that of subjects in the youngest age group.

Flight Deck-Related Human Factors Research.—Two phases of a three-phase study have been completed to assess age-related changes in pilots' auditory thresholds compared to non-pilots and determine the effects of those differences on the ability to detect and respond to auditory alarms in flight simulations. Threshold data were collected from 150 non-pilots and 150 pilots using stratified age samplings. The usual high-frequency decrements attributable to aging and general environmental exposure were found in

both samples. Significant differences were found between the non-pilots and pilot samples, with greater threshold shifts between 2 and 6 kHz in evidence among pilots. The second phase involved the detection and identification of conventional and novel auditory warning sounds during exposure to simulated aircraft engine noise. Assessments of pilot responses to different types of auditory alarms in the general aviation simulator will be assessed this year.

Air Traffic Control.—Issues associated with the selection and training of air traffic personnel along with the introduction of new technologies has maintained interest in the role of age on performance. A study was completed to develop a systematic projection of the aging of the current air traffic control workforce and retirement eligibility in order to model recruitment, hiring, and training requirements for the future. Based on these projections, the annual retirement rate is projected to slowly rise from about 1.4 percent in FY 1999 to a peak of about 6.1 percent in FY 2012, and then decline to about 1.7 percent in FY 2020. These data suggest that the majority of controllers will continue to work through at least the initial modernization of the National Air Space, represented by Free Flight Phase I. As part of the validation of a new computerized selection instrument for air traffic controllers, a study was conducted to determine the relationship between age and performance on both the selection tests and on the criterion measures of controller performance. The two criteria measurers used in the study were ratings (both peer and supervisor) and score on a newly developed computer-based performance measure. Results show a curvilinear relationship between age and both test scores and criterion measures, with performance declining for controllers over the age of 42. A draft report describing outcomes for the study has been completed.

FEDERAL HIGHWAY ADMINISTRATION (FHWA)

Beginning in 1989, a High Priority Area for research was established to address the needs of older drivers with respect to the roadway environment. Research under this program started as problem identification, and quickly moved to focus on the specific areas, which cause the greatest problems for older drivers and pedestrians. The activities described below were ongoing during the calendar years 1997 and 1998. It should be noted that all human factors research, including Intelligent Transportation Systems initiatives, conducted by FHWA includes an older driver component to ensure the system's utility for all potential users.

A research study, titled, Synthesis of Research Findings on Older Drivers, gathered all available research and synthesized it into a report of major replicable findings regarding older drivers. This research was then incorporated into an Older Driver Highway Design Handbook (FHWA–RD–97–135) which became available in January 1998. The handbook serves as an important resource for traffic engineers in assuring that highways meet the needs and capabilities of older drivers and pedestrians. The handbook has been widely distributed and extremely well received. A condensed version, titled Older Driver Highway Design Handbook: Recommendations and Guidelines (FHWA–RD–99–045), became available in December of 1998.

As a companion to the Handbook, the FHWA has initiated a workshop for traffic engineers and highway designers. The workshop educates practitioners about the needs and capabilities of older road users, reviews the recommendations of the Handbook in detail, and presents case studies as learning exercises. Six workshops have been presented, in Florida, Texas, Iowa, and Pennsylvania, and more are planned.

The FHWA is also currently in the process of fulfilling a mandate issued by Congress that requires public agencies to maintain pavement markings to minimum levels of brightness. In the process of establishing these minimum guidelines, research has been conducted to determine the brightness of pavement markings necessary for older drivers to drive safely and comfortably at night. FHWA is also investigating a new type of automobile headlight system, which has the potential to drastically improve the visibility of pavement markings and pedestrians at night. Older drivers have been included in the field experiments of the ultraviolet headlamp technology, and results indicate a favorable response both subjectively and objectively. Another ongoing study will identify optimum lighting design for older drivers.

The results of these studies and other research will be incorporated into the next generation of the Handbook, which is under development. Besides including the most recent research findings, this document will address a wider range of highway design areas. It will be produced in electronic as well as traditional paper media.

NATIONAL HIGHWAY TRAFFIC ADMINISTRATION (NHTSA)

Vehicle Design for Crash Avoidance. NHTSA's crash avoidance research program addresses the relationship between vehicle design and driver performance and behavior. New vehicle technologies could help reduce older driver crashes and enhance their mobility. For example, in-vehicle navigation systems may allow drivers to concentrate on watching for dangerous traffic conflicts instead of being distracted while searching for road signs. Collision avoidance systems may alert drivers to potential crash situations. Additional research in this area could provide useful information regarding the acceptability of technology-based innovations designed to help older, functionally less able people continue to drive. The focus is to determine how the design and function of vehicle systems need to be adapted to the unique capabilities and needs of older drivers.

During 1998, research was completed regarding the possible benefits and drawbacks of Head-Up Displays (HUD). HUDS are small windshield-projected displays of information that may provide benefits to older drivers, as well as younger drivers, because they present information closer to the driver's line of sight than instrument panel displays.

A pilot effort was completed that identified an experimental test protocol to evaluate the performance of drivers using infrared night vision enhancement systems (VES). VES may help alleviate one of the common complaints of older persons—night driving. The VES technology displays a high contrast image of the forward scene on a head-up display.

Occupant Protection.—One of the most significant reasons for elderly drivers over-involvement in fatal crashes is the inability of their bodies to absorb crash forces. What would be a survivable crash for a younger person is often a fatal crash for an older person. Current occupant-protection standards do not specifically address the frailty of older occupants. More information is needed to establish the feasibility of improving the protection of older people when they are in a crash. NHTSA is collecting detailed data for research on injuries, treatments, outcomes, and costs for the older population.

NHTSA, with the Volpe Transportation Systems Center, is using computer simulation and experimental work to improve belt/air bag systems for vehicle occupants. Particular attention is being paid to possible approaches to improving alternate restraint designs or requirements for elderly vehicle occupants. It is expected that this work will be of particular value to older vehicle occupants and to women, who due to their more fragile bone structure can benefit most from improved belt/air bag designs.

In addition, NHTSA's new side impact standard provides a higher level of protection to older occupants in vehicles meeting the standard. The new standard is based on a dynamic crash test which incorporated age effects for the first time and, thus, will provide better protection to older vehicle occupants. It was phased in beginning with 1994 model year cars such that all cars by the 1997 model year had to meet the requirement. Starting with the 1999 model year, trucks, buses, and multipurpose passenger vehicles less than or equal to 2,721 kg (6,000 lbs.) must meet the dynamic part of this standard.

NHTSA's current efforts related to advanced frontal crash protection, which will usher in a new generation of safer air bags, will result in systems which will provide improved safety benefit to all age groups.

Pedestrian Safety Issues.—Older pedestrians, 65 and over, account for a smaller proportion (7.7 percent) of all pedestrian crashes than would be expected by their numbers in the population (12.8 percent). However, they account for almost one quarter (22.4 percent) of all pedestrian fatalities. In response to this problem, NHTSA and FHWA are continuing work aimed at preventing crashes involving older pedestrians. A joint research initiative was conducted in Phoenix and Chicago that involved a demonstration program of behavioral safety information, combined with traffic engineering applications, in selected zones of the cities that have been shown to have a high incidence of older pedestrian crashes. An impact evaluation of the Phoenix initiative revealed that, while both the overall population and pedestrian crashes increased over the study period, older adult crashes decreased 13.7 percent. More impressive, there were fewer crashes in each of the pedestrian zones, amounting to an overall 46.3 percent decrease in pedestrian crashes. Crashes in comparable areas outside the safety zones increased 9.9 percent. These changes were statistically significant. Upon completion of this activity, a "how to" Zone Guide was prepared which explains how to design and use pedestrian safety zones. A copy of the report, Development, Implementation and Evaluation of a Pedestrian Safety Zone for Elderly Pedestrians, is available from the

Office of Research and Traffic Records, NHTSA, NTS–31, 400 Seventh Street, S.W., Washington, D.C. 20590, or send a FAX to (202) 366–7096.

Older Driver Safety.—The majority of older drivers do not constitute a major safety problem. Research has indicated that most older drivers adjust their driving practices to compensate for declining capabilities. They reduce or stop driving after dark or in bad weather and avoid rush hours, and unfamiliar routes. Men appear to be somewhat more reluctant than women to stop driving and, consequently, are at a higher risk of crashing than women of comparable age. Conditions, such as memory loss, glaucoma, and antidepressant use, appear to be related to increased crash risk.

Some older persons are not aware of their changing conditions, most notably, those with cognitive disorders, such as Alzheimer's disease, and certain visual problems. These drivers may not self regulate and, as a result, pose an increased risk of crash involvement. Such individuals may require outside intervention to remove them from traffic. Unfortunately, research suggests that most family members, social service agencies, and health care professionals are either not sufficiently aware or choose not to provide assistance in making driving related decisions to those who need it. For a variety of reasons, many appear hesitant to get involved with this issue. Most older drivers prefer to decide for themselves when it is time to stop.

In 1998, NHTSA worked with the State of Maryland to develop a consortium comprised of national, Federal, state, and local groups to develop and implement programs to encourage safe mobility for life.

Driver Assessment Activities.—Those elderly drivers who remain a problem are not easily detected with standard licensing procedures. Further, there is some doubt as to whether most licensing staff have the skills necessary to detect these problem drivers, even with training and state-of-the art testing techniques. Diagnostic tests currently in use have not been shown to be effective in identifying those older drivers who are at increased crash risk, but some recently developed tests of "speed of attention" and "visual perception" may have such potential.

Several long-term efforts are now approaching conclusion. These developmental projects include: (1) procedures to help elderly drivers make better decisions about adapting their driving to accommodate their changing abilities are being developed in a joint project with the Federal Highway Administration and the Commonwealth of Pennsylvania; (2) procedures for family members, friends, social service agencies, physicians, and other health care providers to recognize when an older person needs to adjust his or her driving to adapt to functional limitations; (3) model screening and assessment procedures to help driver licensing agencies deal with those who do not appropriately restrict their driving; and (4) model programs for medical and social service agencies to help older people to make appropriate decisions about driving while maintaining their mobility. Current efforts also include a survey to determine societal perceptions and willingness to assist older drivers to better regulate their driving.

Mobility Issues.—One factor that must be considered with regard to interventions is the fact that elderly people who give up driving often lose mobility. For many, the automobile is their primary mode of transportation and acceptable alternatives are simply not available. Decreased mobility is frequently followed by decreased quality of life as elderly people are cut off from the social events, family visits, medical attention, and opportunities for worship that are critical in maintaining their sense of well being. These issues are being studied in a joint project with the Department of Health and Human Services and in a separate project with the Federal Transit Administration.

FEDERAL TRANSIT ADMINISTRATION (FTA)

Funded under a $700,000 FTA grant in 1997, the Independent Transportation Network (ITN) in Portland, Maine, provides convenient and affordable transportation for seniors who have chosen to reduce or totally eliminate driving their own cars. Service is provided by a fleet of standard size sedans driven by four paid drivers and over 95 volunteer drivers using their own vehicles. The service provided by ITN allows seniors to live independently in their own homes. The project's strategy is to: (1) develop a prototype, financially self-sufficient operation without tax subsidy in Portland; (2) incorporate ITS technology in dispatching, ridesharing, and fare collection; (3) implement and operate a satellite ITN at another location in Maine to demonstrate the integration of multiple service units under a centralized management structure; and (4) develop tools for national replication in other areas with high concentrations of seniors. The project offers a number of payment options including credits earned from trading in seldom-used vehicles, payments debited from an individual's ITN account, and gift certificates. In addition to assistance from FTA, ITN has received corporate support, foundation awards, and funding from American Association of Retired Persons among others. The ITN has demonstrated that its type of membership-oriented, community supported transportation service combining volunteer drivers, merchant participation, corporate support, and local and national fund raising can be the solution to the isolation and lack of mobility experienced by millions of elderly Americans who can no longer drive their own cars.

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION (RSPA)

As revised and expanded in the Transportation Equity Act for the Twenty-First Century (TEA–21), RSPA manages the Department's University Transportation Centers Program.

Each center focuses its research on a specific theme or interest area. Several of these themes are linked in whole or in part with improving mobility for elderly citizens:

University of Arkansas: Rural Transportation

University of California—Berkeley: Improving Accessibility for All

Marshall University: Economic Growth and Productivity in Rural Appalachia Through Transportation

Montana State University: (Western Transportation institute): Rural Travel and Transportation

Morgan State University: Transportation—A Key to Human and Economic Development

University of Nebraska—Lincoln: Improved Design and Operation of Transportation Facilities and Services in Mid-America

North Carolina A&T State University: Urban Transit

University of Southern California and California State/Long Beach: Solutions to Transportation Issues in Major Metropolitan Areas

University of South Florida: Urban Transit

North Dakota State University: Rural and Non-Metropolitan Transportation

INFORMATION DISSEMINATION

FEDERAL RAILROAD ADMINISTRATION (FRA)

Information about Amtrak accessibility is available to senior citizens and passengers with disabilities in a brochure entitled "Access Amtrak" which can be obtained by calling 1–800–USA-RAIL. Amtrak also works directly with a number of organizations each year on moving groups of passengers needing assistance and traveling together.

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION (NHTSA)

A Pedestrian and Bicyclist Safety and Accommodations course, funded by NHTSA and FHWA, was completed. This course was designed to address the pedestrian and bicyclist traffic safety needs of highway safety specialists, police, traffic engineers, and other professionals. A resource guide was prepared which provides information about traffic safety problems and ways to avoid them for all pedestrians, including older pedestrians. Also, as a countermeasure to the hazards that older Hispanic pedestrians face, materials were prepared for Hispanic senior citizens. These materials include a report, slide show, a presenters guide, brochure, and a video "novela."

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION (RSPA)

RSPA continues to disseminate technical reports describing the mobility needs of senior citizens, and alternative ways to meet them. Documents are available in hard copy from the Department at no charge, and may be ordered on the INTERNET at the Technology Sharing Program home page: *http://www.tsp.dot.gov*

RSPA provides staff support to the National Science and Technology Council's (NSTC's) Committee on Technology, including its subcommittee on Transportation R&D. In September 1997 the NSTC Transportation Science and Technology Strategy was released, which included recommendations for several government-wide strategic partnership initiatives to promote technology application and implementation. One of these initiatives deals specifically with "Accessibility for Aging and Transportation Disadvantaged Populations." A goal of this initiative is to "create seamless regional alternative transportation systems serving the needs of the elderly and the transportation-disadvantaged while optimizing the existing human and capital investment in paratransit." Imple-

mentation activities are defined in the *NSTC Transportation Technology Plan,* which is now being prepared for release.

To facilitate communication and information-sharing on technology issues and support the NSTC, RSPA has brought a science and technology INTERNET home page on line. The element deal with the accessibility partnership is located at *http://scitech.dot.gov/partech/accage/accessaging.html.* It includes background information on the need, links to selected on-line manuals and technical reports, and announcements of upcoming conferences and events.

The University Transportation Centers Program integrates its products in a directory of University Research Results on its INTERNET Home Page at *http://educ.dot.gov.* The directory includes the title of each report and a contact who can provide further information on the research and the availability of documentation from it. In addition, program staff is exploring making key UTC products available on-line as volumes in the National Transportation Library at *(http://www.bts.gov/NTL).*

ITEM 13—DEPARTMENT OF TREASURY

U.S. TREASURY ACTIVITIES IN 1997–1998 AFFECTING OLDER AMERICANS

The Treasury Department recognizes the importance and the special concerns of older Americans.

SOCIAL SECURITY TRUST FUNDS

The Secretary of the Treasury is the Managing Trustee of the Social Security trust funds. The short- and long-run financial status of these trust funds is presented in annual reports issued by the Trustees. The April 1998 report, covering calendar year 1997, estimated that the combined Old Age and Survivors Insurance and Disability Insurance (OASDI) benefits can be paid on time for about the next 34 years. The OASDI cost-of-living increase was 2.1 percent for 1997 and 1.3 percent for 1998. The taxable base for OASDI was increased to $65,400 in 1997 and $68,400 in 1998. The amount a 65- to 69–year-old beneficiary could earn before OASDI benefits were reduced was $13,500 in 1997 and $14,500 in 1998.

MEDICARE TRUST FUNDS

The Secretary of the Treasury is also the Managing Trustee of the Federal Hospital Insurance (HI) and Supplementary Medical Insurance (SMI) trust funds. In their April 1998 report covering calendar year 1997, the trustees estimated that the HI trust fund would be exhausted in 2008. The Supplementary Medical Insurance Program is primarily financed by transfers from the general fund of the U.S. Treasury and by monthly premiums paid by beneficiaries. The Balanced Budget Act of 1997 permanently established SMI premiums at 25 percent of program expenditures. The SMI trust fund is expected to remain adequately financed into the indefinite future because current law provides for the establishment of program financing each year based on an updated calculation of expected cost per SMI beneficiary.

PERSONAL INCOME TAX

Each year, pursuant to statute, the width of the income tax brackets and the personal exemption and standard deduction amounts are increased to reflect the effects of inflation during the preceding year.

The personal exemption allowed for each taxpayer and dependent increased from $2,550 in 1996 to $2,650 in 1997 and to $2,700 in 1998.

Taxpayers age 65 or over (and taxpayers who are blind) are entitled to larger standard deductions than other taxpayers. Each sin-

gle taxpayer who is at least 65 years old was entitled to an extra standard deduction of $1,000 in 1996 and 1997, and $1,050 in 1998. Each married taxpayer age 65 or over was entitled to an extra standard deduction of $800 in 1996 and 1997, and $850 in 1998. Thus, a married couple both of whom were over age 65 were entitled to extra standard deduction amounts of $1,600 in 1996 and 1997, and $1,700 in 1998. Including the extra standard deduction amounts and the basic standard deduction amounts, taxpayers over age 65 were entitled to the following standard deductions for tax years 1994 through 1998:

Filing Status	1996	1997	1998
Single	$5,000	$5,150	$5,300
Unmarried Head of Household	6,900	7,050	7,300
Married Filing Jointly:			
One spouse age 65 or older	7,500	7,700	7,950
Both spouses age 65 or older	8,300	8,500	8,800

The tax credit for the elderly (and permanently disabled) was retained throughout the period.

Prior to mid-1997, an individual over age 55 was generally entitled, on a one-time basis, to exclude from income subject to tax up to $125,000 of gain from the sale of a principal residence. The Taxpayer Relief Act of 1997 (TRA97) replaced that $125,000 one-time exclusion with a $250,000 exclusion ($500,000 exclusion for married taxpayers filing a joint return) for gain realized on the sale of a principal residence. Taxpayers, regardless of age, may use the new exclusion each time a residence is sold, but generally not more frequently than once every two years.

Beginning for tax year 1998, TRA97 provides that the *de minimis* exception from having to pay estimated taxes is increased from $500 to $1,000 of unpaid tax liability. (The other exceptions, relating to prior year liability and percentages of current year liability, were not changed.)

Effective in 1997, the 15 percent excise taxes on excess accumulations in, and excess distributions from, qualified retirement plans, tax-sheltered annuities, and IRAs was eliminated. The separate limits on contributions and benefits applicable to each type of retirement saving vehicle remain.

Two provisions of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) are particularly relevant to the aged. Both provisions became effective for tax year 1997. HIPAA provides that accelerated death benefits received under a life insurance contract or from a viatical settlement provider are generally excluded from income subject to tax. Also, qualified long-term care insurance premiums and the unreimbursed expenses for the care of a chronically ill individual may be deductible, but only as part of the itemized deduction for medical expenses. Employer-paid long-term care premiums are excludable from the employee's income subject to taxation. Long-term care premiums paid by self-employed workers are partially deductible in the calculation of adjusted gross income, to the same extent as other health insurance premiums. (The Taxpayer Relief Act of 1997 accelerated the increases, and ultimately raised to 100 percent, the deductibility of health insurance premiums for a self-employed individual and the individual's

spouse and dependents if neither the individual nor spouse is eligible for health insurance coverage as employees. The changes are phased in beginning in tax year 2000 .)

The Balanced Budget Act of 1997 permits Medicare-eligible individuals to choose either the traditional Medicare program or Medicare Plus Choice, which may include a medical savings account (MSA). The option will be available beginning in 1999. Under the Medicare Plus Choice MSA, limited contributions will be made to the individual's MSA, and those contributions and the earnings on balances in the MSA account will not be subject to tax. Withdrawals used to pay for qualified medical expenses will not be subject to tax. Withdrawals used for other purposes will be included in income subject to tax, and, if they exceed certain limits, will also be subject to penalties.

A gift tax is imposed on lifetime transfers by gift, and an estate tax is imposed on transfers at death. A unified credit applying to both the gift and estate taxes permits a certain amount to be transferred before gift or estates taxes are imposed. TRA97 increased the unified credit from an effective exemption of $600,000 to an effective exemption of $625,000 for 1998 and to higher amounts in subsequent years. (The unlimited exemption for transfers to spouses was retained.) TRA97 also provides, beginning in 1998, that estates may elect special estate tax treatment for certain qualified family-owned business interests; the elected exclusion for family-owned business interests together with the general effective exemption may not exceed $1.3 million.

INTERNAL REVENUE SERVICE

The Internal Revenue Service (IRS) recognizes the importance and special concerns of older Americans, a group that will comprise an increasing proportion of the population in the years ahead. Major programs and initiatives of the Office of the Chief, Operations that are of interest to older Americans and to others are described below:

The following publications, revised annually, are directed to older Americans:

Publication 524, Credit for the Elderly or Disabled, explains that individuals 65 and older may be able to take the Credit for the Elderly or Disabled, reducing taxes owed. In addition, individuals under age 65 who retire with a permanent and total disability and receive taxable disability income from a public or private employer because of that disability may be eligible for the credit.

Publication 554, Older Americans' Tax Guide, explains the income conditions under which single taxpayers aged 65 or older, and married taxpayers filing jointly if at least one of the spouses is 65 or older, are generally not required to file a Federal income tax return. The publication also advises older taxpayers about possible eligibility for the earned income credit. The taxpayer may be eligible for a credit based on the number of qualifying children in the home or a smaller credit if the taxpayer has no qualifying children.

Publication 721, Tax Guide to U.S. Civil Service Retirement Benefits, and Publication 575, Pension and Annuity Income, provide information on the tax treatment of retirement income.

Publication 907, Tax Highlights for Persons with Disabilities is a guide to issues of particular interest to persons with handicaps or disabilities and to taxpayers with disabled dependents.

Publication 915, Social Security and Equivalent Railroad Retirement Benefits, assists taxpayers in determining the taxability, if any, of benefits received from Social Security and Tier I Railroad Retirement.

All publications are available free of charge. They can be obtained by using the order forms found in the tax forms packages or by calling 1–800–TAX-FORM (1–800–829–3676.) Many libraries and post offices stock the most frequently requested forms, schedules, instructions, and publications for taxpayers to pickup. Also, many libraries stock a reference set of IRS publications and a set of reproducible tax forms.

Most forms and some publications are on CD-ROM and are on sale to the general public through the National Technical Information Service. Information about ordering can be obtained by calling 1–877–233–6767. Forms, instructions, and tax information are available by fax by calling 703–363–9694 using the phone attached to your fax machine.

Taxpayers may obtain most forms, instructions, publications, and other products via the IRS's Internet Web Site at www.ustreas.gov.

The 1990 tax year was the first year older American could use the expanded Form 1040A to report income from pensions and annuities, as well as other items applicable to older Americans, such as estimated tax payments and the credit for the elderly or the disabled. More than half the potential filing population eligible to use this simpler, shorter form made the switch from the much longer Form 1040.

Responding to requests from the public for such a product, the Tax Forms and Publications Division developed large-print versions of the Form 1040 and Form 1040A packages earmarked for older Americans. These packages (designated as Publication 1614 and 1615, respectively) are newspaper-size and contain both the instructions and the forms (for use only as worksheets, with the amounts to be transferred to regular-size forms for filing).

IRS VOLUNTEER & OUTREACH PROGRAMS

The *Volunteer Income Tax Assistance* (VITA) Program offers FREE tax help to people who cannot afford paid professional assistance. Volunteers help prepare basic tax returns for taxpayers with special needs, including persons with disabilities, non-English speaking persons, those with low income, and elderly taxpayers. Assistance is provided at community and neighborhood centers, libraries, schools, shopping malls, and other convenient locations across the nation. Many sites provide free electronic filing of tax returns. Volunteers generally include college students, law students, members of professional, business and accounting organizations, and members of retirement, religious, military and community groups.

In 1997, more than 40,000 volunteers assisted more than 1.7 million taxpayers at nearly 8,300 sites across the nation through the VITA Program. In 1998, more than 39,000 volunteers assisted

more than 1.8 million taxpayers at nearly 6,100 sites across the nation through the VITA Program.

Tax Counseling for the Elderly (TCE) Program

Tax Counseling for the Elderly (TCE) Program was first authorized by Congress in 1978 as part of the Revenue Act of 1978. The Revenue Act authorizes an appropriation of special funds, in the form of grants, to provide free income tax assistance to individuals 60 years of age or older. TCE sponsors recruit volunteers trained by the Service to provide income tax assistance to older individuals. TCE volunteer sites can be found in retirement homes, neighborhood sites, and shopping malls. Many sites provide free electronic filing of income tax returns. Volunteers also travel to the private residences of the homebound. In 1997, 31,000 volunteers assisted 1.6 million taxpayers at nearly 10,500 sites. In 1998, 32,000 volunteers assisted 1.7 million taxpayers at nearly 10,600 sites.

Community Outreach Tax Education Program

The Community Outreach Tax Education Program provides individuals with group Income return preparation assistance and tax education seminars. IRS employees and trained volunteers conduct these seminars which address a variety of topics. They are tailored for groups and individuals with common tax interests, such as groups of older Americans. These seminars are conducted at convenient community locations.

In 1997, more than 800 volunteers assisted more than 470,000 taxpayers in more than 4,900 sessions across the nation through this program. In 1998, almost 970 volunteers assisted more than 430,000 taxpayers in more than 5,000 sessions.

Post Offices and Library (POL) Program

During 1997 and 1998, the Post Offices and Library Program (POL) provided approximately 46,500 post offices, libraries, and other sites with free tax preparation materials such as tax forms and publications that can assist older Americans in preparing forms 1040, 1040A, 1040EZ, and related schedules. IRS provided volunteers in some libraries to answer tax questions and direct taxpayers to the correct tax forms.

Small Business Tax Education Program (STEP)

The Small Business Tax Education Program (STEP) provides information about business taxes and the responsibilities of operating a small business. During 1997 and 1998, small business owners and other self-employed persons had an opportunity to learn what they needed to know about business taxes through a partnership between IRS and approximately 2,000 community colleges, universities and business associations. Assistance was offered at convenient community locations and times. Many elderly persons, such as those beginning second careers, availed themselves of this program.

FINANCIAL MANAGEMENT SERVICE

The Financial Management Service (FMS) makes more than 700 million payments annually, including Social Security, Supplemental Security Income, and Veterans benefits. Working under the

mandate of the Debt Collection Improvement Act signed by President Clinton on April 26, 1996, Federal Departments and agencies are on the fast track to convert Federal payments to electronic funds transfer (EFT). The law requires most payments to be made electronically by January 2, 1999, but also gives the Secretary of the Treasury broad authority to grant waivers. EFT significantly improves the certainty of payments reaching the intended recipients on a timely basis, and improves the ability of recipients to use those payments safely and conveniently. Payment inquiries and claims are significantly reduced under EFT.

Payment by EFT has substantial benefits in terms of reliability, safety, and security that are especially important for the elderly. Recipients are twenty times more likely to have a problem with a paper check than with an EFT transaction, and in FY 1998 Treasury replaced more than 600,000 checks that were lost, stolen, delayed, or damaged during delivery. Waiting days for a replacement check is an inconvenience and a burden on recipients, especially elderly persons living on low incomes. EFT payments are much more convenient and secure—misrouted EFT payments are never lost, and, if misrouted, the payments are typically routed to the correct bank account within 24 hours.

During the past three years, Treasury has been overseeing government-wide implementation of the Debt Collection Improvement Act of 1996 by working with Federal agencies to identify and resolve the major issues confronting stakeholders. Significant progress has been made by Federal agencies to convert payments to EFT (EFT' 99). The percentage of Treasury-disbursed payments made electronically has increased from 53 percent in FY 96 to 63 percent in FY 98, and as of November 1998, 71 percent of Treasury-disbursed payments were made by EFT. More than 74 percent of Social Security payments were made electronically as of November 1998, an increase of more than 15 percentage points since FY 96. Other Federal benefit agencies show similar increases in EFT payments.

Four public hearings and numerous meetings with stakeholders were held in 1997 and 1998 prior to issuance of the final rule. On September 25, 1998, Treasury published its final regulation, 31 Code of Federal Regulations (CFR) 208, which prescribed policies relating to the circumstances under which waivers are available from the EFT requirement, requirements for sending Federal EFT payments to accounts, and the responsibilities of Federal agencies and recipients. This regulation reflects the many comments and input from Federal agencies, consumer and community organizations, financial services trade associations, and other key stakeholders received during the public comment period.

The final rule allows recipients choices in selecting a payment method, depending on their circumstances, and permits individuals to continue to receive checks in situations where electronic payment presents a hardship. Specifically, the EFT requirement is waived if the individual determines, at his or her sole discretion, that payment by EFT would impose a hardship due to a physical or mental disability, or a geographic, language or literacy barrier, or if EFT would impose a financial hardship.

Federal payment recipients who elect to receive their payments via Direct Deposit enjoy the benefits of this simple, safe, and secure payment mechanism. Recipients who have not signed up for Direct Deposit do have choices, as described in 31 CFR 208. Federal check recipients receiving salary, wage, benefit or retirement payments can choose to: (1) receive payment via Direct Deposit through a financial institution, (2) wait for the low-cost Electronic Transfer Account (ETA℠) to become available or, (3) continue to receive a paper check, if receiving payment by Direct Deposit would cause the recipient a hardship.

In 1999 Treasury will develop a basic, low-cost account called the ETA℠, which will be available to individuals who receive Federal benefit, wage, salary, or retirement payments. Federally insured financial institutions will be encouraged to offer the ETA℠ on a voluntary basis, subject to soon-to-be published standards and terms set forth in an agreement between Treasury and the financial institution. These low-cost accounts are designed to meet the statutory mandate that recipients have access to an account at a reasonable cost and with consumer protections, comparable to other accounts at the same financial institution. Treasury issued a Federal Register notice for public comment on November 23, 1998 regarding the attributes of such an account. Treasury is now evaluating those comments and will issue the final notice in the spring of 1999. The ETA℠ is expected to be available to individual recipients during 1999.

The Financial Management Service and Treasury have been conducting a massive public education campaign on both a national and regional basis, seeking involvement of national, regional, and local consumer and community-based organizations, financial trade associations, and Federal regulatory agencies to distribute materials and to conduct "in touch" programs with Federal recipients to educate them about their choices under the law. Public Service Announcements for television, radio, and print ads were produced, as well as posters, brochures, and other educational materials.

FMS continues to support the implementation of a nationwide program to make Electronic Benefits Transfer (EBT) a viable electronic payment option. Geared toward those individuals without a bank account, EBT is an electronic benefit delivery mechanism that enables recipients to use plastic cards to access their benefits at automated teller machines or point-of-sale terminals. Forty-seven states have some type of EBT program which provides electronic access to benefits for recipients; twenty-nine of these and the District of Columbia are full-fledged, statewide programs, and others are either in the pilot phases, expanding statewide, or in the process of being awarded to providers. In 1996, FMS partnered with the Southern Alliance of States (SAS) to deliver Federal and State benefits through EBT to recipients in an eight-state area. In the SAS, recipients of Federal and State benefits can access their benefits using the same EBT card. All 50 States expect to be operating statewide EBT systems by 2002, and Treasury will work with individual states at their request to allow both State and Federal benefits to be accessed through the State EBT card where feasible.

A variety of information on EFT '99 is available on the FMS Web site describing products and services offered by the agency. Infor-

mation available includes recent FMS activities related to EFT '99, publications, statistics, and contact information. The EFT Web site includes topics on General Information, Regulations and Policy, Agency Assistance, News and Media, Education and Marketing, Vendor Information, and the ETA SM. The site can be accessed at www.fms.treas.gov/eft.

The Check Forgery Insurance Fund

The Check Forgery Insurance Fund (CFIF) legislation was enacted into law on April 26, 1996 as part of the Debt Collection Improvement Act of 1996.

The Check Forgery Insurance Fund (CFIF) is a revolving fund established to settle payee claims of non-receipt where the original check has been fraudulently negotiated. FMS uses the Fund to ensure that innocent payees, whose Treasury Checks have been fraudulently negotiated, are promptly issued replacement checks. Reinstitution of the CFIF relieves the burden for recipients of forged checks by providing funding for expeditious issuance of replacement checks.

Check forgery is a concern of FMS and individuals who receive paper check payments. FMS continues to consider and address this concern. On March 26, 1998, various Treasury Systems were enhanced to comply with the legislation and to modify both internal and external operational and system procedures required to process check forgery claims timelier utilizing the CFIF. Reinstituting the CFIF relieves the burden for recipients of forged checks, especially the elderly.

The CFIF is a Fund which benefits all payees of forged checks after the forgery has been substantiated. Although payment by electronic funds transfer (EFT) has substantial benefits, paper checks continue to be the desired method of payment by recipients of various Federal payments. The elderly, who represent a large portion of this group, continue to receive payments by check. Because of continued check issuance, forgery of these items is highly probable. Those elderly individuals affected by forgeries are largely low-income, unbanked and rely on the monthly payment for their basic subsistence. The CFIF allows for immediate relief to the elderly and other payees after the claim of forgery has been substantiated.

Implementation of the CFIF benefits The Federal Program Agencies (FPAs) by relieving the FPAs of the responsibility for issuing replacement checks out of their appropriations on forgery claims. Typically, the FPAs would not issue a replacement check on a forgery claim until after FMS had recovered the forged amount from the financial institution (FI) and credited the agency with the check amount. The FI has 60 days to respond to FMS' request for refund. The CFIF provides for expeditious processing of these cases and does not make issuance of the replacement check contingent on whether recovery on the forgery is delayed or unsuccessful.

FMS is continuing to use the CFIF to facilitate the timely issuance of replacement checks to the elderly and all check recipients on substantiated forgery claims.

UNITED STATES MINT

The U.S. Mint continues to consider the needs and concerns of older Americans in delivery of our programs.

The Exhibits and Public Affairs staff of the Philadelphia Mint are available to help older persons and people with special needs who wish to take the Mint self-guided tour. A wheelchair is also available for those wishing to take the tour. Additionally, benches are strategically placed along the tour route to provide resting areas for visitors.

The Denver Mint continues to provide public tours conducted by Mint personnel that are considerate of the needs and concerns of older persons. Tour Guides request that if any member of the public requires special assistance; ascending stairs, etc., that requests for such assistance are made at the beginning of the tour. Additional assistance that may be needed during the tour can also be requested of the Tour Guides as well.

U.S. Mint facilities at both Denver and Philadelphia will continue to explore how such assistance can be enhanced in 1999 and 2000.

BUREAU OF ENGRAVING AND PRINTING

The National Academy of Sciences conducted a study on ways to assist the blind and visually impaired with currency transactions. Based on that study, the Bureau of Engraving and Printing (BEP) unveiled the new $20 design on May 20th 1998 with several features to assist the elderly and visually impaired population. In addition to several counterfeit deterrent features, the note contained a large high contrast numeral in the back lower right of the note. The large high contrast numeral is designed to assist the more than 23 million mostly elderly Americans with varying degrees of vision impairment.

In addition, based on discussions with the American Council for the Blind, the BEP incorporated a machine-readable feature to the new $20 bill. This feature is intended to facilitate the development of convenient scanners for the blind and people with low vision. The BEP intends to add this feature in all future redesign of currency.

OFFICE OF THRIFT SUPERVISION

During 1997 and 1998, OTS continued its Community Affairs Program, designed to provide outreach and support to the thrift industry's efforts to meet housing and other community credit and financial services needs. A primary objective of the program is to serve as a liaison between the thrift industry and consumer and community groups on housing and community development issues. Most of the groups with which OTS interacts represent low- and moderate-income individuals, including older persons.

Our Community Affairs staff, along with senior management, participated in meetings with hundreds of thrifts and community organizations across the country, including groups with particular emphasis on older persons, such as those that provide affordable housing for senior citizens. During those meetings, information was shared on affordable housing, financial services and economic de-

velopment needs; on thrifts' authorities and abilities to meet those needs; and on opportunities for collaborative partnerships.

OTS continued to publish its Community Liaison newsletter and distribute the newsletter to all thrifts and to several hundred community and consumer organizations. The newsletter spotlights achievements in affordable housing and community development, many of which have benefitted older Americans. During 1998, the newsletter included several articles pertaining to EFT99 which can significantly affect many older Americans.

For many years, OTS has maintained an active program for addressing complaints that consumers may have against the thrifts that OTS regulates. We provide a free nationwide consumer hotline and a TDD line, and professional staff is available to help people evaluate whether their concerns are addressed by OTS regulations. Senior citizens are frequent users of this service.

OTS has also issued a Customer Service Plan for consumer complaints and urged the institutions it regulates to give high priority to consumer relations. Of approximately 12,500 complaints filed with OTS in 1997 and 1998, 23 complaints alleged credit discrimination based on age. OTS investigated each of the complaints in accordance with its expanded procedures for discrimination complaints, which call for interviewing the complainant and reviewing the complainant's loan file. None of the complaints led to a finding of discrimination.

BUREAU OF THE PUBLIC DEBT

The Bureau of Public Debt continues to make improvements in its programs to better serve all investors. The following improvements to simplify access to Treasury securities are of particular benefit to the elderly investor.

Marketable securities

Treasury marketable securities provide a safe investment and interest income, features that are popular with older Americans. The latest survey of investors using the TreasuryDirect service indicated that 67 percent were age 65 or older. Therefore, our recent improvements to TreasuryDirect will benefit older Americans.

Electronic services

In 1997 and 1998 Public Debt made it more convenient for TreasuryDirect customers to invest by introducing a variety of electronic services. These services benefit older Americans since they can now conduct a wide variety of transactions from home.

- Pay Direct allows existing customers to pay for their securities by authorizing Treasury to debit their bank account on the day the security is issued. Prior to this, investors had to pay for their securities when they submitted their tender. Pay Direct eliminates a trip to the bank by a customer to obtain a cashier's or certified check for Treasury bill investors.
- Reinvest Direct allows customers to reinvest maturing securities by phone 24 hours a day, 365 days a year. When investors get a reinvestment notice in the mail from Public Debt, all they need to do is call a toll-free number on a touch-tone phone from anywhere in the U.S.

• Sell Direct allows customers to authorize Public Debt to sell their securities rather than first having to transfer them to a bank or brokerage firm.

• Buy Direct gives current TreasuryDirect customers an easy way to purchase securities by using the Internet. To purchase and authorize Public Debt to charge their bank account for the purchase price, a customer visits Public Debt's "virtual lobby," and indicate which security they wish to purchase. Investors can purchase securities by calling a toll-free number and following a simple interactive menu authorizing Public Debt to charge their bank account on issue day.

Other services

TreasuryDirect customers can check their account balance, order a statement of account, or request a duplicate interest income statement (1099–INT) on a touch-tone phone. Customers having Internet access can go to our website (*www.publicdebt.treas.gov*) and perform the same functions. The website offers the additional features of providing detailed account information and allows customers to change address and phone number information in their account. The website provides a wealth of information about Treasury marketable securities and the TreasuryDirect service. Current or potential customers can obtain information, order forms and publications, and send electronic mail inquiries directly to Public Debt.

$1,000 minimums

In August 1998, the Treasury Department took steps to demonstrate its commitment to encourage all Americans to save and invest by reducing the minimum amounts needed to purchase all marketable Treasury bills, notes and bonds to $1,000. Previously, Treasury bills were available in minimum purchase amounts of $10,000 and notes with maturities of four years or less required a minimum purchase of $5,000. Notes with longer maturities and 30–year bonds were already available in $1,000.

Uniform-price auction

In November 1998, Treasury decided to expand the use of uniform-price auctions to the sale of all marketable Treasury securities. Prior to this, and since 1992, only the 2–year and 5–year notes were sold using this technique. Most TreasuryDirect customers buy their securities on a noncompetitive basis. The uniform price auction assures these investors the same yield as larger bidders.

Public Debt continues to encourage owners of registered and bearer securities to convert these certificates to book-entry form in TreasuryDirect. Holding securities in book-entry form provides a much safer and more convenient method than holding certificates.

Public Debt will continue to seek opportunities to improve customer service for its TreasuryDirect investors through expanded electronic information and transaction services.

Savings securities

Series I bonds

In September 1998, Series I Bonds, accrual savings bonds indexed to inflation, were added to the line of savings instruments we offer our customers. Along with the usual features which attract mature, conservative investors—tax benefits if used for education, exemption from state and local income taxes, federal income tax deferral, replacement in the event of loss, theft, or destruction, etc.—I Bonds ensure a real rate of return over and above inflation.

Home banking

Many banks have expanded their home banking services, which allows customers to conduct many transactions from their homes. We are working with banks and software providers to include a savings bond module in their home banking packages. The convenience of home banking extends to all, but particularly to senior citizens, who may be unable to visit the bank to buy savings bonds.

Direct deposit for series HH interest payments

We are working to encourage all Series H and HH bond holders to use Direct Deposit for their interest payments. Now, some 85 percent of Series H and HH investors receive their interest by Direct Deposit. They enjoy timely payment of interest and don't have to make trips to the bank to deposit interest checks.

EasySaver

In November 1998, we created the EasySaver Plan for purchasing U.S. Savings Bonds. Now, millions of Americans, particularly the elderly, who do not have access to payroll savings plans, can buy bonds automatically for themselves or their families. All the customer needs to do is complete an order form authorizing Treasury to charge their bank account for the price of the bond and choose the date to charge their account for their savings bond purchases.

Customer service improvements

Public Debt continues to improve customer service through increased use of information technology and streamlined operating procedures. Since a substantial number of savings bonds are held by older Americans, it can be expected that these customers will be involved in a proportionate number of the transactions handled by the Bureau. Service improvements should be welcomed and keenly felt among the group.

In May of 1999, we will offer for sale two new I Bonds. They are a $200 denomination featuring Chief Joseph of the Nez Perce, one of the greatest Native American leaders, and a $10,000 I Bond with a portrait of Spark Matsunaga, a former U.S. Senator and Congressman and World War II hero. The new denominations will offer investors, including the elderly, more flexibility.

In the coming years, we intend to continue to work with financial institutions and financial software companies in order to promote and expand our home banking program which allows for customers

to purchase savings bonds on-line. We also hope to conduct many more transactions related to savings bonds via the Internet.

UNITED STATES SECRET SERVICE

Senior Citizen Employment Program (SCEP)

In 1998, the Secret Service implemented a senior citizen employment program (SCEP) which is designed to provide older, economically disadvantaged seniors with an opportunity to upgrade outdated skills and develop new skills which may enhance future employment opportunities. Seniors hired under this program provide administrative clerical support to Secret Service offices. The Secret Service works closely with organizations such as the American Association of Retired Persons and other community associations to identify eligible seniors.

Advanced fee fraud schemes

Advanced fee fraud schemes result in reported financial losses exceeding a hundred million dollars annually. The true losses are much higher as many victims fail to report their losses due to fear or embarrassment. The elderly population is especially susceptible. The Secret Service has received scores of reports from the elderly indicating they have lost their life savings through this type of fraudulent scheme. In conjunction with the local Department's of State and Commerce, the Secret Service has reached out to organizations that are associated with the principal targets of this scam, namely small businesses and the elderly. The Better Business Bureau, the American Bankers Association, and the AARP have assisted the Secret Service in publishing articles designed to educate the public to these schemes and hopefully prevent them from falling prey to these frauds.

Government benefits

The Secret Service continues to protect the nation's elderly recipients from fraud perpetrated against their government benefits. The Secret Service is committed to investigating all fraud related to government benefits. During Fiscal Year 1997–1998, the Secret Service received and investigated 18,233 cases relating to U.S. Treasury check violations (which includes among other Social Security benefits, Railroad Retirement, and Office of Personnel Management). Additionally, the Secret Service received and investigated 4,225 cases involving the illegal diversion of funds through the Direct Deposit/Electronic Funds Transfer process during Fiscal Year 1997–1998.

White House tours

The Secret Service gives White House tours for over one million visitors a year. In an effort to provide better customer service to the elderly and physically disabled, the Secret Service now provides escorted wheelchair tours of White House areas open to the public. Past procedures only provided for tours of the State Floor. Additionally, upon request, sign language tours are made available for the hearing impaired and touch tours are provided for the visually impaired.

U.S. CUSTOMS

U.S. Customs Service's major activities affecting older Americans include the following:

The Customs Service offers special treatment for the aging, the handicapped, the ill, and those who are unable to wait in line when arriving from abroad. Such travelers can speak with a Customs supervisor upon arrival in the Customs processing area of the airport or other Customs port of entry. The supervisor is able to facilitate the traveler's Customs clearance.

Customs strives to treat all travelers entering and leaving the United States with professionalism and courtesy. In addition, Customs works to ensure that Federal inspection facilities, such as restrooms, etc., facilitate the movement of the elderly or handicapped who must rely on a wheelchair or walker.

In addition, the Customs Service has a number of programs supporting Customs employees. For example, the Employee Assistance Program encourages elderly employees to seek additional assistance if needed. The Customs Health Enhancement Program offers activities and classes to Customs employees, including the elderly, in areas such as fitness, CPR/first aid, stress management, conflict resolution, defense tactics, allergy and asthma inoculations, nutrition, and health screening. In addition, special seminars and video broadcasts are offered throughout Customs on eldercare. Topics include long-term health care, legal issues, caregiver issues, nursing homes, etc. and are available for the elderly as well as younger employees who may have older relatives and friends. The Customs Service also offers retirement seminars several times each year to all employees who are eligible to retire within the succeeding 5 years. These seminars cover retirement benefits, legal matters and financial planning.

OFFICE OF COMPTROLLER OF THE CURRENCY

During 1997 and 1998 the Office of the Comptroller of the Currency (OCC) continued to enforce fair lending laws relating to age discrimination. Continued emphasis was also placed on evaluating performance of national banks with respect to the Community Reinvestment Act (CRA). During 1998, the OCC created a new bank supervision division specifically focused on consumer compliance, CRA, and fair lending. The new division is to support the OCC's consistent enforcement of compliance laws by providing a direct link between policy makers and compliance examiners in the field.

OCC examiners are alert to the potential for discrimination on the basis of age (as well as the other bases covered by ECOA and Reg. B) when conducting fair lending examinations. In 1997, the OCC found evidence of age discrimination during two fair lending exams and referred both cases to the Department of Justice (DOJ) for action; the OCC found evidence of age discrimination during one exam in 1998 and forwarded that case to DOJ. DOJ returned all three cases to the OCC for administrative action. The three aforementioned cases bring the total number of OCC cases involving age discrimination to nine since 1993.

During 1997 and 1998, Comptroller Eugene A. Ludwig and Acting Comptroller Julie A. Williams met ten times with representa-

tives from national community and consumer organizations, including representatives of senior organizations, at the OCC's Washington, DC headquarters. They also met six times with representatives of local community and consumer organizations from five of six OCC regional districts. The purpose of these outreach sessions was to share information about OCC policy and national bank examination practices with bank customer organizations, and to learn first-hand about the concerns these organizations had about the activities of national banks, as well as about the OCC's supervision of the national banking system. Topics discussed typically included community reinvestment, fair lending, community development, and access to financial services for the "unbanked", including elderly individuals, who do not have a relationship with a depository financial institution.

The OCC is responsible for resolving consumer complaints against national banks, including those complaints made by older Americans. During 1997, the OCC received 40,000 total telephone complaints and 33,084 total written complaints. During 1998, we received over 85,322 total telephone complaints and 71,000 total written complaints. In a continuing effort to improve our assistance to customers, the complaint processing was consolidated into the OCC's Ombudsman's Office in April, 1998. The new Customer Assistance Group was formed with the hiring of compliance professionals and state of the art telephone equipment. The toll-free national consumer complaint telephone number was maintained (800–613–6743).

ITEM 14—COMMISSION ON CIVIL RIGHTS

During calendar years 1997 and 1998 the Commission continued to process complaints received from individuals alleging denials of their civil rights. Specifically, in 1997 23 complaints alleging discrimination on the basis of age were received by the Commission and referred to the appropriate agency for resolution. In 1998, the Commission referred 22 complaints alleging age discrimination.

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1996
May 1996 -September 1996
Table 1. Breakdown of Complaints Received and Processed

Start Date	Backlog Beginning	Complaints Received	Non-Congressional Correspondence	Congressional	Automatic Telephone Calls	Total Backlog Ending
January						
February						
March						
April						
May ' 96	0	537	218	1	315	0
June	0	1042	542	2	482	0
July/August	0	1268	489	10	764	0
September ' 96	0	832	383	1	446	0
October						
November						
December						
Total		3679	1632	14	2007	

Table 2

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1996
May 1996 - September 1996
Table 2. Breakdown of Complaints Received by Subject

Start Date	Employment	Housing	Education	Federal Programs	Admin. of Justice	Voting	Health Care	Human Rights	Police Brutality	Public Accom.	Hate Crimes	Other	No Jurisdiction	Unknown	Monthly Total
January															0
February															0
March															0
April															0
May ' 96	32	8	11	5	159	1	2	0	1	4	0	209	53	35	519
June	23	6	12	1	158	1	0	0	0	5	0	32	31	223	492
July/August	35	27	10	4	165	2	4	0	0	0	1	16	44	8	316
September ' 96	25	4	5	1	103	2	2	0	1	1	0	11	54	4	213
October															
November															
December															
															0
Total	115	45	38	11	585	6	8	0	2	10	1	267	182	270	1540

Table 3

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1996
May 1996 - September 1996
Table 3. Breakdown of Complaints Received by Basis

Start Date	Black	Hispanic	American Indian	Asian	Other Ethnic Group	Religion	Sex	Disability	Age	Inmates	Sexual Harassment	Reprisal	Unknown	Basis Not Stated	Other
May ' 96	34	5	1	0	0	3	3	15	5	122	1	0	44	0	302
June	30	2	0	3	2	2	1	12	5	155	2	0	223	0	37
July/August	37	32	5	1	5	7	3	19	2	131	2	0	12	0	65
September ' 96	19	6	1	1	3	3	3	9	7	91	2	0	12	0	23
Total	120	45	7	5	10	15	10	51	19	499	7	0	291	0	427

Table 4

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1996
May 1996 - September 1996
Table 4. Breakdown of Complaints Referrals

Start Date	USDA	DOD	DOEd	HHS	HUD	DOJ	State	DOT	Treasury	DOL	OPM	GSA	VA	EPA	EEOC	FCC	FTC	FAA	MSPB	NLRB	SBA	USPS	Other
May ' 96	0	3	12	7	7	176	0	0	1	3	0	0	4	0	27	2	2	0	2	0	0	0	20
June	0	0	11	4	5	175	0	0	1	1	0	0	2	0	22	0	0	0	0	0	0	1	144
July/August	5	0	9	4	26	170	1	0	2	0	0	0	4	0	31	0	0	0	0	0	0	1	8
September ' 96	0	1	5	2	4	113	0	0	0	4	0	0	0	0	25	0	0	0	0	0	1	1	170
Total	5	4	37	17	42	634	1	0	4	8	0	0	10	0	105	2	2	0	2	0	1	3	342

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1997
October 1996 - September 1997
Table 1. Breakdown of Complaints Received and Processed

Start Date	Backlog Beginning	Complaints Received	Non-Congressional Correspondence	Congressional	Authentic Telephone Calls	Total Backlog Ending
October '96	0	914	208	4	700	0
November	0	523	260	1	260	0
December	0	693	236	3	454	0
January ' 97						
February	0	498	195	0	303	0
March	0	512	115	1	396	0
April	0	740	265	1	474	0
May	0	686	125	2	559	0
June	0	582	214	1	366	0
July/August	0	1043	311	1	731	0
September '97	0	407	184	6	217	0
Total		6598	2113	20	4460	

Table 2

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1997
October 1996 - September 1997
Table 2. Breakdown of Complaints Received by Subject

Start Date	Employment	Housing	Education	Federal Programs	Admin. of Justice	Voting	Health Care	Human Rights	Police Brutality	Public Accom.	Hate Crimes	Other	No Jurisdiction	Unknown	Monthly Total
October '96	13	4	3	3	79	1	0	0	1	1	1	11	108	20	245
November	24	4	1	0	82	0	3	0	0	1	0	15	75	20	225
December	16	2	11	1	104	3	3	0	0	1	0	9	46	20	216
January '97															0
February	18	2	2	1	95	0	1	2	2	2	0	20	38	10	193
March	17	2	5	6	51	1	0	0	0	0	0	14	15	2	113
April	100	5	12	2	100	0	3	0	0	0	0	4	45	0	271
May	15	0	2	4	65	0	0	2	2	2	0	15	10	7	15
June	25	1	9	4	118	0	0	2	2	2	0	11	47	0	221
July/August	31	5	2	1	159	0	1	1	0	0	0	12	88	4	304
September '97	27	2	4	0	167	0	2	0	14	0	0	0	18	43	277
Total	286	27	51	22	1020	5	13	7	21	9	1	111	490	126	2080

Table 3

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1997
October 1996 - September 1997
Table 3. Breakdown of Complaints Received by Basis

Start Date	Black	Hispanic	American Indian	Asian	Other Ethnic Group	Religion	Sex	Disability	Age	Income	Sexual Harassment	Retrieval	Unknown	Basis Not Stated	Other
October ' 96	19	5	0	1	1	2	4	7	3	74	2	1	41	0	53
November	20	5	1	1	2	2	4	3	3	74	1	0	40	0	55
December	25	2	1	1	3	2	2	10	2	90	2	1	32	15	45
January ' 97															
February	30	3	1	0	0	2	2	5	1	60	0	0	15	30	24
March	17	3	0	0	1	2	2	4	2	40	0	0	4	4	12
April	27	5	2	0	3	2	2	10	2	74	0	0	30	24	62
May	15	3	1	0	4	2	2	6	2	60	0	0	15	10	10
June	10	1	0	0	1	1	2	7	2	101	2	0	7	22	40
July/August	20	5	2	2	1	0	1	11	3	137	4	0	15	51	61
September ' 97	40	7	2	2	1	0	1	11	3	137	4	0			
													15	51	61
Total	223	39	10	7	17	15	22	74	23	847	15	2	214	207	423

Table 4

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1997
October 1996 - September 1997
Table 4. Breakdown of Complaints Referrals

Start Date	USDA	DOD	DOEd	HHS	HUD	DOJ	State	DOT	Treasury	DOL	OPM	GSA	VA	EPA	EEOC	FCC	FTC	FAA	NSPS	NLRB	SBA	USPS	Other
October '96	0	1	3	0	2	79	0	0	0	0	0	0	1	0	11	0	0	0	0	0	2	2	4
November	0	2	1	2	4	85	0	1	1	1	0	0	2	2	35	0	0	0	0	0	0	1	30
December	0	2	10	5	5	104	0	0	0	7	0	0	2	0	30	0	0	0	0	0	2	0	20
January '97																							
February	0	0	2	1	2	95	0	0	2	2	0	0	2	0	18	0	0	0	0	0	0	0	3
March	1	1	5	0	2	59	0	0	1	2	0	0	1	0	17	1	0	0	0	0	1	0	3
April	2	0	26	3	5	116	0	0	0	4	0	0	5	2	113	0	0	0	0	0	4	0	47
May	0	0	2	0	0	75	0	1	0	2	0	0	2	1	15	0	0	0	0	0	4	0	18
June	0	1	9	0	1	124	0	1	0	1	0	0	2	1	25	0	0	0	0	0	4	0	5
July/August	0	2	2	0	5	171	0	0	0	1	0	0	1	0	38	0	0	0	0	0	0	0	14
September '97	0	0	4	2	5	177	0	0	0	1	0	0	1	0	20	0	0	0	0	0	1	0	1
Total	3	9	64	13	31	1085	0	3	4	21	0	0	19	6	322	1	0	0	0	0	18	3	145

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1998
October 1997 - September 1998
Table 1. Breakdown of Complaints Received and Processed

Start Date	Backlog Beginning	Complaints Received	Non-Congressional Correspondence	Congressional	Authentic Telephone Calls	Total Backlog Ending
October ' 97	0	501	176	5	320	0
November	0	481	266	3	212	0
December	0	503	143	1	359	0
January ' 98	0	217	217	0	0	0
February	0	530	196	2	328	0
March	0	755	328	3	427	0
April	0	295	216	2	76	0
May						
June	0	224	199	1	24	0
July/August	0	545	456	2	86	0
September '98	0	280	195	2	83	0
		4331	2392	21	1915	

Table 2

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1998
October 1997 - September 1998
Table 2. Breakdown of Complaints Received by Subject

Start Date	Employment	Housing	Education	Federal Programs	Admin. of Justice	Voting	Health Care	Human Rights	Police Brutality	Public Accom.	Non-Criminal	Other	Beyond Jurisdiction	Unknown	Monthly Total
October ' 97	21	5	1	5	117	0	3	0	0	0	0	18	56	0	226
November	23	3	2	5	175	0	3	0	2	2	0	5	51	5	276
December	18	0	3	2	69	0	3	0	0	0	0	6	45	0	146
January ' 98	26	2	2	4	116	0	1	0	0	1	0	10	50	0	212
February	26	2	2	4	116	0	1	0	0	1	0	10	50	0	212
March	30	10	5	8	205	0	1	0	2	4	0	28	60	0	353
April	27	1	5	8	108	1	1	1	0	0	0	8	62	3	225
May															0
June	15	1	4	1	105	0	4	0	0	0	0	9	45	10	194
July/August	35	5	5	2	198	1	2	0	2	2	0	9	196	10	467
September ' 98	15	2	6	17	71	0	5	1	0	10	0	85	17	1	210
															0
Total	236	31	35	56	1280	2	24	2	6	20	0	188	632	29	2550

Table 3

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW – 1998
October 1997 - September 1998
Table 3. Breakdown of Complaints Received by Basis

Start Date	Black	Hispanic	American Indian	Asian	Other Ethnic Group	Religion	Sex	Disability	Age	Inmates	Sexual Harassment	Reprisal	Unknown	Basis Not Stated	Other
October ' 97	19	2	2	2	10	2	0	16	3	108	2	0	1	16	40
November	20	3	0	3	2	0	2	10	4	160	2	0	10	25	50
December	15	0	0	1	4	1	1	7	1	45	3	1	23	5	28
January ' 98	17	1	1	0	3	1	0	7	1	80	5	0	20	25	52
February	17	1	1	0	3	1	0	7	1	80	5	0	20	25	52
March	25	3	2	0	6	1	2	10	3	133	5	0	30	35	76
April	19	2	2	1	4	1	0	12	1	45	1	3	23	3	53
May															
June	9	0	1	1	1	3	0	9	2	75	0	0	5	0	33
July/August	34	2	1	2	5	2	2	25	4	149	2	4	30	10	73
September ' 98	29	5	1	1	0	1	0	23	2	39	0	3	3	2	80
Total	204	19	11	11	38	13	7	126	22	914	25	11	165	146	537

Table 4

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1998
October 1997 - September 1998
Table 4. Breakdown of Complaints Referrals

Start Date	HHDA	DOD	DOEgy	EHS	HHD	DOJ	State	NEC	Treas - MTY	DOL	OPM	DOEA	VA	EPA	EEOC	FCC	FTC	FAA	NSPS	NLRB	SSA	USPS	Other
October ' 97	1	1	3	2	5	138	0	0	0	0	0	0	0	0	16	0	0	0	0	0	1	0	2
November	0	2	2	3	3	180	0	0	0	1	0	0	0	0	23	0	0	0	0	0	0	1	5
December	0	3	2	0	0	70	0	0	0	0	0	0	3	0	16	0	1	0	0	0	0	1	2
January ' 98	0	2	2	1	2	116	0	2	0	0	0	0	1	0	26	2	1	0	0	0	0	0	2
February	0	2	2	1	2	116	0	2	0	0	0	0	0	0	26	0	1	1	0	0	0	0	2
March	2	4	5	1	10	214	0	0	0	2	0	0	3	0	30	2	2	0	0	0	0	0	10
April	2	1	5	1	1	108	1	0	0	0	0	0	1	0	27	0	0	0	0	0	0	1	10
May																							
June	0	0	2	0	1	105	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	5
July/August	2	0	5	2	5	198	1	1	0	0	0	0	0	0	34	0	0	0	0	0	2	1	4
September ' 98	1	8	5	1	2	70	1	0	0	0	0	4	0	0	12	1	3	0	0	0	0	0	13
Total	8	23	33	12	31	1315	3	5	0	3	0	4	8	0	224	5	8	1	0	0	3	4	55

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1999
October 1998 - September 1999
Table 1. Breakdown of Complaints Received and Processed

Start Date	Backlog Beginning	Complaints Received	Non-Congressional Correspondence	Congressional	Authentic Telephone Calls	Total Backlog Ending
October ' 98	0	178	137	1	40	0
November	0	283	211	1	71	0
December						
January ' 99						
February						
March						
April						
May						
June						
July/August						
September ' 99						
Total		461	348	2	111	

Table 2

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1999
October 1998 - September 1999
Table 2. Breakdown of Complaints Received by Subject

Start Date	Employment	Housing	Education	Federal Programs	Admin. of Justice	Voting	Health Care	Human Rights	Police Brutality	Public Accom.	New Prisons	Other	No Jurisdiction	Unknown	Monthly Total
October ' 98	8	1	3	6	31	0	5	0	2	3	0	36	29	2	126
November	6	2	1	13	95	0	6	0	1	1	0	31	44	0	200
December															0
January ' 99															0
February															0
March															0
April															0
May															0
June															0
July/August															0
September ' 99															0
															0
Total	14	3	4	19	126	0	11	0	3	4	0	67	73	2	326

Table 3

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1999
October 1998 - September 1999
Table 3. Breakdown of Complaints Received by Basis

Start/Date	Black	Hispanic	American Indian	Asian	Other Ethnic Group	Religion	Sex	Disability	Age	Retaliation	Sexual Harassment	Race/Color	Unknown	Basis Not Stated	Other
October ' 98	19	1	1	0	2	2	2	12	2	41	0	0	7	4	69
November	19	1	1	0	2	2	2	12	2	41	0	0	7	4	69
December															
January ' 99															
February															
March															
April															
May															
June															
July/August															
September ' 99															
Total	38	2	2	0	4	4	4	24	4	82	0	0	14	8	138

Table 4

OCRE ANNUAL COMPLAINT PROCESS OVERVIEW -- 1999
October 1998 - September 1999
Table 4. Breakdown of Complaints Referrals

Start Date	USDA	DOD	DOEd	HHS	HUD	DOJ	State	DOT	Treas	DOL	OPM	GSA	VA	EPA	EEOC	SSC	FTC	FAA	MSPB	NLRB	SSA	USPS	Other
October '98	0	2	1	1	2	53	2	1	3	1	0	0	4	0	9	0	1	0	0	0	0	1	14
November	1	1	1	4	3	107	0	2	1	1	0	0	2	0	6	0	2	0	0	0	0	0	5
December																							
January '99																							
February																							
March																							
April																							
May																							
June																							
July/August																							
September '99																							
Total	1	3	2	5	5	160	2	3	4	2	0	0	6	0	15	0	3	0	0	0	0	1	19

ITEM 15—CONSUMER PRODUCT SAFETY COMMISSION

REPORT ON ACTIVITIES TO IMPROVE SAFETY FOR OLDER CONSUMERS

Each year, according to estimates by the U.S. Consumer Product Safety Commission (CPSC), nearly one million people age 65 and older are treated in hospital emergency rooms for injuries associated with products they live with and use every day. The death rate for older people is almost 7 times that of the younger population for unintentional injuries involving consumer products. Consumer products used in and around the home are associated with over 40 deaths per 100,000 persons 65 and older, and over 6 deaths per 100,000 persons under 65.

Fires and burns in the home

Burns from fires in the home are a significant source of injury to older Americans. In fact, adults age 65 and over are twice as likely to die in fires as all ages combined. There are a number of steps older Americans can take to protect themselves.

CPSC recommends the installation and maintenance of smoke detectors on every floor of the home. Older consumers should look for nightwear that will resist flames, such as heavy weight fabric or tightly woven fabrics such as polyester, modacrylics, or fabrics made from wool.

Cooking fires also cause injury and death to older consumers. CPSC urges consumers to keep pot handles turned inward, and keep cooking surfaces and surrounding areas free from clutter and grease build-up. Also, CPSC advises consumers to avoid wearing loose clothing with flowing sleeves while cooking. CPSC is evaluating the feasibility of technologies to detect a pre-fire condition and shut the burner off before a fire occurs.

Older consumers are at greater risk of dying from fires involving upholstered furniture, mattresses, and bedding than the general population. To prevent such fires, CPSC cautions consumers to never smoke in bed, while drowsy, or while under the influence of medication or alcohol. Further, consumers are advised to use large, deep ashtrays for smoking debris and to let the contents cool before disposing of them. CPSC is currently considering ways to address upholstered furniture and mattress and bedding flammability.

Burns from hot tap water are another cause of injury to many older Americans. CPSC recommends that consumers turn down the temperature of their water heater to 120 degrees Fahrenheit to help prevent scalds.

In 1997 and 1998, CPSC distributed approximately 147,000 copies of "Safety for Older Consumers—Home Safety Checklist" (English and Spanish). The checklist is a room-by-room check of the home, identifying hazards and recommending ways to avoid in-

jury. Consumers may order a free copy by sending a postcard to "Home Safety Checklist," CPSC, Washington, D.C. 20207. This checklist is posted on the CPSC Web site at www.cpsc.gov under "Consumer-Publications."

CPSC, in partnership with the American Association of Retired Persons (AARP) and the National Association of State Fire Marshals, distributes another booklet to consumers, "Fire Safety Checklist for Older Consumers" (English and Spanish). In 1997 and 1998, CPSC distributed almost 21,000 copies of this publication. Consumers may request a free copy by sending a postcard to "Fire Safety Checklist," CPSC, Washington, D.C. 20207.

CPSC also contributed to the publication "What Smart Shoppers Know About Nightwear Safety." This brochure was developed by a group of experts in apparel flammability and distributed by the American Association of Retired Persons (AARP). The brochure encourages older consumers to look for sleepwear that is flame resistant. Consumers may request a copy by sending a postcard to AARP, 601 E Street, N.W., Washington, D.C. 20049.

Electrical wiring in older homes

In 1994–95, CPSC conducted a study of electrical wiring fires in older homes. This is a subject of particular importance to senior citizens, since they frequently live in older homes, which are especially vulnerable to electrical wiring fires. Based on this study, CPSC produced a video entitled "Wired for Safety," emphasizing hazards with old electrical wiring and safety measures to prevent fire and electric shock. About 3,000 copies of the video are distributed to electrical safety inspectors, code officials, and others nationwide.

CPSC launched this campaign to help prevent the estimated 40,000 home electrical wiring fires each year. These fires claim 400 lives and cost society $2.2 billion annually. Working with fire departments, electrical safety experts, and building code officials, CPSC encourages electrical reinspections and upgrades to home electrical wiring.

CPSC continues to distribute copies of its publication, "CPSC Guide to Home Wiring Hazards," and in 1997–98, distributed almost 10,000 copies. Consumers may obtain a free copy of this publication by sending a postcard to "Home Wiring Hazards," CPSC, Washington, D.C. 20207.

Grandchild safety

The role of grandparents may range from occasional babysitting to primary caregiving. A recent U.S. Census Bureau study states that 1.3 million children are entrusted to grandparents every day. In the years since grandparents were raising their own children, many safety issues have arisen or drastically changed. As more and more grandparents have become caregivers for American children, it became clear there was a need to reach them with critical child development and safety information.

In 1997, CPSC Chairman Ann Brown and noted pediatrician T. Berry Brazelton, M.D., head of Pampers Parenting Institute, unveiled the booklet, "A Grandparents Guide for Family Nurturing & Safety." This easy-to-read booklet contains important child care

and nurturing information for grandparents. It also features a safety checklist with potentially life saving tips for childproofing homes and protecting grandchildren, from newborns to five-year-olds.

The booklet is available free of charge through the Consumer Information Center. The toll-free number to call is 1–888–8–PUEBLO. The booklet is posted on both the Pampers Parenting Institute Web site at www.pampers.com and the CPSC Web site at www.cpsc.gov. To date, over 84,000 copies have been distributed.

Adult-friendly poison prevention packaging

Older consumers are involved in the childhood poisoning issue because many young children are poisoned when they swallow grandparents' medicine. In fact, about 20% of prescription medicines ingested by children under age 5 belong to grandparents or other relatives. Child-resistant (CR) packaging has saved children's lives. CPSC has data estimating that the widespread use of child-resistant closures on aspirin and oral prescription medicines saved the lives of at least 800 children under age five since 1974 (about 35 or more children saved annually). Net societal savings from this action are estimated at more than $150 million annually, due to prevented deaths. This savings is more than 3 times CPSC's 1999 budget of $47 million.

However, CR packaging can only work if people choose it and use it properly. Many older consumers find it difficult to open CR packaging and may not replace the caps or use the packaging at all. To make it easier for all adults, especially older ones, to use child-resistant packaging, CPSC in 1995 adopted a change in its rules for testing packaging under the Poison Prevention Packaging Act. The new regulation requires that packaging be tested by panels of adults 50 to 70 years of age rather than 18 to 45 years old, as was previously the case. This change—effective for packaging marketed after January 1998—assures that child resistant packaging is more "adult-friendly." The change has encouraged the industry to develop innovative closures that rely on older people's "cognitive skills" instead of their physical strength. CPSC expects the new packaging to help prevent more child poisonings. In addition, CPSC reminds all adults to keep medicines locked up and out of reach of children.

In 1994, Chairman Ann Brown awarded commendations to two companies for safety innovations in child-resistant packaging that were especially useful for older consumers. Procter and Gamble received an award for marketing a major product in adult-friendly child-resistant packaging and Sunbeam Plastics was recognized for developing an entire line of adult-friendly child-resistant packaging.

Sports safety for seniors

A recent CPSC study shows a 54% increase in the number of sports-related injuries suffered by persons 65 years of age and older between 1990 and 1996—from 34,400 to 53,000. The report shows that most of these increases in injuries to older persons are in connection with more active sports, such as bicycling, weight training and skiing. In 1998, the CPSC and the American Academy

of Orthopaedic (AAOS) Surgeons teamed up to help reverse this trend.

In a brochure they developed jointly, CPSC and AAOS give older Americans important tips for remaining safe while enjoying the many benefits of exercise. Exercise is beneficial for most people of all ages, and Americans are remaining more physically active into their 70s, 80s, and 90s. Studies cited by the AAOS show that exercise can result in a longer, healthier life, while building stronger bones and reducing joint and muscle pain. Exercise improves mobility and balance, and reduces the risk of falls and serious injuries like hip fractures. However, many injuries can occur while people exercise.

The CPSC/AAOS brochure strongly recommends the use of proper safety gear when exercising or participating in sports. Safety gear is the best way to reduce or eliminate injuries while exercising. For example, bicycling injuries to older Americans increased 75% from 1990 to 1996. Most bicycling injuries result from falls. Head injuries accounted for 21% of the injuries. Virtually none of the fall victims was wearing a bike helmet. The brochure recommends that bikers always wear a helmet. Injuries associated with exercise activity (aerobics, weight training, etc.) increased 173% between 1990 and 1996. The most common types of injuries were falls and strains. The brochure recommends that persons using exercise equipment should read instructions carefully and, if needed, ask someone qualified to help.

During 1998, CPSC distributed over 3,500 copies of this brochure, "Keep Active and Safe at Any Age." Consumers may order a copy of the brochure by calling toll-free at (800) 824–BONES or send a self-addressed, stamped business-size envelope to, "Keep Active" brochure, American Academy of Orthopaedic Surgeons, P.O. Box 1998, Des Plaines, IL 60017. Copies of the brochure and the CPSC report can be accessed at the CPSC web site at: http// www.cpsc.gov.

International Year of Older Persons 1999

The United Nations (UN) General Assembly recognized "humanity's demographic coming of age" by adopting 1999 as the International Year of Older Persons (IYOP). The UN is encouraging countries, organizations and governments at all levels to observe the IYOP. In 1998, CPSC joined the Federal Committee to prepare for the International Year of Older Persons. This Committee, comprised of 12 cabinet agencies and 15 other federal agencies, commissions, and councils, will work throughout 1999 and beyond to assure that the federal government is prepared for the aging of our society.

The CPSC is participating on both working subcommittees of the Federal Committee: the Media and Conference Subcommittees. The Media Subcommittee is assembling a number of activities that will be undertaken by members of the Federal Committee throughout 1999 and beyond. These activities include public awareness campaigns and media forums on aging issues. Execution of these activities will extend from programs and activities at the national level to grassroots community partnerships.

CPSC developed a media sheet that summarizes agency programs and activities supporting IYOP. On October 19, 1998, this media sheet was included in the Federal Committee's IYOP launch event press kit. The media sheet, CPSC publications and technical reports have been and will be used in a number of CPSC exhibits/displays and other CPSC supported programs around the country as IYOP activities continue. When appropriate, CPSC's Chairman Ann Brown will be involved in the Federal Committee's media activities at the national level, increasing public awareness of the many safety programs CPSC offers older consumers.

The CPSC is contributing to the development of the Federal Committee's conference scheduled for June 1 and 2, 1999. Top experts in the field of gerontology will be panelists at the conference, and federal agencies and other professionals in the field will develop recommendations for continued initiatives. CPSC will contribute its own safety related programs to the conference agenda.

ITEM 16—CORPORATION FOR NATIONAL SERVICE

On September 21, 1993, the President signed into law the National and Community Service Trust Act, which created the Corporation for National Service (Corporation). The Corporation's mission is to engage Americans of all ages and backgrounds in community-based service. This service addresses the Nation's unmet education, public safety, human and environmental need to achieve direct and demonstrable results. This commitment to "get things done" is honored by the Corporation's three national service initiatives: The National Senior Service Corps (Senior Corps), AmeriCorps, and Learn and Serve America.

NATIONAL SENIOR SERVICE CORPS: A THIRTY YEAR HISTORY OF LEADERSHIP IN SENIOR VOLUNTEERISM AND SERVICE

Senior Corps is comprised of three seasoned programs previously supported by the Federal agency ACTION and its predecessors:

- The Foster Grandparent Program enables seniors to provide individual support to children and youth with special and exceptional needs.
- The Retired and Senior Volunteer Program (RSVP), volunteers perform a myriad of services, including organizing neighborhood block watches, identifying sources of groundwater contamination, teaching computer classes, and participating in natural disaster recovery.
- The Senior Companion Program supports older volunteers who provide assistance that allow frail individuals to continue living independently and with enhanced quality of life.

In 1997, nearly half a million Senior Corps volunteers contributed their time, skills, wisdom and experience to addressing unmet community needs, while emphasizing the impact on both the individuals and the communities served.

TABLE 1.—NATIONAL SNAPSHOT OF THE SENIOR CORPS PROGRAMS [1]

Program	Number of local projects	Number of volunteers	Volunteer hours of service to communities (million hours)
FGP	305	25,300	23.8
RSVP	751	453,300	80
SCP	191	13,900	11.8
Totals	1,247	492,500	115.6

[1] Source for all Senior Corps program and volunteer related data: 1997 Annual Project Profile of Volunteer Activities (PPVA), Corporation for National Service, National Senior Service Corps.

TABLE 2.—SENIOR CORPS PROGRAMS IN THE COMMUNITY

Program	Number of local projects	Number of census districts served	Number of local public and nonprofit agencies with senior corps volunteers
FGP	305	826	8,410
RSVP	751	1,416	70,500
SCP	191	603	3,200
Totals	1,247	2,845	82,110

FUNDING THE NATIONAL SENIOR SERVICE CORPS—A COST-EFFECTIVE FEDERAL INVESTMENT TO BENEFIT LOCAL COMMUNITIES

The total federal funding for National Senior Service Corps programs in fiscal year 1998 was $163,240,000, apportioned among each of the three programs as follows:

TABLE 3.—NATIONAL SENIOR SERVICE CORPS FY '98 FEDERAL FUNDING [2]

[Dollars in millions]

Senior Corps Program	FY '98 funding
Foster Grandparent Program	$87.6
Retired and Senior Volunteer Program (RSVP)	$40.3
Senior Companion Program	$35.4
Total	$163.3

[2] Source for fiscal data: FY '98 federal appropriation, Corporation for National Service, National Senior Service Corps.

Senior Corps projects are locally sponsored and administered. Within the broad framework of its legislation, service activities grow out of agreements among the participants, funded projects, and the communities served. As a result, these activities reflect a mix of needs unique to each community.

The community-driven focus is, in large part, a reason for the local non-federal support enjoyed by Senior Corps programs.

TABLE 4.—SENIOR CORPS PROGRAMS AND NON-FEDERAL LOCAL CONTRIBUTIONS

Senior Corps Program	FY '98 federal investment	Non-federal local contribution	Percentage of non-federal support for every federal dollar
Foster Grandparent Program	$87.6 40 cents per dollar	$34.8	40 percent
Retired and Senior Volunteer Program (RSVP)	40.3 $1.05 per dollar	42.4	105 percent
Senior Companion Program	35.4 61 cents per dollar	21.8	61 percent
Total	163.3	99	

Senior Corps programs allow local agencies to provide greater levels of service within their relatively small operating budgets and demands placed on them as community service providers. The mon-

etary value of the volunteer services provided by Senior Corps volunteers exceeds one billion dollars.[3]

TABLE 5.—SENIOR CORPS PROGRAMS AND RETURN ON THE FEDERAL INVESTMENT

Senior Corps Program	FY '97 annual volunteer service hours	Value of service	Return on federal investment
Foster Grandparent Program	23.8 million hours	$315 million	4-fold return
Retired and Senior Volunteer Program (RSVP).	80 million hours	$1.1 billion	31-fold return
Senior Companion Program	11.8 million	$156 million	5-fold return
Total	115.6 million hours	$1.5 billion	

VOLUNTEER OPPORTUNITIES FOR OLDER ADULTS: AMERICA'S MOST ABUNDANT NATURAL RESOURCE

Twice as many older adults live in the United States today as 30 years ago and the number of persons over age 55 will double again by 2025. Three factors make older persons the nation's best increasing natural resource:

- Good Health—More than 80 percent of Americans age 65 and over report no difficulties with activities of daily living. Less than 5 percent are institutionalized.
- More Time—Americans are now spending a third of their lives in retirement, freeing an average of more than 20 hours a week to engage in additional activities.
- High Interest—According to the Independent Sector, a Washington, D.C.-based organization that studies American volunteerism, when persons 55 and older are asked to volunteer, over 70 percent do.

Service by seniors is changing the definition of satisfaction and success in post-retirement, and is increasingly regarded as an essential ingredient in productive aging. For example, in a 2.5-year follow-up of the MacArthur Successful Aging study, participation in volunteer activities was predictive of improved functioning in older adults, with 32 percent lower risk of poor physical function in those so involved, independent of the effects of being physically active. There is preliminary evidence from the same study that the amount of time one is involved in formal volunteering activities is important in conferring health benefits, with greater time involvement predictive of the level of physical functioning two years later. Finally, there is evidence that organized and structured roles and behavior are among the best predictors of survival (Fried, Freedman, et al., 1997). It follows, therefore, that public investment in volunteer service by seniors is not only prudent, but that it has multiple benefits.

[3] Based on the 1996 Biannual Report, Giving and Volunteering in the United States, Independent Sector, which assigned a comparable value of $13.24 per hour to volunteer service.

NATIONAL SENIOR SERVICE CORPS–SIGNIFICANT ACTIVITIES, 1997–1998

SENIOR CORPS VOLUNTEERS: MEETING COMMUNITY NEEDS

As a new millennium approaches, the Senior Corps is at an unprecedented juncture. On one hand, a new generation of older Americans—more healthy, educated, and numerous than any before it—will provide tremendous energy and resources to the senior service movement. On the other hand, economic realities and funding cutbacks at all levels require increased innovation in the delivery of volunteer services.

In this new environment, it is anticipated that funding must go to those programs that can distinguish themselves among competitors by demonstrating value, cost-effectiveness, and significant results in solving critical community needs. Thus, the Senior Corps is aggressively moving beyond talking about "how much time and how many seniors we provide" to answering the question "what difference do we make?"

Senior Corps' evolution in vision requires programming focused on outcomes. *Programming for Impact* is the framework that was developed by the Senior Corps in 1996 to facilitate this evolution. It advocates an approach to service programming that integrates community need, accomplishment and impact into station and volunteer assignment development, planning and reporting. It also measures responsiveness to the community and thereby fosters recognition of seniors as a vital, invaluable resource.

As a vehicle to achieve accomplishment and outcome based programming, *Programming for Impact* will also position Senior Corps to meet Government Performance and Results Act (GPRA) requirements. As a result of the 1993 Government Performance and Results Act, appropriation decisions will now be based on performance and results of Federal agencies. Adding an outcome based focus, *Programming for Impact* is one of the Performance Indicators for Senior Corps' GPRA goals.

Some key components of the *Programming for Impact* initiative in 1997 included state impact conferences involving key stakeholders in dialogue and consensus building, and development and dissemination of technical assistance guidebooks and project management tools.

DEMONSTRATION PROGRAMS

Senior Corps tests new models for mobilizing older persons in service through its demonstration authority, which builds on the effective practices and lessons learned through RSVP, the Foster Grandparents Program, and the Senior Companion Program and positions Senior Corps to tap the vast civic potential of the aging baby boom generation.

In the Fall of 1997, the Corporation launched the 2-year Seniors for Schools initiative in nine communities. This initiative built on and refined the core elements of the Experience Corps model, and narrowed the focus by adopting the goals of "America Reads" which focuses on literacy for young children in grades K–3. The Seniors for Schools program effectively enlisted men and women over the

age of 55 to serve in teams and make a significant commitment to help children learn and read.

Seniors for School completed its first full year of operation in summer of 1998. During this first year the nine projects developed partnerships with AmeriCorps*VISTA, RSVP and FGP projects and 27 Title I elementary schools. They trained and placed a total of 250 senior volunteers in these 27 schools and served more than fifteen hundred children with substantially below-average reading skills in kindergarten through grade three. In year two (1998–1999 school year), the majority of Seniors for Schools volunteers are expected to continue in the program. Several sites will expand to new schools and reach more children.

The Corporation for National Service and the American Association of Retired Persons (AARP) are working together to implement the new Experience Corps for Independent Living in six communities.

The purpose of the Experience Corps for Independent Living, funded in FY '98 to begin operation in FY '99, is to develop and test innovative approaches to using the time, talents, experience and resources of volunteers over 55 to significantly expand the size and scope of volunteer efforts on behalf of independent living services for frail elders and their caregivers in specific communities.

SENIOR CORPS VOLUNTEERS: SUPPORTING AMERICA READS

Reading is a key to success in education and in life. Unfortunately, many children fall behind their classmates because they do not learn to read early and read well. The America Reads initiative calls on all Americans to help ensure that every child can read well and independently by the end of third grade. The National Senior Service Corps, with its strong track record of effective service in tutoring and literacy, is playing an important role in this initiative.

Senior Corps devoted 100 percent of new Foster Grandparent and Retired and Senior Volunteer Program funds available for program expansion in FY 1998 to America Reads activities.

- Nine Seniors for Schools projects recruited and placed 243 senior volunteers who helped 1,570 children with literacy activities at 27 schools.
- Through Programs of National Significance grant augmentations to existing Senior Corps projects, a total of $5.5 million (RSVP and FGP) was awarded to support child literacy.

  RSVP: $2.2 million was awarded to 222 RSVP projects supporting up to 24–26 volunteers per project (5,500 new volunteers).

  FGP: $3.3 million was awarded to 87 existing FGP projects supporting approximately 790 new Volunteer Service Years.
- Nine new RSVP projects were funded in late FY '98, which will recruit and place approximately 1,200 RSVP volunteers to focus on America Reads activities in the first year, beginning operation in FY '99.
- Eleven new Foster Grandparent projects were funded, in late FY '98, which will create opportunities for approximately 680 new Volunteer Service Years; volunteers will focus on

America Reads activities in the first year, beginning operation in FY '99.

NATIONAL ORGANIZATION INITIATIVE

The purpose of the National Organization Initiative is to expand Senior Corps Programs through an approach that taps the expertise of national nonprofit organizations and builds on their existing networks of affiliates who operate programs at the local level. National organizations will explore ways to strengthen the role of senior volunteerism throughout their organizations and will support networking among their local affiliates selected as Senior Corps project sites.

In July 1998, the Corporation for National Service selected the following six national organizations to receive grants to promote senior service as a strategy within their organizations and support networking among designated local affiliates who will operate new Senior Corps projects:

- Big Brothers Big Sisters of America
- Child Welfare League of America/Generations United
- Lutheran Services in America
- Points of Light Foundation
- Save the Children Federation
- Volunteers of America

EVALUATION ACTIVITIES

- The Retired and Senior Volunteer Program Study was conducted by Westat, Inc in 1995–96, and was the first large-scale study of the program in over a decade. The study helped to clarify a number of challenges to be addressed as RSVP moves forward, of which 8 were selected as highest priority.

To position RSVP for the future, sustain its best features and respond to the critical issues raised in the Westat study, the Senior Corps convened focus groups of stakeholders in FY 98 regarding the 8 priority challenges. Focus group members explored challenges and made recommendations. A follow up report will be released to RSVP stakeholders that will also include suggested next steps to address the challenges and move forward.

- The Foster Grandparent Program Study, conducted by Westat, Inc in 1997, sought to learn about what Foster Grandparents actually do in Head Start centers and how their contributions benefit the children they serve. The findings show that the majority of Foster Grandparents engage in a wide range of activities and interactions that contribute positively to children, classrooms and stations.

The final report, "Effective Practices of Foster Grandparents in Head Start Centers: Benefits for Children, Classrooms and Centers" will be disseminated to Foster Grandparent projects nationwide in the first quarter of FY 1999.

FOSTER GRANDPARENT PROGRAM

In 1997–1998, more than 25,000 Foster Grandparents gave care and attention to 175,500 children and youth with special and exceptional needs.

PROGRAM OVERVIEW

The Foster Grandparent Program began in August 1965 as a national demonstration effort. Since its inception, the Foster Grandparent Program has provided young and old the chance to grow together. Today, nearly 25,000 older Americans serve as Foster Grandparents. They give care and attention every day to 175,500 children and youth with special and exceptional needs. In improving the lives of children they serve, Foster Grandparents also profoundly enrich their own lives.

Foster Grandparents volunteer in schools, hospitals, drug treatment centers, correctional institutions, and Head Start and day care centers. They offer emotional support to children who have been abused and neglected, mentor troubled teenagers and young mothers, care for premature infants and children with physical disabilities or severe illnesses, including AIDS. This special care helps young people grow, gain confidence, and become more productive citizens. In the process, Foster Grandparents strengthen communities by providing personalized services to special needs children that community budgets cannot afford and by building strong bridges across generations.

Foster Grandparents must be at least 60 years of age and meet certain income eligibility requirements. They serve 20 hours per week and receive pre-service orientation, training throughout their service, and a modest stipend to offset the cost of volunteering. They receive reimbursement for transportation, some meals during service, an annual physical, and accident and liability insurance while on duty.

NON-FEDERAL SUPPORT AND RETURN ON FEDERAL INVESTMENT

Foster Grandparent projects are jointly funded by federal, state, and local governments, with significant support from the private sector. The federal budget to support these projects was $77.8 million in fiscal year 1997 and $87.6 million in fiscal year 1998. The non-federal local contribution averaged $34.8 million annually or 40 cents for every federal dollar invested—well above the 10 percent match required by law and attesting to the success of Foster Grandparents in the communities they serve.

In 1997–1998, 25,000 Foster Grandparents served through 305 projects sponsored by local nonprofit agencies.

The 23.8 million hours of service provided annually by Foster Grandparents was worth over $315 million, according to a study by the Independent Sector. This represented more than a four-fold return on the federal dollars invested in these projects.

NATIONAL PROFILE OF FOSTER GRANDPARENT VOLUNTEERS

Characteristics	Percent
Distribution by Gender:	
Female	90
Male	10
Distribution by Age:	
60–69 years	31
70–79 years	51
80–89 years	13
85 and over	5
Distribution by Ethnicity:	
White	48
African American	37
Hispanic/Latino	10
Asian/Pacific Islander	4
American Indian/Alaskan Native	2
Population Served:	
Urban	60
Rural	40

The federal cost of a Foster Grandparent serving 20 hours a week is $3,670 annually.

FOSTER GRANDPARENT PROJECT EXAMPLES

HELPING TEEN MOTHERS AND THEIR BABIES—WAYNE ACTION GROUP FOR ECONOMIC SOLVENCY FOSTER GRANDPARENT PROGRAM, NORTH CAROLINA

Foster Grandparents serving with the Wayne Action Group for Economic Solvency (WAGES) project provide support for teenage mothers and their children. They go to the mothers homes, mentoring the mothers in home management and parenting skills, while providing nutritional and nurturing support for their babies. Last year, four Foster Grandparents served five teen mothers who have a total of seven children.

The teen moms are making responsible decisions and getting their lives, and those of their babies, on track, thanks to the guidance and support of the Foster Grandparents. Four of the mothers went back to school and three have already earned their GED certificates. These achievements were possible because the Foster Grandparents cared for the babies while their moms were in school. Four of the mothers are now employed. None have become pregnant since they were served by a Foster Grandparent.

In-home placement of Foster Grandparents has proven a positive response to the challenges created by the growing number of teen mothers in Goldsboro and Wayne County, North Carolina.

ENHANCING CHILD LITERACY AND READING SKILLS—SOUTHEAST FOSTER GRANDPARENT PROGRAM—MONTICELLO, ARKANSAS

Four elementary schools in southeast Arkansas began utilizing Foster Grandparents as literacy and reading tutors the fall of 1997. Teachers from each of the four schools referred children whose total reading scores were in the bottom of the lowest 25 percent on the Stanford 9, a national norm-based test. The lowest scoring 64 children were assigned to 16 Foster Grandparents. All Foster Grandparents have been trained in caregiving, reading and helping children to stay on task. Students were pre-tested in the fall and will be post-tested at the end of the school year to determine

progress. According to teacher evaluations collected in January 1998, all students are reading with more confidence after just a few months with a Foster Grandparent, and 77 percent of the teachers reported that the children were making excellent progress.

MENTORING JUVENILE OFFENDERS TOWARD REHABILITATION FOSTER GRANDPARENT PROGRAM OF SACRAMENTO—SACRAMENTO, CALIFORNIA

The rate of juvenile offenders in Sacramento County has grown 16.5 percent in the last six years. Most of these offenders, according to the Probation Department and the Sacramento County Office of Education, are reading below grade level or have dropped out of school. Seven Foster Grandparents were placed in units with children and youth providing one-to-one mentoring and support, as well as in a school setting working on reading and math skills. The Foster Grandparents helped their assigned youth increase reading levels by 1–2 grade levels, study for and pass GED, and help develop proficiency for post-placement college enrollment.

HELPING STUDENTS OVERCOME LEARNING DISABILITIES—SIETE DEL NORTE FOSTER GRANDPARENT PROGRAM—FAIRVIEW, NEW MEXICO

At the Espanola Elementary School, eight Foster Grandparents volunteers tutored 32 students with learning disabilities and/or attention deficit disorders. According to school officials, Foster Grandparents presence at the Espanola Elementary School helped to improve language and reading skills, and increased school attendance by 50 percent among students with special needs. It is also noted that children assisted by Grandparents improved more rapidly than non-assigned students in behavioral and study habits.

ACADEMIC TUTORING FOR STUDENTS IN NEED OF EXTRA ASSISTANCE—HALL/ADAMS/BUFFALO FOSTER GRANDPARENT PROGRAM—GRAND ISLAND, NEBRASKA

Foster Grandparents were placed in 16 elementary schools to provide one-to-one tutoring with 96 second grade students who scored lowest on Basic Skills test. Foster Grandparents spend an average of four hours a week with each child tutoring him or her in reading, spelling and word recognition. Midway through the school year, the second grade students were retested using the same test, and results substantiated that children tutored by the Foster Grandparents recognized more words, performed better on spelling tests and raised their reading levels higher than the children who did not receive any extra attention or tutoring.

SENIOR COMPANION PROGRAM

In 1997–1988, almost 13,900 Senior Companion volunteers served 48,900 frail older persons.

PROGRAM OVERVIEW

The Senior Companion Program awarded funds to its first projects in August 1974. This program recruits low-income persons age 60 and over to provide assistance and friendship to frail adults, mostly the elderly who are homebound and living alone. The services Senior Companions provide help others to live independently

in their own homes instead of moving to expensive institutional care. Senior Companions also provide respite care for short periods of time to relieve live-in caretakers.

By assisting clients with simple chores, providing transportation to medical appointments, and offering needed contact to the outside world, Senior Companions often provide the supportive services that the frail need to continue to live independently. Because Senior Companions spend significant amounts of time with their clients, they are often a critical part of the client's "care team." Senior Companions alert doctors and family members of potential health problems, allowing them to provide immediate care to the client.

Senior Companions serve three to four clients in an average week, predominately in the client's own homes. Community organizations that address health needs of the elderly such as home health care agencies, hospitals, or centers on aging serve as volunteer stations. These organizations identify individuals who need assistance and then work with Senior Companion projects to match them with available Senior Companions.

Like Foster Grandparents, Senior Companions serve 20 hours per week. They also receive pre-service orientation, training throughout their service, and a modest stipend to offset the cost of volunteering. They are provided transportation, some meals during service, an annual physical, and accident and liability insurance while on duty.

Compared with the average cost of nursing home care, which exceeds $38,000 annually, the annual cost for Senior Companion services is $4,000. This is a very cost-effective way to provide supportive services to an average of five frail adults per Senior Companion, who might otherwise be at risk for premature institutionalization.

NON-FEDERAL SUPPORT AND RETURN ON FEDERAL INVESTMENT

In 1997–1998, almost 14,000 Senior Companions served over 49,000 frail adults annually through 191 projects sponsored by local public and private nonprofit agencies. These projects are jointly funded by the federal government, state and local governments, and the private sector. The federal budget for Senior Companions was $35.4 million in fiscal year 1998. The non-federal local contribution to these projects was $21.8 million. This non-federal contribution represented a support of 61 percent, or 61 cents for every federal dollar invested—well above the 10 percent match required by law.

In fiscal year 1997, the 11.8 million hours of service provided annually by Senior Companions was estimated to be worth $156 million, according to a study by the Independent Sector. This represents almost a five-fold return on the federal dollars invested in the program.

NATIONAL PROFILE OF SENIOR COMPANION VOLUNTEERS

Characteristics	Percent
Distribution by Gender:	
Female	85
Male	15

NATIONAL PROFILE OF SENIOR COMPANION VOLUNTEERS—Continued

Characteristics	Percent
Distribution by Age:	
60–69 years	35
70–79 years	51
80–89 years	10
85 and over	4
Distribution by Ethnicity:	
White	51
African American	33
Hispanic/Latino	11
Asian/Pacific Islander	4
American Indian/Alaskan Native	2
Population Served:	
Urban	63
Rural	37

The federal cost of a Senior Companion serving 20 hours a week is $4,000 annually.

SENIOR COMPANION PROJECT EXAMPLES

HELPING CLIENTS WITH ALZHEIMER'S DISEASE.—SENIOR COMPANION PROGRAM OF KANKAKEE COUNTY—KANKAKEE, ILLINOIS

Statistics provided by the Illinois Department on Aging, based on 1990 census information, indicate that approximately 3,027 persons residing in Kankakee and Iroquois county communities, age 65 and over, are afflicted with Alzheimers or a related disease. The average cost of nursing home care for one person exceeds $30,000 annually. Three Senior Companions who received specialized training in Alzheimers care provide respite care to 5 clients—reducing the possibility of premature nursing home placement for conditions that limit activities of daily living. It is anticipated that the Senior Companions' assistance will allow 4 of the 5 clients to remain at home for a minimum of 8 months. The cost savings of delaying nursing home placement is anticipated at $1,690 per month. An overall savings of $54,096 for 4 clients is projected.

PROVIDING NON-SKILLED MEDICAL CARE TO ADULTS WITH AIDS—NEW ORLEANS COUNCIL ON AGING SENIOR COMPANION PROGRAM—NEW ORLEANS, LOUISIANA

Two Senior Companions were assigned to the Shelter Resources, Inc., a residential care facility for adults living with AIDS. They received 20 hours of pre-service training and 20 hours of orientation from the "House" Personal Care Attendant. They also attended meetings at the end of the month with the station supervisor. The Companions provided non-skilled medical care to selected residents needing extra care. They prepared meals, escorted clients to the doctor or to social activities, assisted with personal care and room cleanliness. The Companions, each serving 20 hours per week, are surrogate "family" to those without family support.

SERVING FRAIL TRIBAL SENIORS ON NATIVE AMERICAN RESERVATIONS.—SENIOR COMPANION PROGRAM OF MINNESOTA—RED LAKE, MINNESOTA

Many elders of the Red Lake Indian Reservation have no transportation or telephone, little income, and few family members near-

by. Four Senior Companions serve 40 home bound elders, providing them with rides to the grocery store, medical appointments and elder nutrition sites for meals. The Senior Companions report that their clients are now eating better and more regularly. Companions also have been instrumental in obtaining emergency medical care for clients when needed, in addition to helping to link them to other community services.

HELPING OLDER RUSSIAN IMMIGRANTS ACCLIMATE TO A NEW CULTURE—SCP OF FRANKLIN COUNTY—COLUMBUS, OHIO

Senior Companions are helping 57 older Russian refugees become familiar with their new home by providing English tutoring, translation, obtain housing, food, and other living necessities, and accompanying clients to appointments. Twenty-four clients gained proficiencies to allow independence; 33 improved their English skills and understanding of culture, and 4 clients passed the citizenship test to become new United States citizens.

PROVIDING QUALITY SERVICES TO HOMEBOUND CLIENTS—FLORIDA DEPARTMENT OF ELDER AFFAIRS SENIOR COMPANION PROGRAM, TALLAHASSEE

Florida continues to lead the nation in proportion of older persons comprising its general population. The fastest growing segment of its older population are those ages 80 and older, leading to a high incidence of Alzheimer's and other chronic illnesses. In the Tallahassee area, 141 Senior Companion volunteers provided services to 618 frail and chronically ill seniors, of which 110 were diagnosed with Alzheimer's. Senior Companions provide essential services to frail clients who require extra assistance to maintain independence, including light chore services, companionships, and transportation.

RETIRED AND SENIOR VOLUNTEER PROGRAM (RSVP)

In 1997–1998, RSVP volunteers provided over 31.9 million hours of service to individuals needing assistance with health and nutritional concerns. The volunteers helped individuals who are mentally, developmentally and physically disabled; rehabilitating from alcoholism and drugs; and those suffering from HIV/AIDS. The volunteers also provided health education, nutritional support, and in-home care for those needing peer support and meal preparation.

PROGRAM OVERVIEW

The Retired and Senior Volunteer Program (RSVP) was launched in 1971. RSVP matches the personal interests and skills of seniors age 55 and older with opportunities to help solve the problems in their communities and meet the needs of their fellow citizens. RSVP volunteers choose how and where they want to serve—from a few to over 40 hours a week in a wide range of community organizations such as hospitals, youth recreation centers, schools, and local police stations.

RSVP volunteers provide hundreds of community services. They tutor at-risk youth, computerize information systems for community health organizations, get children immunized, teach parenting

skills to teen parents, provide respite care for caregivers of Alzheimer's victims, establish neighborhood watch groups, plan community gardens, and a myriad of other community services. Through such efforts, RSVP is meeting community needs that strained local budgets cannot afford to address.

In 1997–1998, over 453,300 RSVP volunteers served through 751 projects sponsored by local public and private nonprofit agencies. RSVP volunteers contributed over 80 million hours of service to their communities annually in approximately 1,416 counties nationwide.

RSVP projects are jointly funded by the federal government, state and local governments, and the private sector. RSVP's federal budget was $40.3 million in fiscal year 1998. The non-federal local contribution to RSVP projects was $42.4 million, demonstrating broad support for RSVP across the country. For every federal dollar invested, $1.05 was contributed from non-federal sources in 1998.

Of the combined RSVP cost, federal funding provided 49 percent, while 51 percent of the costs were borne by local funding sources.

According to the study conducted by the Independent Sector, the over 80 million hours of service provided annually by RSVP volunteers had an estimated worth of over $1.1 billion. This represented approximately a 31-fold return on the federal dollars invested in RSVP.

NATIONAL PROFILE OF RSVP VOLUNTEERS

Characteristics	Percent
Distribution by Gender:	
Female	75
Male	25
Distribution by Age:	
55–59	4
60–64 years	13
65–74 years	41
75–84 years	33
85 and over	10
Distribution by Ethnicity:	
White	86
African American	9
Hispanic/Latino	4
Asian/Pacific Islander	1
American Indian/Alaskan Native	1
Population Served:	
Urban	54
Rural	46

The federal cost of an RSVP volunteer serving is approximately 40 cents per hour of service.

RSVP Project Examples

HELPING DOMESTIC VIOLENCE VICTIMS—MILES CITY RSVP—MILES CITY, MONTANA

There were 224 new cases of domestic abuse reported in Custer County. Determined to rid their community of domestic violence, the Custer Network Against Domestic Abuse (CNADA) sought RSVP volunteers to work in public education and victim counseling. The volunteers also trained 22 school teachers on how to help children who either are abused themselves or who witnessed abuse in the home and established an awareness program at the local

high school. These education efforts have contributed to additional arrests in their County and fewer victims being returned to their abusers.

CREATING A SAFER ENVIRONMENT THROUGH RECYCLING EFFORTS—NORTH PLATTE RSVP—NORTH PLATTE, NEBRASKA

RSVP volunteers participated in a countywide goal to reduce the tonnage of phone books entering the city's landfill. RSVP volunteers collected and counted books from elementary schools, then transported them to a storage facility. Wal-Mart stores provided trucks to transport the books to a recycling facility. A total of seven RSVP volunteers spent 74 hours collecting and transporting 20,000 telephone books, representing 8.5 tons of paper waste that was recycled, thus kept out of the North Platte landfill.

PROVIDING TAX ASSISTANCE FOR LOW-INCOME RESIDENTS—CITY OF LAS CRUCES RSVP—LAS CRUCES, NEW MEXICO

The Department of Human Services estimates that there are 31,770 household in Dona Ana County who live under the poverty level, and that at least 20 percent of those households failed to file their taxes and receive a tax refund. The goal of the Volunteer Income Tax Assistance Program (VITAP) is to enable senior volunteers to provide free income tax services to the low-income and elderly population. Forty-five RSVP volunteers assisted more than 2,400 low-income and elderly households to prepare their taxes, and provided over 2,409 hours of income tax service. Calculated at the average commercial filing fee of $90 per household, the volunteers saved their clients a total of more than $216,000 in 1997. Each household received a refund of approximately $100 each.

HELPING TO KEEP COMMUNITIES SAFE—MANDAN GOLDEN AGE CLUB RSVP—BISMARCK, NORTH DAKOTA

The Mandan Golden Age Club, Retired and Senior Volunteer Program utilized a "Summer of Safety" demonstration grant to revitalize the Bismarck Police Department's Neighborhood Watch program. Although the police had originally estimated it would take eight years to accomplish an effective Neighborhood Watch program, the RSVP volunteers had organized Watch areas for every street in the city (about 600 separate Neighborhood Watch areas) within several months. Comparing data over the years, Officer Dwight Offerman of the Bismarck Police Department estimated that RSVP efforts had directly contributed to a 27 percent reduction in residential burglaries. The categories of theft and vandalism also were reduced by 15 and 23 percent across the same period.

WORKING TO BUILD A COMMUNITY KITCHEN PROJECT—CACHE COUNTY SENIOR CITIZENS CENTER KITCHEN PROJECT—LOGAN, UTAH

Since 1973, the Cache County Senior Citizens Center were providing congregate meals for senior citizens and all delivered meals to homebound senior citizens of Cache County. With the growth of the aging population, it was determined that a larger kitchen and service area at the Center was needed. A team of volunteers including Retired and Senior Volunteer Program volunteers were re-

cruited for the "Kitchen Project," which included research and work on facility design, staffing costs, nutritional requirements and meal planning, raw foods vs. prepared food cost comparison, land requirements, building permit requirements, community support, and fund-raising. Over the past several years, more than 80 RSVP volunteers, along with other community volunteers, raised more than $600,000 needed to build the new kitchen facility. The chairman, an RSVP Volunteer, alone donated over 900 recorded hours to the project. In addition to research and fund-raising, the volunteers also contributed "hands-on" work in the building and ground preparation. Relationships were developed between local food businesses and the Community Food Pantry who offered to provide ongoing food donations to the "Kitchen." The new state of the art kitchen facility opened for business in July of 1997.

HELPING TO RID COMMUNITIES OF HAZARDOUS WASTE—AREA I AGENCY OF AGING/VOLUNTEER CENTER—EUREKA, CALIFORNIA

A large freighter ran into a dock in November 1997, causing 4,500 gallons of crude oil to spill in to the bay. This hazardous waste disaster was a threat to the wildlife and marine life. The Volunteer Center/Retired and Senior Volunteer Program acted as the disaster volunteer management center, recruiting community assistance by preparing public service announcements for radio and television. The Volunteer Center/RSVP and the State Department of Fish and Game and the County Office of Emergency Services worked together to ascertain immediate cleanup needs and mobilize resources. The result of the volunteers work shows that 200 shore birds were saved, 79 volunteers in total were successfully recruited from the community, 40 volunteers helped at the Marine Wildlife Facility, and 12 volunteers were recruited to join the Volunteer Center/RSVP program to serve as disaster preparedness volunteers.

HELPING TO IMMUNIZE CHILDREN—RSVP OF SOUTHEASTERN WYOMING—CHEYENNE, WYOMING

The required State Of Wyoming vaccinations for seventh graders include Hepatitis B series, Measles, Mumps, Rubella and a tetanus booster. It is estimated that 30,000 children in Wyoming need the immunization series. To date, 4 RSVP volunteers have contributed 288 hours of service to a school clinic set up by the City/County Health Department. With the help of RSVP volunteers, the school clinic immunized 1,020 students this past year. "The City County Health Department values the time and talent provided by the RSVP volunteers," states Connie Diaz, Director of City/County Health Department in Cheyenne.

ITEM 17 ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROTECTION AGENCY– SENIOR

ENVIRONMENTAL EMPLOYMENT (SEE) PROGRAM

The Environmental Programs Assistance Act of 1984 (Public Law 98-313) authorizes the Environmental Protection Agency (EPA) to enter into grants or cooperative agreements with private non-profit organizations, as designated by the Secretary of Labor under Title V of the Older American Act. These cooperative agreements are administered by the EPA under the Senior Environmental Employment (SEE) Program. These cooperative agreements are administered in support of environmental programs, objectives, and initiatives by utilizing the wealth of talent, experience, and skills possessed by retired and unemployed older Americans age 55 and over.

There are six national aging organizations that EPA funded cooperative agreements with during calendar years 1997 and 1998: the National Older Worker Career Center, Inc., National Council on Aging, National Caucus and Center on Black Aged, Inc., National Association for Hispanic Elderly, National Senior Citizens Education and Research Center, and the National Asian Pacific Center on Aging. Under the auspices of cooperative agreements, these organizations are responsible for recruiting qualified candidates for enrollment in positions that support federal, state and local environmental offices.

SEE enrollees provide a wide array of technical assistance. These older workers are involved in every aspect of EPA's effort to improve our environment, from providing clerical support to performing radiation and air pollution monitoring. The SEE program provides support to EPA where it is most needed, and enables older workers to remain active using their matured skills to perform meaningful tasks that promote and support important agency environmental programs and initiatives.

Another EPA initiative that affects older Americans was undertaken by the Office of Policy and the Office of Air and Radiation. These program offices jointly produced a report, The Benefits and Costs of the Clean Air Act, October 1997, which was required by Section 812 of the Clean Air Act Amendments of 1990. The report assesses the effect of the Clean Air Act on the public health, economy, and environment of the United States. While the report did not specifically address issues affecting the elderly, its findings revealed that a monetary benefit was derived from the avoided ill health effects that specific pollutants could have on the elderly. The health effects were calculated specifically for an older age group, rather than the population at large.

This retrospective analysis evaluates the benefits and costs of emissions controls imposed by the Clean Air Act and associated regulations. The focus is primarily on the criteria pollutants sulfur dioxide, nitrogen oxides, carbon monoxide, particulate matter, ozone, and lead since essential data were lacking for air toxics. To determine the range and magnitude of effects of these pollutant emission reductions, EPA compared and contrasted two regulatory scenarios. The "control scenario" reflects the actual conditions resulting from the historical implementation of the 1970 and 1977 Clean Air Acts. In contrast, the "no control" scenario reflects expected conditions under the assumption that, absent the passage of the 1970 Clean Air Act, the scope, form, and stringency of air pollution control programs would have remained as they were in 1970. The "no control" scenario represents a hypothesized "baseline" against which to measure the effects of the Clean Air Act. The differences between the public health, air quality, and economic and environmental conditions resulting from these two scenarios represent the benefits and costs of the Act's implementation from 1970 to 1990.

United States Environmental Protection Agency
Office of Administration and Resources Management
Office of Policy, Planning and Evaluation
October 1997

EPA

The Benefits and Costs of the Clean Air Act

1970 to 1990

Internet Address (URL) • http://www.epa.gov
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Abstract

Section 812 of the Clean Air Act Amendments of 1990 requires the Environmental Protection Agency (EPA) to periodically assess the effect of the Clean Air Act on the "public health, economy, and environment of the United States," and to report the findings and results of its assessments to the Congress. Section 812 further directs EPA to evaluate the benefits and costs of the Clean Air Act's implementation, taking into consideration the Act's effects on public health, economic growth, the environment, employment, productivity, and the economy as a whole. This EPA Report to Congress presents the results and conclusions of the first section 812 assessment, a retrospective analysis of the benefits and costs of the Clean Air Act from 1970 to 1990. Future reports will detail the findings of prospective analyses of the benefits and costs of the Clean Air Act Amendments of 1990, as required by section 812.

This retrospective analysis evaluates the benefits and costs of emissions controls imposed by the Clean Air Act and associated regulations. The focus is primarily on the criteria pollutants sulfur dioxide, nitrogen oxides, carbon monoxide, particulate matter, ozone, and lead since essential data were lacking for air toxics. To determine the range and magnitude of effects of these pollutant emission reductions, EPA compared and contrasted two regulatory scenarios. The "control scenario" reflects the actual conditions resulting from the historical implementation of the 1970 and 1977 Clean Air Acts. In contrast, the "no-control" scenario reflects expected conditions under the assumption that, absent the passage of the 1970 Clean Air Act, the scope, form, and stringency of air pollution control programs would have remained as they were in 1970. The no-control scenario represents a hypothesized "baseline" against which to measure the effects of the Clean Air Act. The differences between the public health, air quality, and economic and environmental conditions resulting from these two scenarios represent the benefits and costs of the Act's implementation from 1970 to 1990.

To identify and quantify the various public health, economic, and environmental differences between the control and no-control scenarios, EPA employed a sequence of complex modeling and analytical procedures. Data for direct compliance costs were used in a general equilibrium macroeconomic model to estimate the effect of the Clean Air Act on the mix of economic and industrial activity comprising the nation's economy. These differences in economic activity were used to model the corresponding changes in pollutant emissions, which in turn provided the basis for modeling resulting differences in air quality conditions. Through the use of concentration-response functions derived from the scientific literature, changes in air quality provided the basis for calculating differences in physical effects between the two scenarios (e.g, reductions in the incidence of a specific adverse health effect, improvements in visibility, or changes in acid deposition rates). Many of the changes in physical effects were assigned an economic value on the basis of a thorough review and analysis of relevant studies from the economics, health effects, and air quality literature. The final analytical step involved aggregating these individual economic values and assessing the related uncertainties to generate a range of overall benefits estimates.

Comparison of emissions modeling results for the control and no-control scenarios indicates that the Clean Air Act has yielded significant pollutant emission reductions. The installation of stack gas scrubbers and the use of fuels with lower sulfur content produced a 40 percent reduction in 1990 sulfur dioxide emissions from electric utilities; total suspended particulate emissions were 75 percent lower as a result of controls on industrial and utility smokestacks. Motor vehicle pollution controls adopted under the Act were largely responsible for a 50 percent reduction in carbon monoxide emissions, a 30 percent reduction in emissions of nitrogen oxides, a 45

percent reduction in emissions of volatile organic compounds, and a near elimination of lead emissions. Several of these pollutants (primarily sulfur dioxide, nitrogen oxides, and volatile organic compounds) are precursors for the formation of ozone, particulates, or acidic aerosols; thus, emissions reductions have also yielded air quality benefits beyond those directly associated with reduced concentrations of the individual pollutants themselves.

The direct benefits of the Clean Air Act from 1970 to 1990 include reduced incidence of a number of adverse human health effects, improvements in visibility, and avoided damage to agricultural crops. Based on the assumptions employed, the estimated economic value of these benefits ranges from $5.6 to $49.4 trillion, in 1990 dollars, with a mean, or central tendency estimate, of $22.2 trillion. These estimates do not include a number of other potentially important benefits which could not be readily quantified, such as ecosystem changes and air toxics-related human health effects. The estimates are based on the assumption that correlations between increased air pollution exposures and adverse health outcomes found by epidemiological studies indicate causal relationships between the pollutant exposures and the adverse health effects.

The direct costs of implementing the Clean Air Act from 1970 to 1990, including annual compliance expenditures in the private sector and program implementation costs in the public sector, totaled $523 billion in 1990 dollars. This point estimate of direct costs does not reflect several potentially important uncertainties, such as the degree of accuracy of private sector cost survey results, that could not be readily quantified. The estimate also does not include several potentially important indirect costs which could not be readily quantified, such as the possible adverse effects of Clean Air Act implementation on capital formation and technological innovation.

Thus, the retrospective analysis of the benefits and costs of implementing the Clean Air Act from 1970 to 1990 indicates that the mean estimate of total benefits over the period exceeded total costs by more than a factor of 42. Taking into account the aggregate uncertainty in the estimates, the ratio of benefits to costs ranges from 10.7 to 94.5.

The assumptions and data limitations imposed by the current state of the art in each phase of the modeling and analytical procedure, and by the state of current research on air pollution's effects, necessarily introduce some uncertainties in this result. Given the magnitude of difference between the estimated benefits and costs, however, it is extremely unlikely that eliminating these uncertainties would invalidate the fundamental conclusion that the Clean Air Act's benefits to society have greatly exceeded its costs. Nonetheless, these uncertainties do serve to highlight the need for additional research into the public health, economic, and environmental effects of air pollution to reduce potential uncertainties in future prospective analyses of the benefits and costs of further pollution controls mandated by the Clean Air Act Amendments of 1990.

Executive Summary

Purpose of the Study

Throughout the history of the Clean Air Act, questions have been raised as to whether the health and environmental benefits of air pollution control justify the costs incurred by industry, taxpayers, and consumers. For the most part, questions about the costs and benefits of individual regulatory standards continue to be addressed during the regulatory development process through Regulatory Impact Analyses (RIAs) and other analyses which evaluate regulatory costs, benefits, and such issues as scope, stringency, and timing. There has never been, however, any comprehensive, long-term, scientifically valid and reliable study which answered the broader question:

"How do the overall health, welfare, ecological, and economic benefits of Clean Air Act programs compare to the costs of these programs?"

To address this void, Congress added to the 1990 Clean Air Act Amendments a requirement under section 812 that EPA conduct periodic, scientifically reviewed studies to assess the benefits and the costs of the Clean Air Act. Congress further required EPA to conduct the assessments to reflect central tendency, or "best estimate," assumptions rather than the conservative assumptions sometimes deemed appropriate for setting protective standards.

This report is the first in this ongoing series of Reports to Congress. By examining the benefits and costs of the 1970 and 1977 Amendments, this report addresses the question of the overall value of America's historical investment in cleaner air. The first Prospective Study, now in progress, will evaluate the benefits and costs of the 1990 Amendments.

Study Design

Estimates of the benefits and costs of the historical Clean Air Act are derived by examining the differences in economic, human health, and environmental outcomes under two alternative scenarios: a "control scenario" and a "no-control scenario." The control scenario reflects actual historical implementation of clean air programs and is based largely on historical data. The no-control scenario is a hypothetical scenario which reflects the assumption that no air pollution controls were established beyond those in place prior to enactment of the 1970 Amendments. Each of the two scenarios is evaluated by a sequence of economic, emissions, air quality, physical effect, economic valuation, and uncertainty models to measure the differences between the scenarios in economic, human health, and environmental outcomes. Details of this analytical sequence are presented in Chapter 1 and are summarized in Figure 1 of that chapter.

Study Review

EPA is required, under section 812, to consult both a panel of outside experts and the Departments of Labor and Commerce in designing and implementing the study.

The expert panel was organized in 1991 as the Advisory Council on Clean Air Act Compliance Analysis (hereafter "Council") under the auspices of EPA's Science Advisory Board (SAB). Organizing the external panel under the auspices of the SAB ensured that the peer review of the study would be conducted in a rigorous, objective, and publicly open manner. Eminent scholars and practitioners with expertise in economics, human health sciences, environmental sciences, and air quality modeling served on the Council and its technical subcommittees, and these reviewers met many times throughout the design and implementation phases of the study. During this ongoing, in-depth review, the Council provided valuable advice pertaining to the development and selection of data, selection of models and assumptions, evaluation and interpretation of the analytical findings, and characterization of those findings in several successive drafts of the Report to Congress. The present report was vastly improved as a result of the Council's rigorous and constructive review effort.

With respect to the interagency review process, EPA expanded the list of consulted agencies and convened a series of meetings during the design and early implementation phases from 1991 through late 1994. In late 1994, to ensure that all interested parties and the public received consistent information about remaining analytical issues and emerging results, EPA decided to use the public SAB review process as the primary forum for presenting and discussing issues and results. The Interagency Review Group was therefore discontinued as a separate process in late 1994.

A final, brief interagency review, pursuant to Circular A-19, was organized in August 1997 by the Office of Management and Budget and conducted following the completion of the extensive expert panel peer review by the SAB Council. During the course of the final interagency discussions, it became clear that several agencies held different views pertaining to several key assumptions in this study as well as to the best techniques to apply in the context of environmental program benefit-cost analyses, including the present study. The concerns include: (1) the extent to which air quality would have deteriorated from 1970 to 1990 in the absence of the Clean Air Act, (2) the methods used to estimate the number of premature deaths and illnesses avoided due to the CAA, (3) the methods used to estimate the value that individuals place on avoiding those risks, and (4) the methods used to value non-health related benefits. However, due to the court deadline the resulting concerns were not resolved during this final, brief interagency review. Therefore, this report reflects the findings of EPA and not necessarily other agencies in the Administration. Interagency discussion of some of these issues will continue in the context of the future prospective section 812 studies and potential regulatory actions.

Summary of Results

Direct Costs

To comply with the Clean Air Act, businesses, consumers, and government entities all incurred higher costs for many goods and services. The costs of providing goods and services to the economy were higher primarily due to requirements to install, operate, and maintain pollution abatement equipment. In addition, costs were incurred to design and implement regulations, monitor and report regulatory compliance, and invest in research and development. Ultimately, these higher costs of production were borne by stockholders, business owners, consumers, and taxpayers.

Figure ES-1 summarizes the historical data on Clean Air Act compliance costs by year, adjusted both for inflation and for the value of long-term investments in equipment. Further adjusting the direct costs incurred each year to reflect their equivalent worth in the year 1990, and then summing these annual results, yields an estimate of approximately $523 billion for the total value of 1970 to 1990 direct expenditures (see Appendix A for calculations).

Emissions

Emissions were substantially lower by 1990 under the control scenario, as shown in Figure ES-2. Sulfur dioxide (SO_2) emissions were 40 percent lower, primarily due to utilities installing scrubbers and/or switching to lower sulfur fuels. Nitrogen oxides (NO_x) emissions were 30 percent lower by 1990, mostly because of the installation of catalytic converters on highway vehicles. Volatile organic compound (VOC) emissions were 45 percent lower and carbon monoxide (CO) emissions were 50 percent lower, also primarily due to motor vehicle controls.

For particulate matter, it is important to recognize the distinction between reductions in directly emitted particulate matter and reductions in ambient concentrations of particulate matter in the atmosphere. As discussed further in the next section, changes in particulate matter air quality depend both on changes in emissions of primary particles (i.e., air pollution which is already in solid particle form) and on changes in emissions of gaseous pollutants, such as sulfur dioxide and nitrogen oxides, which can be converted to particulate matter through chemical transformation in the atmosphere. Emissions of primary particulates

Figure ES-1. Total Estimated Direct Compliance Costs of the CAA (in billions of inflation-adjusted dollars).

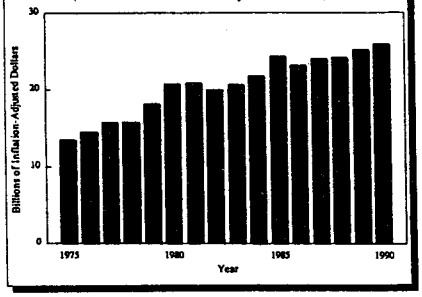
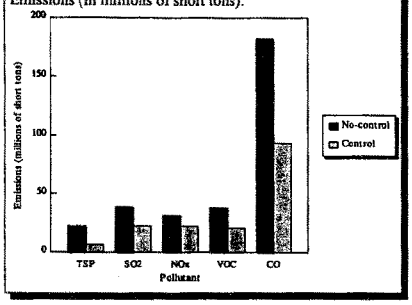


Figure ES-2. 1990 Control and No-control Scenario Emissions (in millions of short tons).



were 75 percent lower under the control scenario by 1990 than under the no-control scenario. This substantial difference is primarily due to vigorous efforts in the 1970s to reduce visible emissions from utility and industrial smokestacks.

Lead (Pb) emissions for 1990 are reduced by about 99 percent from a no-control level of 237,000 tons to about 3,000 tons under the control scenario.[1] The vast majority of the difference in lead emissions under the two scenarios is attributable to reductions in the use of leaded gasoline.

These reductions were achieved during a period in which population grew by 22.3 percent and the national economy grew by 70 percent.

Air Quality

The substantial reductions in air pollutant emissions achieved by the Clean Air Act translate into significantly improved air quality throughout the U.S. For sulfur dioxide, nitrogen oxides, and carbon monoxide, the improvements in air quality under the control scenario are assumed to be proportional to the estimated reduction in emissions. This is because, for these pollutants, changes in ambient concentrations in a particular area are strongly related to changes in emissions in that area. While the differences in control and no-control scenario air quality for each of these pollutants vary from place to place because of local variability in emissions reductions, by 1990 the national average improvements in air quality for these pollutants were: 40 percent reduction in sulfur dioxide, 30 percent reduction in nitrogen oxides, and 50 percent reduction in carbon monoxide.

Ground-level ozone is formed by the chemical reaction of certain airborne pollutants in the presence of sunlight. Reductions in ground-level ozone are therefore achieved through reductions in emissions of its precursor pollutants, particularly volatile organic compounds (VOCs) and nitrogen oxides (NO_x).[2] The differences in ambient ozone concentrations estimated under the control scenario vary significantly from one location to another, primarily because of local differences in the relative proportion of VOCs and NO_x, weather conditions, and specific precursor emissions reductions. On a national average basis, ozone concentrations in 1990 are about 15 percent lower under the control scenario. For several reasons, this overall reduction in ozone is significantly less than the 30 percent reduction in precursor NO_x and 45 percent reduction in precursor VOCs. First, significant natural (i.e., biogenic) sources of VOCs limit the level of ozone reduction achieved by reductions in man-made (i.e., anthropogenic) VOCs. Second, current knowledge of atmospheric photochemistry suggests that ozone reductions will tend to be proportionally smaller than reductions in precursor emissions. Finally, the plume model system used to estimate changes in urban ozone for this study is incapable of handling long-range transport of ozone from upwind areas and multi-day pollution events in a realistic manner.

There are many pollutants which contribute to ambient concentrations of particulate matter. The relative contributions of these individual pollutant species to ambient particulate matter concentrations vary from one region of the country to the next, and from urban areas to rural areas. The most important particle species, from a human health standpoint, may be the fine particles which can be respired deep into the lungs. While some fine particles are directly emitted by sources, the most important fine particle species are formed in the atmosphere through chemical conversion of gaseous pollutants. These species are referred to as secondary particles. The three most important secondary particles are (1) sulfates, which derive primarily from sulfur dioxide emissions; (2) nitrates, which derive primarily from nitrogen oxides emissions; and (3) organic aerosols, which can be directly emitted or can form from volatile organic com-

[1] Results for lead are not shown in Figure ES-2 because the absolute levels of lead emissions are measured in thousands, not millions, of tons and will not be discernible on a graph of this scale.

[2] Ambient NOx concentrations are driven by anthropogenic emissions whereas ambient VOCs result from both anthropogenic and biogenic sources (e.g., terpenes emitted by trees).

Table ES-1. Criteria Pollutant Health Benefits — Estimated Distributions of 1990 Incidences of Avoided Health Effects (in thousands of incidences reduced) for 48 State Population. [1]

Endpoint	Pollutant(s)	Affected Population	Annual Effects Avoided [2] (thousands)			Unit
			5th %ile	Mean	95th %ile	
Premature Mortality	PM [3]	30 and over	112	184	257	cases
Premature Mortality	Lead	all	7	22	54	cases
Chronic Bronchitis	PM	all	498	674	886	cases
Lost IQ Points	Lead	children	7,440	10,400	13,000	points
IQ less than 70	Lead	children	31	45	60	cases
Hypertension	Lead	men 20-74	9,740	12,600	15,600	cases
Coronary Heart Disease	Lead	40-74	0	22	64	cases
Atherothrombotic brain infarction	Lead	40-74	0	4	15	cases
Initial cerebrovascular accident	Lead	40-74	0	6	19	cases
Hospital Admissions						
All Respiratory	PM & Ozone	all	75	89	103	cases
Chronic Obstructive Pulmonary Disease & Pneumonia	PM & Ozone	over 65	52	62	72	cases
Ischemic Heart Disease	PM	over 65	7	19	31	cases
Congestive Heart Failure	PM & CO	65 and over	28	39	50	cases
Other Respiratory-Related Ailments						
Shortness of breath, days	PM	children	14,800	68,000	133,000	days
Acute Bronchitis	PM	children	0	8,700	21,600	cases
Upper & Lower Respiratory Symptoms	PM	children	5,400	9,500	13,400	cases
Any of 19 Acute Symptoms	PM & Ozone	18-65	15,400	130,000	244,000	cases
Asthma Attacks	PM & Ozone	asthmatics	170	850	1,520	cases
Increase in Respiratory Illness	NO2	all	4,840	9,800	14,000	cases
Any Symptom	SO2	asthmatics	26	264	706	cases
Restricted Activity and Work Loss Days						
Minor Restricted Activity Days	PM & Ozone	18-65	107,000	125,000	143,000	days
Work Loss Days	PM	18-65	19,400	22,600	25,600	days

[1] The following additional human welfare effects were quantified directly in economic terms: household soiling damage, visibility impairment, decreased worker productivity, and agricultural yield changes.

[2] The 5th and 95th percentile outcomes represent the lower and upper bounds, respectively, of the 90 percent credible interval for each effect as estimated by uncertainty modeling. The mean is the arithmetic average of all estimates derived by the uncertainty modeling. See Chapter 7 and Appendix I for details.

[3] In this analysis, PM is used as a proxy pollutant for all non-Lead (Pb) criteria pollutants which may contribute to premature mortality. See Chapter 5 and Appendix D for additional discussion.

pound emissions. This highlights an important and unique feature of particulate matter as an ambient pollutant: more than any other pollutant, reductions in particulate matter are actually achieved through reductions in a wide variety of air pollutants. In other words, controlling particulate matter means controlling "air pollution" in a very broad sense. In the present analysis, reductions in sulfur dioxide, nitrogen oxides, volatile organic compounds, and directly-emitted primary particles achieved by the Clean Air Act result in a national average reduction in total suspended particulate matter of about 45 percent by 1990. For the smaller particles which are of greater concern from a health effects standpoint (i.e., PM_{10} and $PM_{2.5}$), the national average reductions were also about 45 percent.

Reductions in sulfur dioxide and nitrogen oxides also translate into reductions in formation, transport, and deposition of secondarily formed acidic compounds such as sulfate and nitric acid. These are the principal pollutants responsible for acid precipitation, or "acid rain." Under the control scenario, sulfur and nitrogen deposition are significantly lower by 1990 than under the no-control scenario throughout the 31 eastern states covered by EPA's Regional Acid Deposition Model (RADM). Percentage decreases in sulfur deposition range up to more than 40 percent in the upper Great Lakes and Florida-Southeast Atlantic Coast areas, primarily because the no-control scenario projects significant increases in the use of high-sulfur fuels by utilities in the upper Great Lakes and Gulf

Coast states. Nitrogen deposition is also significantly lower under the control scenario, with percentage decreases reaching levels of 25 percent or higher along the Eastern Seaboard, primarily due to higher projected emissions of motor vehicle nitrogen oxides under the no-control scenario.

Finally, decreases in ambient concentrations of light-scattering pollutants, such as sulfates and nitrates, are estimated to lead to perceptible improvements in visibility throughout the eastern states and southwestern urban areas modeled for this study.

Physical Effects

The lower ambient concentrations of sulfur dioxide, nitrogen oxides, particulate matter, carbon monoxide, ozone and lead under the control scenario yield a substantial variety of human health, welfare and ecological benefits. For a number of these benefit categories, quantitative functions are available from the scientific literature which allow estimation of the reduction in incidence of adverse effects. Examples of these categories include the human mortality and morbidity effects of a number of pollutants, the neurobehavioral effects among children caused by exposure to lead, visibility impairment, and effects on yields for some agricultural products.

A number of benefit categories, however, can not be quantified and/or monetized for a variety of reasons. In some cases, substantial scientific uncertainties prevail regarding the existence and magnitude of adverse effects (e.g., the contribution of ozone to air pollution-related mortality). In other cases, strong scientific evidence of an effect exists, but data are still too limited to support quantitative estimates of incidence reduction (e.g., changes in lung function associated with long-term exposure to ozone). Finally, there are effects for which there is sufficient information to estimate incidence reduction, but for which there are no available economic value measures; thus reductions in adverse effects cannot be expressed in monetary terms. Examples of this last category include relatively small pulmonary function decrements caused by acute exposures to ozone and reduced time to onset of angina pain caused by carbon monoxide exposure.

Table ES-1 provides a summary of the key differences in quantified human health outcomes estimated under the control and no-control scenarios. Results are presented as thousands of cases avoided in 1990 due to control of the pollutants listed in the table and reflect reductions estimated for the entire U.S. population living in the 48 continental states. Epidemiological research alone cannot prove whether a cause-effect relationship exists between an individual

Table ES-2. Major Nonmonetized, Adverse Effects Reduced by the Clean Air Act.

Pollutant	Nonmonetized Adverse Effects
Particulate Matter	Large Changes in Pulmonary Function Other Chronic Respiratory Diseases Inflammation of the Lung Chronic Asthma and Bronchitis
Ozone	Changes in Pulmonary Function Increased Airway Responsiveness to Stimuli Centroacinar Fibrosis Inflammation of the Lung Immunological Changes Chronic Respiratory Diseases Extrapulmonary Effects (i.e., other organ systems) Forest and other Ecological Effects Materials Damage
Carbon Monoxide	Decreased Time to Onset of Angina Behavioral Effects Other Cardiovascular Effects Developmental Effects
Sulfur Dioxide	Respiratory Symptoms in Non-Asthmatics Hospital Admissions Agricultural Effects Materials Damage Ecological Effects
Nitrogen Oxides	Increased Airway Responsiveness to Stimuli Decreased Pulmonary Function Inflammation of the Lung Immunological Changes Eye Irritation Materials Damage Eutrophication (e.g., Chesapeake Bay) Acid Deposition
Lead	Cardiovascular Diseases Reproductive Effects in Women Other Neurobehavioral, Physiological Effects in Children Developmental Effects from Maternal Exposure, inc IQ Loss [1] Ecological Effects
Air Toxics	All Human Health Effects Ecological Effects

[1] IQ loss from direct, as opposed to maternal, exposure is quantified and monetized. See Tables ES-1 And ES-3.

pollutant and an observed health effect. Although not universally accepted, this study uses the epidemiological findings about correlations between pollution and observed health effects to estimate changes in the number of health effects that would occur if pollution levels change. A range is presented along with the mean estimate for each effect, reflecting uncertainties which have been quantified in the underlying health effects literature.

Adverse human health effects of the Clean Air Act "criteria pollutants" sulfur dioxide, nitrogen oxides, ozone, particulate matter, carbon monoxide, and lead dominate the quantitative estimates in part because, although there are important residual uncertainties, evidence of physical consequences is greatest for these pollutants. The Clean Air Act yielded other benefits, however, which are important even though they are uncertain and/or difficult to quantify. These other benefit categories include (a) all benefits accruing from reductions in hazardous air pollutants (also referred to as air toxics), (b) reductions in damage to cultural resources, buildings, and other materials, (c) reductions in adverse effects on wetland, forest, and aquatic ecosystems, and (d) a variety of additional human health and welfare effects of criteria pollutants. A more complete list of these nonmonetized effects is presented in Table ES-2.

In addition to controlling the six criteria pollutants, the 1970 and 1977 Clean Air Act Amendments led to reductions in ambient concentrations of a small number of hazardous air pollutants. Although they are not fully quantified in this report, control of these pollutants resulted both from regulatory standards set specifically to control hazardous air pollutants and from incidental reductions achieved through programs aimed at controlling criteria pollutants.

Existing scientific research suggests that reductions in both hazardous air pollutants and criteria pollutants yielded widespread improvements in the functioning and quality of aquatic and terrestrial ecosystems. In addition to any intrinsic value to be attributed to these ecological systems, human welfare is enhanced through improvements in a variety of ecological services. For example, protection of freshwater ecosystems achieved through reductions in deposition of acidic air pollutants may improve commercial and recreational fishing. Other potential ecological benefits of reduced acid deposition include improved wildlife viewing, maintenance of biodiversity, and nutrient cycling. Increased growth and productivity of U.S. forests may have resulted

Table ES-3. Central Estimates of Economic Value per Unit of Avoided Effect (in 1990 dollars).

Endpoint	Pollutant	Valuation (mean est.)	
Mortality	PM & Lead	$4,800,000	per case /1
Chronic Bronchitis	PM	$260,000	per case
IQ Changes			
Lost IQ Points	Lead	$3,000	per IQ point
IQ less than 70	Lead	$42,000	per case
Hypertension	Lead	$680	per case
Strokes /2	Lead	$200,000 $150,000	per case-males /3 per case-females /3
Coronary Heart Disease	Lead	$52,000	per case
Hospital Admissions			
Ischemic Heart Disease	PM	$10,300	per case
Congestive Heart Failure	PM	$8,300	per case
COPD	PM & Ozone	$8,100	per case
Pneumonia	PM & Ozone	$7,900	per case
All Respiratory	PM & Ozone	$6,100	per case
Respiratory Illness and Symptoms			
Acute Bronchitis	PM	$45	per case
Acute Asthma	PM & Ozone	$32	per case
Acute Respiratory Symptoms	PM, Ozone, NO_2, SO_2	$18	per case
Upper Respiratory Symptoms	PM	$19	per case
Lower Respiratory Symptoms	PM	$12	per case
Shortness of Breath	PM	$5.30	per day
Work Loss Days	PM	$83	per day
Mild Restricted Activity Days	PM & Ozone	$38	per day
Welfare Benefits			
Visibility	DeciView	$14	per unit change in DeciView
Household Soiling	PM	$2.50	per household per PM-10 change
Decreased Worker Productivity	Ozone	$1	/4
Agriculture (Net Surplus)	Ozone	Change in Economic Surplus	

/1 Alternative results, based on assigning a value of $293,000 for each life-year lost are presented on pg. ES-9.

/2 Strokes are comprised of atherothrombotic brain infarctions and cerebrovascular accidents; both are estimated to have the same monetary value.

/3 The different valuations for stroke cases reflect differences in lost earnings between males and females. See Appendix G for a more complete discussion of valuing reductions in strokes.

/4 Decreased productivity valued as change in daily wages: $1 per worker per 10% decrease in ozone.

from reductions in ground-level ozone. More vigorous forest ecosystems in turn yield a variety of benefits, including increased timber production; improved forest aesthetics for people enjoying outdoor activities such as hunting, fishing, and camping; and improvements in ecological services such as nutrient cycling and temporary sequestration of global warming gases. These improvements in ecological structure and function have not been quantified in this assessment.

Economic Valuation

Estimating the reduced incidence of physical effects provides a valuable measure of health benefits for individual endpoints. However, to compare or aggregate benefits across endpoints, the benefits must be monetized. Assigning a monetary value to avoided incidences of each effect permits a summation, in terms of dollars, of monetized benefits realized as a result of the Clean Air Act, and allows that summation to be compared to the cost of the Clean Air Act.

Before proceeding through this step, it is important to recognize the substantial controversies and uncertainties which pervade attempts to characterize adverse human health and ecological effects of pollution in dollar terms. To many, dollar-based estimates of the value of avoiding outcomes such as loss of human life, pain and suffering, or ecological degradation do not capture the full and true value to society as a whole of avoiding or reducing these effects. Adherents to this view tend to favor assessment procedures which (a) adopt the most technically defensible dollar-based valuation estimates for analytical purposes but (b) leave the moral dimensions of policy evaluation to those who must decide whether, and how, to use cost-benefit results in making public policy decisions. This is the paradigm adopted in the present study. Given the Congressional mandate to perform a cost-benefit study of the Clean Air Act, the Project Team has endeavored to apply widely-recognized, customary techniques of Applied Economics to perform this cost-benefit analysis. However, EPA believes there are social and personal values furthered by the Clean Air Act which have not been effectively captured by the dollar-based measures used in this study. Therefore, EPA strongly encourages readers to look beyond the dollar-based comparison of costs and benefits of the Clean Air Act and consider the broader value of the reductions in adverse health and environmental effects which have been achieved as well as any additional adverse consequences of regulation which may not be reflected in the cost estimates reported herein.

For this study, unit valuation estimates are derived from the economics literature and reported in dollars per case (or, in some cases, episode or symptom-day)

Table ES-4. Total Estimated Monetized Benefits by Endpoint Category for 48 State Population for 1970 to 1990 Period (in billions of 1990 dollars).

Endpoint	Pollutant(s)	Present Value		
		5th %ile	Mean	95th %ile
Mortality	PM	$2,369	$16,632	$40,597
Mortality	Lead	$121	$1,339	$3,910
Chronic Bronchitis	PM	$409	$3,313	$10,401
IQ (Lost IQ Pts. + Children w/ IQ<70)	Lead	$271	$399	$551
Hypertension	Lead	$77	$98	$120
Hospital Admissions	PM, Ozone, Lead, & CO	$27	$57	$120
Respiratory-Related Symptoms, Restricted Activity, & Decreased Productivity	PM, Ozone, NO2, & SO2	$123	$182	$261
Soiling Damage	PM	$6	$74	$192
Visibility	particulates	$38	$54	$71
Agriculture (Net Surplus)	Ozone	$11	$23	$35

[3] All of these summary results are present values of the 1970 to 1990 streams of benefits and costs, discounted at five percent.

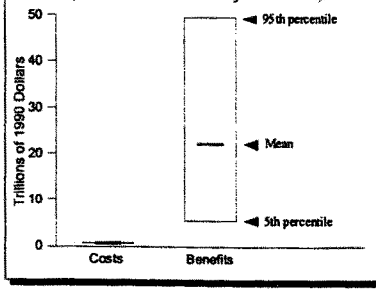
avoided for health effects and dollars per unit of avoided damage for human welfare effects. Similar to estimates of physical effects provided by health studies, each of the monetary values of benefits applied in this analysis can be expressed in terms of a mean value and a range around the mean estimate. This range reflects the uncertainty in the economic valuation literature associated with a given effect. These value ranges, and the approaches used to derive them, are described in Chapter 6 and Appendix I for each of the effects monetized in this study. The mean values of these ranges are shown in Table ES-3.

Monetized Benefits and Costs

The total monetized economic benefit attributable to the Clean Air Act is derived by applying the unit values (or ranges of values) to the stream of monetizable physical effects estimated for the 1970 to 1990 period. In developing these estimates, steps are taken to avoid double-counting of benefits. In addition, a computer simulation model is used to estimate ranges of plausible outcomes for the benefits estimates reflecting uncertainties in the physical effects and economic valuation literature (see Chapter 7 and Appendix I for details).

The economic benefit estimation model then generated a range of economic values for the differences in physical outcomes under the control and no-control scenarios for the target years of the benefits analysis: 1975, 1980, 1985, and 1990. Linear interpolation between these target years is used to estimate benefits in intervening years. These yearly results are then adjusted to their equivalent value in the year 1990 and summed to yield a range and mean estimate for the total monetized benefits of the Clean Air Act from 1970 to 1990. These results are summarized in Table ES-4.

Figure ES-3. Total Estimated Direct Compliance Costs of the CAA (in trillions of inflation-adjusted dollars).



Combining these benefits results with the cost estimates presented earlier yields the following analytical outcomes.[3]

- **The total monetized benefits of the Clean Air Act realized during the period from 1970 to 1990 range from 5.6 to 49.4 trillion dollars, with a central estimate of 22.2 trillion dollars.**
- **By comparison, the value of direct compliance expenditures over the same period equals approximately 0.5 trillion dollars.**
- **Subtracting costs from benefits results in net, direct, monetized benefits ranging from 5.1 to 48.9 trillion dollars, with a central estimate of 21.7 trillion dollars, for the 1970 to 1990 period.**
- **The lower bound of this range may go down and the upper bound may go up if analytical uncertainties associated with compliance costs, macroeconomic effects, emissions projections, and air quality modeling could be quantified and incorporated in the uncertainty analysis. While the range already reflects many important uncertainties in the physical effects and economic valuation steps, the range might also broaden further if additional uncertainties in these two steps could be quantified.**
- **The central estimate of 22.2 trillion dollars in benefits may be a significant underestimate due to the exclusion of large numbers of benefits from the monetized benefit estimate (e.g., all air toxics effects, ecosystem effects, numerous human health effects).**

Figure ES-3 provides a graphical representation of the estimated range of total monetized benefits and compares this range to estimated direct compliance costs. Clearly, even the lower bound estimate of monetized benefits substantially exceeds the costs of the historical Clean Air Act. As shown by the yearly data presented in Chapter 7, monetized benefits consistently and substantially exceeded costs throughout the 1970 to 1990 period.

Table ES-5. Alternative Mortality Benefits Mean Estimates for 1970 to 1990 (in trillions of 1990 dollars) Compared to Total 1970 to 1990 Compliance Costs.

	Mortality Benefits (trillions of dollars)	
Benefit Estimation Method	PM	PM+Pb
Statistical life method ($4.8M/case)	16.6	18.0
Life-years lost method ($293,000/year)	9.1	10.1
Total compliance cost	---	0.5

Alternative Results

The primary results of this analysis, including aggregate cost and benefit estimates which reflect many elements of the uncertainty associated with them, are presented above. However, some additional analysis is required to address an important issue raised by the EPA Science Advisory Board Council on Clean Air Act Compliance Analysis (a.k.a. Council) charged with reviewing the present study. Specifically, the Council believes it is appropriate to also display alternative premature mortality results based on an approach which estimates, and assigns a value to, the loss of life-years (i.e., the reduction in years of remaining life expectancy) resulting from the pollution exposure. The Council's position is based on the conclusion that older individuals are more susceptible to air pollution-induced mortality. EPA believes, however, that the simplifying assumptions which must be adopted to implement a life-years lost approach render its results less reliable, even for the purposes of economic efficiency analysis, than a value of statistical life approach. In addition, EPA is concerned about any analytical methodology which may be interpreted to justify conferring less environmental protection on particular individuals or groups of individuals (e.g., the elderly and/or sick). EPA therefore prefers at this time to continue with its current practice of assigning the same economic value to incidences of premature mortality regardless of the age and health status of those affected, and the primary results presented above reflect this view. Nevertheless, complete alternative results based on a value of statistical life-years lost (VSLY) approach are presented in Chapter 7 and Appendix I and are summarized below.

Table ES-5 summarizes and compares the results of the mortality benefits estimates based on the value of statistical life (VSL) and VSLY approaches. Estimated 1970 to 1990 benefits from PM-related mortality alone and total mortality (i.e., PM plus Lead) benefits are reported, along with total compliance costs for the same period. Adding the VSLY-based mortality benefits estimates to the non-mortality benefits estimates from Table ES-4 yields the following results for the overall analysis.

- ***Alternate Result:*** **The total monetized benefits of the Clean Air Act realized during the period from 1970 to 1990 range from 4.8 to 28.7 trillion dollars, with a central estimate of 14.3 trillion dollars.**

- ***Alternate Result:*** **Subtracting costs from benefits results in net, direct, monetized benefits ranging from 4.3 to 28.2 trillion dollars, with a central estimate of 13.7 trillion dollars, for the 1970 to 1990 period.**

The results indicate that the choice of valuation methodology significantly affects the estimated monetized value of historical reductions in air pollution-related premature mortality. However, the downward adjustment which would result from applying a VSLY approach in lieu of a VSL approach does not change the basic outcome of this study, viz. the estimated monetized benefits of the historical Clean Air Act substantially exceed the estimated historical costs of compliance.

Conclusions and Future Directions

First and foremost, these results indicate that the benefits of the Clean Air Act and associated control programs substantially exceeded costs. Even considering the large number of important uncertainties permeating each step of the analysis, it is extremely unlikely that the converse could be true.

A second important implication of this study is that a large proportion of the monetized benefits of the historical Clean Air Act derive from reducing two pollutants: lead and particulate matter[4] (see Table ES-4). Some may argue that, while programs to control these two pollutants may have yielded measurable

[4] Ambient particulate matter results from emissions of a wide array of precursor pollutants, including sulfur dioxide, nitrogen oxides, and organic compounds.

benefits in excess of measurable costs, estimates of measurable benefits of many other historical Clean Air Act programs and standards considered in isolation might not have exceeded measurable costs. While this may or may not be true, this analysis provides no evidence to support or reject such conjectures. On the cost side, the historical expenditure data used in this analysis are not structured in ways which allow attribution of control costs to specific programs or standards. On the benefit side, most control programs yielded a variety of benefits, many of which included reductions in other pollutants such as ambient particulate matter. For example, new source performance standards for sulfur dioxide emissions from coal-fired utility plants yielded benefits beyond those associated with reducing exposures to gaseous sulfur dioxide. The reductions in sulfur dioxide emissions also led to reductions in ambient fine particle sulfates, yielding human health, ecological, and visibility benefits.

This retrospective study highlights important areas of uncertainty associated with many of the monetized benefits included in the quantitative analysis and lists benefit categories which could not be quantified or monetized given the current state of the science. Additional research in these areas may reduce critical uncertainties and/or improve the comprehensiveness of future assessments. Particularly important areas where further research might reduce critical uncertainties include particulate matter-related mortality incidence, valuation of premature mortality, and valuation of particulate-related chronic bronchitis and cardiovascular disease. Additional research on hazardous air pollutants and on air pollution-related changes in ecosystem structure and function might help improve the comprehensiveness of future benefit studies. (See Appendix J for further discussion.)

Finally, the results of this retrospective study provide useful lessons with respect to the value and the limitations of cost-benefit analysis as a tool for evaluating environmental programs. Cost-benefit analysis can provide a valuable framework for organizing and evaluating information on the effects of environmental programs. When used properly, cost-benefit analysis can help illuminate important effects of changes in policy and can help set priorities for closing information gaps and reducing uncertainty. Such proper use, however, requires that sufficient levels of time and resources be provided to permit careful, thorough, and technically and scientifically sound data-gathering and analysis. When cost-benefit analyses are presented without effective characterization of the uncertainties associated with the results, cost-benefit studies can be used in highly misleading and damaging ways. Given the substantial uncertainties which permeate cost-benefit assessment of environmental programs, as demonstrated by the broad range of estimated benefits presented in this study, cost-benefit analysis is best used to inform, but not dictate, decisions related to environmental protection policies, programs, and research.

1

Introduction

Background and Purpose

As part of the Clean Air Act Amendments of 1990, Congress established a requirement under section 812 that EPA develop periodic Reports to Congress estimating the benefits and costs of the Clean Air Act itself. The first such report was to be a retrospective analysis, with a series of prospective analyses to follow every two years thereafter. This report represents the retrospective study, covering the period beginning with passage of the Clean Air Act Amendments of 1970, until 1990 when Congress enacted the most recent comprehensive amendments to the Act.

Since the legislative history associated with section 812 is sparse, there is considerable uncertainty regarding Congressional intent behind the requirement for periodic cost-benefit evaluations of the Clean Air Act (CAA). However, EPA believes the principal goal of these amendments was that EPA should develop, and periodically exercise, the ability to provide Congress and the public with up-to-date, comprehensive information about the economic costs, economic benefits, and health, welfare, and ecological effects of CAA programs. The results of such analyses might then provide useful information for refinement of CAA programs during future reauthorizations of the Act.

The retrospective analysis presented in this Report to Congress has been designed to provide an unprecedented examination of the overall costs and benefits of the historical Clean Air Act. Many other analyses have attempted to identify the isolated effects of individual standards or programs, but no analysis with the present degree of validity, breadth and integration has ever been successfully developed. Despite data limitations, considerable scientific uncertainties, and severe resource constraints; the EPA Project Team was able to develop a broad assessment of the costs and benefits associated with the major CAA programs of the 1970 to 1990 period. Beyond the statutory goals of section 812, EPA intends to use the results of this study to help support decisions on future investments in air pollution research. Finally, many of the methodologies and modeling systems developed for the retrospective study may be applied in the future to the ongoing series of section 812 prospective studies.

Clean Air Act Requirements, 1970 to 1990

The Clean Air Act establishes a framework for the attainment and maintenance of clean and healthful air quality levels. The Clean Air Act was enacted in 1970 and amended twice — in 1977 and most recently in 1990. The 1970 Clean Air Act contained a number of key provisions. First, EPA was directed to establish national ambient air quality standards for the major criteria air pollutants. The states were required to develop implementation plans describing how they would control emission limits from individual sources to meet and maintain the national standards. Second, the 1970 CAA contained deadlines and strengthened enforcement of emission limitations and state plans with measures involving both the states and the federal government. Third, the 1970 Act forced new sources to meet standards based on the best available technology. Finally, the Clean Air Act of 1970 addressed hazardous pollutants and automobile exhausts.

The 1977 Clean Air Act Amendments also set new requirements on clean areas already in attainment with the national ambient air quality standards. In addition, the 1977 Amendments set out provisions to help areas that failed to comply with deadlines for achievement of the national ambient air quality standards. For example, permits for new major sources and modifications were required.

The 1990 Clean Air Act Amendments considerably strengthened the earlier versions of the Act. With respect to nonattainment, the Act set forth a detailed and graduated program, reflecting the fact that problems in some areas are more difficult and complex than others. The 1990 Act also established a list of 189 regulated hazardous air pollutants and a multistep program for controlling emissions of these toxic air pollutants. Significant control programs were also established for emissions of acid rain precursors and stratospheric ozone-depleting chemicals. The biggest regulatory procedural change in the Act is the new permit program where all major sources are now required to obtain an operating permit. Finally, the amendments considerably expanded the enforcement provisions of the Clean Air Act, adding administrative penalties and increasing potential civil penalties.

Section 812 of the Clean Air Act Amendments of 1990

Section 812 of the Clean Air Act Amendments of 1990 requires the EPA to perform a "retrospective" analysis which assesses the costs and benefits to the public health, economy and the environment of clean air legislation enacted prior to the 1990 amendments. Section 812 directs that EPA shall measure the effects on "employment, productivity, cost of living, economic growth, and the overall economy of the United States" of the Clean Air Act. Section 812 also requires that EPA consider all of the economic, public health, and environmental benefits of efforts to comply with air pollution standards. Finally, section 812 requires EPA to evaluate the prospective costs and benefits of the Clean Air Act every two years.

Analytical Design and Review

Target Variable

The retrospective analysis was designed to answer the following question:

"How do the overall health, welfare, ecological, and economic benefits of Clean Air Act programs compare to the costs of these programs?"

By examining the overall effects of the Clean Air Act, this analysis complements the Regulatory Impact Analyses (RIAs) developed by EPA over the years to evaluate individual regulations. Resources were used more efficiently by recognizing that these RIAs, and other EPA analyses, provide complete information about the costs and benefits of specific rules. Furthermore, in addition to the fact that the RIAs already provide rule-specific benefit and cost estimates, the broad-scale approach adopted in the present study precludes reliable re-estimation of the benefits and costs of individual standards or programs. On the cost side, this study relies on aggregated compliance expenditure data from existing surveys. Unfortunately, these data do not support reliable allocation of total costs incurred to specific emissions reductions for the various pollutants emitted from individual facilities. Therefore, it is infeasible in the context of this study to assign costs to specific changes in emissions. Further complications emerge on the benefit side. To estimate benefits, this study calculates the change in incidences of adverse effects implied by changes in ambient concentrations of air pollutants. However, reductions achieved in emitted pollutants contribute to changes in ambient concentrations of those, or secondarily formed, pollutants in ways which are highly complex, interactive, and often nonlinear. Therefore, even if costs could be reliably matched to changes in emissions, benefits cannot be reliably matched to changes in emissions because of the complex, nonlinear relationships between emissions and the changes in ambient concentrations which are used to estimate benefits.

Focusing on the broader target variables of "overall costs" and "overall benefits" of the Clean Air Act, the EPA Project Team adopted an approach based on construction and comparison of two distinct scenarios: a "no-control scenario" and a "control scenario." The no-control scenario essentially freezes federal, state, and local air pollution controls at the levels of stringency and effectiveness which prevailed in 1970. The control scenario assumes that all federal, state, and local rules promulgated pursuant to, or in support of, the CAA during 1970 to 1990 were implemented. This analysis then estimates the differences between the economic and environmental outcomes associated with these two scenarios. For more information on the scenarios and their relationship to historical trends, see Appendix B.

Key Assumptions

Two key assumptions were made during the scenario design process to avoid miring the analytical process in endless speculation. First, the "no-control" scenario was defined to reflect the assumption that no additional air pollution controls were imposed by any level of government or voluntarily initiated by private entities after 1970. Second, it is assumed that the geographic distribution of population and economic activity remains the same between the two scenarios.

The first assumption is an obvious oversimplification. In the absence of the CAA, one would expect to see some air pollution abatement activity, either voluntary or due to state or local regulations. It is conceivable that state and local regulation would have required air pollution abatement equal to—or even greater than—that required by the CAA; particularly since some states, most notably California, have done so. If one were to assume that state and local regulations would have been equivalent to CAA standards, then a cost-benefit analysis of the CAA would be a meaningless exercise since both costs and benefits would equal zero. Any attempt to predict how state and local regulations would have differed from the CAA would be too speculative to support the credibility of the ensuing analysis. Instead, the no-control scenario has been structured to reflect the assumption that states and localities would not have invested further in air pollution control programs after 1970 in the absence of the federal CAA. That is, this analysis accounts for the costs and benefits of all air pollution

control from 1970 to 1990. Speculation about the precise fraction of costs and benefits attributable exclusively to the federal CAA is left to others. Nevertheless, it is important to note that state and local governments and private initiatives are responsible for a significant portion of these total costs and total benefits. At the same time, it must also be acknowledged that the federal CAA played an essential role in achieving these results by helping minimize the advent of pollution havens[1], establishing greater incentives for pollution control research and development than individual state or local rules could provide; organizing and promoting health and environmental research, technology transfer and other information management and dissemination services; addressing critical interstate air pollution problems, including the regional fine particle pollution which is responsible for much of the estimated monetary benefit of historical air pollution control; providing financial resources to state and local government programs; and many other services. In the end, however, the benefits of historical air pollution controls were achieved through partnerships among all levels of government and with the active participation and cooperation of private entities and individuals.

The second assumption concerns changing demographic patterns in response to air pollution. In the hypothetical no-control world, air quality is worse than that in the historical "control" world particularly in urban industrial areas. It is possible that in the no-control case more people, relative to the control case, would move away from the most heavily polluted areas. Rather than speculate on the scale of population movement, the analysis assumes no differences in demographic patterns between the two scenarios. Similarly, the analysis assumes no changes in the spatial pattern of economic activity. For example: if, in the no-control case, an industry is expected to produce greater output than it did in the control case, that increased output is produced by actual historical plants, avoiding the need to speculate about the location or other characteristics of new plants providing additional productive capacity.

Analytic Sequence

The analysis was designed and implemented in a sequential manner following seven basic steps which are summarized below and described in detail later in this report. The seven major steps were:

- direct cost estimation
- macroeconomic modeling
- emissions modeling
- air quality modeling
- health and environmental effects estimation
- economic valuation
- results aggregation and uncertainty characterization

By necessity, these components had to be completed sequentially. The emissions modeling effort had to be completed entirely before the air quality models could be configured and run; the air quality modeling results had to be completed before the health and environmental consequences of air quality changes could be derived; and so on. The analytical sequence, and the modeled versus actual data basis for each analytical component, are summarized in Figure 1 and described in the remainder of this section.

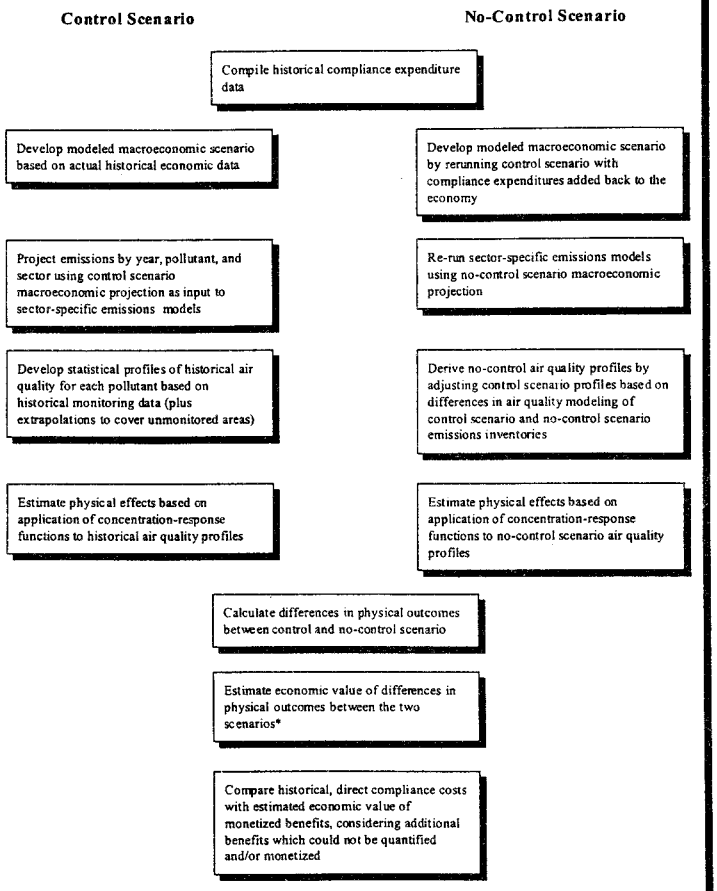
The first step of the analysis was to estimate the total direct costs incurred by public and private entities to comply with post-1970 CAA requirements. These data were obtained directly from Census Bureau and Bureau of Economic Analysis (BEA) data on compliance expenditures reported by sources, and from EPA analyses. These direct cost data were then adopted as inputs to the macroeconomic model used to project economic conditions–such as production levels, prices, employment patterns, and other economic indicators–under the two scenarios. To ensure a consistent basis for scenario comparison, the analysis applied the same macroeconomic modeling system to estimate control and no-control scenario economic conditions.[2] First, a control scenario was constructed by running the macroeconomic model using actual historical data for input factors such as economic growth rates during the 1970 to 1990 period. The model was then re-run for the no-control scenario by, in essence, returning all post-1970 CAA compliance expenditures to the economy. With these additional resources available for capital formation, personal consumption, and other purposes, overall economic conditions under the no-control scenario differed from those of the control scenario. In addition to providing estimates of the difference in overall economic growth and other outcomes under the two scenarios, these first two analytical steps were used to define specific economic conditions used as inputs to the emissions modeling effort, the first step in the estimation of CAA benefits.[3]

[1] "Pollution havens" is a term used to identify individual states or localities which permit comparatively high levels of pollution in order to attract and hold polluting industries and other activities.

[2] Using modeled economic conditions for both scenarios has both advantages and disadvantages. The principal disadvantage is that historical economic conditions "predicted" by a macroeconomic model will not precisely duplicate actual historical events and conditions. However, this disadvantage is outweighed by the avoidance of distortions and biases which would result from comparing a modeled no-control scenario with actual historical conditions. By using the same macroeconomic model for both scenarios, model errors and biases essentially cancel out, yielding more robust estimates of scenario differences, which are what this analysis seeks to evaluate.

[3] For example, the macroeconomic model projected different electricity sales levels under the two scenarios, and these sales levels were used as key input assumptions by the utility sector emissions model.

Figure 1. Summary of Analytical Sequence and Modeled versus Historical Data Basis.



* In some cases, economic value is derived directly from physical effects modeling (e.g., agricultural yield loss).

Using appropriate economic indicators from the macroeconomic model results as inputs, a variety of emissions models were run to estimate emissions levels under the two scenarios. These emissions models provided estimates of emissions of six major pollutants[4] from each of six key emitting sectors: utilities, industrial processes, industrial combustion, on-highway vehicles, off-highway vehicles, and commercial/residential sources. The resulting emissions profiles reflect state-wide total emissions from each pollutant-sector combination for the years 1975, 1980, 1985, and 1990.[5]

The next step toward estimation of benefits involved translating these emissions inventories into estimates of air quality conditions under each scenario. Given the complexity, data requirements, and operating costs of state-of-the-art air quality models–and the afore-mentioned resource constraints–the EPA Project Team adopted simplified, linear scaling approaches for a number of pollutants. However, for ozone and other pollutants or air quality conditions which involve substantial non-linear formation effects and/or long-range atmospheric transport and transformation, the EPA Project Team invested the time and resources needed to use more sophisticated modeling systems. For example, urban area-specific ozone modeling was conducted for 147 urban areas throughout the 48 contiguous states.

Up to this point of the analysis, both the control and no-control scenario were based on modeled conditions and outcomes. However, at the air quality modeling step, the analysis returned to a foundation based on actual historical conditions and data. Specifically, actual historical air quality monitoring data from 1970 to 1990 were used to define the control scenario. Air quality conditions under the no-control scenario were then derived by scaling the historical data adopted for the control scenario by the ratio of the modeled control and no-control scenario air quality. This approach took advantage of the richness of the historical data on air quality, provided a realistic grounding for the benefit measures, and yet retained the analytical consistency conferred by using the same modeling approach for both scenarios. The outputs of this step of the analysis were statistical profiles for each pollutant characterizing air quality conditions at each monitoring site in the lower 48 states.[6]

The control and no-control scenario air quality profiles were then used as inputs to a modeling system which translates air quality to physical outcomes –such as mortality, emergency room visits, or crop yield losses– through the use of concentration-response functions. These concentration-response functions were in turn derived from studies found in the scientific literature on the health and ecological effects of air pollutants. At this point, estimates were derived of the differences between the two scenarios in terms of incidence rates for a broad range of human health and other effects of air pollution by year, by pollutant, and by monitor.[7]

In the next step, economic valuation models or coefficients were used to estimate the economic value of the reduction in incidence of those adverse effects which were amenable to such monetization. For example, a distribution of unit values derived from the economic literature was used to estimate the value of reductions in mortality risk associated with exposure to particulate matter. In addition, benefits which could not be expressed in economic terms were compiled and are presented herein. In some cases, quantitative estimates of scenario differences in the incidence of a nonmonetized effect were calculated.[8] In many other cases, available data and techniques were insufficient to support anything more than a qualitative characterization of the change in effects.

Finally, the costs and monetized benefits were combined to provide a range of estimates for the partial, net economic benefit of the CAA with the range reflecting quantified uncertainties associated with the physical effects and economic valuation steps.[9] The term "partial" is emphasized because only a subset of the total potential benefits of the CAA could be represented in economic terms due to limitations in analyti-

[4] These six pollutants are total suspended particulates (TSP), sulfur dioxide (SO_2), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOCs), and lead (Pb). The other CAA criteria pollutant, ozone (O_3), is formed in the atmosphere through the interaction of sunlight and ozone precursor pollutants such as NO_x and VOCs.

[5] By definition, 1970 emissions under the two scenarios are identical.

[6] The one exception is particulate matter (PM). For PM, air quality profiles for both Total Suspended Particulates (TSP) and particulates less than or equal to 10 microns in diameter (PM_{10}) were constructed at the county level rather than the individual monitor level.

[7] Or, for PM, by county.

[8] For example, changes in forced expiratory volume in one second (FEV_1) as a result of exposure to ozone were quantified but could not be expressed in terms of economic value.

[9] Although considerable uncertainties surround the direct cost, macroeconomic modeling, emissions modeling,, and air quality modeling steps, the ranges of aggregate costs and benefits presented in this analysis do not reflect these uncertainties. While the uncertainties in these components were assessed qualitatively, and in some cases quantitatively, resource limitations precluded the multiple macroeconomic model, emissions model, and air quality model runs which would have been required to propagate these uncertainties through the entire analytical sequence. As a result, complete quantitative measures of the aggregate uncertainty in the cost and benefit estimates could not be derived. However, the ranges presented do reflect quantitative measures of the uncertainties in the two most uncertain analytical steps: physical effects estimation and economic valuation.

cal resources, available data and models, and the state of the science.[10] Of paramount concern to the EPA Project Team was the paucity of concentration-response functions needed to translate air quality changes into measures of ecological effect. In addition, significant scientific evidence exists linking air pollution to a number of adverse human health effects which could not be effectively quantified and/or monetized.[11]

Review Process

The CAA requires EPA to consult with an outside panel of experts--referred to statutorily as the Advisory Council on Clean Air Act Compliance Analysis (the Council)--in developing the section 812 analyses. In addition, EPA is required to consult with the Department of Labor and the Department of Commerce.

The Council was organized in 1991 under the auspices and procedures of EPA's Science Advisory Board (SAB). Organizing the review committee under the SAB ensured that review of the section 812 studies would be conducted by highly qualified experts in an objective, rigorous, and publicly open manner. The Council has met many times during the development of the retrospective study to review methodologies and interim results. While the full Council retains overall review responsibility for the section 812 studies, some specific issues concerning physical effects and air quality modeling have been referred to subcommittees comprised of both Council members and members of other SAB committees. The Council's Physical Effects Review Subcommittee met several times and provided its own review findings to the full Council. Similarly, the Council's Air Quality Subcommittee, comprised of members and consultants of the SAB Clean Air Scientific Advisory Committee (CASAC), held several teleconference meetings to review methodology proposals and modeling results.

With respect to the interagency review process, EPA expanded the list of consulted agencies and convened a series of meetings during the design and early implementation phases from 1991 through late 1994. In late 1994, to ensure that all interested parties and the public received consistent information about remaining analytical issues and emerging results, EPA decided to use the public SAB review process as the primary forum for presenting and discussing issues and results. The Interagency Review Group was therefore discontinued as a separate process in late 1994.

A final, brief interagency review, pursuant to Circular A-19, was organized in August 1997 by the Office of Management and Budget and conducted following the completion of the extensive expert panel peer review by the SAB Council. During the course of the final interagency discussions, it became clear that several agencies held different views pertaining to several key assumptions in this study as well as to the best techniques to apply in the context of environmental program benefit-cost analyses, including the present study. The concerns include: (1) the extent to which air quality would have deteriorated from 1970 to 1990 in the absence of the Clean Air Act, (2) the methods used to estimate the number of premature deaths and illnesses avoided due to the CAA, (3) the methods used to estimate the value that individuals place on avoiding those risks, and (4) the methods used to value non-health related benefits. However, due to the court deadline the resulting concerns were not resolved during this final, brief interagency review. Therefore, this report reflects the findings of EPA and not necessarily other agencies in the Administration. Interagency discussion of some of these issues will continue in the context of the future prospective section 812 studies and potential regulatory actions.

Report Organization

The remainder of the main text of this report summarizes the key methodologies and findings of retrospective study. The direct cost estimation and macroeconomic modeling steps are presented in Chapter 2. The emissions modeling is summarized in Chapter 3. Chapter 4 presents the air quality modeling methodology and sample results. Chapter 5 describes the approaches used and principal results obtained through the physical effects estimation process. Economic valuation methodologies are described in Chapter 6. Chapter 7 presents the aggregated results of the cost and benefit estimates and describes and evaluates important uncertainties in the results.

Additional details regarding the methodologies and results are presented in the appendices and in the referenced supporting documents. Appendix A covers the direct cost and macroeconomic modeling. Appendix B provides additional detail on the sector-specific emissions modeling effort. Details of the air quality models used and results obtained are presented or referenced in Appendix C. The effects of the CAA on human health and visibility, aquatic, wetland, and forest ecosystems; and agriculture are presented in Appendices D, E, and F, respectively. Appendix G presents details of the lead (Pb) benefits analysis. Air toxics reduction benefits are discussed in Appendix H. The methods and assumptions used to value quantified effects of the CAA in economic terms are described in Appendix I. Appendix J describes some areas of research which may increase comprehensiveness and reduce uncertainties in effect estimates for future assessments, and describes plans for future section 812 analyses.

[10] It should be noted that there is some uncertainty associated with the estimates of economic costs as well and that some omitted components of adverse economic consequences of pollution control programs may be significant. For example, some economists argue that the economic costs of the CAA reported herein may be significantly underestimated to the extent potential adverse effects of regulation on technological innovation are not captured. Nevertheless, it is clear that the geographic, population, and categorical coverage of monetary cost effects is significantly greater than coverage of monetized benefits in this analysis.

[11] For example, while there is strong evidence of a link between exposure to carbon monoxide and reduced time of onset of angina attack, there are no valuation functions available to estimate the economic loss associated with this effect.

2

Cost and Macroeconomic Effects

The costs of complying with Clean Air Act (CAA) requirements through the 1970 to 1990 period affected patterns of industrial production, capital investment, productivity, consumption, employment, and overall economic growth. The purpose of the analyses summarized in this chapter was to estimate those direct costs and the magnitude and significance of resulting changes to the overall economy. This was accomplished by comparing economic indicators under two alternative scenarios: a control scenario serving as the historical benchmark, including the historical CAA as implemented; and a no-control scenario which assumes historical CAA programs did not exist. The estimated economic consequences of the historical CAA were taken as the difference between these two scenarios.

Data used as inputs to the cost analysis can be classified into two somewhat overlapping categories based on the information source: survey-based information (generally gathered by the Census Bureau) and information derived from various EPA analyses. For the most part, cost estimates for stationary air pollution sources (e.g., factory smokestacks) are based on surveys of private businesses that attempt to elicit information on annual pollution control outlays by those businesses. Estimates of pollution control costs for mobile sources (e.g., automobiles) are largely based on EPA analyses, rather than on direct observation and measurement of compliance expenditures. For example, to determine one component of the cost of reducing lead emissions from mobile sources, the Project Team used an oil refinery production cost model to calculate the incremental cost required to produce unleaded (or less-leaded, as appropriate) rather than leaded gasoline, while maintaining the octane level produced by leaded gasoline.

As is the case with many policy analyses, a significant uncertainty arises in the cost analysis as a consequence of constructing a hypothetical scenario. With this retrospective analysis covering almost twenty years, difficulties arise in projecting alternative technological development paths. In some cases, the analytical assumptions used to project the alternative scenario are not immediately apparent. For example, the surveys covering stationary source compliance expenditures require respondents to report pollution abatement expenditures—implicitly asking them to determine by how much the company's costs would decline if there were no CAA compliance requirements. While a response might be relatively straightforward in the few years following passage of the CAA, a meaningful response becomes more difficult after many years of technical change and investment in less-polluting plant and equipment make it difficult to determine the degree to which total costs would differ under a "no CAA" scenario. In cases such as this, assumptions concerning the alternative hypothetical scenario are made by thousands of individual survey respondents. Where cost data are derived from EPA analyses, the hypothetical scenario assumptions are, at least in theory, more apparent. For example, when determining the incremental cost caused by pollution-control requirements, one needs to make assumptions (at least implicitly) about what an auto would look like absent pollution control requirements. In either case, the need to project hypothetical technology change for two decades introduces uncertainty into the assessment results, and this uncertainty may be difficult to quantify.

The remainder of this chapter summarizes the basic methods and results of the direct compliance cost and macroeconomic analyses. Further details regarding the modeling methods and assumptions employed, as well as additional analytical results, are presented in Appendix A.

Direct Compliance Costs

Compliance with the CAA imposed direct costs on businesses, consumers, and governmental units; and triggered other expenditures such as governmental regulation and monitoring costs and expenditures for

Table 1. Estimated Annual CAA Compliance Costs ($billions).

	Expenditures		Annualized Costs $1990 at:		
Year	$current	$1990	3%	5%	7%
1973	7.2	19.6	11.0	11.0	11.1
1974	8.5	21.4	13.2	13.4	13.7
1975	10.6	24.4	13.3	13.6	14.0
1976	11.2	24.1	14.1	14.6	15.1
1977	11.9	24.1	15.3	15.9	16.6
1978	12.0	22.6	15.0	15.8	16.7
1979	14.4	24.8	17.3	18.3	19.3
1980	16.3	25.7	19.7	20.8	22.0
1981	17.0	24.4	19.6	20.9	22.3
1982	16.0	21.6	18.6	20.1	21.7
1983	15.5	20.1	19.1	20.7	22.5
1984	17.3	21.6	20.1	21.9	23.8
1985	19.1	22.9	22.5	24.4	26.5
1986	17.8	20.8	21.1	23.2	25.4
1987	18.2	20.6	22.1	24.2	26.6
1988	18.2	19.8	22.0	24.3	26.7
1989	19.0	19.8	22.9	25.3	27.8
1990	19.0	19.0	23.6	26.1	28.7

research and development by both government and industry. Although expenditures unadjusted for inflation — that is, expenditures denominated in "current dollars"— increased steadily from $7 billion to $19 billion per year over the 1973 to 1990 period,[12] annual CAA compliance expenditures adjusted for inflation were relatively stable, averaging near $25 billion (in 1990 dollars) during the 1970s and close to $20 billion during most of the 1980s (see Table 1). Aggregate compliance expenditures were somewhat less than one half of one percent of total domestic output during that period, with the percentage falling from two thirds of one percent of total output in 1975 to one third of one percent in 1990.

Although useful for many purposes, a summary of direct annual expenditures may not the best cost measure to use when comparing costs to benefits. Capital expenditures are investments, generating a stream of benefits and opportunity cost[13] over the life of the investment. The appropriate accounting technique to use for capital expenditures in a cost/benefit analysis is to annualize the expenditure. This technique, analogous to calculating the monthly payment associated with a home mortgage, involves spreading the cost of the capital equipment over the useful life of the equipment using a discount rate to account for the time value of money.

For this cost/benefit analysis, "annualized" costs reported for any given year are equal to O&M expenditures — including R&D and other similarly recurring expenditures — plus amortized capital costs (i.e., depreciation plus interest costs associated with the existing capital stock) for that year. Stationary source air pollution control capital costs were amortized over 20 years; mobile source air pollution control costs were amortized over 10 years.[14] All capital expenditures were annualized using a five percent, inflation-adjusted rate of interest. Additionally, annualized costs were calculated using discount rates of three and seven percent to determine the sensitivity of the cost results to changes in the discount rate. Table 1 summarizes costs annualized at three, five, and seven percent, as well as annual expenditures.

Total expenditures over the 1973-1990 period, discounted to 1990 using a five percent (net of inflation) discount rate, amount to 628 billion dollars (in 1990 dollars). Discounting the annualized cost stream to 1990 (with both annualization and discounting procedures using a five percent rate) gives total costs of 523 billion dollars (in 1990 dollars). Aggregate annualized costs are less than expenditures because the annualization procedure spreads some of the capital cost beyond 1990.[15]

[12] Due to data limitations, the cost analysis for this CAA retrospective starts in 1973, missing costs incurred in 1970-72. This limitation is not likely to be significant, however, because relatively little in the way of compliance with the "new" provisions of the 1970 CAA was required in the first two years following passage.

[13] In this context, "opportunity cost" is defined as the value of alternative investments or other uses of funds foregone as a result of the investment.

[14] Although complete data are available only for the period 1973-1990, EPA's Cost of Clean report includes capital expenditures for 1972 (see Appendix A for more details and complete citation). Those capital expenditure data have been used here. Therefore, amortized costs arising from 1972 capital investments are included in the 1973-1990 annualized costs, even though 1972 costs are not otherwise included in the analysis. Conversely, some capital expenditures incurred in the 1973-1990 period are not reflected in the 1973-1990 annualized costs — those costs are spread through the following two decades, thus falling outside of the scope of this study (e.g., only one year of depreciation and interest expense is included for 1989 capital expenditures). Similarly, benefits arising from emission reductions realized after 1990 as a result of capital investments made during the 1970 to 1990 period of this analysis are not included in the estimates of benefits included in this report.

[15] This adjustment is required because many 1970 to 1990 investments in control equipment continue to yield benefits beyond 1990. Annualization of costs beyond 1990 ensures that the costs and benefits of any particular investment are properly scaled and matched over the lifetime of the investment.

Indirect Effects of the CAA

Through changing production costs, CAA implementation induced changes in consumer good prices, and thus in the size and composition of economic output. The Project Team used a general equilibrium macroeconomic model to assess the extent of such second-order effects. This type of model is useful because it can capture the feedback effects of an action. In the section 812 macroeconomic modeling exercise, the feedback effects arising from expenditure changes were captured, but the analogous effects arising from improvements in human health were not captured by the model. For example, the macroeconomic model results do not reflect the indirect economic effects of worker productivity improvements and medical expenditure savings caused by the CAA. Consequently, the macroeconomic modeling exercise provides limited and incomplete information on the type and potential scale of indirect economic effects.

The effects estimated by the macroeconomic model can be grouped into two broad classes: sectoral impacts (i.e., changes in the composition of economic output), and aggregate effects (i.e., changes in the degree of output or of some measure of human welfare). The predicted sectoral effects were used as inputs to the emissions models as discussed in Chapter 3. In general, the estimated second-order macroeconomic effects were small relative to the size of the U.S. economy. See Appendix A for more detail on data sources, analytical methods, and results for the macroeconomic modeling performed for this assessment.

Sectoral Impacts

The CAA had variable compliance impacts across economic sectors. The greatest effects were on the largest energy producers and consumers, particularly those sectors which relied most heavily on consumption of fossil fuels (or energy generated from fossil fuels). In addition, production costs increased more for capital-intensive industries than for less capital-intensive industries under the control scenario due to a projected increase in interest rates. The interest rate increase, which resulted in an increase in the cost of capital, occurred under the control scenario because CAA-mandated investment in pollution abatement reduced the level of resources available for other uses, including capital formation.

Generally, the estimated difference in cost impacts under the control and no-control scenarios for a particular economic sector was a function of the relative energy-intensity and capital-intensity of that sector. Increased production costs in energy- and capital-intensive sectors under the control scenario were reflected in higher consumer prices, which resulted in reductions in the quantity of consumer purchases of goods and services produced by those sectors. This reduction in consumer demand under the control scenario led, ultimately, to reductions in output and employment in those sectors. The sectors most affected by the CAA were motor vehicles, petroleum refining, and electricity generation. The electricity generation sector, for example, incurred a two to four percent increase in consumer prices by 1990, resulting in a three to five and a half percent reduction in output. Many other manufacturing sectors saw an output effect in the one percent range.

Some other sectors, however, were projected to increase output under the control scenario. Apart from the pollution control equipment industry, which was not separately identified and captured in the macroeconomic modeling performed for this study, two example sectors for which output was higher and prices were lower under the control scenario are food and furniture. These two sectors showed production cost and consumer price reductions of one to two percent relative to other industries under the control scenario, resulting in output and employment increases of similar magnitudes.

Aggregate Effects

As noted above, the control and no-control scenarios yield different estimated mixes of investment. In particular, the control scenario was associated with more pollution control capital expenditure and less consumer commodity capital expenditure. As a result, the growth pattern of the economy under the control scenario differed from the no-control scenario. Under the control scenario, the macroeconomic model projected a rate of long-run GNP growth about one twentieth of one percent per year lower than under the no-control scenario. Aggregating these slower growth effects of the control scenario over the entire 1970 to 1990 period of this study results, by 1990, in a level of GNP one percent (or approximately $55 billion) lower than that projected under the no-control scenario.

Although small relative to the economy as a whole, the estimated changes in GNP imply that the potential impact of the CAA on the economy by 1990 was greater than that implied by expenditures ($19 billion in 1990) or annualized costs ($26 billion in 1990, annualized at five percent). Discounting the stream of 1973-1990 GNP effects to 1990 gives an aggregate impact on production of 1,005 billion dollars (in 1990 dollars discounted at five percent). Of that total, $569 billion represent reductions in household consumption, and another $200 billion represent government consumption, for an aggregate effect on U.S. consumption of goods and services equal to 769 billion dollars. Both the aggregate GNP effects and aggregate consumption effects exceed total 1973-1990 expenditures ($628 billion) and annualized costs ($523 billion, with all dollar quantities in $1990, discounted at five percent).

Changes in GNP (or, even, changes in the national product account category "consumption") do not necessarily provide a good indication of changes in social welfare. Social welfare is not improved, for example, by major oil tanker spills even though measured GNP is increased by the "production" associated with clean-up activities. Nevertheless, the effects of the CAA on long-term economic growth would be expected to have had some effect on economic welfare. One of the characteristics of the macroeconomic model used by the Project Team is its ability to estimate a measure of social welfare change which is superior to GNP changes. This social welfare measure estimates the monetary compensation which would be required to offset the losses in consumption (broadly defined) associated with a given policy change. The model reports a range of results, with the range sensitive to assumptions regarding how cost impacts are distributed through society. For the CAA, the model reports an aggregate welfare effect of 493 billion to 621 billion dollars (in 1990 dollars), depending on the distributional assumptions used. This range does not differ greatly from the range of results represented by 1973-1990 expenditures, compliance costs, and consumption changes.

Uncertainties and Sensitivities in the Cost and Macroeconomic Analysis

The cost and macroeconomic analyses for the present assessment relied upon survey responses, EPA analyses, and a macroeconomic simulation model. Although the Project Team believes that the results of the cost and macroeconomic analyses are reasonably reliable, it recognizes that every analytical step is subject to uncertainty. As noted at the beginning of this chapter, explicit and implicit assumptions regarding hypothetical technology development paths are crucial to framing the question of the cost impact of the CAA. In addition, there is no way to verify the accuracy of the survey results used;[16] alternative, plausible cost analyses exist that arrive at results that differ from some of the results derived from EPA analyses; and it is not clear how the use of a general equilibrium macroeconomic model affects the accuracy of macroeconomic projections in a macroeconomy characterized by disequilibrium. For many factors engendering uncertainty, the degree or even the direction of bias is unknown. In several areas, nevertheless, uncertainties and/or sensitivities can be identified that may bias the results of the analysis.

Productivity and Technical Change

An important component of the macroeconomic model used by the Project Team is its treatment of technical change and productivity growth. Three factors associated with productivity and technical change have been identified which may bias the results of the macroeconomic simulation: (1) the long-run effects of reducing the "stock" of technology, (2) the possible "chilling" effect of regulations on innovation and technical change, and (3) the role of endogenous productivity growth within the macroeconomic model.

The macroeconomic model projected a decrease in the growth of GNP as a result of CAA compliance. Decreased growth was due not only to decreased capital investment, but also to decreased factor productivity. The annual decrement in productivity can be thought of as a reduction of the stock of available technology. That reduction in stock could be expected to affect macroeconomic activity after 1990, as well as

[16] For an example of the difficulties one encounters in assessing the veracity of survey results, see the discussion in Appendix A on the apparently anomalous growth in stationary source O&M expenditures in relation to the size of the stationary source air pollution control capital stock.

during the 1973-1990 period studied by the Project Team. Thus, to the extent that this effect exists, the Project Team has underestimated the macroeconomic impact of the CAA by disregarding the effect of 1973-1990 productivity change decrements on post-1990 GNP.

Some economists contend that regulations have a "chilling" effect on technological innovation and, hence, on productivity growth. Two recent studies by Gray and Shadbegian,[17] which are sometimes cited in support of this contention, suggest that pollution abatement regulations may decrease productivity levels in some manufacturing industries. The macroeconomic model allowed policy-induced productivity change through the mechanism of price changes and resultant factor share changes. To the extent that additional policy-induced effects on productivity growth exist, the Project Team has underestimated the impact of the CAA on productivity growth during the 1973-1990 period, and, thus, has underestimated macroeconomic impacts during the 1973-1990 period and beyond.

The macroeconomic model allowed productivity growth to vary with changes in prices generated by the model. This use of "endogenous" productivity growth is not universal in the economic growth literature — that is, many similar macroeconomic models do not employ analogous forms of productivity growth. The Project Team tested the sensitivity of the model results to the use of endogenous productivity growth. If the model is run without endogenous productivity growth, then the predicted macroeconomic impacts (GNP, personal consumption, etc.) of the CAA are reduced by approximately 20 percent. That is, to the extent that use of endogenous productivity growth in the macroeconomic model is an inaccurate simulation technique, then the Project Team has overestimated the macroeconomic impact of the CAA.

Discount Rates

There is a broad range of opinion in the economics profession regarding the appropriate discount rate to use in analyses such as the current assessment. Some economists believe that the appropriate rate is one that approximates the social rate of time preference — that is, the rate of return at which individuals are willing to defer consumption to the future. A three percent rate would approximate the social rate of time preference (all rates used here are "real", i.e., net of price inflation impacts). Others believe that a rate that approximates the opportunity cost of capital (e.g., seven percent or greater) should be used.[18] A third school of thought holds that some combination of the social rate of time preference and the opportunity cost of capital is appropriate, with the combination effected either by use of an intermediate rate or by use of a multiple-step procedure employing the social rate of time preference as the "discount rate," but still accounting for the opportunity cost of capital.

The Project Team elected to use an intermediate rate (five percent), but recognizes that analytical results aggregated across the study period are sensitive to the discount rate used. Consequently, all cost measures are presented at three and seven percent, as well as the base case five percent. Table 2 summarizes major cost and macroeconomic impact measures expressed in constant 1990 dollars, and discounted to 1990 at rates of three, five, and seven percent.

Table 2. Compliance Cost, GNP, and Consumption Impacts Discounted to 1990 ($1990 billions)

	3%	5%	7%
Expenditures	552	628	761
Annualized Costs	417	523	657
GNP	880	1005	1151
Household Consumption	500	569	653
HH and Gov't Consumption	676	769	881

[17] Gray, Wayne B., and Ronald J. Shadbegian, "Environmental Regulation and Manufacturing Productivity at the Plant Level," Center for Economic Studies Discussion Paper, CES 93-6, March 1993. Gray, Wayne B., and Ronald J. Shadbegian, "Pollution Abatement Costs, Regulation, and Plant-Level Productivity," National Bureau of Economic Research, Inc., Working Paper Series, Working Paper No. 4994, January 1995.

[18] Some would argue that use of the opportunity cost of capital approach would be inappropriate in the current assessment if the results of the macroeconomic modeling (such as GNP) were used as the definition of "cost," since the macro model already accounts for the opportunity cost of capital. The appropriate rate would then be the social rate of time preference.

Exclusion of Health Benefits from the Macroeconomic Model

The macroeconomic modeling exercise was designed to capture the second-order macroeconomic effects arising from CAA compliance expenditures. Those predicted second-order effects are among the factors used to drive the emissions estimates and, ultimately, the benefits modeled for this assessment. The benefits of the CAA, however, would also be expected to induce second-order macroeconomic effects. For example, increased longevity and decreased incidence of non-fatal heart attacks and strokes would be expected to improve macroeconomic performance measures. The structure of the overall analysis, however, necessitated that these impacts be excluded from the macroeconomic simulation.

The first-order CAA beneficial effects have been included in the benefits analysis for this study, including measures that approximate production changes (e.g., income loss due to illness, or lost or restricted work days; income loss due to impaired cognitive ability; and income loss due to reduced worker production in certain economic sectors). These measures are analogous to compliance expenditures in the cost analysis. The second-order benefits impacts, which would result from price changes induced by CAA-related benefits, have not been estimated. It is likely that the estimated adverse second-order macroeconomic impacts would have been reduced had the impact of CAA benefits been included in the macroeconomic modeling exercise; however, the magnitude of this potential upward bias in the estimate of adverse macroeconomic impact was not quantitatively assessed.

3

Emissions

This chapter presents estimates of emissions reductions due to the Clean Air Act (CAA) for six criteria air pollutants. Reductions are calculated by estimating, on a sector-by-sector basis, the differences in emissions between the control and no-control scenarios. While the relevant years in this analysis are 1970 through 1990, full reporting of emissions was only made for the 1975 to 1990 period since 1970 emission levels are, by assumption, identical for the two scenarios. The criteria pollutants for which emissions are reported in this analysis are: total suspended particulates (TSP),[19] carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide (SO_2), nitrogen oxides (NO_x), and Lead (Pb).

The purpose of the present study is to estimate the differences in economic and environmental conditions between a scenario reflecting implementation of historical CAA controls and a scenario which assumes that no additional CAA-related control programs were introduced after 1970. Because of the focus on differences in –rather than absolute levels of– emissions between the scenarios, the various sector-specific emission models were used to estimate both the control and no-control scenario emission inventories. This approach ensures that differences between the scenarios are not distorted by differences between modeled and actual historical emission estimates.[20]

Despite the use of models to estimate control scenario emission inventories, the models used were configured and/or calibrated using historical emissions estimates. The control scenario utility emissions estimates, for example, were based on the ICF CEUM model which was calibrated using historical emissions inventory data.[21] In other cases, such as the EPA Emissions Trends Report (Trends) methodology[22] used to estimate industrial process emissions, historical data were used as the basis for control scenario emissions with little or no subsequent modification. Nevertheless, differences in model selection, model configuration, and macroeconomic input data[23] result in unavoidable, but in this case justifiable, differences between national total historical emission estimates and national total control scenario emission estimates for each pollutant. Comparisons between no-control, control, and official EPA Trends Report historical emissions inventories are presented in Appendix B.[24]

[19] In 1987, EPA replaced the earlier TSP standard with a standard for particulate matter of 10 microns or smaller (PM_{10}).

[20] By necessity, emission models must be used to estimate the hypothetical no-CAA scenario. If actual historical emissions data were adopted for the control scenario, differences between the monitoring data and/or models used to develop historical emission inventories and the models used to develop no-control scenario emission estimates would bias the estimates of the differences between the scenarios.

[21] See ICF Resources, Inc., "Results of Retrospective Electric Utility Clean Air Act Analysis - 1980, 1985 and 1990," September 30, 1992, Appendix C.

[22] EPA, 1994a: U.S. Environmental Protection Agency, "National Air Pollutant Emission Trends, 1900-1993," EPA-454/R-94-027, Office of Air Quality Planning and Standards, Research Triangle Park, NC, October 1994.

[23] The Jorgenson/Wilcoxen macroeconomic model outputs were used to configure both the control and no-control scenario emission model runs. While this satisfies the primary objective of avoiding "across model" bias between the scenarios, the macroeconomic conditions associated with the control scenario would not be expected to match actual historical economic events and conditions. To the extent actual historical economic conditions are used to estimate official historical emission inventories, conformity between these historical emissions estimates and control scenario emission estimates would be further reduced.

[24] In general, these comparisons show close correspondence between control scenario and Trends estimates with the largest differences occurring for VOC and CO emissions. The Trends report VOC estimates are generally higher than the control scenario estimates due primarily to the inclusion of Waste Disposal and Recycling as a VOC source in the Trends report. This inconsistency is of no consequence since Waste Disposal and Recycling sources were essentially uncontrolled by the historical CAA and therefore do not appear as a difference between the control and no-control scenarios. The higher CO emission estimates in the Trends Report are primarily associated with higher off-highway vehicle emissions estimates. Again, since off-highway emissions do not change between the control and no-control scenario in the present analysis, this inconsistency is of no consequence.

To estimate no-control scenario emissions, sector-specific historical emissions are adjusted based on changes in the following two factors: (1) growth by sector predicted to occur under the no-control scenario; and (2) the exclusion of controls attributable to specific provisions of the CAA.

To adjust emissions for economic changes under the no-control scenario, activity levels that affect emissions from each sector were identified. These activity levels include, for example, fuel use, industrial activity, and vehicle miles traveled (VMT). The Jorgenson-Wilcoxen (J/W) general equilibrium model was used to estimate changes in general economic conditions, as well as sector-specific economic outcomes used as inputs to the individual sector emission models.[25]

Table 3. Summary of Sector-Specific Emission Modeling Approaches.

Sector	Modeling Approach
On-Highway Vehicles	Modeled using ANL's TEEMS; adjusted automobile emission estimates by changes in personal travel and economic activity in the without CAA case. Truck VMT was obtained from the Federal Highway Administration (FHWA). MOBILE5a emission factors were used to calculate emissions. Lead emission changes from gasoline were estimated by Abt Associates based on historical gasoline sales and the lead content of leaded gasoline in each target year.
Off-Highway Vehicles	ELI analysis based on Trends methods. Recalculated historical emissions using 1970 control efficiencies from Trends. No adjustment was made to activity levels in the without the CAA case.
Electric Utilities	ICF's Coal and Electric Utility Model (CEUM) used to assess SO_2, NO_x, and TSP emission changes. Electricity sales levels were adjusted with results of the J/W model. The Argonne Utility Simulation Model (ARGUS) provided CO and VOC results. Changes in activity levels were adjusted with results of the J/W model. Lead emissions were calculated based on energy consumption data and Trends emission factors and control efficiencies.
Industrial Combustion	ANL industrial boiler analysis for SO_2, NO_x, and TSP using the Industrial Combustion Emissions (ICE) model. VOC and CO emissions from industrial boilers were calculated based on Trends methods; recalculated using 1970 control efficiencies. Lead emissions calculated for boilers and processes based on Trends fuel consumption data, emission factors, and 1970 control efficiencies.
Industrial Processes	ELI analyzed industrial process emissions based on Trends methods. Adjusted historical emissions with J/W sectoral changes in output, and 1970 control efficiencies from Trends. Lead emissions calculated for industrial processes and processes based on Trends fuel consumption data, emission factors, and 1970 control efficiencies.
Commercial / Residential	ANL's Commercial and Residential Simulation System (CRESS) model was used.

[25] For example, the change in distribution of households by income class predicted by the J/W model was used as input to the transportation sector model system. Changes in household income resulted in changes in vehicle ownership and usage patterns which, in turn, influence VMT and emissions. (See Pechan, 1995, p. 43).

The specific outputs from the J/W model used in this analysis are the percentage changes in gross national product (GNP), personal consumption, and output for various economic sectors under the control and no-control scenario for the years 1975, 1980, 1985, and 1990.[26] The sectors for which the results of the J/W model are used include: industrial processes, electric utilities, highway vehicles, industrial boilers, and the commercial/residential sector. For the off-highway sector, economic growth was not taken into account as there was no direct correspondence between J/W sectors and the off-highway vehicle source category activity.

In addition to adjusting for economic activity changes, any CAA-related control efficiencies that were applied to calculate control scenario emissions were removed for the no-control scenario. In most instances, emissions were recalculated based on 1970 control levels.

Uncertainty associated with several key modeling inputs and processes may contribute to potential errors in the emission estimates presented herein. Although the potential errors are likely to contribute in only a minor way to overall uncertainty in the estimated monetary benefits of the Clean Air Act, the most significant emission modeling uncertainties are described at the end of this chapter.

Sector-Specific Approach

The approaches used to calculate emissions for each sector vary based on the complexity of estimating emissions in the absence of CAA controls, taking economic activity levels and CAA regulations into account. For the off-highway vehicle and industrial process sectors, a relatively simple methodology was developed. The approaches used for the highway vehicles, electric utilities, industrial boilers, and commercial/residential sectors were more complex because the J/W model does not address all of the determinants of economic activity in these sectors that might have changed in the absence of regulation. The approaches by sector used to estimate emissions for the two scenarios are summarized in Table 3, and are described in more detail in Appendix B.

Summary of Results

Figure 2 compares the total estimated sulfur dioxide emission from all sectors under the control and no-control scenarios over the period from 1975 to 1990. Figures 3, 4, 5, 6, and 7 provide similar comparisons for NO_x, VOCs, CO, TSP, and Lead (Pb) respectively.

Additional tables presented in Appendix B provide further breakdown of the emissions estimates by individual sector. The essential results are characterized below. For most sectors, emission levels under the control scenario were substantially lower than levels projected under the no-control scenario. For some pollutants, for example NO_x, most of the reductions achieved under the control scenario offset the growth in emissions which would have occurred under the no-control case as a result of increases in population and economic activity. For other pollutants, particularly lead, most of the difference in 1990 emissions projected under the two scenarios reflects significant improvement relative to 1970 emission levels. Appendix B also assesses the consistency of the control and no-control scenario estimates for 1970 to 1990 with pre-1970 historical emissions trends data.

The CAA controls that affected SO_2 emitting sources had the greatest proportional effect on industrial process emissions, which were 60 percent lower in 1990 than they would have been under the no-control scenario. SO_2 emissions from electric utilities and industrial boilers were each nearly 40 percent lower in 1990 as a result of the controls. In terms of absolute tons of emission reductions, controls on electric utilities account for over 10 million of the total 16 million ton difference between the 1990 control and no-control scenario SO_2 emission estimates.

CAA regulation of the highway vehicles sector led to the greatest percent reductions in VOC and NO_x. Control scenario emissions of these pollutants in 1990 were 66 percent and 47 percent lower, respectively, than the levels estimated under the no-control scenario. In absolute terms, highway vehicle VOC controls account for over 15 million of the roughly 17 million ton difference in control and no-control scenario emissions.

Differences between control and no-control scenario CO emissions are also most significant for highway vehicles. In percentage terms, highway vehicle CO emissions were 56 percent lower in 1990 under the control scenario than under the no-control scenario. Industrial process CO emission estimates under the control scenario were about half the levels projected under the no-control scenario. Of the roughly 89 mil-

[26] For details regarding the data linkages between the J/W model and the various emission sector models, see Pechan (1995).

Figure 2. Control and No-control Scenario Total SO_2 Emission Estimates.

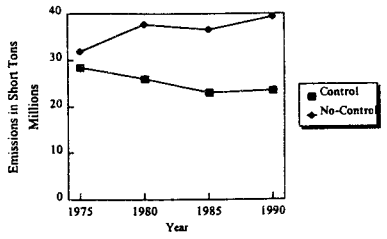


Figure 5. Control and No-control Scenario Total CO Emission Estimates.

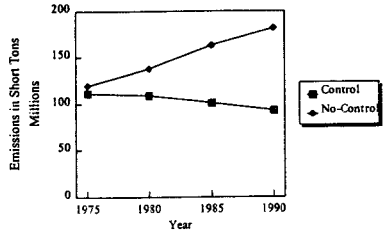


Figure 3. Control and No-control Scenario Total NO_x Emission Estimates.

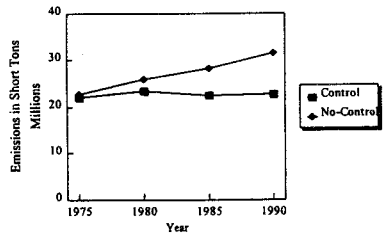


Figure 6. Control and No-control Scenario Total TSP Emission Estimates.

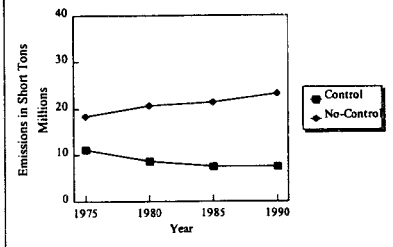


Figure 4. Control and No-control Scenario Total VOC Emission Estimates.

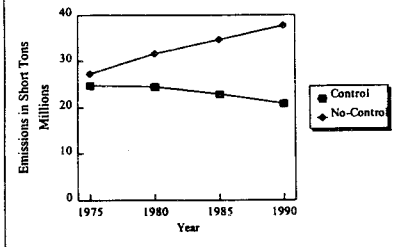
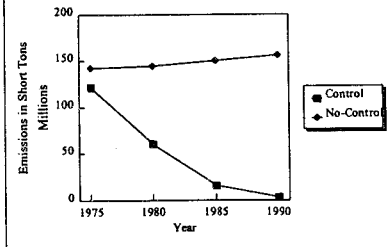


Figure 7. Control and No-control Scenario Total Pb Emission Estimates.



health impacts between the two scenarios (for lead in gasoline only) for the "forward-looking" and "backward-looking" analyses. In general, health effect benefits resulting from gasoline lead reductions exceed those predicted from lead reductions at the point sources examined (i.e., industrial processes and boilers and electric utilities) by three orders of magnitude.

Table G-8. Lead Burned in Gasoline (in tons).

	1970	1975	1980	1985	1990
Control Scenario	176,100	179,200	86,400	22,000	2,300
No-control Scenario	176,100	202,600	206,900	214,400	222,900

Table G-9. Yearly Differences in Number of Health Effects Between the Control and No-control Scenarios: Lead in Gasoline only (Holding Other Lead Sources at Constant 1970 Levels).

Health Effect	1975	1980	1985	1990
Mortality				
Men (40-54)	309	1,820	3,340	4,150
Men (55-64)	220	1,340	2,380	2,700
Men (65-74)	81	520	999	1,260
Women (45-74)	155	939	1,710	2,060
Infants	456	2,340	3,930	4,940
Total	1,220	6,960	12,400	15,100
Coronary Heart Disease				
Men (40-54)	230	1,360	2,540	3,280
Men (55-64)	92	563	1,030	1,220
Men (65-74)	113	723	1,380	1,750
Women (45-74)	73	442	805	965
Total	508	3,090	5,760	7,210
Strokes				
Cerebrovascular Accident (men 45-74)	147	884	1,610	1,960
Cerebrovascular Accident (women 45-74)	73	442	805	965
Brain Infarction (men 45-74)	85	508	927	1,130
Brain Infarction (women 45-74)	47	286	521	624
Total	352	2,120	3,862	4,679
Hypertension (men 20-74)	677,000	4,200,000	7,840,000	9,740,000
IQ Decrement				
Lost IQ Points	1,030,000	5,020,000	8,580,000	10,400,000
IQ<70 (cases)	3,780	20,100	36,500	45,300
Population Exposed (millions)	214	225	237	247

Table G-10. Yearly Differences in Number of Health Effects Between the Control and No-control Scenarios: Lead in Gasoline only (Holding Other Lead Sources at Constant 1990 Levels).

Health Effect	1975	1980	1985	1990
Mortality				
Men (40-54)	476	3,040	6,140	7,950
Men (55-64)	342	2,250	4,430	5,240
Men (65-74)	128	886	1,880	2,480
Women (45-74)	242	1,590	3,210	4,030
Infants	456	2,340	3,930	4,940
Total	1,640	10,100	19,600	24,600
Coronary Heart Disease				
Men (40-54)	356	2,280	4,690	6,310
Men (55-64)	142	945	1,910	2,370
Men (65-74)	176	1,220	2,570	3,380
Women (45-74)	113	740	1,490	1,860
Total	787	5,180	10,700	13,900
Strokes				
Cerebrovascular Accident (men 45-74)	225	1,460	2,940	3,720
Cerebrovascular Accident (women 45-74)	113	740	1,490	1,860
Brain Infarction (men 45-74)	129	837	1,680	2,120
Brain Infarction (women 45-74)	73	477	955	1,190
Total	540	3,514	7,065	8,890
Hypertension (men 20-74)	984,000	6,350,000	12,300,000	15,600,000
IQ Decrement				
Lost IQ Points	1,030,000	5,030,000	8,580,000	10,400,000
IQ<70 (cases)	3,790	20,100	36,500	45,300
Population Exposed (millions)	214	225	237	247

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Appendix D: Human Health and Welfare Effects of Criteria Pollutants

Introduction

In responding to the mandate of section 812, EPA conducted a comprehensive benefits analysis to identify and estimate the quantifiable health and welfare benefits enjoyed by Americans due to improved air quality resulting from the CAA. Health benefits resulted from avoidance of air pollution-related health effects, such as mortality, respiratory illness, and heart disease. Welfare benefits accrued where improved air quality averted damage to ecological health and measurable resources, such as agricultural production, building materials, and visibility.

This appendix presents an overview of EPA's approach for modeling human health and welfare effects. It provides an outline of the principles used to guide the benefits analysis, details methods used to quantify criteria air pollutant exposure nationwide across the study period (1970 to 1990), and discusses several critical conceptual and implementation issues for using health and welfare effect information. Modeling results, estimates of avoided incidences of adverse health and welfare effects, are then presented. Ecological and agricultural benefits are examined in more detail in Appendices E and F, respectively. Appendix I details the approach used to translate health and welfare effects into monetary benefits.

Principles for the Section 812 Benefits Analysis

Estimating the effects of even modest shifts in environmental releases involves complex chemical, environmental, biological, psychological and economic processes. The task of estimating the broad changes associated with adoption and implementation of the Clean Air Act challenges the limits of scientific knowledge and modeling capability to synthesize available information and techniques into a practical framework. A pragmatic plan for a comprehensive assessment must fairly reflect the complexities and uncertainties, but still produce a policy-relevant analysis in a timely fashion. In order to achieve this ambitious goal, the following principles have been used to guide the section 812 benefits assessment.

Comprehensiveness: The assessment should include as many benefit categories as are reasonably believed to be affected by implementation of the Clean Air Act. Comprehensiveness requires assessing effects with which greater levels of scientific confidence are associated, as well as less well-understood effects. The degree of relative certainty among effects must be carefully described in order to fairly present a broad portrayal of the physical and social benefits accruing to the nation from implementing the Act. In addition, section 812 of the 1990 CAA Amendments explicitly directs a comprehensive benefits coverage that prohibits a default assumption of zero value for identified benefits unless a zero value is supported by specific data.

Quantification Where Feasible: The central goal of the present study is to evaluate and compare the benefits and costs of historical CAA-related programs. Effective comparison of the variety of human health, welfare, and ecological benefits with the associated compliance costs requires that these consequences be measured in terms of a common metric. Expressing the value of these various effects in economic terms is the most efficient way to accomplish this objective, and is consistent with standard practices associated with economic benefit-cost analysis. Expressing these effects in economic terms requires quantifying and presenting estimated effects in both physical and monetized economic terms. Pursuant to this paradigm, the emphasis in the present study is largely on categories having direct and perceptible effects on human health. That is, the emphasis of the analysis is on categories such as symptoms and diseases rather than on physical changes (such as cell level changes) that do not directly result in a decreased health status noticeable to the individual.

Efficient Use of Previous Research Results: Significant research effort has been spent to understand and quantify the complex relationships between air pollution and human health. The present study has relied as much as possible on available research results, making adjustments as necessary to apply the existing results to the current analysis.

Incorporate Uncertainty: To properly convey the results of any benefits assessment, it is important to include an evaluation and characterization of how much confidence the analysts have in the estimates. Ideally this would include a formal quantitative assessment of the potential for error, and the sources, directions, and potential significance of any resultant biases. A method for considering and reporting uncertainty must be built into the fundamental design of the assessment. Such a framework was developed and applied in the present study, and was supplemented where necessary by expert judgment regarding the sources and potential significance of errors in each analytical step.

General Modeling Approach

Consistent with these principles, the EPA developed an approach for quantifying the effects of reduced pollutant exposure, with particular focus on those effect categories for which monetary benefits could be estimated. As described previously, the study design adopted for the section 812 assessment links a sequence of analytical models. The macroeconomic modeling (Appendix A) estimated economy-wide effects of CAA expenditures. These effects provided a basis for the modeling of criteria pollutant emissions under the two scenarios considered (the factual control scenario and the hypothetical no-control scenario), as documented in Appendix B. The emissions estimates were used as input to the air quality models (Appendix C). Ambient pollutant concentrations estimated by the air quality models were used as inputs to the health and welfare benefits model, the focus of this appendix.

The approach developed to model health and welfare benefits is known as a "reduced form" or "embedded model" approach. The concept of a reduced form model is to use simplified versions of previously constructed complex models to characterize the impact of a series of linked physical and socioeconomic processes. The health and welfare benefits model is characterized as a reduced form model because it relies on *summaries* of the data output from the air quality models, which rely on emissions summaries and summaries of macroeconomic conditions, successively. Although results of the independent models are used in series, the models themselves have not been integrated into the health and welfare benefits model.

In general, the reduced form health and welfare benefits model relies on two fundamental inputs: (1) nationwide changes in pollutant exposures across the study period, and (2) the association between changes in exposure and expected changes in specific health and welfare effects. These inputs are discussed below.

Quantifying Changes in Pollutant Exposures

Estimating changes in pollutant exposures requires characterization of nationwide air quality improvements across the study period, as well as the populations exposed to the different levels of improvement.

Air Quality

As discussed in Appendix C, the section 812 analysis estimated ambient concentrations for both the control and no-control scenarios for the following pollutants and air quality parameters:

- Particulate matter, less than 10 microns in diameter (PM_{10})
- Ozone (O_3)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Carbon monoxide (CO)
- Visibility measures (light extinction and DeciView)[1]
- Lead (Pb)

Generally, this analysis adopted actual historical air pollution monitoring data to represent control scenario air quality. No-control scenario profiles were

[1] While the visibility measures listed are not criteria air pollutants, they provide important measures of a significant welfare effect resulting from air pollution, visibility degradation. Light extinction (which is related to DeciView, a haziness index) results from light scattered by fine particles in the atmosphere, especially sulfates and ammonium nitrates. As atmospheric concentrations of such particles increase, light is attenuated and visibility diminishes.

derived by running the control and no-control scenario emissions inventories through a suite of air quality models and then using the differences in these modeled outcomes to adjust the historical profiles. Since lead was treated differently than the other pollutants, the analysis of the CAA impacts on atmospheric lead concentrations is documented in Appendix G.

With respect to the distribution of air quality data across the two decades considered, it should be noted that both the number and location of monitors tracking air quality changed over time. Table D-1 depicts the number of monitors for each pollutant across the period of this analysis. The number of monitors generally increased throughout the 1970s and leveled off or declined at varying points during the 1980s, depending on the pollutant.

Table D-1. Criteria Air Pollutant Monitors in the U.S., 1970 - 1990.

	Pollutant				
Year	PM_{10}	O_3	NO_2	SO_2	CO
1970	245	1	43	86	82
1975	1,120	321	303	827	494
1980	1,131	546	375	1,088	511
1985	970	527	305	916	458
1990	720	627	345	753	493

For the section 812 modeling, the non-lead pollutants have been characterized as either county-level or monitor-level pollutants. The distinction was important for quantifying the population exposed to different levels of air quality improvements, as discussed below. PM_{10} is considered a county-level pollutant, since historical concentrations in monitored counties have been synthesized into a single concentration for each county.[2] In contrast, O_3, NO_2, NO, SO_2, and CO were reported at specific monitor locations, given by latitude/longitude coordinates. Finally, visibility was treated as a county-level pollutant in the western U.S. and a monitor-level pollutant in the eastern U.S.[3] Air quality data for PM_{10} and ozone were reported for each year of the study period; data for the remaining pollutants were reported only for 1975, 1980, 1985, and 1990.

In order to reduce the volume of air quality data necessary to describe pollutant concentrations for two scenarios nationwide over twenty years, annual concentration profiles were reduced to frequency distributions. That is, annual pollutant concentrations for a variety of averaging times (e.g., 1-hour, 6-hour, daily) were summarized as a distribution of values across the year. This approach reduced data management requirements significantly, while adequately capturing air quality improvements between the control and no-control scenarios.

Population Distribution

Health and some welfare benefits resulting from air quality improvements are distributed to populations in proportion to the reduction in exposure each enjoys. Predicting population exposures, then, is a necessary step in estimating health effects. Doing so for the section 812 analysis required not only an understanding of where air quality improved as a result of the CAA, but also how many individuals were affected by varying levels of air quality improvements. Thus, a critical component of the benefits analysis required that the distribution of the U.S. population nationwide be described in a manner compatible with the air quality data. Described below is the method used to allocate U.S. Census data to a symmetrical grid overlying the country.

Census Data

Three years of U.S. Census data were used to represent the geographical distribution of U.S. residents: 1970, 1980, and 1990. Population data were supplied at the census block group level, with approximately

[2] Two different measures of ambient concentrations of particulate matter were used in the United States during the period 1970 to 1990. Prior to 1987, the indicator for the National Ambient Air Quality Standard for PM was total suspended particulates (TSP). In 1987, the indicator was changed to PM_{10} (particles less than 10 μM in diameter). Widespread PM_{10} monitoring did not begin until 1985; prior to that only TSP data is available. Because the recent scientific literature reports primarily the relationship between PM_{10} and adverse health and welfare effects, PM_{10} data is preferred, if available. Where only TSP is available, PM_{10} concentrations were estimated using PM_{10}:TSP ratios that vary by area of the country and the urban/rural characterization of the area.

[3] In the western U.S., visibility was modeled using a linear-rollback model and extinction budget approach for 30 major urban centers (SAI, 1994). The modeling results, reported in DeciView, were applied to the counties in the vicinity of the urban centers and considered to share a common air basin. In the eastern U.S., Regional Acid Deposition Model (RADM) runs provided visibility estimates in terms of light extinction coefficients. These were modeled across a 60 km. X 60 km. grid, approximately covering the eastern half of the country. Since the extinction coefficients were reported at the grid cell centroids, for which the coordinates were known, visibility in the east was treated as a monitor-level pollutant.

290,000 block groups nationwide. Allocating air quality improvements to the population during intermediate years necessitated interpolation of the three years of population data. Linear interpolation was performed at the block group level in order to preserve the variability in growth rates throughout the country.

Gridding U.S. Population

To ease computational burden, block group population estimates were aggregated to a rectangular grid structure. The grid, comprised of ten kilometer by ten kilometer gridcells, spanned the entire area of the contentional United States. This grid size generated 46,885 populated gridcells throughout the U.S.

The entire population of each block group was assumed to reside at the geographical centroid of the block group area, the coordinates of which were available from the U.S. Bureau of the Census. Block group populations were aggregated to gridcells according to the block group centroids encompassed by each cell. In addition to the population of each gridcell, the state and county names for each gridcell were retained, permitting aggregation of data at the state and county level, as well as nationwide.

Allocating Exposure Estimates to the Population

Two alternative modeling strategies were used to allocate air quality improvements to the U.S. population. They differed in terms of both the certainty of the estimates and the geographic coverage:

Table D-2. Population Coverage in the "Within 50 km" Model Runs (percent of continental U.S. population).

	1975	1980	1985	1990
CO	67.4%	67.9%	68.4%	70.4%
EXT	73.2%	72.3%	72.3%	72.2%
NO_2	53.3%	58.8%	60.8%	61.5%
O_3	55.5%	70.5%	71.5%	74.4%
PM_{10}	78.5%	79.5%	75.8%	67.8%
SO_2	64.7%	73.3%	73.0%	70.6%
Pb	100%	100%	100%	100%

Method One

Air quality improvements (difference between control and no-control scenarios) were applied to individuals living in the vicinity of air quality monitors. For pollutants with monitor-level data, it was assumed that the individuals in a gridcell were exposed to air quality changes estimated at the nearest monitor, as long as the monitor was within 50 kilometers. Likewise, for PM_{10} (for which data was available at the county level) the population of each monitored county was assumed to be exposed to the air quality changes reported for that county.[4] The remainder of the population was excluded from the analysis.

Unfortunately, by limiting the quantitative analysis to populations within 50 km of a monitor (or within a monitored county, for PM), a significant portion of the U.S. population was left out of the analysis (see Table D-2). For most pollutants in most years (excepting lead), less than three-quarters of the population lived within 50 km of a monitor (or within a PM-monitored county). Clearly, an analysis that excluded 25 percent of the population from the benefits calculations (thus implicitly assuming that the CAA had no impact on that population) would understate the physical effects of the CAA. Conversely, ascribing air pollution reduction benefits to persons living great distances from air quality monitors is a speculative exercise, and could overstate benefits.

Method Two

As an alternative modeling strategy, air quality improvements were applied to almost all individuals nationwide. Where monitor data were not available within 50 kilometers, data from the closest monitor, regardless of distance, were used. Similarly, PM_{10} concentrations were extrapolated using regional air quality models to all counties (even those for which monitoring data was unavailable) and applied to the populations of those counties.

Although subject to less certain air quality data, the second alternative extrapolates pollutant exposure estimates to almost the entire population using the closest monitoring data available (see Table D-3).[5] This second alternative was chosen as the preferred approach in the benefits analysis. The sensitivity of

[4] Since the lead (Pb) analysis, which was handled separately from that of the other criteria pollutants, did not require air quality modeling data, the issue of proximity to monitors is irrelevant. The Pb analysis extended to 100 percent of the population.

[5] While this alternative captures the vast majority of the U.S. population, it does not model exposure for everyone. To improve computational efficiency, those gridcells with populations less than 1,000 were not modeled; these cells account for less than five percent of the U.S. population.

the benefits estimate to the extrapolation of air quality data beyond monitored areas is explored in Appendix I.

Table D-3. Population Coverage for "Extrapolated to All U.S." Model Runs (percent of continental U.S. population).

	1975	1980	1985	1990
CO	97.2%	97.2%	98.7%	100.0%
EXT	75.6%	74.8%	74.7%	74.7%
NO_2	97.2%	97.2%	98.7%	100.0%
O_3	96.6%	97.2%	98.7%	100.0%
PM_{10}	95.9%	95.8%	97.2%	98.5%
SO_2	95.4%	95.6%	97.0%	98.4%
Pb	100%	100%	100%	100%

Estimating Human Health Effects of Exposure

It is impossible to estimate all of the physical effects that would have occurred without the Clean Air Act. While scientific information is available that makes it possible to estimate certain effects, many other, potentially very important, health and welfare effects cannot be estimated at this time. Other physical effects can be quantified, but it is impossible to assess the economic value of those endpoints based on the current economics literature. Table D-4 shows the health and welfare effects for which quantitative analysis has been prepared, as well as some of the health effects that have not been quantified in the analysis.

In order to translate the reductions in pollutant exposure estimated to result from the CAA into health benefits, it is necessary to quantify the relationship between such exposures and adverse health effects. As indicated below, this analysis relies on concentration-response relationships published in the scientific literature which provide estimates of the number of fewer individuals that incur an adverse health effect per unit change in air quality. Such relationships are combined with the air quality improvement and population distribution data to estimate changes in the incidence of each health endpoint. By evaluating each concentration-response function for every gridcell throughout the country, and aggregating the resulting incidence estimates, it was possible to generate national estimates of avoided incidence.

It should be noted that a slightly different approach was used to compute health effects associated with exposure to gasoline lead. Instead of relating health outcomes to ambient pollutant concentrations, the concentration-response functions for lead-induced effects link changes in health effects directly to changes in the population's mean blood lead level. This value is directly related to the concentration of lead in gasoline in a particular year. Appendix G documents both the methods used to characterize mean blood lead levels and the approach for estimating human health effects from lead exposure.

The discussion below outlines the types of health studies considered for this analysis, and issues critical to selecting specific studies appropriate for use in the section 812 context. Next, details regarding use of the results of the studies are explored. Finally, the concentration-response functions used to model health benefits from reductions in non-lead criteria pollutants are outlined.

Types of Health Studies

Scientific research about air pollution's adverse health impacts uses a broad array of methods and procedures. The research methods used to investigate the health effects of air pollution have become considerably more sophisticated over time, and will continue to evolve in the future. This progress is the result of better available research techniques and data, and the ability to focus further research more sharply on key remaining issues based on the contributions of earlier work.

The available health effects studies that could potentially be used as the basis of the section 812 assessment are categorized into epidemiology studies and human clinical studies. Epidemiological research in air pollution investigates the association between exposure to air pollution and observed health effects in the study population. Human clinical studies involve examination of human responses to controlled conditions in a laboratory setting. Research has been conducted on health effects from exposure to pollution using each approach, and studies using these techniques have been considered in various formal regulatory proceedings. Each type of study (as it is used

Table D-4. Human Health Effects of Criteria Pollutants.

Pollutant	Quantified Health Effects	Unquantified Health Effects	Other Possible Effects
Ozone	Mortality* Respiratory symptoms Minor restricted activity days Respiratory restricted activity days Hospital admissions Asthma attacks Changes in pulmonary function Chronic Sinusitis & Hay Fever	Increased airway responsiveness to stimuli Centroacinar fibrosis Inflammation in the lung	Immunologic changes Chronic respiratory diseases Extrapulmonary effects (e.g., changes in structure, function of other organs)
Particulate Matter/ TSP/ Sulfates	Mortality* Bronchitis - Chronic and Acute Hospital admissions Lower respiratory illness Upper respiratory illness Chest illness Respiratory symptoms Minor restricted activity days All restricted activity days Days of work loss Moderate or worse asthma status (asthmatics)	Changes in pulmonary function	Chronic respiratory diseases other than chronic bronchitis Inflammation in the lung
Carbon Monoxide	Hospital Admissions - congestive heart failure Decreased time to onset of angina	Behavioral effects Other hospital admissions	Other cardiovascular effects Developmental effects
Nitrogen Oxides	Respiratory illness	Increased airway responsiveness	Decreased pulmonary function Inflammation in the lung Immunological changes
Sulfur Dioxide	In exercising asthmatics: Changes in pulmonary function Respiratory symptoms Combined responses of respiratory symptoms and pulmonary function changes		Respiratory symptoms in non-asthmatics Hospital admissions
Lead	Mortality Hypertension Non-fatal coronary heart disease Non-fatal strokes IQ loss effect on lifetime earnings IQ loss effects on special education needs	Health effects for individuals in age ranges other than those studied Neurobehavioral function Other cardiovascular diseases Reproductive effects Fetal effects from maternal exposure Delinquent and anti-social behavior in children	

* This analysis estimates excess mortality using PM_{10} as an indicator of the pollutant mix to which individuals were exposed.

for air pollution research) is described below, and the relative strengths and weaknesses for the purposes of the section 812 assessment are examined.

Epidemiological Studies

Epidemiological studies evaluate the relationship between exposures to ambient air pollution and health effects in the human population, typically in a "natural" setting. Statistical techniques (typically variants of multivariate regression analysis) are used to estimate quantitative concentration-response (or exposure-response) relationships between pollution levels and health effects.

Epidemiology studies can examine many of the types of health effects that are difficult to study using a clinical approach. Epidemiological results are well-suited for quantitative benefit analyses because they provide a means to estimate the incidence of health effects related to varying levels of ambient air pollution without extensive further modeling effort. These estimated relationships implicitly take into account at least some of the complex real-world human activity patterns, spatial and temporal distributions of air pollution, synergistic effects of multiple pollutants and other risk factors, and compensating or mitigating behavior by the subject population. Suspected relationships between air pollution and the effects of both

long-term and short-term exposure can be investigated using an epidemiological approach. In addition, observable health endpoints are measured, unlike clinical studies which often monitor endpoints that do not result in observable health effects (e.g. forced expiratory volume). Thus, from the point of view of conducting a benefits analysis, the results of epidemiological studies, combined with measures of ambient pollution levels and the size of the relevant population, provide all the essential components for associating measures of ambient air pollution and health status for a population in the airshed being monitored.

Two types of epidemiological studies are considered for dose-response modeling: individual level cohort studies and population level ecological studies. Cohort-based studies track individuals that are initially disease-free over a certain period of time, with periodic evaluation of the individuals' health status. Studies about relatively rare events such as cancer incidence or mortality can require tracking the individuals over a long period of time, while more common events (e.g., respiratory symptoms) occur with sufficient frequency to evaluate the relationship over a much shorter time period. An important feature of cohort studies is that information is known about each individual, including other potential variables correlated to disease state. These variables, called confounders, are important to identify because if they are not accounted for in the study they may produce a spurious association between air pollution and health effect.

A second type of study used in this analysis is a population-level ecological study. The relationship between population-wide health information (such as counts for daily mortality, hospital admissions, or emergency room visits) and ambient levels of air pollution are evaluated. One particular type of ecological study, time-series, has been used frequently in air-pollution research. An advantage of the time-series design is that it allows "the population to serve as its own control" with regard to certain factors such as race and gender. Other factors that change over time (tobacco, alcohol and illicit drug use, access to health care, employment, and nutrition) can also affect health. However, since such potential confounding factors are unlikely to vary over time in the same manner as air pollution levels, or to vary over periods of months to several years in a given community, these factors are unlikely to affect the magnitude of the association between air pollution and variations in short-term human health responses.

Drawbacks to epidemiological methods include difficulties associated with adequately characterizing exposure, measurement errors in the explanatory variables, the influence of unmeasured variables, and correlations between the pollution variables of concern and both the included and omitted variables. These can potentially lead to spurious conclusions. However, epidemiological studies involve a large number of people and do not suffer extrapolation problems common to clinical studies of limited numbers of people from selected population subgroups.

Human Clinical Studies

Clinical studies of air pollution involve exposing human subjects to various levels of air pollution in a carefully controlled and monitored laboratory situation. The physical condition of the subjects is measured before, during and after the pollution exposure. Physical condition measurements can include general biomedical information (e.g., pulse rate and blood pressure), physiological effects specifically affected by the pollutant (e.g., lung function), the onset of symptoms (e.g., wheezing or chest pain), or the ability of the individual to perform specific physical or cognitive tasks (e.g., maximum sustainable speed on a treadmill). These studies often involve exposing the individuals to pollutants while exercising, increasing the amount of pollutants that are actually introduced into the lungs.

Clinical studies can isolate cause-effect relationships between pollutants and certain human health effects. Repeated experiments altering the pollutant level, exercise regime duration and types of participants can potentially identify effect thresholds, the impact of recovery (rest) periods, and the differences in response among population groups. While cost considerations tend to limit the number of participants and experimental variants examined in a single study, clinical studies can follow rigorous laboratory scientific protocols, such as the use of placebos (clean air) to establish a baseline level of effects and precise measurement of certain health effects of concern.

There are drawbacks to using clinical studies as the basis for a comprehensive benefits analysis. Clinical studies are appropriate for examining acute symptoms caused by short-term exposure to a pollutant. While this permits examination of some important health effects from air pollution, such as bronchoconstriction in asthmatic individuals caused by sulfur dioxide, it excludes studying more severe

effects or effects caused by long term exposure. Another drawback is that health effects measured in some well-designed clinical studies are selected on the basis of the ability to measure precisely the effect, for example forced expiratory volume, rather than a larger symptom. The impact of some clinically measurable but reversible health effects such as lung function on future medical condition or lifestyle changes are not well understood.

Ethical limits on experiments involving humans also impose important limits to the potential scope of clinical research. Chronic effects cannot be investigated because people cannot be kept in controlled conditions for an extended period of time, and because these effects are generally irreversible. Participation is generally restricted to healthy subjects, or at least to exclude people with substantial health conditions that compromise their safe inclusion in the study. This can cause clinical studies to avoid providing direct evidence about populations of most concern, such as people who already have serious respiratory diseases. Ethical considerations also limit the exposures to relatively modest exposure levels, and to examining only mild health effects that do no permanent damage. Obviously for ethical reasons human clinical evidence cannot be obtained on the possible relationship between pollution and mortality, heart attack or stroke, or cancer.

One potential obstacle to using dose-response information from clinical research methods in a benefits assessment is the need for an exposure model. The dose-response functions developed from clinical research are specific to the population participating in the study and the exposure conditions used in the laboratory setting. It is therefore difficult to extrapolate results from clinical settings to daily exposures faced by the whole population. For example, many clinical studies evaluate effects on exercising individuals. Only a small portion of the population engages in strenuous activity (manual labor or exercise) at any time. Reflecting these fundamental differences between the laboratory setting and the "real world" imposes a formidable burden on researchers to provide information about human activity patterns, exercise levels, and pollution levels. This requirement adds an additional step in the analytical process, introducing another source of uncertainty and possible error.

To apply the clinical results to model the general population, two decisions must be made. First, how far can the conditions in the clinical setting be expanded? For example, if the subjects in the clinical study were healthy male college students, should the results be applied to the entire population, including children? Second, how many people in the general population are exposed to conditions similar to those used in the clinical setting? Frequently, clinical studies are conducted at relatively high exercise levels (increasing the dose, or the quantity of pollutants actually delivered to the lungs). In the general population few people experience these conditions very often, and people do not reach these exercise levels with equal frequencies during the day and night.

In addition, the analyst must determine the number of people that are exposed to the levels of ambient conditions seen in the laboratory. Air quality varies throughout a city and is typically reported by data from monitors located at various places throughout the city. However, people are not exposed to the conditions at any one monitor all day. As people move around in the city, they are exposed to ambient air quality conditions represented by different monitors at different times during the day. To further compound the problem, air quality also varies between indoors and outdoors, within a car or garage, and by such factors as proximity to a roadway or major pollution source (or sink). The exposure model must account for the ambient conditions in the "microenvironments" that the population actually experiences.

The issues of study subjects, exercise and microenvironments can influence the choice of clinical studies selected for the section 812 assessment. Clinical studies that use exposure regimes and exercise levels more similar to what larger groups of the population see are easier to apply in a benefits model than are more narrow studies. Similarly, studies that use a diverse group of subjects are easier to apply to the general population than are more narrow studies.

Given the major advantages of epidemiological studies—exposures do not need to be modeled and health effects are observed in a large, more heterogeneous population—epidemiological studies are used as the basis for determining the majority of health effects and dose-response curves. The diverse activity patterns, microenvironments, and pollution levels are already considered in the aggregate through the concentration-response functions derived from epidemiological studies. Clinical studies are used if there are health effects observed in clinical studies not observed in epidemiological studies.

Issues in Selecting Studies To Estimate Health Effects

A number of issues arise when selecting and linking the individual components of a comprehensive benefits analysis. The appropriate procedure for handling each issue must be decided within the context of the current analytical needs, considering the broader analytical framework. While more sophisticated or robust studies may be available in some circumstances, the potential impact on the overall analysis may make using a simpler, more tractable approach the pragmatic choice. In considering the overall impact of selecting a study for use in the section 812 assessment, important factors to consider include the likely magnitude the decision will have on the overall analysis, the balance between the overall level of analytical rigor and comprehensiveness in separate pieces of the analysis, and the effect on the scientific defensibility of the overall project.

This section discusses ten critical issues in selecting health information for use in the section 812 assessment: use of peer-reviewed research, confounding factors, uncertainty, the magnitude of exposure, duration of exposure, threshold concentrations, the target population, statistical significance of relationships, relative risks, and the need for baseline incidence data. The previous discussion about the types of research methods available for the health information alluded to some of these issues, as they are potentially important factors in selecting between studies using different methods. Other issues address how scientific research is used in the overall analytical framework.

Peer-Review of Research

Whenever possible, peer reviewed research rather than unpublished information has been relied upon. Research that has been reviewed by the EPA's own peer review processes, such as review by the Clean Air Science Advisory Committee (CASAC) of the Science Advisory Board (SAB), has been used whenever possible. Research reviewed by other public scientific peer review processes such as the National Academy of Science, the National Acidic Precipitation Assessment Program, and the Health Effects Institute is also included in this category.

Research published in peer reviewed journals but not reviewed by CASAC has also been considered for use in the section 812 assessment, and has been used if it is determined to be the most appropriate available study. Research accepted for publication by peer reviewed journals ("in press") has been considered to have been published. Indications that EPA intends to submit research to the CASAC (such as inclusion in a draft Criteria Document or Staff Paper) provide further evidence that the journal-published research should be used.

Air pollution health research is a very active field of scientific inquiry, and new results are being produced constantly. Many research findings are first released in University Working Papers, dissertations, government reports, non-reviewed journals and conference proceedings. Some research is published in abstract form in journals, which does not require peer review. In order to use the most recent research findings and be as comprehensive as possible, unpublished research was examined for possible use in the section 812 assessment. Any unpublished research used is carefully identified in the report, and treated as having a higher degree of uncertainty than published results. The peer review of the section 812 assessment by the Advisory Council on Clean Air Compliance Analysis provides one review process for all components of the assessment, as well as for the way in which the components have been used.

Confounding Factors

Confounding can occur when the real cause of disease is associated with a number of factors. If only one contributing factor is evaluated in an epidemiological study, a false association may occur. For example, in epidemiology studies of air pollution, it is important to take into account weather conditions, because weather is associated with both air pollution and health outcomes. If only air pollution is evaluated, a false association between air pollution and health could result; one may incorrectly assume that a reduction in air pollution is exclusively responsible for a reduction in a health outcome. Potential confounders include weather-related variables, age and gender mix of the subject population, and pollution emissions other than those being studied. Studies that control for a broad range of likely confounders can offer a more robust conclusion about an individual pollutant, even if the statistical confidence interval is larger due to the inclusion of more variables in the analysis.

In many cases, several pollutants in a "pollutant mix" are correlated with each other—that is, they tend to occur simultaneously. Therefore, although there may be an association between a health effect and each of several pollutants in the mix, it may not be clear which pollutant is causally related to the health effect (or whether more than one pollutant is causally related). This analysis includes epidemiological modeling of the health effects that have been associated with exposure to a number of pollutants. In most cases where the health effect is being modeled for the several correlated pollutants of interest, regression coefficients based on PM as a surrogate for the mixture were chosen in preference to multiple pollutant models and single pollutant models. The most important example of this occurs in estimating mortality effects. There is substantial evidence that exposure to criteria pollutants, either individually or collectively, is significantly associated with excess mortality. Generally, this association is related to particulate matter. Therefore, even though particulate matter cannot be shown to be the sole pollutant causing pollution-related excess mortality, it can be used as an indicator of the pollutant mixture which appears to result in excess mortality. This analysis estimates excess mortality (for all criteria pollutants other than lead) using PM as an indicator of the pollutant mix to which individuals were exposed. This issue is discussed further below, where details on estimating mortality effects are explored.

The one exception to the use of single pollutant regression models is estimating hospital admissions. Both PM and ozone are generally found to have a statistically significant and separate association with hospital admissions. Using separate regressions (from single pollutant models) for each pollutant may overstate the number of effects caused by each pollutant alone. On the other hand, using PM as a single indicator of the pollutant mix could underestimate the total hospital admissions caused by different mechanisms. Separate PM and ozone coefficients for hospital admissions are selected from regression models that consider the effects of both pollutants simultaneously.

Uncertainty

The stated goal of the section 812 assessment is to provide a comprehensive estimate of benefits of the Clean Air Act. To achieve this goal, information with very different levels of confidence must be used. Benefit categories are not to be omitted simply because they are highly uncertain or controversial, but those benefit categories that are reasonably well understood must be distinguished from those which are more tentative.

The ideal approach to characterizing uncertainty is to conduct a formal quantitative uncertainty analysis. A common approach develops an estimated probability distribution for each component of the analysis. A Monte Carlo procedure draws randomly from each of these distributions to generate an estimate of the result. Evaluating the result for many such random combinations, creates a distribution of results that reflects the joint uncertainties in the analysis.

The most serious obstacle to preparing a formal quantitative uncertainty analysis is identifying all the necessary distributions for each component of the analysis. The Monte Carlo procedure requires that all components of the model be rerun many times. However, the section 812 project links the outputs from independent modeling activities. It would be impractical to simultaneously rerun the macroeconomic, emissions, air quality, and exposure models because of the diverse origins of the models. Therefore, instead of a complete formal uncertainty analysis, the section 812 assessment includes a less rigorous analysis of the inherent uncertainties in the modeling effort. The uncertainty analysis combines quantitative and qualitative elements designed to sufficiently describe the implications of the uncertainties. A primary goal of the sensitivity/uncertainty analysis is to identify the health effects that make a sizable contribution to the overall assessment of the monetary benefits. There may be situations where there are significant differences in the available information used to predict the incidence of a particular health effect (i.e., the uncertainty bounds are large). It is important to alert the reader to situations where using the lower incidence estimates may portray the health effect as only modestly contributing to the overall total benefits, but using reasonable alternative higher estimated incidence figures (or higher monetized values) would substantially impact not only the monetized value of the individual health effect, but actually make a noticeable difference in the total benefits assessment.

Consideration of the overall uncertainties inherent in the section 812 assessment has several important implications for health study selection. It was important to carefully examine the balance between the level of uncertainties in the analysis and the need for

comprehensive coverage of all benefit categories. There were frequently situations in which a direct tradeoff existed between more comprehensive coverage and the restriction of the analysis to more certain information. Also, the relationship between the uncertainty in other parts of the analysis and the uncertainty for each particular health effect was carefully considered.

Magnitude of Exposure

One component of the section 812 analysis estimates the air pollution levels that would have occurred in the absence of the Clean Air Act. These estimates are larger than currently observed levels of U.S. air pollution, and perhaps even levels currently observed elsewhere in the world. This aspect of the analysis poses difficulties for the application of concentration-response functions that have been based on exposures at much lower pollution levels. The shape of the concentration-response function much above observed exposures levels is unknown. It is possible that biological mechanisms affecting response that are unimportant at low levels of exposure may dominate the form of response at higher levels, introducing nonlinearity to the mathematical relationship. In general, studies that include exposure levels spanning the range of interest in the section 812 assessment are preferable to studies at levels outside of the range, or that only include a narrow part of the range. A possible drawback to this approach is that studies which fit this criterion have often been conducted outside the U.S. The application of foreign studies to U.S. populations introduces additional uncertainties regarding the representativeness of the exposed population and the relative composition of the air pollution mix for which the single pollutant is an indicator. These difficult issues were considered in selecting studies for the benefits analysis.

Duration of Exposure

Selection of health studies for the section 812 assessment must consider the need to match the health information to the air quality modeling conducted for the assessment. For example, information on the health effects from short term (five minute) exposure to sulfur dioxide cannot be readily combined with information on average daily sulfur dioxide levels. In selecting studies for the benefits analysis, preference was shown for studies whose duration of exposure matched one of the averaging times of the air quality data.

Thresholds

Exposure-response relationships are conceptualized as either exhibiting a threshold of exposure below which adverse effects are not expected to occur, or as having no response threshold, where any exposure level theoretically poses a non-zero risk of response to at least one segment of the population. The methods employed by health researchers to characterize exposure-response relationships may or may not explicitly analyze the data for the existence of a threshold. Studies may analyze relationships between health and air pollution without considering a threshold. If a threshold for population risk exists but is not identified by researchers, then Clean Air Act benefits could be overestimated if CAA levels are below the threshold, because the risk reduction from the no-control scenario could be overstated. On the other hand, if a threshold is artificially imposed where one does not exist, the relative benefits of the Clean Air Act may be underestimated. In general, those studies that explicitly consider the question of a threshold (whether a threshold is identified or not) provide stronger evidence; consideration of this question is a positive feature when selecting studies for this analysis.

Target Population

Many of the studies relevant to quantifying the benefits of air pollution reductions have focused on specific sensitive subpopulations suspected to be most susceptible to the effects of the pollutant. Some of these effects may be relevant only for the studied subpopulation; effects on other individuals are either unknown, or not expected to occur. For such studies, the challenge of the analysis is to identify the size and characteristics of the subpopulation and match its occurrence to exposure. Other studies have examined specific cohorts who may be less susceptible than the general population to health effects from air pollution (e.g., healthy workers), or who differ in age, gender, race, ethnicity or other relevant characteristics from the target population of the benefits analysis. Extrapolating results from studies on nonrepresentative subpopulations to the general population introduces uncertainties to the analysis, but the magnitude of the uncertainty and its direction are often unknown. Because of these uncertainties, benefit analyses often limit the application of the dose-response functions only to those subpopulations with the characteristics of the study population. While this approach has merit in minimizing uncertainty in the analysis, it can also

severely underestimate benefits if, in fact, similar effects are likely to occur in other populations. For these reasons, studies that examine broad, representative populations are preferable to studies with narrower scope because they allow application of the functions to larger numbers of persons without introducing additional uncertainty.

Many studies included in the section 812 analysis focus on a particular age cohort of the population for the identification of health effects. The choice of age group is often a matter of convenience (e.g., extensive Medicare data may be available for the elderly population) and not because the effects are, in reality, restricted to the specific age group (even though their incidence may vary considerably over the life span). However, since no information is available about effects beyond the studied population, this analysis applies the given concentration-response relationships only to those age groups corresponding to the cohorts studied. Likewise, some studies were performed on individuals with specific occupations, activity patterns, or medical conditions because these traits relate to the likelihood of effect. In these cases, application of dose-response functions has been restricted to populations of individuals with these same characteristics.

Statistical Significance of Exposure-Response Relationships

The analysis includes as many studies related to a given health effect as possible, except for studies inapplicable to the current analysis. For some endpoints, the group of adequate studies yielded mixed results, with some showing statistically significant responses to pollutant concentrations and others with insignificant associations. Unless study methods have been judged inadequate, dose-response functions with both statistically significant and insignificant coefficients have been included to characterize the possible range of risk estimates. Excluding studies exclusively on the basis of significance could create an upward bias in the estimates by not reflecting research that indicates there is a small, or even zero, relationship between pollution and specific health effects. It should be noted, however, that some studies that found insignificant effects for a pollutant could not be used because they did not report the insignificant coefficient values.

In some cases, a single study reported results for multiple analyses, yielding both significant and nonsignificant results, depending on the nature of the input parameters (e.g., for different lag periods or concurrent exposures). In these cases, only significant results were included.

Relative Risks

Many studies reported only a relative risk value (defined as the ratio of the incidence of disease in two groups exposed to two different exposure levels). The analysis required conversion of these values to their corresponding regression coefficients when the coefficients were not reported. When converting the relative risk to a coefficient value, the analysis used the functional form of the regression equation reported by the authors of the study.

The coefficients from a number of studies measured the change in the number of health effects for the study population rather than a change per individual. These coefficients were divided by the size of the study population to obtain an estimate of change per individual. The coefficient could then be multiplied by the size of the population modeled in the current analysis to determine total incidence of health effects.

Baseline Incidence Data

Certain dose-response functions (those expressed as a change relative to baseline conditions) require baseline incidence data associated with ambient levels of pollutants. Incidence data necessary for the calculation of risk and benefits were obtained from national sources whenever possible, because these data are most applicable to a national assessment of benefits. The National Center for Health Statistics provided much of the information on national incidence rates. However, for some studies, the only available incidence information come from the studies themselves; in these cases, incidence in the study population is assumed to represent typical incidence nationally.

Studies were excluded if health endpoints could not be defined in the U.S. population. For example, in Pope and Dockery (1992) the authors developed a unique definition of symptomatic children in Utah which has no correlation in the incidence data bases which were available; consequently, the results could not be applied to the general population.

Estimating Mortality Effects

Using PM as an Indicator

There is substantial evidence that exposure to criteria pollutants, either individually or collectively, is significantly associated with excess mortality. This association is most closely and consistently related to the ambient air concentrations of PM.

Several studies have found small but statistically significant relationships between ozone and mortality, while other studies have not found a significant relationship. There is inconclusive evidence whether ozone has an effect independent of the effect of other pollutants (e.g., PM or CO), has a synergistic effect in combination with other effects, or is a confounder in the relationship between mortality and other pollutants. For example, in a recent study HEI (1996) found a significant and relatively stable ozone coefficient for most of the model specifications presented in the study. However, the measured ozone effect was largest and most significant in the winter and autumn, when ozone levels are low.

This analysis estimates excess mortality (for all criteria pollutants other than lead) using PM as an indicator of the pollutant mix to which individuals were exposed. Even if particulate matter exposure cannot be shown to be an independent causal factor of excess mortality, it is, at a minimum, a good indicator measure of the exposure to the pollutant mixture that has been shown to be related to excess mortality. Because PM is used as an indicator, the concentration-response functions from single pollutant models (i.e., statistical models including PM as the only pollutant) are preferred. To the extent that ozone is correlated with PM, the effect of ozone, either as an independent association or acting in combination with other pollutants, will be captured by this approach.

Estimating the Relationship Between PM and Premature Mortality

Long-term exposure versus short-term exposure studies and the degree of prematurity of mortality. Both long-term exposure (cohort) studies and short-term exposure (longitudinal or time-series) studies have estimated the relationship between exposure to PM and premature mortality. While there are advantages and disadvantages to each type of study (as discussed above), the long-term studies may capture more of the PM-related premature mortality, as well as premature mortality that is more premature, than the short-term studies.

The degree of prematurity of pollution-related death may be an important uncertainty in the effort to estimate the benefits of reducing pollution concentrations, as discussed in Appendix I. The willingness to pay to save a few days of life may be significantly less than the willingness to pay to save a few, or many, years of life. Evidence concerning the degree of prematurity of pollution-related death would, in this case, be crucial. Such evidence is, however, still scarce. There is some limited evidence that the relative risk of mortality from exposure to PM is higher for older individuals than for younger individuals. This, combined with the fact that the baseline incidence of mortality consists disproportionately of people 65 and over, suggests that PM-related mortality is disproportionately among older individuals. The extent to which prematurity of death among older individuals is on the order of days or weeks versus years, however, is more uncertain. The short-term exposure studies can provide little information on this. It is possible that premature deaths on high pollution days would have occurred only days later, if the individuals were sick and therefore particularly susceptible. The fact that the long-term exposure mortality studies found substantially larger relative risks, however, suggests that not all of the premature mortality is on the order of days or even weeks. Shortening of life of such a small duration would not be detectable in a long-term epidemiology study, ensuring that the effects detected in such studies must represent longer periods of life shortening. This suggests that at least some of the premature mortality associated with exposure to PM may reduce lifespans by substantially longer amounts of time.

Even if an individual's PM-related premature mortality is of very short duration, on the order of days, however, it may be misleading to characterize such a PM-related loss as only those few days if the individual's underlying susceptibility was itself exacerbated by chronic exposure to elevated levels of pollution. Suppose, for example, that long-term exposure to elevated PM levels compromises the cardiopulmonary system, making the individual more susceptible to mortality on peak PM days than he otherwise would have been. If this is the case, then the underlying susceptibility would itself be either caused by chronic exposure to elevated PM levels or exacer-

bated by it. Characterizing the individual's loss as a few days could, in this case, be a substantial underestimate.

In addition, the long-term studies estimate significantly more PM-related mortality than the annual sum of the daily estimates from the short-term studies, suggesting that the short-term studies may be missing a component of PM-related mortality that is being observed in the long-term studies. For example, if chronic exposure to elevated PM levels causes premature mortality that is not necessarily correlated with daily PM peak levels, this type of mortality would be detected in the long-term studies but not necessarily in the short-term studies. Two of the long-term exposure studies suggest, moreover, that the association between ambient air pollution and mortality cannot be explained by the confounding influences of smoking and other personal risk factors.

Uncertainties surround analyses based on epidemiological studies of PM and mortality. In addition to the uncertainty about the degree of prematurity of mortality, there are other uncertainties surrounding estimates based on epidemiological studies of PM and mortality. Although epidemiological studies are generally preferred to human clinical studies, there is nevertheless uncertainty associated with estimates of the risk of premature mortality (and morbidity) based on studies in the epidemiological literature. Considering all the epidemiological studies of PM and mortality, both short-term and long-term, there is significant interstudy variability as well as intrastudy uncertainty. Some of the difference among estimates reported by different studies may reflect only sampling error; some of the difference, however, may reflect actual differences in the concentration-response relationship from one location to another. The transferability of a concentration-response function estimated in one location to other locations is a notable source of uncertainty.

Although there may be more uncertainty about the degree of prematurity of mortality captured by short-term exposure studies than by long-term exposure studies, certain sources of uncertainty associated with long-term exposure studies require mention. Although studies that are well-executed attempt to control for those factors that may confound the results of the study, there is always the possibility of insufficient or inappropriate adjustment for those factors that affect long-term mortality rates and may be confounded with the factor of interest (e.g., PM concentrations). Prospective cohort studies have an advantage over ecologic, or population-based, studies in that they gather individual-specific information on such important risk factors as smoking. It is always possible, however, that a relevant, individual-specific risk factor may not have been controlled for or that some factor that is not individual-specific (e.g., climate) was not adequately controlled for. It is therefore possible that differences in mortality rates that have been ascribed to differences in average PM levels may be due, in part, to some other factor or factors (e.g., differences among communities in diet, exercise, ethnicity, climate, industrial effluents, etc.) that have not been adequately controlled for.

Another source of uncertainty surrounding the prospective cohort studies concerns possible historical trends in PM concentrations and the relevant period of exposure, which is as yet unknown. TSP concentrations were substantially higher in many locations for several years prior to the cohort studies and had declined substantially by the time these studies were conducted. If this is also true for PM_{10} and or $PM_{2.5}$, it is possible that the larger PM_{10} and or $PM_{2.5}$ coefficients reported by the long-term exposure studies (as opposed to the short-term exposure studies) reflect an upward bias. If the relevant exposure period extends over a decade or more, then a coefficient based on PM concentrations at the beginning of the study or in those years immediately prior to the study could be biased upward if pollution levels had been decreasing markedly for a decade or longer prior to the study.

On the other hand, if a downward trend in PM concentrations continued throughout the period of the study, and if a much shorter exposure period is relevant (e.g., contained within the study period itself), then characterizing PM levels throughout the study by those levels just prior to the study would tend to bias the PM coefficient downward.

The relevant exposure period is one of a cluster of characteristics of the mortality-PM relationship that are as yet unknown and potentially important. It is also unknown whether there is a time lag in the PM effect, Finally, it is unknown whether there may be cumulative effects of chronic exposure — that is, whether the relative risk of mortality actually increases as the period of exposure increases.

Estimating the relationship between PM and premature mortality. The incidence of PM-related mortality used for estimating the benefits of the CAA is

based on the concentration-response relationship reported by one of the two recent long-term exposure (prospective cohort) studies (Pope et al., 1995, and Dockery et al., 1993). Because it is based on a much larger population and many more locations than Dockery et al. (1993), the concentration-response function from Pope et al. (1995) was used in this analysis. The results of Pope et al. are consistent with those of Dockery et al., which reported an even larger response, but in only six cities. Moreover, Pope et al. is also supported by several ecological cross-sectional studies of annual mortality based on 1960 and 1970 census data (using either TSP or sulfate as indicators of PM), including the work of Lave and Seskin (1977) and Lipfert (1984).

Numerous short-term exposure (time series) studies have also reported a positive and statistically significant relationship between PM and mortality. Of the fourteen studies that estimated the relationship between daily PM_{10} concentrations and daily mortality listed in Table 12-2 of the PM Criteria Document, twelve reported positive and statistically significant findings (Pope et al., 1992; Pope and Kalkstein, 1996; Dockery et al., 1992; Schwartz, 1993a; Ozkaynak et al., 1994; Kinney et al., 1995: Ito et al., 1995; Ostro et al., 1996; Saldiva et al., 1995; Styer et al., 1995; Ito and Thurston, 1996; Schwartz et al., 1996). While these studies lend substantial support to the hypothesis that there is a relationship between PM_{10} and mortality, they may be capturing only the portion of that relationship involving short-term effects. For this reason, they are considered in this analysis only as supporting evidence to the results of the study by Pope et al.

The Pope et al. study has several further advantages. The population followed in this study was largely white and middle class, decreasing the likelihood that interlocational differences in premature mortality were due in part to differences in socioeconomic status or related factors. In addition, the generally lower mortality rates and possibly lower exposures to pollution among this group, in comparison to poorer minority populations, would tend to bias the PM coefficient from this study downward, counteracting a possible upward bias associated with historical air quality trends discussed above.

Another source of downward bias in the PM coefficient in Pope et al. is that intercity movement of cohort members was not considered in this study. Migration across study cities would result in exposures of cohort members being more similar than would be indicated by assigning city-specific annual average pollution levels to each member of the cohort. The more intercity migration there is, the more exposure will tend toward an intercity mean. If this is ignored, differences in exposure levels, proxied by differences in city-specific annual median PM levels, will be exaggerated, resulting in a downward bias of the PM coefficient (because a given difference in mortality rates is being associated with a larger difference in PM levels than is actually the case).

In summary, because long-term exposure studies appear to have captured more of the PM-related premature mortality, as well as premature mortality that is more premature, they are preferable to the short-term exposure studies. Among the long-term exposure studies, the Pope et al. study has several advantages, as discussed above, which are likely to reduce the possibility of a key source of confounding and increase the reliability of the concentration-response function from that study. For these reasons, the concentration-response function estimated in this study is considered the most reasonable choice for this analysis.

Matching PM Indices in the Air Quality Profiles and Concentration-Response Function. The Pope et al. study examined the health effects associated with two indices of PM exposure: sulfate particles and fine particles ($PM_{2.5}$). The reported mortality risk ratios are slightly larger for $PM_{2.5}$ than for sulfates (1.17 versus 1.15 for a comparison between the most polluted and least polluted cities). The $PM_{2.5}$ relationship is used in this analysis because it is more consistent with the PM_{10} air quality data selected for the analysis. Estimated changes in $PM_{2.5}$ air quality must be matched with the $PM_{2.5}$ mortality relationship. However, only PM_{10} profiles were used for the entire 20 year period. Therefore, the same regional information about the PM_{10} components (sulfate, nitrate, organic particulate and primary particulate) used to develop the PM_{10} profiles were used to develop regional $PM_{2.5}/PM_{10}$ ratios. Although both urban and rural ratios are available, for computational simplicity, only the regional urban ratios were used to estimate the $PM_{2.5}$ profiles from the PM_{10} profiles used in the analysis. This reflects the exposure of the majority of the modeled population (i.e., the urban population), while introducing some error in the exposure changes for the rural population. In the east and west, where the rural ratio is larger than the urban ratio, the change in $PM_{2.5}$ exposure will be underestimated for the rural population.

In the central region the $PM_{2.5}$ change will be overestimated. These ratios were used in each year during 1970-1990, introducing another source of uncertainty in the analysis. Table D-5 summarizes the $PM_{2.5}/PM_{10}$ ratios used in this analysis.

Table D-5. $PM_{2.5}/PM_{10}$ Ratios Used to Estimate $PM_{2.5}$ Data Used With Pope et al. (1995) Mortality Relationship.

	East	Central	West	National
Urban	0.59	0.58	0.48	0.55
Rural	0.68	0.53	0.49	0.57

Prematurity of Mortality: Life-Years Lost as a Unit of Measure

Perhaps the most important health effect that is examined in this analysis is mortality. Although this analysis does not take into account the degree of prematurity of death (that is, the ages of those individuals who die prematurely from exposure to PM are not considered), considerable attention has been paid to this issue and, in particular, to life-years lost as an alternative to lives lost as a measure of the mortality-related effects of pollution.

Because life-years lost is of potential interest and because there is a substantial potential for confusion in understanding apparently disparate estimates of life-years lost from pollution exposure, this section attempts to present a clear discussion of the various possible measures of life-years lost, what they depend on, and how they are related to each other.

Because the actual number of years any particular individual is going to live cannot be known, "life-years lost" by an individual actually refers to an *expected* loss of years of life by that individual. The expected loss of years of life by an individual depends crucially on whether the expectation is contingent on the individual only having been exposed to PM or on the individual actually having died from that exposure.

An *ex ante* estimate of life-years lost per individual is contingent not on the individual having died prematurely but only on the individual having been exposed. Suppose, for example, that a 25 year old has a life expectancy of 50 more years in the absence of exposure and only 49 more years in the presence of exposure. Given (chronic) exposure from the age of 25 on, the 25 year old exposed to (some elevated level of) PM might expect a shortening of life expectancy of one year, for example. That is one expected life-year lost due to chronic exposure. This is the life-years lost that can be expected by every *exposed* individual.

An *ex post* estimate of life-years lost per individual is contingent on the individual actually having died from exposure to PM. When an individual dies of exposure to PM, he is said to have lost the number of years he would have been expected to live, calculated, for example, from age- and gender-specific life expectancy tables. Suppose that the life expectancy of 25 year olds is 75 — that is, a 25 year old can expect to live 50 more years. A 25 year old who dies from exposure to PM has therefore lost 50 expected years of life. This is the life-years lost that can be expected by every 25 year old *affected* individual (i.e., every 25 year old who actually dies from exposure to PM).

Estimates of the total life-years lost by a population exposed to PM depend on several factors, including the age distribution and the size of the exposed population, the magnitude of the change (or changes) in PM being considered, the relative risk assumed to be associated with each change in PM, and the length of time exposure (i.e., the change in PM) is presumed to occur. A population chronically exposed to a given increase in PM will lose more life-years than a population exposed to the same increase in PM for only a year or two.[6] A population that is generally older will lose fewer life-years, all else equal, than one that is generally younger, because older individuals have fewer (expected) years of life left to lose. And a population exposed to a greater increase in PM will lose more life-years than if it were exposed to a smaller increase in PM. Finally, the life-years lost by the population will increase as the relative risk associated with the increase in PM increases.

Life-years lost are usually reported as averages over a population of individuals. The population being averaged over, however, can make a crucial dif-

[6] Even in the absence of cumulative effects of exposure, exposure of a population for many years will result in a greater total number of pollution-related deaths than exposure for only a year or two, because the same relative risk is applied repeatedly, year after year, to the population, rather than for only a year or two.

ference in the reported average life-years lost, as noted above. The average life-years lost *per exposed individual* (the *ex ante* estimate) is just the total life-years lost by the population of exposed individuals divided by the number of exposed individuals. This average will depend on all the factors that the total life-years lost depends on except the size of the exposed population. The average life-years lost by an exposed individual is a statistical expectation. It is the average of the numbers of life-years actually lost by each member of the exposed population. Alternatively, it can be thought of as a weighted average of possible numbers of years lost, where the weights are the proportions of the population that lose each number of expected years of life. Although those individuals who do die prematurely from exposure to PM may lose several expected years of life, most exposed individuals do not actually die from exposure to PM and therefore lose zero life-years. The average life-years lost per exposed individual in a population, alternatively referred to as the average decrease in life expectancy of the exposed population, is therefore heavily weighted towards zero. The average number of life-years lost *per individual who dies of exposure to PM* (the *ex post* measure of life-years lost) is an average of the numbers of expected years of life lost by individuals who actually died prematurely because of PM. Because everyone who dies prematurely from exposure to PM loses some positive number of expected years of life, this average, by definition, does not include zero.

An example of an *ex ante* measure of life-years lost is given by a study in the Netherlands (WHO, 1996), which considered a cohort of Dutch males, aged 25-30, and compared the life expectancy of this cohort to what it would be in a hypothetical alternative scenario in which these individuals are continuously exposed to concentrations of $PM_{2.5}$ that are 10 $\mu g/m^3$ lower than in the actual scenario. The life expectancy of this cohort of 25-30 year old Dutch males was calculated to be 50.21 years in the actual scenario, based on a 1992 life table from the Netherlands. Assuming that the relative risk of mortality associated with an increase of 10 $\mu g/m^3$ $PM_{2.5}$ is 1.1 (the average of the relative risks of 1.14 from Dockery et al., 1993, and 1.07 from Pope et al., 1995), the study authors calculated death rates in the hypothetical "cleaner" scenario by dividing the age-specific death rates in the actual scenario by 1.1. Using these slightly lower death rates, and assuming that the effect of PM does not begin until 15 years of exposure, the authors constructed a life table for the cohort in the hypothetical "cleaner" scenario. Based on this new life table in a cleaner world, the life expectancy of the cohort of 25-30 year old Dutch males was calculated to be 51.32 years in the hypothetical cleaner scenario. (In calculating life expectancies in both the "dirty" scenario and the "clean" scenario, it is assumed that any individual who does not survive to the next 5-year age group lives zero more years. For example, a 30 year old individual either survives to age 35 or dies at age 30.) The change in life expectancy for this cohort of 25-30 year old Dutch males, due to a change in PM exposure of 10 $\mu g/m^3$ for the rest of their lives (until the age of 90), was therefore 51.32 years - 50.21 years = 1.11 years. That is, the average life-years lost by an exposed individual in this population, under these assumptions, is 1.11 years.

The estimate of 1.11 years of expected life lost depends on several things, as mentioned above. If the study authors had used the relative risk from Pope et al., 1995, alone, (1.07 instead of 1.1), for example, the change in life expectancy (the *ex ante* measure of life-years lost) for this cohort of 25-30 year old Dutch males would have been 0.80 years. Similarly, changing the assumption about the duration of exposure also changes the estimate of *ex ante* life-years lost. Using a relative risk of 1.1, but assuming that exposure lasts only during the first 5 years (i.e., that the death rate in the first five years, from age 25 through age 30, is lower but that after that it is the same as in the "dirty" scenario), the average life-years lost by an exposed individual in this population is reduced from 1.11 years to 0.02 years.

By their construction and definitions, the average life-years lost per exposed individual and the average life-years lost per affected individual (i.e., per individual who dies prematurely from PM) take the same total number of life-years lost by the exposed population and divide them by different denominators. The average life-years lost per exposed individual divides the total life-years lost by the total population exposed; the average life-years lost per affected individual divides the same total life-years lost by only a small subset of the total population exposed, namely, those who died from PM. The average per exposed individual is therefore much smaller than the average per affected individual. Because both types of average may be reported, and both are valid measurements, it is important to understand that, although the numbers will be very dissimilar, they are consistent with each other and are simply different measures of the estimated mortality impact of PM.

To calculate the total (estimated) life-years lost by a population, it is necessary to follow each age cohort in the population through their lives in both scenarios, the "dirty" scenario and the "clean" scenario, and compute the difference in total years lived between the two scenarios, as WHO (1996) did for the cohort of Dutch males 25-30 years old. This method will be referred to as Method 1. In practice, however, it is not always possible to do this. (Other changes to the population, such as those from recruitment and immigration, for example, would make such an exercise difficult.) An alternative method, which approximates this, is to predict the numbers of individuals in each age category who will die prematurely from exposure to PM (i.e., who will die prematurely in the "dirty" scenario), and multiply each of these numbers by the corresponding expected number of years remaining to individuals in that age category, determined from life expectancy tables. This method will be referred to as Method 2. Suppose, for example, that individuals age 25 are expected to live to age 75, or alternatively, have an expected 50 years of life remaining. Suppose that ten 25 year olds are estimated to die prematurely because of exposure to PM. Their expected loss of life-years is therefore 50 years each, or a total of 500 life-years. If the same calculation is carried out for the individuals dying prematurely in each age category, the sum is an estimate of the total life-years lost by the population.

Using Method 1 (and retaining the assumptions made by WHO, 1996), the average life-years lost per PM-related death among the cohort of Dutch males is calculated to be 14.28 years. Using Method 2 it is estimated to be 14.43 years.

Although this *ex post* measure of life-years lost is much larger than the *ex ante* measure (1.11 life-years lost per exposed individual), it only applies to those individuals who actually die from exposure to PM. The number of individuals in the age 25-30 Dutch cohort example who eventually die from exposure to PM (7,646) is much smaller than the number of individuals in the age 25-30 Dutch cohort who are exposed to PM (98,177). The total life-years lost can be calculated either as the number of exposed individuals times the expected life-years lost per exposed individual (98,177*1.11 = 109,192.1) or as the number of affected individuals times the expected life-years lost per affected individual (7,646*14.28 = 109,192.1).

To further illustrate the different measures of life-years lost and the effects of various input assumptions on these measures, death rates from the 1992 U.S. Statistical Abstract were used to follow a cohort of 100,000 U.S. males from birth to age 90 in a "dirty" scenario and a "clean" scenario, under various assumptions. Death rates were available for age less than 1, ages 1-4, and for ten-year age groups thereafter. The ten-year age groups were divided into five-year age groups, applying the death rate for the ten-year group to each of the corresponding five-year age groups. *Ex ante* and *ex post* measures of life-years lost among those individuals who survive to the 25-29 year old category were first calculated under the assumptions in the WHO (1996) study. These assumptions were that the relative risk of mortality in the "dirty" scenario versus the "clean" scenario is 1.1; that exposure does not begin until age 25; that the effect of exposure takes fifteen years; that individuals at the beginning of each age grouping either survive to the next age grouping or live zero more years; and that all individuals age 85 live exactly five more years. Under these assumptions, the expected life-years lost per exposed individual in the 25-29 year old cohort is 1.32 years. There are 96,947 exposed individuals in this age cohort. The expected life-years lost per affected individual (i.e., per PM-related death) is 16.44 years (Method 1). There are 7,804 affected individuals. The total life-years lost by individuals in this cohort is 128,329.3 (1.32*96,947 = 16.44* 7,804 = 128,329.3).

If the relative risk is changed to 1.07, the expected life-years lost per exposed individual in the cohort of 25-29 year old U.S. males is reduced from 1.32 to 0.95 years. The expected life-years lost per affected individual (i.e., per PM-related death) is 16.44 years (Method 1). Using a relative risk of 1.1 but assuming no lag (i.e., assuming that exposure starts either at birth or at age 25 and has an immediate effect), the expected life-years lost per exposed individual in the 25-29 year old cohort changes from 1.32 to 1.12. The expected life-years lost per affected individual (i.e., per PM-related death) becomes 19.7 years (Method 1).

Estimating Morbidity Effects

In addition to mortality effects, this analysis quantifies effects for a number of non-fatal health endpoints. Several issues arise in implementing the studies selected for this analysis.

Overlapping Health Effects

Several endpoints reported in the health effects literature overlap with each other. For example, the literature reports relationships for hospital admissions for single respiratory ailments (e.g. pneumonia or chronic obstructive pulmonary disease) as well as for all respiratory ailments combined. Similarly, several studies quantify the occurrence of respiratory symptoms where the definitions of symptoms are not unique (e.g., shortness of breath, upper respiratory symptoms, and any of 19 symptoms). Measures of restricted activity provide a final example of overlapping health endpoints. Estimates are available for pollution-induced restricted activity days, mild restricted activity days, activity restriction resulting in work loss. This analysis models incidence for all endpoints. Double-counting of benefits is avoided in aggregating economic benefits across overlapping endpoints (see Appendix I).

Studies Requiring Adjustments

Applying concentration-response relationships reported in the epidemiological literature to the national scale benefits analysis required by section 812 required a variety of adjustments.

Normalization of coefficients by population. To be applied nationwide, concentration-response coefficients must reflect the change in risk per person per unit change in air quality. However, some studies report the concentration-response coefficient, , as the change in risk for the entire studied population. For example, Thurston et al. (1994) reported the total number of respiratory-related hospital admissions/day in the Toronto, Canada area. To normalize the coefficient so that it might be applied universally across the country, it was divided by the population in the geographical area of study (yielding an estimate of the change in admissions/person/day due to a change in pollutant levels).

Within-study meta-analysis. In some cases, studies reported several estimates of the concentration-response coefficient, each corresponding to a particular year or particular study area. For example, Ostro and Rothschild (1989) report six separate regression coefficients that correspond to regression models run for six separate years. This analysis combined the individual estimates using a fixed coefficient meta-analysis on the six years of data.

Conversion of coefficients dependent on symptom status during the previous day. Krupnick et al. (1990) employed a Markov process to determine the probability of symptoms that were dependent on symptom status of the previous day. The current analysis adjusts the regression coefficients produced by the model in order to eliminate this dependence on previous day's symptom status.

Concentration-Response Functions: Health Effects

After selecting studies appropriate for the section 812 analysis, taking into account the considerations discussed above, the published information was used to derive a concentration-response function for estimating nationwide benefits for each health effect considered. In general, these functions combine air quality changes, the affected population and information regarding the expected per person change in incidence per unit change in pollutant level. The following tables present the functions used in this analysis, incorporating information needed to apply these functions and references for information.

Particulate Matter

The concentration-response functions used to quantify expected changes in health effects associated with reduced exposure to particulate matter are summarized in Table D-6. The data profiles selected for use in this analysis are PM_{10}. In those cases in which PM_{10} was not the measure used in a study, this analysis either converted PM_{10} air quality data to the appropriate air quality data (e.g., $PM_{2.5}$ or TSP) or, equivalently, converted the pollutant coefficient from the study to the corresponding PM_{10} coefficient, based on location-specific information whenever possible.

Table D-6. Summary of Concentration-Response Functions for Particulate Matter.

Except where noted otherwise, the functional form is

$$\Delta cases = cases * (e^{\beta * \Delta PM_{10}} - 1)$$

where "cases" refers to incidence at the first pollution level.

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas. from Original Study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
mortality (long-term exposure)	non-accidental deaths by county[b]	annual median $PM_{2.5}$	50 cities, all deaths	over age 30	$\beta_{PM2.5} = 0.006408$ PM_{10} data converted to $PM_{2.5}$ data[c]	s.e. = 0.00148	Pope et al., 1995 American Cancer Society cohort
hospital admissions--all resp. illnesses (ICD 460-519)	.504[d]/year (incidence in pop. > 65 years of total U.S. pop.)	same day PM_{10}	65 and older in New Haven, CT, Tacoma, WA	65 and older	New Haven: 0.00172 Tacoma: 0.00227 average: 0.0020	c.i. = New Haven: 1.00-1.12 s.e. = 0.00093 Tacoma: 0.97-1.29 s.e. = 0.00146	Schwartz, 1995 New Haven and Tacoma
hospital admissions -- all resp. illnesses (ICD 460-519)	n/a	mean monthly PM_{10}	variety of ages in Salt Lake Valley, Utah	all	Δ cases = β * ΔPM_{10} * Pop. where β = 0.8047 monthly admissions / Salt Lake Valley population (780,000). = 3.4×10^{-4} (converted from monthly to daily admissions)	s.e. = 0.28	Pope, 1991 Salt Lake Valley
daily respiratory admissions (total) includes 466, 480, 481, 482, 485, 490, 491, 492, 493	n/a	same-day PM_{10}	Toronto metro area	all	Δ cases = β * Δ PM_{10} * Pop where β = 0.0339 daily admissions / Toronto population (2.4 million) = 1.4×10^{-5} (model also includes O_3)	s.e. = 0.034/2.4 million = 1.4×10^{-5}	Thurston et al. 1994 Toronto
hospital admissions pneumonia (480-487)	.229[d]/year (incidence in pop. > 65 years of total U.S. pop.)	same day PM_{10}	over 65, Birmingham AL	over 65	β = 0.00174	c.i. = 1.07 - 1.32 s.e. = 0.000536	Schwartz, 1994a Birmingham

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas. from Original Study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
hospital admissions COPD (490-496)	103[b]/year (incidence in pop. > 65 years of total U.S. pop.)	same day PM_{10}	over 65, Birmingham AL	over 65	$\beta = 0.00239$	c.i. = 1.08 - 1.50 s.e. = 0.00084	Schwartz, 1994a Birmingham
hospital admissions pneumonia (480-487)	229[b]/year (incidence in pop. > 65 years of total U.S. pop.)	same day PM_{10}	over 65, Detroit	over 65	$\beta = 0.00115$	s.e. = 0.00039	Schwartz, 1994b Detroit
hospital admissions COPD (490-496)	103[b]/year (incidence in pop. > 65 years of total U.S. pop.)	same day PM_{10}	over 65, Detroit	over 65	$\beta = 0.00202$	s.e. = 0.00059	Schwartz, 1994b Detroit
hospital admissions pneumonia (480-487)	229[b]/year (incidence in pop. > 65 years of total U.S. pop.)	same day PM_{10}	65 and over in Mpls	over 65	$\beta = 0.00157$	c.i. = 1.02 - 1.33 s.e. = 0.00068	Schwartz, 1994c Mpls, St. Paul
hospital admissions COPD (490-496)	103[b]/year (incidence in pop. > 65 years of total U.S. pop.)	current and previous day PM_{10}	65 and over in Mpls	over 65	$\beta = 0.00451$	c.i. = 1.20 - 2.06 s.e. = 0.00138	Schwartz, 1994c Mpls, St. Paul
hospital admissions for congestive heart failure (ICD 428)	231[b]/year (incidence in pop. > 65 years of total U.S. pop.)	avg same and previous day PM_{10}	65 and older in Detroit	65 and older	$\beta = 0.00098$	c.i. = 1.012-1.052 s.e. = 0.00031	Schwartz and Morris, 1995 Detroit
hospital admissions for ischemic heart disease (ICD 410-414)	450[b]/year (incidence in pop. > 65 years of total U.S. pop.)	24 hr avg PM_{10} same day	65 and older in Detroit	65 and older	$\beta = 0.00056$	c.i. = 1.005-1.032 s.e. = 0.00021	Schwartz and Morris, 1995 Detroit

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas. from Original Study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
hospital admissions -- all resp. illnesses (ICD 460-519)	504[b]/year (incidence in pop. > 65 years of total U.S. pop.)	24 hr avg PM_{10}	over 65, Spokane	over 65	$\beta = 0.00163$	s.e. = 0.00047	Schwartz, 1996, Spokane
hospital admissions COPD (490-496)	103[b]/year (incidence in pop. > 65 years of total U.S. pop.)	24 hr avg PM_{10}	over 65, Spokane	over 65	$\beta = 0.00316$	s.e. = 0.00084	Schwartz, 1996, Spokane
hospital admissions pneumonia (480-487)	229[b]/year (incidence in pop. > 65 years of total U.S. pop.)	24 hr avg PM_{10}	over 65, Spokane	over 65	$\beta = 0.00103$	s.e. = 0.00068	Schwartz, 1996, Spokane
LRS defined as cough, chest pain, phlegm, and wheeze	not applicable	same day PM_{10}	8-12 yr olds	0-12 yr olds	$\Delta cases = \frac{P_0}{(1-P_0) * e^{-\beta * \Delta PM10}} - P_0$ where P_0 = the probability of a child in the study pop suffering from LRS in the base case = 1.45 % and $\beta = 0.014176$	s.e. = 0.0041	Schwartz et al., 1994d
shortness of breath, days	not applicable	24 hour avg PM_{10}	African-American asthmatics between ages 7 and 12	same as study pop.	$\Delta cases = \frac{P_0}{(1-P_0) + e^{-\beta * \Delta PM10}} - P_0$ where P_0 = the probability of a child in the study pop. suffering from shortness of breath in the base case = 5.6 % and $\beta = 0.008412$	s.e. = 0.00363	Ostro et al., 1995

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas. from Original Study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
URI defined as runny or stuffy nose, wet cough, burning, aching, or red eyes	1,192[c] (ages 10-12) 5,307[b] (ages <= 12)	same day PM_{10}	10-12 yr old non-symptomatic	12 and under	$\beta = 0.0036$	s.e. = 0.0015	Pope et al., 1991 Utah
acute bronchitis (ICD 466)	n/a	PM_{10} annual avg (converted)	10 to 12 year olds	18 and under	$\beta = 0.0330$ $\Delta cases = \frac{P_0(e^{\beta \cdot \Delta PM \cdot 10}) - P_0}{1 - P_0 + P_0(e^{\beta \cdot \Delta PM \cdot 10})} * Pop$ P_0 = baseline probability of having bronchitis =0.065[c]	s.e. = 0.0216	Dockery et al., 1989 6 cities
chronic bronchitis	710/year (of study pop.)	annual mean TSP	Seventh Day Adventists in California	all	$\beta = 0.00512$ convert PM_{10} to TSP: $\Delta\ TSP = \frac{\Delta PM10}{0.56}$ where 0.56 is the specific conversion based on region and initial TSP conc.	not available	Abbey et al., 1993

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas. from Original Study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
chronic bronchitis	600/year	annual mean TSP	adults 30-74 years old in 53 U.S. urban areas	all	Δ cases/year = $(p_1 - p_0)$ * Pop where $P_1 = \frac{1}{1 + e^{-(\alpha_1 + p_0 + \beta \Delta PM_{10})}}$ where p_0 = 0.006 = the probability of developing physician-diagnosed chronic bronchitis per individual per year and β = 0.0012, the PM_{10} coefficient, converted from the TSP coefficient, using the relationship: $\Delta TSP = \frac{\Delta PM10}{0.56}$ where 0.56 is the specific conversion based on region and initial TSP conc.	95% CI = (1.02 - 1.12) for odds ratio corresponding to a 10 μg/m3 increase in annual TSP	Schwartz, 1993b
presence of any of 19 acute respiratory symptoms	not applicable	24 hour average COH in units/ 100 ft[b] COH = coeff. of haze	adult members of families of elementary school-aged children in Glendora-Covina-Azusa, CA	adults 18-65	Δ $Sympt_{day}$/day = $(p_1 - p_0)$ * Pop where $P_1 = \frac{1}{1 + e^{-(\alpha_1 + p_0 + \beta \cdot \Delta O_3)}}$ and p_0 = the probability of $Sympt_{day}$ per individual for a 24-hour period in the base case = 0.19 β = 0.000466[c] (Model includes O_3, COH, SO_2)	s.e. = 0.0002[d]	Krupnick et al., 1990

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas. from Orighal Study	Study Pop.	Applied Pop.	Functional form[1]	Uncert & Var.	Sources
moderate or worse asthma status	n/a	average $PM_{2.5}$ during 9:00 am to 4:00 pm (μg/m³)	Denver asthmatics between ages 18 and 70	asthmatic (4% of total pop.)	Δ asthma status= $\beta[\ln(X_1/X_0)]$*Pop where X_0 = PM_{10} concentrations with CAA, X_1 = PM_{10} concentrations without CAA, and $\beta = 0.00038^{[2]}$ (model includes $PM_{2.5}$ and modeled $PM_{2.5}$ measures for periods where $PM_{2.5}$ measures were missing)	s.e. = 0.00019	Ostro et al., 1991 Denver
Restricted Activity Days (RADs)	400,531 days/year[4] (of the total U.S. pop)	2-wk average $PM_{2.5}$ (μg/m³)	All adults 18-65 in metropolitan areas in the U.S.	adults aged 18-65	Δ health effects determined over a 2 wk period $\beta = 0.0030^{[3]}$	s.e. = 0.00018[5]	Ostro, 1987
respiratory and nonrespiratory conditions resulting in a minor restricted activity day (MRAD)	780,000 days/year (cited as 7.68 days per person per year in study)	$PM_{2.5}$ averaged over a 2-wk period	employed adults across the U.S. between the ages of 18-65	adults aged 18-65	number of health effects determined over a 2-week period $\beta = 0.00463^{[3]}$ (Model includes fine particulates and O_3)	s.e. = 0.00044[5]	Ostro and Rothschild, 1989
respiratory restricted activity days (RRADs)	306,000 days/year (cited as 3.06 days per person per year in study)	$PM_{2.5}$ averaged over a 2 wk period	employed adults across the U.S. between the ages of 18-65	adults aged 18-65	number of health effects determined over a 2-wk period $\beta = 0.00936^{[3]}$ (Model includes fine particulates and O_3)	s.e. = 0.00103[5]	Ostro and Rothschild, 1989
Work Loss Days (WLDs)	150,750[6] (of total U.S. pop)	2-wk average $PM_{2.5}$ (μg/m³)	All adults 18-65 in metropolitan areas in the U.S.	adults aged 18-65	Δ health effects determined over a 2 wk period $\beta = 0.0029^{[3]}$	s.e. = 0.00022[5]	Ostro, 1987

NOTES:
[a] Pollutant coefficients reflect changes in health effects per change in μg/m³ PM_{10}.
[b] Mortality baseline incidence data for each county taken from Vital Statistics of the United States, Vol. II - Mortality, Part B, (U.S. Dept. of Health and Human Services). Incidence rates were generated for total mortality excluding accidental deaths and adverse effects, suicide, homicide, and other external causes (ICD E800-E999). Rates calculated based on 1990 population.
[c] PM_{10} data converted to $PM_{2.5}$ data by using national urban average $PM_{2.5}/PM_{10}$ ratio = 0.56.
[d] Centers for Disease Control, 1992. Vital and Health Statistics, Detailed Diagnoses and Procedures, National Hospital Discharge Survey, 1990. Number of 1990 discharges divided by 1990 U.S. population (248,709,873) from City and County Databook, 12th edition, 1994, U.S. Dept. of Commerce, Bureau of the Census, Washington, D.C.
[e] Pope et al., 1991 NOTE: rates were not available from standard incidence sources and so were calculated from incidence in the study of 10-12 year olds. This may not be entirely appropriate for older or younger individuals. Children of this age are less likely to have colds than much younger children and may be more representative of the adult population.
[f] Dockery et al., 1989.
[g] Coefficient and standard error are converted from a β and s.e. for coefficient of haze (COH) to a β and s.e. for PM_{10}. This was done by using a ratio of COH to TSP of 0.116 from the study authors (as cited in ESEERCO, 1994) and a ratio of PM_{10} to TSP of 0.55 (U.S. EPA, 1986).
[h] Coefficient and standard error incorporate the stationary probabilities as described in Krupnick et al. (1990). To do this, the calculation used the transitional probabilities supplied by the authors and presented in ESEERCO, 1994.
[i] U.S. EPA, 1994a.
[j] β converted from a change in health effects per change in μg/m³ $PM_{2.5}$ to a change per μg/m³ PM_{10} using the following relationship: 1 μg/m³ $PM_{2.5}$ = 0.56 μg/m³ PM_{10} (ESEERCO, 1994).
[k] Number of RADs for all acute conditions from: National Center for Health Statistics. Current Estimates from the National Health Interview Survey: United States, 1990. (Hyattsville, MD). This number is divided by the U.S. population for 50 states for 1990 (248,709,873) and multiplied by 100,000 (to obtain the incidence per 100,000).
[l] Based on fixed-weight meta-analysis of single-year coefficients and standard errors reported in study.
[m] Number of WLDs of 374,933,000 from: National Center for Health Statistics. Current Estimates from the National Health Interview Survey from 1990. (Hyattsville, MD). Series 10, No. 181. This number is divided by the U.S. population for 50 states for 1990 (248,709,873) and multiplied by 100,000 (to obtain the incidence per 100,000).

Ozone

The health effects literature includes studies of the relationships between ozone and a variety of non-fatal health effects. Many of these relationships are provided by the same studies that reported the particulate matter relationships shown above. For some health endpoints, most notably hospital admissions, multiple studies report alternative estimates of the concentration-response relationship. The variability between these reported estimates is incorporated into the Monte Carlo approach used to combine estimates of avoided health effects with economic valuations (discussed in Appendix I). Table D-7 documents the concentration-response functions used in this analysis.

Table D-7. Summary of Concentration-Response Functions for Ozone.

Except where noted otherwise, the functional form is

$$\Delta cases = cases * (e^{\beta * \Delta O3} - 1)$$

where "cases" refers to incidence at the first pollution level.

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas from original study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
hospital admissions -- all resp. illnesses (ICD 460-519)	504/year[b] (incidence in pop .> 65 years of total U.S. pop.)	24 hr avg ($\mu g/m^3$)	65 and older in New Haven, CT, Tacoma, WA	over 65 only	β = New Haven: 0.0027 Tacoma: 0.007 where 1 µg/m3= 0.510 ppb (two pollutant model with PM_{10} and O_3)	New Haven: s.e. = 0.0014 Tacoma: s.e. = 0.0025 where $1 \mu g/m^3 = 0.51$ ppb	Schwartz, 1995 New Haven and Tacoma
daily respiratory admissions-includes 466, 480, 481, 482, 485, 490, 491, 492, 493	n/a	1 hour daily max ozone (ppb)	all	all	for Toronto: β = 0.0388/2.4 million $=1.62 \times 10^{-8}$ Δ cases/day = $\beta * \Delta O_3 *$ pop (ozone and PM_{10} model used)	se = 0.0241/2.4 million $=1.0 \times 10^{-8}$	Thurston et al., 1994 Toronto
hospital admissions pneumonia (480-487)	229/year[b] (incidence in pop .> 65 years of total U.S. pop.)	24-hr avg ppb	over 65, Birmingham AL	over 65	β = 0.00262 for O_3 alone (single pollutant model only avail.)	s.e. = 0.00196	Schwartz, 1994a Birmingham

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas from original study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
hospital admissions COPD (490-496)	103/year[b] (incidence in pop. > 65 years of total U.S. pop.)	24-hr avg ppb	over 65, Birmingham AL	over 65	β = 0.00314 for O_3 only (only single pollutant model avail.)	s.e. = 0.00316	Schwartz, 1994a Birmingham
hospital admissions pneumonia (480-487)	229/year[b] (incidence in pop. > 65 years of total U.S. pop.)	24-hr avg ppb	over 65, Detroit	over 65	β = 0.00521 (two pollutant model with O_3 and PM_{10}) note: authors suggest a threshold of 25 ppb	s.e. = 0.0013	Schwartz, 1994b Detroit
hospital admissions COPD (490-496)	103/year[b] (incidence in pop. > 65 years of total U.S. pop.)	24-hr avg ppb	over 65, Detroit	over 65	β = 0.00549 (two pollutant model with O_3 and PM_{10}) note: authors suggest a threshold of 25 ppb	s.e. = 0.00205	Schwartz, 1994b Detroit
hospital admissions pneumonia ((ICD 480-487)	229/year[b] (incidence in pop. > 65 years of total U.S. pop.)	24 hr avg ppb	65 and over in Mpls	over 65	β = 0.002795 (two pollutant model with O_3 and PM_{10})	s.e. = 0.00172	Schwartz 1994c Mpls, St. Paul
hospital admissions -- all resp. illnesses ((ICD 460-519)	504/year[b] (incidence in pop. > 65 years of total U.S. pop.)	1 hour daily max ozone (ppb)	over 65, Spokane	over 65	β = 0.008562	s.e. = 0.004326	Schwartz, 1996, Spokane
hospital admissions COPD (490-496)	103/year[b] (incidence in pop. > 65 years of total U.S. pop.)	1 hour daily max ozone (ppb)	over 65, Spokane	over 65	β = 0.004619	s.e. = 0.007739	Schwartz, 1996, Spokane

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas from original study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
hospital admissions pneumonia (ICD 480-487)	229/year[b] (incidence in pop. > 65 years of total U.S. pop.)	1 hour daily max ozone (ppb)	over 65, Spokane	over 65	$\beta = 0.00965$	s.e. = 0.006011	Schwartz, 1996, Spokane
presence of any of 19 acute respiratory symptoms	n/a	daily one-hour max. O_3 (ppbm)	adult members of families of elementary school-aged children in Glendora-Covina-Azusa, CA	adults 18-65	$\Delta Sympt_{day}$/day = $(\beta_1 - \gamma_0) * Pop$ where $P_1 = \frac{1}{1 + e^{-(\ln \frac{p_0}{1 - p_0} + \beta \Delta O_3)}}$ and p_0 = the probability of having $Sympt_{day}$ per individual for a 24-hour period in the base case = 0.19 $\beta = 1.4 \times 10^{-4}$ (Model includes O_3, COH, SO_2)	s.e. 6.7×10^{-5}	Krupnick et al., 1990

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas from original study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
self-reported asthma attacks	n/a	1 hour daily max. oxidants (ppm)	asthmatics in Los Angeles	all asthmatics (4.9% of the total population)	Δ asthma attacks/day = $(p_1 - p_0) * Pop$ where $p_1 = \frac{1}{1 + e^{-(\alpha + \beta x_1 + \beta x_2 + \beta x_3)}}$ and p_0 = the probability of attacks per asthmatic for a 24-hour period in the base case, = 0.027[b] $\beta = 1.9 \times 10^{-1}$ [c] 1.11 = factor to convert measured O_3 levels to oxidants (only model includes oxidants and TSP)	s.e. = 7.2×10^{-4} [c]	Whittemore and Korn, 1980 and U.S. EPA, 1993b
respiratory and nonrespiratory conditions resulting in a minor restricted activity day (MRAD)	780,000/ year[d] (of study pop.)	1 hour daily max. O_3 (ppm) averaged over 2 weeks	employed adults across the U.S. between the ages of 18-65 (urban residents)	all adults aged 18-65	equation predicts daily change in MRAD $\beta = 2.2 \times 10^{-1}$ [c] (Model includes O_3 and fine particulates)	s.e. = 6.6×10^{-1} [c]	Ostro and Rothschild, 1989
respiratory restricted activity days (RRADs)	310,000/ year[d] (of study pop.)	1 hour daily max O_3 (ppm) averaged over 2 weeks	employed adults across the U.S. between the ages of 18-65 (urban residents)	all adults aged 18-65	equation predicts daily change in RRAD $\beta = -0.0054$[f] (Model includes O_3 and fine particulates)	s.e. = 0.0017[f]	Ostro and Rothschild, 1989

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas from original study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
sinusitis and hay fever	n/a	hourly O_3 averaged over six years (1974-1979) in ppm	adults in urban areas surveyed in the National Health Interview Survey	all	$Accrec = \frac{[\Phi(\alpha + \beta x_1) - \Phi(\alpha + \beta x_0)]}{6} * Pop$ where: Φ = standard normal distribution function x_1 = average hourly O_3 concentration over six years in the m-CAA scenario x_0 = average hourly O_3 concentration over six years in the CAA scenario[b] $\alpha = -1.13$[c] $\beta = 0.017$ maximum likelihood probit model	s.e. = 0.0070[d]	Portney and Mullahy, 1990

Health Endpoint (ICD-9 code)	Baseline Incidence (per 100,000)	Expos Meas from original study	Study Pop.	Applied Pop.	Functional form[a]	Uncert & Var.	Sources
The following two rows should be combined, e.g., cases of $DFEV_1 \geq 15\%$ for heavy exercisers (using equation based on Avol et al., 1984) should be added to cases of $DFEV_1 \geq 15\%$ for moderate exercisers (using equation based on data from Seal et al., 1993)							
Decrements in lung function as measured by forced expiratory volume in one second (FEV_1)	n/a	Exposure to ozone for 1.33 hours during which individuals were exercising continuously for one hour (controlled setting)	Heavily exercising male and female bicyclists (mean age = 26.4 yrs)	all under age 50[e]	$\Delta cases = \alpha * \beta * \Delta O_3 * Pop.$ where, β = 0.00297 for $DFEV_1 \geq 15\%$ = 0.00268 for $DFEV_1 \geq 20\%$ α = 0.06656[e]	--	Avol et al., 1984
Decrements in lung function as measured by FEV_1	n/a	Exposure to ozone for 2.33 hours during which individuals were exercising intermittently (total exercise time = 1 hour) (controlled setting)	Moderately exercising male and female college students (ages 18-35)	all under age 50[e]	$= \sum_{i=1}^{2} \left\{ \Phi \left[\left(\frac{\ln\left(\frac{X_0 \cdot d_i}{1 - X_0 \cdot d_i}\right) - a}{b} \right)^{\frac{1}{c_i}} \right] - \Phi \left[\left(\frac{\ln\left(\frac{X_1 \cdot d_i}{1 - X_1 \cdot d_i}\right) - a}{b} \right)^{\frac{1}{c_i}} \right] \right\} \cdot Pop$ where, a = -0.664 for $DFEV_1 \geq 15\%$ = -0.326 for $DFEV_1 \geq 20\%$ b = 0.000840 for $DFEV_1 \geq 15\%$ = 0.000919 for $DFEV_1 \geq 20\%$ d_1 = 1.06[g] d_2 = 1.00 d_3 = 0.70 c_1 = 0.288[h] c_2 = 0.224 c_3 = 0.640 X_0 and X_1 are ozone concentrations in the CAA and No-CAA scenarios	--	Seal, et al., 1993

NOTES:

[a] Pollutant coefficients expressed as a change in health effects per change in ppb O_3.

[b] Centers for Disease Control, 1992. Vital and Health Statistics, Detailed Diagnoses and Procedures, National Hospital Discharge Survey, 1990. Number of 1990 discharges divided by 1990 U.S. population (248,709,873) from City and County Databook, 12th edition, 1994, U.S. Dept. of Commerce, Bureau of the Census, Washington, D.C.

[c] Determined the incremental effect/unit O_3 by incorporating stationary probabilities from transitional probabilities. ESSERCO (1994) obtained transitional probabilities for adults from original study authors.

[d] U.S. EPA, 1994a.

[e] Calculated as baseline asthma attack rate (number of attacks per person per year) divided by 365 days per year. Number of attacks per person per year = 9.9 from National Center for Health Statistics, National Health Interview Survey, 1979 (as cited by Krupnick and Kopp, 1988).

[f] β coefficient and s.e. converted to Δ in cases/ppb O_3 based on the following relationship: 1 ppb O_3 = 1.11 ppb oxidants.

[g] Study did not report a s.e. Thus, the analysis assumed the largest s.e. possible (at p = 0.01, using a two-tailed test of significance)

[h] Ostro and Rothschild (1989) report average annual MRADs as 7.8 per person, using data from 6 years.

[i] β is a weighted mean using separate coefficients for six years. Each year's coefficient was weighted by the inverse of the variance for that coefficient.

[j] Standard error is the square root of the sum of the weights (sqrt[sum(1/var$_i$)], where I indicates the individual year).

[k] Ostro and Rothschild (1989) report average annual RRADs as 3.1 per person, using data from 6 years.

[l] Obtained by determining the products of beta coefficients for other independent variables and their mean values and summing these and the constant value.

[m] Calculated by dividing β by asymptotic t-ratio.

[n] From Table 12 in 1992 Statistical Abstracts, the percent of individuals in the U.S. population under age 50 = 75%.

[o] Factor to adjust for differences in concentration among microenvironments and amount of time spent in different microenvironments at heavy exercise rates.

[p] The values, d_i, adjust ozone concentrations for various microenvironments (outdoor — near road, outdoor — other, and indoor) using values reported in U.S. EPA, 1993.

[q] The values, e_i, adjust the response rates by the percent of time spent in each microenvironment at the relevant exercise rates (i.e., percent of time at a fast rate is used for Avol et al., 1984, and percent of time at a moderate rate is used for Seal et al., 1993). U.S. EPA (1993) presents information to determine e_i values.

Nitrogen Oxides

Nitrogen dioxide (NO_2) is the primary focus of health studies on the nitrogen oxides and serves as the basis for this analysis. The primary pathophysiology of NO_2 in humans involves the respiratory system and the concentration-response function identified for NO_2 describes the relationships between measures of NO_2 and respiratory illness.

A number of epidemiological studies of NO_2 are available; however, most have either confounded exposures (with other pollutants) or insufficient exposure quantification (e.g., exposure assessment indicates only absence or presence of a gas stove). Most studies consider NO_2 generated by gas stoves or other combustion sources in homes and are therefore not directly usable in concentration-response functions. However, studies by Melia et al, 1980 and Hasselblad et al, 1992 provide a reasonable basis for development of a concentration response function. Table D-8 presents the function obtained from their work. The function relates NO_2 to respiratory illness in children.

Table D-8. Summary of Concentration-Response Functions for NO_2.

Health Endpoint	Exposure Measure from Original Studies	Study Population	Applied Population	Functional Form[a]	Uncertainty/ Variab.	Sources
respiratory illness (as indicated by respiratory symptoms)	NO_2 measurements in bedrooms with Palmes tubes (one year time weighted average concentration in $\mu g/m^3$)	children ages 6 to 7	all (combining functions for men and women)	$\Delta Resp\ cases = \Delta Prob(Resp) * Pop$ where: Prob(resp) = probability of respiratory illness during a one year period: $Prob(resp) = \frac{1}{1 + e^{-logodds}}$ and $logodds\ Resp = -0.536 + 0.0275\ NO_2 - 0.0295\ gender$ gender = 1 for boys and 0 for girls (the term drops out for girls)	s.e. = 0.0132	Hasselblad, et al., 1992.

NOTES:

[a] This equation was obtained from two sources. The NO_2 coefficient was reported in Hasselblad et al., 1992. The background and gender intercepts were obtained via personal communication with V. Hasselblad 2/28/95 by Abt Associates. The equation was based on an evaluation by Hasselblad et al. of study results obtained by Melia et al. (1980). See text for further discussion.

Carbon Monoxide

Three concentration-response relationships are available for estimating the health effects of carbon monoxide. The first relates ambient CO levels to hospital admissions for congestive heart failure (Morris et al., 1995). The second equation (Allred et al., 1989a,b, 1991) relates the CO level in the bloodstream to the relative change in time of onset of angina pain upon exertion. The third relates the CO level in the bloodstream to the relative change in time of onset of silent ischemia. Due to the lack of quantitative information relating silent ischemia to a meaningful physical health effect, this analysis uses only the first two dose-response functions shown in Table D-9.

Table D-9. Summary of Concentration-Response Functions for Carbon Monoxide.

Health Endpoint	Baseline Incidence	Exposure Measure	Study Population	Applied Population	Functional Form	Uncert./ Variability	Sources
Hospital admiss. for congestive heart failure	n/a	average of hourly max CO (ppm)	Medicare population in 7 large U.S. cities (96% of which are ≥65)	65 and over	$\Delta cases = \beta * \Delta CO * Pop$ where $\beta = 1.1x10^{-7}$	s.e. = 1.9×10^{-8}	Morris et al., 1995 7 large U.S. cities
percent change in time to angina	baseline time to onset of angina during treadmill test from Allred et al. studies = 515 seconds at %COHb = 0.63[a]	CO (in ppm) averaged over 1 or 8 hours	men, age 35-75 years, stable angina, nonsmokers (of at least 3 months) at time of study	Angina patients in U.S. = 3,080,000 in 1989[b] Frequency of angina attacks for the study population = 4.6 per week (range = 0 - 63)[c, d]	percent change in time to angina $=\beta * \Delta\%COHb$ where: β = -1.89% and COHb = blood level of carboxyhemoglobin and $\Delta\%COHb = 0.45 * \Delta CO^{e}$, where: CO = concentration of CO (ppm), for non-smoking adults undertaking light exercise (alveolar ventilation rate of 20L/min) for one hour at low altitude, with an initial COHb = 0.5%. OR $\Delta\%COHb = 0.12 * \Delta CO^{e}$, where: conditions are the same as above except that study individuals are at rest (alveolar ventilation rate of 10L/min) for 8 hours.	s.e. = 0.81%	Allred, et al., 1989a,b, 1991

NOTES:

[a] Calculated as the mean of means from 3 pre-exposure treadmill tests and 1 post-exposure test (control exposure to air) (Allred et al., 1991).

[b] American Heart Association (1991)

[c] Allred et al. (1991)

[d] Multiple daily events are not modeled. Although it is possible that angina attacks may occur more than once per day, the average frequency of attacks was 4.6 per week (< 1 per day).

[e] Equation calculated from figure in U.S. EPA (1991a), p. 2-7.

Sulfur Dioxide

This analysis estimated one concentration-response function for SO_2 using clinical data from two sources on the responses of exercising asthmatics to SO_2, as measured by the occurrence of respiratory symptoms in mild and moderate asthmatics (see Table D-10).

Table D-10. Summary of Concentration-Response Functions for Sulfur Dioxide.

Health Endpoint	Expos Meas. from original study	Study Pop.	Applied Pop.	Functional Form	Uncert & Var.	Sources
Any Symptom (chest tightness, shortness of breath, etc.)	5-minute SO_2 concentration, ppm (using peak to mean ratio from hourly SO_2 concentration of 2:1 to 3:1)	generally young exercising asthmatics (ventilation rate 0.4 m^3/min)	exercising asthmatics - defined as 4% of general population, of whom 1.7% (range 0.2% to 3.3%) are exercising during waking hours	$logodds\ Symp = -5.65 + 0.0059\ SO_2 + 1.10\ status$ where *status* = asthma status (0 for mild, 1 for moderate) $Prob(symp) = \frac{1}{1 + e^{-logodds}}$ $Cases = Prob_{mild}(effects) \cdot Pop_{mild} + Prob_{mod}(effects) \cdot Pop_{mod}$ Cases = number of individuals with occurrences of at least moderate effects for all three measures. where Pop_{mild} = exposed population of exercising mild asthmatics (assumed to be 2/3 of asthmatic population); Pop_{mod} = exposed population of exercising moderate asthmatics (assumed to be 1/3 of asthmatic population)	s.e. for: const. term= 2.60 for SO_2 coeff = 0.0025 for *status* coeff = 1.44	data from Linn et al.(1987, 1988, 1990), Roger et al. (1985)

Estimating Welfare Effects of Exposure

In addition to avoided incidences of adverse human health effects, the air quality improvements estimated to result from the CAA yield additional benefits, namely welfare benefits. Table D-10 indicates a variety of benefits expected to have accrued through the avoidance of air pollution damage to resources. As indicated, data supporting quantified estimates of welfare benefits are more limited than those quantifying the relationship between air pollution exposure and human health. While evidence exists that a variety of welfare benefits result from air quality improvements, currently available data supports quantifying only a limited number of potential effects at this time. The Table lists the effects quantified in the section 812 analysis; each is discussed below.

Table D-11. Selected Welfare Effects of Criteria Pollutants.

Pollutant	Quantified Welfare Effects	Unquantified Welfare Effects
Ozone	Agriculture - Changes in crop yields (for 7 crops) Decreased worker productivity	Changes in other crop yields Materials damage Ecological - effects on forests Ecological - effects on wildlife
Particulate Matter/ TSP/ Sulfates	Materials Damage - Household soiling Visibility	Other materials damage Ecological - effects on wildlife
Nitrogen Oxides	Visibility	Crop losses due to acid deposition Materials damage due to acid deposition Effects on fisheries due to acid deposition Effects on forest
Sulfur Dioxide	Visibility	Crop losses due to acid deposition Materials damage due to acid deposition Effects on fisheries due to acid deposition Effects on forest

Agricultural Effects

This analysis was able to quantify the benefits to economic welfare attributable to the increased crop yields expected from CAA-related air quality improvements. Appendix F describes the method used to estimate such benefits using reported relationships between ozone exposure and yields of a variety of commodity crops.

It should be noted that the method used to allocate monitor-level ozone concentrations to estimate crop exposure differed from that used to estimate ozone health effects. Instead of assigning concentrations from the nearest monitor, the agricultural benefits analysis estimated ozone concentrations for each county nationwide. This was necessary because of two factors specific to the agricultural analysis. First, crop production is reported at the county level, so changes in crop yields associated with changes in ozone levels must be estimated for each county. Second, much of the nation's agricultural production of "commodity crops" (corn, wheat, soybeans, etc.) occurs at significant distances from the location of the population-oriented ozone monitors. Thus, an algorithm was used to assign ozone concentrations for the agricultural analysis for the control and no-control scenarios to county centroids based on a planar interpolation of concentrations at the nearest three monitors. Appendix F documents the details of the triangulation of ozone air quality data.

Materials Damage

Welfare benefits also accrue from avoided air pollution damage, both aesthetic and structural, to architectural materials and to culturally important articles. At this time, data limitations preclude the ability to quantify benefits for all materials whose deterioration may have been promoted and accelerated by air pollution exposure. However, this analysis does address one small effect in this category, the soiling of households by particulate matter. Table D-11 documents the function used to associate nationwide PM-10 levels with household willingness to pay to avoid the cleaning costs incurred for each additional $\mu g/m^3$ of PM-10.

Visibility

In addition to the health and welfare benefits estimated directly from reduced ambient concentrations of individual criteria air pollutants, this analysis also estimates the general visibility improvements attributed to improved air quality. Visibility effects are measured in terms of changes in DeciView, a measure useful for comparing the effects of air quality on visibility across a range of geographic locations for a range of time periods. It is directly related to two other common visibility measures, visual range (measured in km) and light extinction (measured in km^{-1}); however, it characterizes visibility in terms of perceptible changes in haziness independent of baseline conditions.

Visibility conditions under the control and no-control scenarios were modeled separately for the eastern and western U.S. In the east, the Regional Acid Deposition Model (RADM) generated extinction coefficient estimates for each of 1,330 grid cells in the RADM domain (essentially the eastern half of the country). The extinction coefficients were translated to DeciView using the relationship reported in Pitchford and Malm (1994). In the Western U.S., a conventional extinction budget approach provided DeciView estimates for 30 metropolitan areas (SAI, 1994). A linear rollback model provided the corresponding no-control estimates. Visibility estimates for both portions of the country were generated for the target years 1975, 1980, 1985, and 1990.

Table D-12 summarizes the methodology used to predict visibility benefits attributable to the CAA. Physical benefits for a given year are reported in terms of the average DeciView change per person in the modeled population.

Worker Productivity

Available data permits quantification of a final human welfare endpoint, worker productivity. Crocker and Horst (1981) and U.S. EPA (1994c) present evidence regarding the inverse relationship between ozone exposure and productivity in exposed citrus workers. This analysis applies the worker productivity relationship (reported as income elasticity with respect to ozone) to outdoor workers in the U.S. (approximately one percent of the population). Table D-12 details the form of the concentration response function.

Ecological Effects

It is likely that the air pollution reductions achieved under the CAA resulted in improvements in the health of aquatic and terrestrial ecosystems. To the extent that these ecosystems provide a variety of services (e.g., fishing, timber production, and recreational opportunities), human welfare benefits also accrued. However, due to a lack of quantified concentration-response relationships (or a lack of information concerning affected population), ecological effects were not quantified in this analysis. Appendix E provides discussion of many of the important ecological benefits which may have accrued due to historical implementation of the CAA.

Table D-12. Summary of Functions Quantifying Welfare Benefits.

Endpoint	Expos Meas.	Applied Pop.	Functional Form	Uncert & Var.	Sources
Household Soiling Damage (change in dollar valuation)	annual mean PM_{10}	all households (study based on households in 20 metropolitan areas)	Soiling Damage = β * Pop/PPH * ΔPM_{10} where β = $2.52 PPH = people per household (2.68)[a]	Beta distribution with mean = $2.52 s.e. = $1.00 interval = [$1.26 - $10.08] slope parameters: α = 1.2, β = 7.3	Manuel et al. (1982); McClellan, et al. (1991); Watson and Jaksch (1982); ESEERCO (1994)
Visibility (average change in DeciView per person)[b,c]	Eastern U.S.: Extinction coefficient (Ext) in units of km^{-1} Western U.S.: DeciView, dv (unitless)	all	$\Delta Vis = \frac{\sum_i (dv_{NoCAA,i} - dv_{CAA,i}) * Pop_i}{\sum_i Pop_i}$ where, ΔVis = avg. change in DeciView per person in modeled population i = modeled area dv_{NoCAA} = DeciView under no control scenario dv_{CAA} = DeciView under control scenario Pop_i = modeled population in modeled area, i In the East, Ext (in units of km^{-1}) is converted to dv as follows: $deciview = 10 \ln\left(\frac{Ext}{0.01 \ km^{-1}}\right)$	not available	Pitchford and Malm (1994)

Endpoint	Expos Meas.	Applied Pop.	Functional Form	Uncert & Var.	Sources
worker productivity (resulting in changes in daily wages)	hourly O_3 concentration averaged over a workday or 24-hours (ppm)	individuals in occupations that require heavy outdoor physical labor (study based on citrus workers in S. California)	$\Delta I = I * \eta * (X_1 - X_0)/X_0 * Pop * W$ ΔI = change in total daily income, η = income elasticity with respect to O_3 conc., η = -0.14 for 24-hour period, I = total daily income per worker engaged in strenuous outdoor labor = $73[a] W = proportion of outdoor workers in the U.S. population = 0.012[a] X_0 = average hourly O_3 concentrations with CAA, X_1 = average hourly O_3 concentrations without CAA (NOTE: Average number of days worked per year for workers engaged in strenuous outdoor labor = 213)[f] (model includes O_3 only)	not available	Estimated using data from Crocker and Horst (1981) and U.S. EPA, 1994c

NOTES:

[a] 1990 Census

[b] Visibility is measured in two ways: (1) in terms of extinction coefficient in the eastern U.S. (based on modeling of RADM domain); and (2) as DeciView (dv) in the west (modeling of 30 western cities) (SAI, 1994).

[c] DeciView is a haziness index used to characterize visibility through uniform hazes.

[d] Average daily wage, assuming an 8-hour day, by workers in the job categories listed below, taken from U.S. Bureau of the Census, Earnings by Occupation and Education, 1990.

[e] Full- and part-time workers (total of 3,100,000) taken from U.S. Bureau of the Census, Earnings by Occupation and Education, 1990. Includes the following job categories: farm workers; groundskeepers and gardeners, except farm; forestry workers, except logging; timber cutting and logging occupations; brickmasons and stonemasons; brickmason and stonemason apprentices; roofers; structural metal workers; construction laborers; garbage collectors; and stevedores. Value is divided by total U.S. population.

[f] Average number of days worked per year, assuming an 8-hour day, by workers in the job categories listed above, taken from U.S. Bureau of the Census, Earnings by Occupation and Education, 1990.

Modeling Results

This section summarizes results of the health and welfare effects modeling. As indicated previously, the Project Team adopted a Monte Carlo approach in an effort to capture uncertainty in the benefits analysis. With respect to estimating avoided incidence of adverse health and welfare effects, two sources of variability are considered. The first is the statistical uncertainty associated with each concentration-response relationship reported in the literature. In addition to an estimate of a concentration-response function coefficient, studies typically report a standard error of the reported estimate. The second source of uncertainty lies in the choice of studies, where multiple studies offer estimates for the same endpoint. Different published results reported in the scientific literature typically do not report identical findings; in some instances the differences are substantial. This between-study variability is captured by considering the range of estimates for a given endpoint.

Table D-13 summarizes health and welfare effects for each study included in the analysis. The values presented are mean estimates of the number of cases of each endpoint *avoided* due to implementation of the CAA. A distribution is associated with each mean estimate, capturing the uncertainty inherent in the estimate of the concentration-response coefficient. The distribution of estimated effects corresponding to a given study was generated by randomly sampling from the distribution of coefficients (given by the estimated coefficient and its standard error reported in the study) and evaluating the concentration-response function, yielding an estimate of avoided incidence for the given effect. This procedure was repeated many times. While only the central estimates of the resulting distributions are presented here, the distributions were retained for use in monetizing and aggregating economic benefits (see Appendix I).[7]

As shown, for some health endpoints more than one concentration-response function was used, each representing a different study. The alternative concentration-response functions provide differing measures of the effect. These can be used to derive a range of possible results. In the case of lead (Pb), alternative functions were not used; rather, two analytical procedures were implemented (labeled the "backward-looking" and "forward looking" analyses), giving a range of results for most Pb endpoints (see Appendix G for discussion of Pb health effects).

The table presents the results of modeling "all U.S. population" (although, with the exception of Pb, not all of the 48 state population is modeled, with up to five percent being excluded in a given year). The results depict the *pattern* of health effects incidence across years. The accuracy of the *scale* of incidence is less certain (due to the extrapolation of air quality data). These results are almost certainly more accurate than the corresponding "50 km" results, but rely on the assumption that (for a portion of the population) distant air quality monitors provide a reasonable estimate of local air quality conditions. Thus, the results presented here are somewhat speculative. It is likely that the estimated health effects are overstated for that population group (20 to 30 percent of total population in the case of PM) for which distant monitors are used. (Note, however, that the scaling of unmonitored county PM concentrations based on regional-scale grid model projections significantly mitigates this potential overestimation in the case of PM; see Appendix C for details). Conversely, there is an implied zero health impact for that portion of the population (three to four percent in the case of PM) excluded from the analysis altogether, an understatement of health impacts for that group.

The results indicate the growth of benefits over the study period, consistent with increasing improvements in air quality between the control and no-control scenarios from 1970 to 1990.

The mortality effects documented above can be disaggregated by age. Table D-14 indicates the estimated proportions of premature mortalities for various age groups (Pb-induced mortality estimates for children, men, and women are grouped). Also presented is the average life expectancy for each group, indicating the degree of prematurity of PM and Pb-related mortality.

Table D-15 presents estimated incidence reductions for several health effects which could be quantified but not monetized for this analysis.

[7] With the exception of visibility, welfare endpoints estimated economic benefits directly and are therefore included in the monetary benefits results presented in Appendix I.

Table D-13. Criteria Pollutants Health Effects -- Extrapolated to 48 State U.S. Population (Cases per year - mean estimates).

Endpoint	Study	Pollutant(s)	1975	1980	1985	1990
MORTALITY						
Mortality (long-term exposure)	Pope et al., 1995	PM_{10}	58,764	145,884	169,642	183,539
Mortality (Pb exposure) -Male	Average of Backward & Forward	Pb	822	5,261	10,340	12,819
Mortality (Pb exposure) -Female	Average of Backward & Forward	Pb	231	1,474	2,866	3,537
Mortality (Pb exposure) -Infant	Average of Backward & Forward	Pb	456	2,342	3,933	4,944
CHRONIC BRONCHITIS						
Chronic Bronchitis	Schwartz, 1993b	PM_{10}	198,973	554,832	720,186	741,775
	Abbey et al., 1993	PM_{10}	173,571	454,309	564,753	602,990
OTHER Pb-INDUCED AILMENTS						
Lost IQ Points	Average of Backward & Forward	Pb	1,028,492	5,031,157	8,559,426	10,378,268
IQ < 70	Average of Backward & Forward	Pb	3,780	20,074	36,520	45,393
Hypertension-Men	Average of Backward & Forward	Pb	830,299	5,276,999	10,087,115	12,646,876
Cor. Heart Disease	Average of Backward & Forward	Pb	1,313	8,444	16,871	21,069
Atherothrombotic brain infarction - Men	Average of Backward & Forward	Pb	181	1,128	2,165	2,690
Atherothrombotic brain infarction - Women	Average of Backward & Forward	Pb	84	529	1,020	1,255
Initial cerebrovascular accident - Men	Average of Backward & Forward	Pb	260	1,635	3,154	3,926
Initial cerebrovascular accident - Women	Average of Backward & Forward	Pb	120	758	1,466	1,804
HOSPITAL ADMISSIONS						
All Respiratory	Schwartz, 1995, Tacoma	PM_{10} & O3	32,004	77,827	95,435	106,777
	Schwartz, 1996, Spokane	PM_{10} & O3	29,393	69,449	93,137	119,290
	Pope, 1991, Salt Lake Valley	PM_{10}	30,982	73,093	88,407	95,486
	Schwartz, 1995, New Haven	PM_{10} & O3	23,137	55,096	66,385	73,842
	Thurston et al., 1994, Toronto	PM_{10} & O3	13,746	32,383	39,691	46,013
COPD + Pneumonia	Schwartz, 1994c	PM_{10} & O3	21,868	53,928	64,217	70,528
	Schwartz, 1996, Spokane	PM_{10} & O3	19,769	47,294	63,116	80,113
	Schwartz, 1994a	PM_{10} & O3	16,942	40,882	49,290	55,227
	Schwartz, 1994b	PM_{10} & O3	13,006	30,679	37,434	43,410
Ischemic Heart Disease	Schwartz and Morris, 1995	PM_{10}	6,348	14,709	17,289	19,098
Congestive Heart Failure	Schwartz and Morris, 1995	PM_{10}	5,733	13,365	15,742	17,362
	Morris et al., 1995	CO	3,022	8,543	17,028	21,835
OTHER RESPIRATORY-RELATED AILMENTS						
- Adults						
Any of 19 Acute Symptoms	Krupnick et al., 1990	PM_{10} & O3	41,631,456	98,876,110	117,275,400	129,529,717
- Children						
Shortness of breath, days	Ostro et al., 1995	PM_{10}	20,752,402	50,758,872	58,575,484	68,375,216
Acute Bronchitis	Dockery et al., 1989	PM_{10}	1,936,260	6,255,801	7,644,924	8,541,833
Lower Respiratory Symptoms	Schwartz et al., 1994d	PM_{10}	2,994,048	6,100,276	6,977,880	7,804,860
Upper Respiratory Symptoms	Pope et al., 1991	PM_{10}	500,395	1,292,922	1,557,177	1,683,854
- All Ages						
Asthma Attacks	Ostro et al., 1991	PM_{10}	264,430	546,306	686,953	841,916
	Whittemore and Korn, 1980; EPA ,1983	O3	193	482	818	1,080
Increase in Respiratory Illness	Hasselblad, 1992	NO2	729,306	2,686,813	6,113,639	9,776,267
Any Symptom	Linn et al. (1987, 1988, 1990)	SO2	104,896	319,192	282,846	265,650
RESTRICTED ACTIVITY AND WORK LOSS DAYS						
RAD	Ostro, 1987	PM_{10}	19,170,337	47,445,314	56,939,271	62,187,720
MRAD	Ostro and Rothschild, 1989	PM_{10} & O3	60,871,610	155,799,151	190,333,140	209,924,765
RRAD	Ostro and Rothschild, 1989	PM_{10} & O3	47,659,732	237,799,482	176,850,171	174,329,691
Work Loss Days	Ostro, 1987	PM_{10}	6,956,775	17,213,581	20,648,906	22,562,752
HUMAN WELFARE						
Household Soiling Damage	ESEERCO, 1994	PM_{10}	direct economic valuation			
Visibility - East (DeciView chg. per person)	Pitchford and Malm, 1994	DeciView	0.4	1.4	1.9	2.0
Visibility - West (DeciView chg. per person)	Pitchford and Malm, 1994	DeciView	2.4	4.9	5.0	5.0
Decreased Worker Productivity	Crocker & Horst, 1981 and EPA, 1994c	O3	direct economic valuation			
Agriculture (Net Surplus)	Minimum Estimate	O3	direct economic valuation			
	Maximum Estimate	O3	direct economic valuation			

Table D-14. Mortality Distribution by Age: Proportion of PM- and Pb-related Premature Mortalities and Associated Life Expectancies.

Age Group	Proportion of Premature Mortalities by Age[a]		Life Expectancy (years)
	PM[b]	Pb[c] Forward (Backward)[d]	
Infants		33% (20%)	75
5-30			
30-34	2%		48
35-39	4%		38
40-44		11% (13%)	
45-54	6%	21% (25%)	29
55-64	13%	22% (27%)	21
65-74	24%	12% (15%)	14
75-84	29%		9
85+	22%		6
	100%	100%	

Notes:

[a] Distribution of premature mortalities across ages is fairly consistent across years.

[b] PM-related mortality incidence estimated only for individuals 30 years and older, consistent with the population studied by Pope et al., 1995.

[c] Pb-related mortality incidence was estimated for infants, women aged 45-74, and men in three age groups (40-54, 55-64, 65-74), each with a distinct concentration-response relationship.

[d] Forward (backward) analysis holds other lead sources at constant 1970 (1990) levels - see Appendix G. Values may not sum to 100% due to rounding.

Table D-15. Quantified Benefits Which Could Not Be Monetized – Extrapolated to the Entire 48 State Population.

Endpoint	Study	Pollutant	1975	1980	1985	1990	Units
Pulmonary Function Decrements							
Decreased FEV by 15 % or more	Avol et al. 1984 & Seal et al. 1993	O3	53	121	196	312	*million person-days with decreased FEV (per year)*
Decreased FEV by 20 % or more	Avol et al. 1984 & Seal et al. 1993	O3	39	87	141	224	*million person-days with decreased FEV (per year)*
Chronic Sinusitis and Hay Fever	Portney and Mullahy, 1990	O3	6	8	8	9	*million cases/year*
Time to Onset of Angina Pain	Allred, et al., 1989a,b, 1991	CO	0.1%	0.4%	0.7%	0.8%	*fractional increase in time to onset of angina attack*

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ITEM 18_EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

THE UNITED STATES EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

REPORT OF ACTIVITIES

ON BEHALF OF

OLDER AMERICANS

for

Calendar Years 1997 and 1998

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

Activities on behalf of Older Americans

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ADMINISTRATIVE ENFORCEMENT

ACTIVITIES

OFFICE OF FIELD PROGRAMS

I. OVERVIEW OF THE OFFICE OF FIELD PROGRAMS

The Office of Field Programs (OFP) serves as principal advisor to the Chairman and the Commission in administrative enforcement of Federal statutes prohibiting discrimination in employment and assures effective and efficient management and implementation of the Commission's administrative enforcement program.

A. Organization

The Office provides overall direction, coordination, leadership and administrative support to the following major program elements at headquarters and in the field:

- Field Management Programs
- Field Coordination Programs
- State and Local Programs
- 24 District Offices, the Washington Field Office and 25 Area and Local Offices

B. Mission and Function

The Office is responsible for the following functions:

Makes recommendations for Commission policy related to the implementation of the laws the Commission enforces and translates substantive policy into operational form through development of procedures and manuals for guidance to the field staff.

- Develops and provides guidance, advice, technical assistance, and education for the field, OFP, other headquarters offices and members of the public on EEOC's administrative enforcement process and the laws EEOC enforces. Coordinates these activities with pertinent headquarters offices.

- Develops operational plans and budgets and implements approved plans relevant to: EEO charge resolution processes for Title VII of the Civil Rights Act of 1964, as amended (Title VII), the Equal Pay Act of 1963 (EPA); the Age Discrimination in Employment Act of 1967, as amended (ADEA); and the Americans with Disabilities Act (ADA).

- Coordinates operational planning support services for field offices and provides advice and assistance to support OFP managers in the development and implementation of effective planning activities.

- Coordinates with other headquarters and field offices to ensure the development, implementation and maintenance of appropriate systems that result in effective

and efficient management of the Commission's charge resolution programs and other activities in both field and headquarters offices; and develops and implements charge resolution and evaluation approaches.

- Coordinates with the Office of General Counsel to assure the effective integration of the administrative enforcement process and approved national and local enforcement plans.

- Develops and administers substantive staff development programs to managers and employees in various areas of OFP.

- Coordinates with the Office of Financial Resources Management to assure efficient delivery of budgetary and general administrative services to field offices.

- Initiates, develops and recommends policies and changes to approve charge resolution policies and procedures, under Title VII, the EPA, the ADEA and the ADA.

- Manages and coordinates the Commission's administrative enforcement Alternative Dispute Resolution (ADR) program and provides support and technical assistance for the program. Develops and articulates Commission policy related to the implementation and operation of an ADR program for administrative enforcement.

- Manages and coordinates the Revolving Fund program in coordination with appropriate Commission offices.

- Directs and supervises all aspects of field office operations.

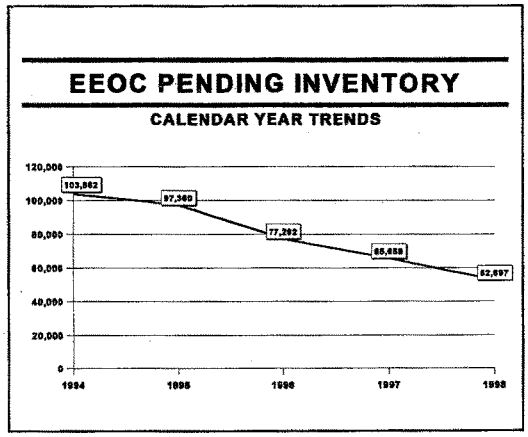
C. Introduction

During 1997 and 1998, field offices completed two years of operation under the agency's National Enforcement Plan (NEP). The NEP employs a three-pronged approach for addressing the agency's mission: (1) prevention of discrimination through enhanced education, technical assistance and outreach to the employer community, advocacy groups, and other stakeholders; (2) the eradication of discrimination through investigation, conciliation, and litigation of charges with significant impact; and (3) effective caseload and inventory management, including effective use of Alternative Dispute Resolution methods, to allow the Commission to focus substantial resources on those matters having the greatest impact.

District Offices developed their own Local Enforcement Plans (LEPs) tailored to local issues and situations that fall within the scope of the NEP. In 1997, field offices designed new approaches to outreach and education and substantially increased their efforts in this area,

implemented new initiatives to meet enforcement priorities, and piloted a variety of ADR and other programs.

In 1998, after three years of implementation under the agency's Priority Charge Handling Procedures (PCHP), the agency has realized extraordinary gains in reducing its charge inventory. Prior to implementation of the PCHP, in June 1995, the agency had a pending inventory of 111,451 charges. At the end of 1998, the inventory was reduced to 52,697 charges---a reduction of 53%. This was accomplished by focusing on removing the meritless charges from the inventory as quickly as possible. After making significant strides in reducing the inventory, most field offices have now turned their attention to the development of category "A" charges--those with potential violations and those with potential for significant impact on deterring or eradicating discrimination. They also have focused on early resolutions of charges through the use of mediation and other ADR methods.



Utilizing the PHCP, the Commission has continued to prioritize charges so that the agency's limited resources could be strategically directed to those charges with merit and greatest impact. These procedures also include more in-depth counseling at intake, to help charging parties make better informed decisions about the merits of their charges, and aid quick removal of meritless charges. These procedures have been effective in reducing the overwhelming charge inventory accumulated between 1991 and 1995 due to major new legal enforcement responsibilities under the Americans with Disabilities Act of 1990, the Civil Rights Act of 1991, and a surge in sexual harassment charges, with no provision of additional resources.

The major trends in EEOC's overall enforcement activity during 1997 and 1998 are reflected in enforcement of the Age Discrimination in Employment Act (ADEA). These trends include significant reduction of the agency's pending charge inventory, reduction in charge

processing time, increased monetary benefits for charging parties, increased use of mediation to resolve charges, and expanded outreach and educational activity.

II. HIGHLIGHTS OF ADEA ADMINISTRATIVE ENFORCEMENT ACTIVITY

Major achievements during these two years included:

- **Continued reduction of the pending charge inventory.** At the end of 1998, the inventory of ADEA charges pending resolution was reduced by 35.4% from the level at the end of 1996 (down from 16,458 charges at the end of 1996 to 10,627 charges at the end of 1998).

- **Reduction in the age of charges in the pending inventory.** At the end of 1996 the average ADEA charge in the inventory was 343 days old. By the end of 1998, the average age had been reduced to 278 days.

- **Reduction of the time required to resolve cases.** Average processing time for ADEA charges was reduced by 91 days--from 405 days at the end of 1996 to 314 days at the end of 1998.

- **An increase in mediated charges that also dramatically reduced the time for resolving charges.** The average resolution time for ADEA mediated charges in 1998 was only 162 days, compared to 314 days for other ADEA resolutions.

A. Charge Receipts

In 1997, the Commission received 15,870 ADEA charges, representing 19.4% of charges received under all statutes that year (81,656). Approximately half (50.2%) of the ADEA charges also alleged discrimination under another statute enforced by the Commission (e.g. discrimination based on sex, disability, race).

In 1998, 14,374 ADEA charges were received (18.8% of total charge receipts). Again, half of these charges also alleged discrimination under another Commission statute. The decrease in charges mirrored an overall downward trend in EEOC charge receipts, reflecting PCHP procedures providing for more effective intake interviews and pre-charge counseling to ensure that charges were properly filed under statutes enforced by the Commission.

B. Discrimination Issues

Discriminatory discharge was by far the most frequent issue in ADEA charges (more than 40% of all charges in each year). This is consistent with experience under all Commission statutes. Other significant ADEA issues, in order of frequency, were: Terms and Conditions of Employment; Harassment; Hiring; Promotion; Layoff; Compensation; Disciplinary Actions and

Demotion. In 1998, there were a considerable number of concurrent ADEA charges (those filed under ADEA and another statute) that also alleged sexual harassment discrimination under Title VII of the Civil Rights Act, and concurrent charges alleging failure to provide reasonable accommodation under the Americans with Disabilities Act (ADA).

C. Charge Resolutions

The Commission resolved 21,000 ADEA charges in 1997, comprising 20.4% of all charge resolutions for the year. In 1998, there were 19,327 ADEA resolutions--19.2% of total resolutions for the year.

D. FEPA Receipts and Resolutions

The Commission has dual filing agreements with state and local fair employment practices agencies (FEPAs) who process charges filed under the ADEA and laws that they enforce. These agencies received 11,830 ADEA charges in 1997 and resolved 9,835 charges. In 1998, FEPAs received 10,314 ADEA charges and resolved 9,584.

E. Monetary Benefits

In 1997, EEOC obtained total monetary benefits of $53 million under the ADEA for 2,352 individuals, through mediations, settlements, conciliations and withdrawals with benefits. This was an increase from the $43 million obtained in 1996. The average benefit per ADEA charge ($29,937) was significantly higher than the average benefit per charge under all EEOC statutes ($20,891).

In 1998, total ADEA monetary benefits of $40 million were obtained for 1,787 persons. Again, the average ADEA benefit per charge ($23,724) was considerably higher than the average benefit per charge under all EEOC statutes ($18,093) .

EEOC and FEPA Charge Activity						
	EEOC			FEPA		
	1996	1997	1998	1996	1997	1998
Total Receipts	80,404	81,656	78,294	67,151	69,433	63,988
ADEA Receipts	16,224	15,870	14,734	11,393	11,830	10,314
Total Resolutions	109,002	103,176	100,781	59,858	60,647	60,043
ADEA Resolutions	22,501	21,002	19,327	9,294	9,835	9,584
Total Benefits*	$60,000,000	$179,000,000	$164,000,000	$69,000,000	$68,000,000	$89,000,000
ADEA Benefits*	$43,000,000	$53,000,000	$40,000,000	$20,000,000	$15,000,000	$23,000,000

*Benefits rounded to nearest million $.

F. Mediation Accomplishments

In 1997, the Commission established mediation programs in each district office and expanded efforts to mediate charges significantly during 1998. The mediation option allows charging parties and respondents to make choices about how a dispute will be resolved. Mediations have produced a variety of benefits--tangible and intangible--for both parties, including expedited resolution, more amicable agreements and clear understanding of the issues.

The number of EEOC charges resolved in mediation increased substantially from 155 in 1996 to 1,722 in 1998. Mediations of ADEA charges also significantly increased from only 26 in 1996 to 199 in 1997, and 299 in 1998. Total monetary benefits in ADEA mediated cases rose from $349,000 in 1996 to $3.5 million in 1997, and $5.4 million in 1998. The average monetary benefit in 1998 ADEA mediated cases ($19,374) was higher than the average for all EEOC mediated charges ($14,618).

Most significantly, the average resolution time from charge filing to final resolution was much shorter for mediated cases. In 1998, the average time for ADEA mediated cases was 162 days, compared to an average of 314 days for all ADEA charge resolutions.

The expansion of the mediation program was particularly impressive, given that it was accomplished without any increase in funding and staffed through allocation of current internal resources. Field offices were also able to expand the program by recruiting and training a roster of pro bono mediators.

G. Examples of ADEA Mediated Resolutions

- The charging party was a registered pharmacist, seventy years old. He applied to work at one of the respondent's chain stores as a pharmacist. He submitted an employment application, but had never been interviewed or contacted in any manner. At the time there was a shortage of registered pharmacists in the state of Michigan. The respondent could have easily surmised the charging party's age from various dates on the application form (i.e. dates of graduation from colleges, etc.). The respondent claimed that the application was not pursued because the cover letter accompanying it did not show much retail experience. In mediation, the respondent offered to set up an interview, and if the charging party passed the interview to hire him. The mediator suggested conducting the interview, right then and there. This was done, and as a result, the charging party was hired as a full-time pharmacist for stores in the district nearest to his home.

- The charging party, a high ranking official with Respondent, alleged that he was discriminated against on the basis of his age when he was terminated with a minimal severance package. The respondent reluctantly entered into mediation, in an effort to limit litigation costs and to expedite the processing of the charge. This case was settled within 85 days with a monetary benefit of $1,025,000 to the charging party.

- An engineer for a gas supplier alleged age discrimination when he was terminated in what appeared to be a downsizing. He later found out that of all downsized employees from his engineering group, he was the only one not rehired. He chose mediation and in one session received a $172,000 settlement.

H. Examples of ADEA Administrative Charge Resolutions

The following is a sampling of administrative resolutions of age discrimination charges in EEOC field offices during 1997 and 1998. Consistent with the agency Priority Charge Handling Procedures (PCHP) and national/local enforcement plans, innovative strategies and techniques were frequently utilized in the processing and resolutions of these charges.

- The *Atlanta District Office* successfully conciliated an ADEA and ADA charge against a major publishing company for over $50,000 in monetary benefits. The charging party had been denied an interview and selection for a Sales Representative position due to his age (51) and disability (seizure disorder).

- A *Baltimore District Office* predetermination settlement obtained $1,349,000 in backpay for 59 engineers, aged 50 or above, who were terminated in a downsizing program by a major manufacturing company during three different layoffs.

  Baltimore also resolved ADEA charges filed against a police department by two law enforcement officers. The charging parties, both high ranking police officers, alleged that they were stripped of responsibilities previously performed, relegated to small quarters, and given the least desirable shift assignments because of their ages (62 and 64), and in retaliation for filing previous charges of discrimination. Under the terms of the settlement agreement, the charging parties received monetary relief totaling $110,000. In addition, both charging parties were granted paid sick leave, given appropriate benefits, and allowed to remain on paid leave until the date of their voluntary retirement with enhanced benefits.

- The *Birmingham District Office* successfully conciliated an ADEA charge in which the complainant alleged that his retirement was involuntary. The respondent had a policy of requiring all employees who reached 65 years of age to retire. After a cause finding was issued, the case was successfully conciliated with the charging party receiving double backpay ($27,500).

- The *Charlotte District Office* resolved a case in which the charging party, 55 years old, alleged discharge because of his age. Prior to issuance of a determination charging party was offered $150,000 to settle the charge. He declined the offer. After a determination of reasonable cause, another effort was made to resolve the charge, and charging party accepted an offer of $250,000.

- The *Detroit District Office* successfully resolved a charge of discriminatory layoff because of age. The charging party alleged that she was laid off because of her age (60) when the respondent had retained younger, less senior employees. The investigation confirmed her allegation. Under the settlement, she was recalled and received all lost benefits, including vacation, medical, dental and restoration of her seniority. The total value of the relief obtained was $24,716.

- The *Memphis District Office* conciliated an ADEA directed case filed against a major interstate package carrier with nation-wide facilities. The company had targeted college students in its advertisements for package handlers and its written policies suggested that recruitment efforts be made at colleges and high schools. Respondent agreed to pay $300,000 to an estimated 227 affected class members. Significantly, although the investigation included only the company's facilities located in two states within the jurisdiction of the Memphis District Office, the respondent agreed to make employment data available from facilities in ten other cities (where the illegal advertising was done). The respondent also agreed to advertise in those areas for older workers who had been

discouraged from applying previously. The company also agreed to make job offers as employment opportunities become available, cease the student preference in its advertising, change its personnel manual relating to recruitment, distribute the changes to all manual holders, and create and maintain a reporting form for purposes of tracking its progress in complying with the ADEA.

- The *Miami District Office* achieved an early settlement of an age discrimination charge in accordance with the PCHP. The respondent had declined to hire the charging party as a shoe salesman because of his age (75) despite his 30 years experience. As a result of the settlement, the charging party was hired in the men's shoe department at $8.00 an hour plus draw on commissions, with a weekly quota of $1200. He easily surpassed the weekly quota, earning an average of $300 a day, with an estimated annual income of $62,400. In addition, he received an employee discount and other benefits, such as vacation when eligible. This charge was resolved in less than two months.

- The *Milwaukee District Office* investigated and successfully resolved a series of EEOC directed ADEA charges involving a number of unions and public agencies. Prior to the initiation of the charges, evidence was obtained that labor agreements between unions and local city and county governments contained restrictive clauses which stated in part that covered employees, in essence, had to choose between filing a grievance or filing a charge of discrimination under state or federal law. The contract language provided that employees who filed a charge of discrimination would not be able to proceed with a grievance under the contract. Milwaukee held that this language was both discriminatory and retaliatory in that it effectively denied access to the laws enforced by the Commission for those persons who utilized the grievance process and it retaliated against those persons who filed charges of discrimination by denying them a bargained-for benefit of the labor agreement.

  The settlement agreements provided for changes in the language of each contract to allow charges of discrimination to be filed without interfering with the grievance process. The changed labor contracts will potentially affect over 6,000 employees.

- The *Nashville Area Office* categorized a charge against a restaurant as an "A" charge for priority handling. The charging party alleged that she was denied her hourly wage, given reduced hours, denied paid vacation and subsequently laid off because of her age, 59, and race, Black. After an investigation, a cause determination was issued within 3 months. The case was successfully conciliated. The charging party declined reinstatement and received monetary benefits of $10,197.

- In a *Newark* Area office case, two charging parties alleged that because of their age (both were 50) they were laid off and replaced by individuals who were substantially younger. As a result of an on-site investigation that involved in-depth witness interviews, analysis of documents involving the performance of charging party and similarly situated

employees, and obtaining testimony from a recalcitrant former supervisory employee who had to be subpoenaed for testimony, a cause finding was issued on both cases. A conciliation conference was held, and through persuasion, the charges were settled for $80,000 ($50,000 and $30,000 to each of the charging parties).

- The *New Orleans District Office* resolved a case in which the charging party alleged that he was forced to leave his job as Human Resource Manager and involuntarily placed on disability without pay because of his age and disability. The respondent agreed to reinstate the charging party to his former position, transfer him to another site and pay relocation costs. Total benefit to the charging party was $76,550.

- The *New York District Office* resolved an ADEA complaint filed by an evening news anchor who alleged that he had been constructively discharged from his weekend position because he was considered "too old" for television. The investigation took a relatively short time to complete because the network basically acknowledged that they considered the anchor too old for the market. (He was 65.) The conciliation process was intensive because EEOC wanted to ensure he would be given a new contract and that it would include weekend anchoring, not just reporting. The final agreement provided for his reinstatement with a 4-year contract, first year pay of $390,000 and $10,000 raises each year. Confidentiality was extremely important to the charging party because of his reputation in the industry. The major issue here was that age is an unwritten criterion in broadcasting,

  Another *New York* conciliation agreement provided $418,000 to six former employees of a firm which had denied them pension benefits because they were more than 60 years old. The investigation found that the company had a policy which provided a higher pension for employees who retired prior to their 60th birthday than those who retired after 60. The conciliation agreement provided for a recalculated retirement package for the affected employees.

- The *Philadelphia District Office* settled a case in which the charging party alleged that he was laid off from his position and denied alternate positions because of his age and because he was due to retire shortly. Prior to a determination, the charge was resolved by a negotiated settlement . The charging party received a total of $330,000 in backpay and damages, as well as the right to participate in the respondent's health insurance plan on the same basis as a retiree.

- The *Phoenix District Office* settled an ADEA class case against a major corporation alleging discriminatory layoff because of age. The settlement resolved 108 individual charges and provided monetary benefits of $7,500,000.

- In a *San Antonio District Office* case, the charging party, a store manager in a retail department store, was deemed unsatisfactory and discharged. The respondent stated that

store managers were evaluated by a number of specified measures and that this individual's performance had been lacking by these measurements. The evidence indicated that a younger store manager who had a similar unsatisfactory evaluation had not been terminated, but was demoted and allowed to retain his store manager's salary. The case was resolved and monetary relief of $50,000 was obtained for the charging party.

- In a *San Francisco District Office* case, a police officer alleged that he had applied for assignment as a helicopter observer, but was denied the position because of his age. Respondent's officials indicated that they preferred younger individuals despite the fact that the charging party was well qualified for the position. The respondent agreed to settle the case by placing the charging party in the position he sought, and paying his attorney's fees. Total monetary benefits were $10,636.

- The ***St. Louis District Office*** conciliated two ADEA charges alleging involuntary retirements, filed against a public transportation company. Both charges received priority consideration under the office's local enforcement plan. The investigation was completed and a reasonable cause determination was issued within 128 days of filing of one charge and within 50 days of filing of the second charge. Under the terms of the conciliation agreement, the employer agreed to pay $72,000 in monetary relief to 17 protected age group class members, to reinstate six persons, and to make necessary changes in the company's policy.

- The *Washington Field Office* conciliated an age discrimination complaint against a prestigious Washington law firm, after finding that the firm followed a pattern or practice of not hiring older applicants, and that its employment advertisements had an adverse impact on such applicants. The agreement provided full backpay for a charging party and three other aggrieved persons subjected to age discrimination. The firm also agreed to establish a scholarship worth up to $63,000 for persons over 40, to keep records and report to EEOC on its applicant flow and hiring for three years and to train its hiring officials on EEO laws.

I. Outreach, Education and Technical Assistance

Field office outreach, education and technical assistance expanded significantly during 1997 and 1998. During these two years combined, field staff participated in more than 4600 outreach activities reaching more than 340,000 persons. These activities included speeches, workshops, training seminars, representing EEOC at events of other organizations, and dissemination of informational materials.

There was a substantial increase in education and outreach to groups protected under laws enforced by the Commission, including racial and ethnic groups, women , older workers and people with disabilities, who may have been under-served in the past. Between 30 and 40

percent of events had audiences from these groups each year. Approximately one-third of the events reached employer audiences, including private, state, local and federal government employers and their professional and legal organizations. The remaining events had audiences representing the general public.

The major topic in presentations was an overview of various EEOC statute provisions, including the ADEA (more than 40% of presentations) followed by information on EEOC's new charge processing procedures, and various specific statutory issues. In addition to the EEOC overview presentations, more than 360 presentations during these two years focused exclusively on ADEA issues.

During 1997 and 1998 field offices also expanded contacts with a broad range of stakeholders to obtain input on issues and customer service. Several offices established mechanisms for regular input and communication with employer, advocacy and community based organizations. Regular meetings, Advisory Councils and Task Forces brought EEOC information on stakeholder concerns and provided them with information on EEO law, policy and procedures.

For example:

The Atlanta District Office organized a Stakeholder Task Force representing more than 30 employer and advocacy organizations. The Task Force met regularly and produced a newsletter containing information from EEOC and the organizations that was distributed to several thousand members of these groups. The Task Force included representatives from the AARP and the Georgia Department of Human Rights Division of Aging Services.

The Los Angeles and Miami District Offices and San Diego and Tampa Area Offices established employer and community organization Advisory Councils that have met regularly and developed working agendas to provide input to EEOC and educate their members on EEO law and procedures.

III. OVERVIEW OF THE OFFICE OF THE GENERAL COUNSEL

A. The Mission of the Office of the General Counsel

The Equal Employment Opportunity Act of 1972 amended Title VII of the Civil Rights Act of 1964 to provide for a General Counsel, appointed by the President and confirmed by the Senate, with responsibility for conducting the Commission's litigation. Following transfer of enforcement functions from the U.S. Department of Labor to the Commission in 1979, the General Counsel was also vested with responsibility to conduct Commission litigation under the Equal Pay Act and the Age Discrimination in Employment Act. With the enactment of the American with Disabilities Act, the General Counsel was granted responsibility for Commission litigation under that statute as well.

B. Organizational Structure

The Office of General Counsel is divided into ten organizational units: (1) the District Office Legal Units; (2) Litigation Management Services; (3) Appellate Services; (4) Systemic Litigation Services; (5) Litigation Advisory Services; (6) Research and Analytic Services; (7) Administrative and Technical Services Staff; (8) Systemic Investigative Services; (9) the General Counsel's immediate staff; and (10) the Deputy General Counsel's immediate staff.

The District Office Legal Units are located in 23 of the Commission's 24 District Offices. Each District Office legal unit is under the direction of a Regional Attorney who is appointed by the General Counsel and the Chairman of the Commission. The legal units are responsible for prosecuting enforcement litigation under the legal direction of the General Counsel. In addition to their prosecutorial function, legal unit attorneys provide legal advice and assistance to enforcement units in the investigation of charges of discrimination. The legal advice function includes, among other things, completing written reviews of certain proposed "reasonable cause" findings to ensure uniformity with legal standards, drafting determinations for the District Director on objections to administrative subpoenas, and making determinations on Freedom of Information Act requests.

Litigation Management Services is managed by an Associate General Counsel under the supervision of the Deputy General Counsel. Litigation Management Services oversees and supports the Commission's litigation enforcement program in the 23 District Office Legal Units and, in conjunction with the Office of Field Programs, oversees the integration and interaction of District Office legal units into the administrative enforcement structure of the District Office.

Appellate Services of the Office of General Counsel is managed by an Associate General Counsel who reports through the Deputy General Counsel to the General Counsel. Appellate Services is responsible for conducting all appellate litigation where the Commission is a party and for all Commission participation in cases as an *amicus curiae*, usually in cases involving

novel issues. Appellate Services also assists the Solicitor General of the United States in representing the Commission in the United States Supreme Court.

Appellate Services is responsible for reviewing every case in which the Commission receives an adverse judgment. The attorneys of Appellate Services then prepare written recommendations analyzing the facts and legal issues in the case for review by the General Counsel, who makes the final decision on whether to appeal. In *amicus curiae* cases, Appellate Services drafts memoranda recommending Commission participation which, if approved by the General Counsel, are submitted to the Commission for authorization.

Systemic Litigation Services conducts litigation on behalf of the Commission in complex cases alleging patterns or practices of employment discrimination or involving complex legal or factual issues, including the resolution of issues where there is a conflict of opinion among the Federal Courts of Appeal. The responsibilities of Systemic Litigation Services include evaluating and preparing litigation recommendations in certain complex cases for Commission consideration and, upon approval, prosecuting those cases. Further, Systemic Litigation Services coordinates with, and provides legal advice to, the Systemic Investigations Division during the investigation and conciliation of systemic charges. Of particular import is, in coordination with the Systemic Investigations Division, the identification of cases of seminal interest and the development of selective litigation involving cases with significant class or pattern or practice potential.

Litigation Advisory Services is managed by two Assistant General Counsels who report directly to the Deputy General Counsel. The staff of Litigation Advisory Services review litigation recommendations from the Regional Attorneys, prepare recommendations to the General Counsel concerning this litigation, and present such recommendations to the Commission where necessary.

The Research and Analytic Services Staff reports directly to the Deputy General Counsel. The Research and Analytic Services Staff is the principal source within the EEOC of expert and analytical services for cases in litigation as well as cases under investigation. The Research and Analytic Services Staff has a professional staff of experts in the fields of the social sciences, economics, statistics, and psychology as well as a technical staff of research and statistical assistants. The Office of General Counsel has estimated that the Research and Analytic Services Staff saves the Commission nearly two million dollars per year in expert services costs and other types of contract costs.

The Administrative and Technical Services Staff is the central control unit for the Office of General Counsel and is responsible for providing administrative and technical services to all components, including the 23 field legal units.

Systemic Investigations Division develops, investigates, conciliates and monitors the conciliation or settlement of Commission initiated systemic and other pattern or practice charges

arising under the statutes the Commission enforces. In addition, the Systemic Investigations Division provides support, as appropriate, for the investigation and conciliation of systemic pattern or practice charges that arise in EEOC field offices; assists and advises on the development of standards and procedures for conducting systemic investigations, including assistance in the preparation of training manuals, programs and evaluation modules; and consults with Systemic Litigation Services during the development and investigation of headquarters systemic pattern or practice charges, with particular attention to the development and prosecution of cases of seminal and national import.

IV. ADEA LITIGATION HIGHLIGHTS FROM CALENDAR YEARS 1997 AND 1998

A. Litigation Statistics

In Calendar Year (CY) 1997, the Commission filed 40 ADEA lawsuits, of which 12 (20%) were filed on behalf of multiple aggrieved parties and 6 were filed under another statute concurrent with ADEA. During the same time period, the Commission resolved 33 ADEA cases, of which 10 (30.3%) were on behalf of multiple aggrieved parties and 5 were under another statute concurrent with ADEA. The Commission obtained monetary benefits in 1997 in the amount of $30,775,491 from lawsuits litigated under the ADEA. (See Attachment 1 for a chart of CY 1997 ADEA Litigation Activities, broken down by district office).

In Calendar Year (CY) 1998, the Commission filed 49 ADEA lawsuits, of which 14 (28.6%) were on behalf of multiple aggrieved parties and 8 were filed under another statute concurrent with ADEA. During the same time period, the Commission resolved 40 ADEA cases, of which 15 (37.5%) were on behalf of multiple aggrieved parties and 5 under another statute concurrent with ADEA. The Commission obtained monetary benefits in the amount of $12,175,710 in 1998 from lawsuits litigated under the ADEA. (See Attachment 2 for a chart of CY 1998 ADEA Litigation Activities, broken down by district office).

B. Supreme Court ADEA Decisions

In *Oubre v. Entergy Operations, Inc.*, ____ U.S. ____, 118 S. Ct. 838 (1998), the Supreme Court held that if a release does not conform to the requirements of the Older Workers Benefit Protection Act ("OWBPA"), it cannot bar an ADEA claim, and an employee's retention of severance payments does not serve to ratify a defective release. The employer and employee had entered into a severance agreement, under which the employee signed a release waiving all claims against her employer. In exchange, the employer paid the employee $6,258 in six installment payments over a four month period. The release did not comply with the requirements of the OWBPA in at lease three respects: 1) the employer did not give the employee sufficient time to consider the offer; 2) the employer did not give the employee seven days after signing the release to change her mind; and 3) the release did not refer specifically to an ADEA claim. The employee sued, claiming that she was constructively discharged because of her age in violation of the ADEA. The employer moved for summary judgment, arguing that the

employee had ratified the defective release by retaining the severance payments. The district court agreed, granting summary judgment for the employer, and the Fifth Circuit affirmed.

The Solicitor General filed an *amicus curiae* brief in the Supreme Court, advancing the Commission's position that an employee's suit under the ADEA cannot be waived unless the waiver or release of claims complies with the requirements of the OWBPA. The Commission argued further that an employee's retention of severance payments does not ratify a defective release and, therefore, an employee is not required to "tender back" the payments as a precondition to suit. The Supreme Court agreed with the Commission, holding that the employee's "release cannot bar [her] ADEA claim because it does not conform to the statute." "Nor did the employee's mere retention of monies amount to a ratification equivalent to a valid release of her ADEA claims," the Court continued, "since the retention did not comply with the OWBPA any more than the original release did." In the Court's view, "[t]he statute governs the effect of the release on ADEA claims, and the employer cannot invoke the employee's failure to tender back as a way of excusing its own failure to comply." The Court reversed the Fifth Circuit's judgment and remanded for proceedings consistent with its Opinion.

C. Significant Appellate and Amicus Briefs Filed

The following appellate and *amicus curiae* briefs were filed in calendar years 1997 and 1998 in appellate courts on significant issues under the ADEA.

In *EEOC v. Complete Dewatering, Inc.*, No. 97-5291 (11th Cir. brief as appellant filed July 21, 1998 and reply brief filed Sept. 8, 1998), the Commission is appealing the district court's grant of summary judgment in favor of the employer in a case in which the Commission alleges that the employer unlawfully terminated the charging party's employment because of his age. On appeal, the Commission argued that it presented sufficient evidence to withstand summary judgment under a direct evidence standard. Specifically, the Commission argued that discriminatory statements by a company official are sufficient to support a finding of discrimination under a direct evidence theory so long as the statements can be linked, in some fashion, to the decisional process. Alternatively, the Commission argued that its evidence was sufficient to support an inference of discrimination under the McDonnell Douglas standard.

EEOC v. AT&T, Nos. 98-4348 & -4367 (6th Cir. brief as appellant filed Dec. 23, 1998), is another case in which the Commission is appealing the district court's grant of summary judgment in favor of the defendant where the Commission alleges that the defendant violated the ADEA by relying upon age in determining eligibility for a post-termination employee benefit. On appeal, the Commission argued that an employer engages in age discrimination as a matter of law when the employer relies upon an age-defined factor in determining eligibility for a post-termination benefit.

McKeever v. Ironworker's District Council, No. 96-5858 (E.D. Pa. brief as *amicus curiae* filed April 28, 1997), is a class action brought under the ADEA challenging a decision by the

defendants to eliminate coverage under the union's Health Benefit Plan for retired individuals age 65 or over. The defendants moved to dismiss the suit on the ground that the plaintiffs, as retired employees, lacked standing to sue under the ADEA. The district court rejected this argument, ruling that the plaintiffs "have standing to allege that the Plan discriminates on its face by using age as an eligibility factor." The defendants moved for reconsideration, and the Commission filed an *amicus curiae* brief arguing that the ADEA protects retirees who suffer a discriminatory change in their employee benefits.

In *Williams v. Cigna Financial Advisors, Inc.*, No. 97-10985 (5th Cir. brief as *amicus curiae* filed Dec. 18, 1997), the Commission filed an *amicus curiae* brief to urge the court to subject an arbitration award to more exacting review. The plaintiff had submitted his claim of age discrimination to arbitration pursuant to a securities registration form that he was required to sign as a condition of his employment. The arbitration panel ruled in favor of the employer, and the district court confirmed the award because it believed the plaintiff failed to demonstrate that the award should be vacated based on one of the grounds explicitly set forth in the Federal Arbitration Act. The Commission filed an *amicus curiae* brief in the Fifth Circuit to argue that courts reviewing arbitration awards resolving statutory claims should apply a standard of review that is sufficiently rigorous to ensure that the arbitrators have properly interpreted and applied statutory law. The Commission further argued that under a more rigorous standard of review than that applied by the district court, the arbitration award in this case should be vacated.

In *Solon v. Gary Community School Corp.*, 97-3954 & -4024 (7th Cir. brief as *amicus curiae* filed Feb. 13, 1998), the Commission filed an *amicus curiae* brief on the issue of early retirement incentive plans. In this case, the defendant, in connection with its contract with the Gary Teachers' Union, had negotiated an early retirement incentive plan for teachers. According to the plan, early retirement incentives were available to all teachers between the ages of 58 and 62. Individuals who joined the plan at age 58, however, were entitled to receive the value of 48 monthly payments, while later enrollees only received payment from the date of their enrollment to age 62. A class of 34 plaintiffs filed suit, challenging the plan because it offered early retirement incentives that varied based on age. The district court entered summary judgment in favor of the plaintiffs, holding that the plan was facially discriminatory in violation of the ADEA. The court also rejected the defendant's claim that the plaintiffs lacked standing. On appeal, the Commission filed an *amicus curiae* brief arguing that the early retirement incentive plan intentionally discriminates against the plaintiffs in violation of the ADEA, and, further, that the plaintiffs have standing to maintain the action.

Arnett v. California Public Employees' Retirement System, No. 98-15574 (9th Cir. brief as *amicus curiae* filed Sept. 11, 1998). The California Public Employees' Retirement System ("PERS") originally provided that certain disabled employees would receive 50% of final salary as a disability benefit. The legislature amended PERS to state that disability allowance shall not exceed the service retirement the employee would have received if he or she had worked to age 55. The result of this change was that younger employees would likely receive 50% of salary as a benefit, while older employees might receive a smaller percentage of salary than a similarly-

situated younger employee. A class of disabled employees who all received less than 50% of salary in benefits brought suit alleging that the amendment violates the ADEA because it reduces benefits based upon age. The district court dismissed both the disparate treatment and the disparate impact claims. On appeal, the Commission filed an *amicus curiae* brief to argue that the amendment constitutes age-based disparate treatment because an employee's age is necessarily considered in calculating disability benefits.

D. Significant District Court and Appellate Resolutions by Issue

1. Benefits

Early Retirement Programs

In *EEOC v. Crown Point Community School Corp. and Crown Point Education Association,* 72 Fair Empl. Prac. Cas. 1803 (N.D. Ind.1997), the Commission alleged that the early retirement plan in the collective bargaining agreement between defendant school corporation and the union representing its teachers discriminated against individuals age 61 and older by paying lower early retirement benefits to employees 61 to 64 than to employees age 55 to 60, and no early retirement benefits to employees 65 and older. The court granted the Commission's motion for summary judgment on liability. The court held that because benefits under the plan were distributed based on age, the EEOC had established that the plan was facially discriminatory. The court rejected both of defendants' statutory defenses, finding that the defendants had failed to establish a cost justification for the difference in benefits and failed to show that the early retirement plan was voluntary and consistent with the ADEA. In a separate decision on relief, the court awarded $368,927 in benefits to nine individuals.

The Commission also alleged in *EEOC v. Middlebury Community School Corporation,* No. 3:97cv18RM (N.D. Ind. February 2, 1998), that a school corporation and the union representing the corporation's teachers established, through collective bargaining agreements, early retirement plans that discriminated on the basis of age. The court entered summary judgment for the Commission on its liability claim against the school corporation. Under the early retirement plans, eligible employees (in 1987-89 those aged 60-64; from 1989-97 those aged 55-59) received one less payment for each year they exceeded the minimum eligibility age. The court found that the plans were facially discriminatory because they relied solely on age to determine the number of payments a retiree would receive, and rejected the school's argument that the plans were voluntary and consistent with the ADEA, finding that because the school corporation had offered no reason, let alone a justification, for offering early retirees more payments, the plans directly contravened the ADEA's purpose of "prohibiting] arbitrary age discrimination in employment." In a separate decision, the court awarded nine individuals $75,030 in benefits.

In both *Crown Point* and *Middlebury*, the court held that the union was not liable for monetary damage, finding that relief under the ADEA is determined by the remedies available

under the Fair Labor Standards Act, and that statute provides for recovery of monetary relief only from employers.

In *EEOC v. Community College of Philadelphia,* No. 96-6601 (E.D. Pa. November 5, 1997), the Commission again challenged an early retirement incentive program for discriminating against older workers. In this case, the defendant's program reduced the early retirement incentive stipend for eligible employees ages 61 through 64 and provided no benefit to employees age 65 and older. The case was resolved through a settlement agreement providing $125,000 to 17 individuals.

Pension Benefits

In *Huff & Schoolman v. Uarco, Inc.,* 122 F.3d 374 (7th Cir. 1997), the employer demoted the plaintiff while retaining a number of younger individuals in supervisory positions. The plaintiff subsequently resigned. At the time of his resignation, the plaintiff was denied his right to an immediate refund of his voluntary contributions to the employer's retirement plan. The plaintiff filed suit under the ADEA, challenging both the demotion and the discriminatory treatment under the retirement plan. The district court granted summary judgment for the employer, ruling that the plaintiff's evidence on his demotion claim was insufficient to sustain a finding of discrimination. In so ruling, the district court stated that the discriminatory remarks of a decision maker must be "related to the employment decision in question or they will not be considered as evidence of a discriminatory [action]."

On appeal, the Commission filed an *amicus curiae* brief, advancing two arguments. First, the Commission argued that the district court erred in ruling the plaintiff's evidence of age bias lacked probative value. Next, the Commission argued that the employer's retirement plan was facially discriminatory because it made distinctions on the basis of a factor that is explicitly defined by age (and years of service), namely, eligibility for early retirement. The Seventh Circuit agreed with the Commission's position on both points and reversed the district court's grant of summary judgment. Citing to the Commission's *amicus curiae* brief, the court agreed "that in an indirect case, a decision maker's discriminatory remarks, although unrelated to the employment decision, are probative of pretext, and may be used to support a prima facie case for a plaintiff using the indirect method of proof." The court also concluded that the plan's reliance on an age-defined factor, eligibility for early retirement, constituted age-based discrimination.

In *Lee & EEOC v. California Butchers' Pension Trust Fund,* 154 F.3d 1075 (9th Cir. 1998), the plaintiff filed suit under the ADEA and ERISA, alleging that the California Butchers' Pension Trust Fund calculated his pension benefits using a discriminatory age-based formula, resulting in a much lower monthly benefit. The Commission moved to intervene to assert claims under the ADEA and, while the intervention motion was pending, filed an *amicus curiae* brief to support the plaintiff's arguments in favor of summary judgment. The district court granted summary judgment in favor of the plaintiff before ruling on the intervention motion. The court then granted the Commission's motion to intervene and entered summary judgment in its favor

on the same grounds. On appeal, the Commission argued that the ADEA, which prohibits discrimination in pension plans, applied to the Fund, because the Fund is a combination of employers and labor organizations. The Ninth Circuit found the Commission's argument persuasive and affirmed the judgment of the district court.

Other Benefits

In *EEOC v. American Telephone and Telegraph Company and the Communications Workers of America,* 77 Fair Empl. Prac. Cas. 913 (S.D. Ohio 1998), the Commission alleged that defendants denied a class of individuals age 40 and over nonreturn-to-work incentive payments because of their age. In April 1992, in a decision on a grievance filed by defendant union, an arbitrator ordered AT&T to reinstate certain employees laid off during a 1991 reorganization. AT&T and the union later agreed that AT&T would offer monetary payments to employees entitled to reinstatement in return for the employees' voluntary resignations. These payments were substantially higher for employees not eligible to receive a pension. To be pension-eligible, an employee had to be at least 50 years of age or have 30 years of service. Thus all employees eligible for pensions were over 40 years of age, and the Commission consequently argued that the higher payments to nonpension-eligible employees were impermissibly based upon age.

The court granted summary judgment to defendants. The court relied primarily on the Sixth Circuit's unreported affirmance of a district court's summary judgment decision in favor of AT&T in an individual private ADEA action challenging the same payments at issue in the present case. However, the court also cited the Supreme Court's decision in *Hazen Paper Company v. Biggins,* 507 U.S. 604 (1993), and the Sixth Circuit's decision in *Lyon v. Ohio Educational Association and Professional Staff Union,* 53 F.3d 135 (6th Cir. 1995), for the proposition that "a benefit . . . based upon years of service is not an unlawful proxy for age-based discrimination." The court acknowledged but did not directly respond to the Commission's argument that *Hazen Paper* and *Lyon* were distinguishable because age did not correlate with pension eligibility in either of those cases. The Commission is in the process of appealing this decision.

2. Claim Preclusion

In *Simon v. Safelite Glass Corp.,* 128 F.3d 68 (2d Cir. 1997), the Commission filed an *amicus curiae* brief arguing that the court erred in dismissing the ADEA action on judicial estoppel grounds. The district court had dismissed the plaintiff's ADEA action on the ground that he was judicially estopped by a statement he had made in a Social Security disability benefits application, to the effect that he was unable to work. The Commission asserted that applying judicial estoppel to preclude litigation of an employment discrimination claim based on statements in an application for disability benefits goes beyond the proper scope of the doctrine and is against public policy since it interferes with effective enforcement of anti-discrimination laws. The Second Circuit, however, affirmed the judgment of the district court.

In *Tice v. American Airlines, Inc.*, 162 F.3d 966 (7th Cir. 1998), the Commission participated as an *amicus curiae* to urge reinstatement of the plaintiffs' ADEA claims. Twelve pilots had brought an ADEA suit to challenge their forced retirement under a company policy that prohibits pilots who have reached age 60 from downbidding to flight engineers. The district court held that their claims were precluded by the adverse judgment in another ADEA action filed by other individuals who were forced to retire at age 60 under the same policy. Although the individual plaintiffs in this case were not parties to the earlier action, the court concluded that they were "virtually represented" by the plaintiffs in the earlier action and were, therefore, in privity with them. The court thus held that the doctrine of res judicata barred the claims.

On appeal the Commission filed an *amicus curiae* brief arguing that the doctrine of virtual representation cannot preclude employees from litigating their individual ADEA claims of forced retirement under an allegedly discriminatory employment policy, based on the adverse judgment in an earlier private ADEA suit brought by different individuals. The Seventh Circuit agreed, concluding that the district court should have allowed the plaintiffs to proceed with their claims. The court stated, "[a]s the EEOC pointed out in its *amicus curiae* brief in this court, the statute establishing the rights [the plaintiffs] are seeking to vindicate makes it quite clear that these rights are individual, not group-based." The court thus reversed the judgment of the district court and remanded for further proceedings.

3. Demotion and Discharge

In General

EEOC v. Army National Bank, No. 96-1250-CV-W-SOW (W.D. Mo. January 26, 1998), involved claims that defendant bank demoted charging party from his executive vice president position because of his age, 59, and then discharged him because of his age and in retaliation for filing an age discrimination charge over his demotion. The case was resolved through a settlement agreement providing charging party with a total of $222,359 in backpay, frontpay, interest, and liquidated damages.

The Commission intervened in *Foster and EEOC v. Lennox Industries, Inc.*, No. 4-96-1083 (D. Minn. May 7, 1998), an action alleging that defendant, a manufacturer and distributor of heating, ventilation, and air conditioning equipment, had engaged in a nationwide pattern or practice of age discrimination by terminating District Sales Managers 40 years of age and older because of their age. The case was resolved through a consent decree providing $6.2 million in monetary relief to 11 individuals, one third of which represented attorney's fees. The decree also provided for extensive affirmative relief, including monitoring and reporting for 42 months. Defendant reimbursed the Commission for $10,161 in costs.

In *Helton and EEOC v. K-Mart Corporation*, No. 1:92-CV-2564-MHS (N.D. Ga. November 18, 1998), the Commission intervened in an action alleging that K-Mart Corporation discriminated against a class of store managers age 40 and older in its southern region by

demoting, discharging, or constructively discharging them because of their age. The case was resolved through a settlement agreement providing monetary relief of $1,132,631 to an EEOC class of 55 claimants and an additional $6,879,684 to 18 privately represented individuals, 11 of whom were encompassed by the EEOC's complaint. The 18 privately represented claimants also received $620,316 in attorney's fees.

The Commission alleged in *EEOC v. McDonnell Douglas Corporation*, No. 4:96CV02457 (SNL) (E.D. Mo. December 29, 1998), that charging party was laid off from his job as a product support specialist because of his age, 54. The case was resolved through a settlement agreement providing charging party with $48,500 in backpay and $48,500 in liquidated damages.

In *Thomas v. Dillard Dep't Stores, Inc.*, 116 F.3d 1432 (11th Cir. 1997), the plaintiff, who had worked for the employer as a manager for over 20 years was relieved of her position as an area sales manager and was replaced by a much younger individual. The employer had offered her a sales associate position, but she declined. The plaintiff filed suit under the ADEA, proceeding strictly on a theory of actual termination. At a jury trial, after the plaintiff rested, the defendant moved for judgment as a matter of law, arguing that the plaintiff could not prevail because she did not establish that the defendant actually terminated her. The defendant rested its argument on the ground that it had offered the plaintiff alternative employment after it dismissed her from the area sales manager position. The district court granted the defendant's motion, finding that there was no express termination, but instead, a demotion.

On appeal, the Eleventh Circuit agreed with the Commission's position as *amicus curiae* that the plaintiff's refusal to accept the lower ranking position did not compromise her claim of unlawful termination. The court, tracking the argument asserted in the Commission's brief, stated that if the district court's view were accepted, an employer could "seek to improve its legal position after an illegal discharge while still achieving its purpose of terminating the employee by making an offer it knows will not be accepted." Having concluded that the offer of alternative employment did not vitiate the plaintiff's claim of actual termination, the court went on to hold that it was for the jury to decide whether an actual termination had occurred, since reasonable minds might differ on the question.

Corporate Restructurings

In *EEOC v. Clark Refining & Marketing, Inc.*, No. 94 C 2779 (N.D. Ill. July 15, 1998), the Commission alleged that defendant, a retail oil company operating gasoline stations in 12 midwestern states, engaged in a pattern or practice of age discrimination by discharging a class of retail sales managers during a corporate restructuring. The suit was resolved through a consent decree providing $3,276,296 in monetary relief (and an additional $90,000 in attorney's fees) to 38 individuals. Class members will receive amounts ranging from $45,832 to $152,625. The decree also enjoins defendant from engaging in age discrimination in the demotion and

separation of retail salaried personnel, and requires reporting for 3 years on the demotion and termination of retail marketing managers above the level of store manager.

The Commission successfully resolved the claims in *EEOC v. Ameritech Corp.*, No. 98 C 5046 (N.D. Ill. August 21, 1998), that during a 1992-93 corporate restructuring, defendant, a Chicago based telephone company, discharged middle management employees age 40 and over because of their age. The consent decree provided $1 million dollars to the class. As a result, forty individuals will receive from $18,000 to $32,000, amounts similar to the severance packages they received when they were terminated.

Mandatory Retirement - In General

In *EEOC v. Volkswagen of America, Inc.*, No. 1:94-CV-1112-MHS (N.D. Ga. May 27, 1997), the Commission alleged that because of the charging party's age, 55, he was forced to take early retirement from his sales training consultant position to avoid being discharged. The suit was resolved through a settlement agreement providing the charging party with $100,000 in monetary relief.

Mandatory Retirement - Law Enforcement Officers

The Commission intervened in *Gately and EEOC v. Commonwealth of Massachusetts*, No. 92-13018-MA (D. Mass. June 8, 1998), a case challenging a 1991 Massachusetts statute that merged the four state police forces and established a mandatory retirement age of 55 for the resulting consolidated force. Prior to the consolidation, three of the forces had mandatory retirement ages of 65 and the fourth had a mandatory retirement age of 50. Because the resulting retirement age for three of the forces was below the age in effect on March 3, 1983, the ADEA exemption for law enforcement offices and firefighters (effective from January 1, 1987, to December 31, 1993, and restored retroactively (with limitations) in 1996) was not applicable.

Defendants argued that because of public safety concerns age was a bona fide occupational qualification for state police officers and attempted to show that all or substantially all state police officers would be unable to perform their duties after reaching age 55. Plaintiffs argued that by providing in its 1996 amendments to the ADEA that police officers who pass a nationwide fitness test (to be implemented by September 30, 2000) would be exempt from age-based compulsory retirement, Congress recognized that age is not an accurate indicator of an officer's fitness to serve. The court granted summary judgment to plaintiffs, finding that defendants could not show that all or substantially all officers over age 55 would be unable to satisfactorily perform their duties, or that age was an effective proxy for the qualifications at issue. The court held that the mandatory retirement provisions of the state statute were preempted by the ADEA, and it permanently enjoined defendants from requiring state police offers to retire solely on the basis of age. Because the court had preliminarily enjoined terminations under the statute, no officers had lost their jobs and thus no monetary relief was at issue.

Reductions-In-Force

In *EEOC v. Sara Lee Corporation*, No. 1:95-CV-339 (W.D. Mich. November 10, 1997), the Commission prevailed in part on the claim that during a reduction-in-force the defendant discharged the four oldest employees in the quality control department because of their age. At trial, the Commission presented direct evidence of age animus, including an admission by the defendant's human resources manager that he considered employees' ages in deciding whom to discharge. The jury returned a verdict in the Commission's favor on two of the claimants and found that the violations were wilful. The judge subsequently awarded the two claimants a total of $319,466 in backpay and liquidated damages and ordered them both reinstated.

In *EEOC v. Boston Edison Company*, No. CA 91-10312 DPW (D. Mass. March 26, 1997), the Commission alleged that defendant laid off a class of management employees because of their ages. The case was resolved through a consent decree providing $2.25 million in backpay and liquidated damages to 34 individuals.

The Commission alleged in *EEOC v. Martin Marietta Corporation*, No. 94-S-1247 (D. Colo. April 14, 1997), that during a series of layoffs, the defendant discharged nonbargaining unit employees age 40 and over because of their ages. The suit was resolved through a consent decree providing $13 million in monetary relief to approximately 2,000 claimants; hiring of 450 claimants; two years of out placement services; and up to eight classes at the defendant's Evening Institute to interested claimants. The decree also established procedures that the defendant must follow in reductions-in-force occurring during the five-year term of the decree.

The Commission alleged in *EEOC v. McDonnell Douglas Corp.*, 77 Fair Empl. Prac. Cas. 1415 (E.D. Mo. 1998), that during a reduction-in-force (RIF) occurring over the period May 2, 1991, through February 28, 1993, defendant engaged in a pattern or practice of discrimination against nonunion salaried employees age 55 and older. The court granted summary judgment to defendant. EEOC's statistical evidence showed that 14.7% of the 23,051 salaried nonunion employees at risk of layoff were age 55 or older and 85.3% were under age 55; that 13.7% of the age 55 and older employees were laid off compared to 5.4% of those under age 55; and that employees age 55 or older had an 18.2% chance of termination during the RIF compared with a 5.6% chance for those 54 or younger and a 4.9% chance for those under age 40. The court said that in age discrimination RIF cases, the most significant statistic is the percentage of older employees before and after the RIF and that the difference in the present case -- 14.7% age 55 and older before the RIF and 13.6% after -- was "insignificant." The court also found that a statement in the mid-1980s by defendant's then president that one reason for defendant's adoption of a new culture was to "hire and retain the best young people" was too remote in time from the RIF at issue to be probative. Finally, the court held that even if, as EEOC argued, employees age 55 and older were laid off at a higher rate because at age 55 they became eligible for retirement benefits, such a practice was legal under the Supreme Court's decision in *Hazen Paper Co. v. Biggins*.

Waivers

In *EEOC v. Johnson & Higgins*, 5 F. Supp.2d 181 (S.D.N.Y. 1998), the district court refused to enforce waivers that the Commission alleged had been coerced and were invalid as a matter of law. The district court had earlier held that defendant, an insurance brokerage and employee benefits consulting firm, violated the ADEA by requiring that its employee-directors retire at age 62 or age 60 with 15 years of service, whichever occurs first (887 F. Supp. 682). Prior to the affirmance of this decision by the Second Circuit (91 F.3d 1529), the 13 employee-directors entitled to relief signed waivers releasing their claims under the ADEA in return for $1,000 each. Defendant then moved for partial summary judgment, arguing that the waivers required dismissal of the Commission's claims for monetary and injunctive relief. While this motion was pending, the employee-directors filed affidavits repudiating the waivers, primarily on the grounds that they had acted on the advice of counsel for Johnson & Higgins, who had a conflict of interest, and that they were unduly influenced by the Johnson and Higgins' "culture," which did not tolerate dissent.

The Commission opposed defendant's summary judgment motion on the grounds of conflict of interest and undue influence, and on two additional bases: first, that as a matter of law $1,000 could not constitute adequate consideration for backpay and damages claims valued in excess of $3 million, where a finding of liability had already been made on the illegality of defendant's retirement policy and, second, that once a finding of liability has been made in a Commission action, the Commission is a necessary party in any settlement negotiation, and its exclusion from the waiver-signing process therefore vitiated the waivers. The court denied defendant's motion, finding that there were material questions of fact on the conflict of interest, undue influence, and consideration issues, and that "waivers entered into after a finding of liability and without EEOC participation are invalid as a matter of law."

4. Failure to Hire

In *EEOC v. Willoughby Farms, Inc.*, No. C-96-20670-JW (N.D. Cal. March 13, 1997), the Commission alleged that defendant refused to rehire the four charging parties into sprinkler irrigator and tractor driver positions because of their ages, 48, 52, 53, and 60. The suit was resolved through a consent decree providing $90,000 in back pay to the charging parties.

The Commission alleged in *EEOC v. Carnrick Laboratories, Inc.*, No. SA-96-CA-0936 (W.D. Tex. May 30, 1997), that because of the charging party's age, 58, the defendant refused to hire him as a pharmaceutical salesperson. The case was resolved through a consent decree providing the charging party $60,000 in monetary relief.

EEOC v. Irvington Board of Education, No. 97-462 (JWB) (D. N.J. September 30, 1998), was resolved through a settlement agreement reclassifying charging party from a substitute to a permanent teacher retroactive (with benefits) to the beginning of the 1997-98 school year and providing her with $40,000 in back pay and an additional 10 days of sick leave.

The suit alleged that because of her age, 54, defendant failed to hire charging party as a permanent teacher.

In *EEOC v. County of Muskegon,* No. 1:97CV825 (W.D. Mich. November 23, 1998), the Commission alleged that because of charging party's age, 72, defendant failed to hire her for a position as a public health nurse. The suit was resolved through a consent decree providing charging party with $45,000 in monetary relief.

The Commission won a favorable jury verdict after a trial on liability in *EEOC v. Nebco Evans,* No. 8:CV644 (D. Neb. November 24, 1998). The Commission alleged that defendant engaged in a pattern or practice of refusing to hire applicants age 40 and over for truck driving positions. The Commission presented evidence that since November 21, 1988, defendant had rejected more than 150 applicants who were 40 years of age or older. The Commission also presented evidence of comments made by company interviewers to several applicants over age 40 suggesting that they could not handle the hard work and that the jobs might be more suitable for younger drivers. After a two-week trial, the jury returned a verdict in favor of the Commission. A separate trial will be held on relief issues.

5. Jurisdiction

Independent Contractors

In *EEOC v. North Knox School Corp.,* 154 F.3d 744 (7th Cir. 1998), reh'g petition filed, Oct. 9, 1998, the Commission challenged the defendant's policy against allowing any person over the age of 69 to drive a school bus. The district court concluded that the bus drivers are independent contractors not protected by the ADEA. Accordingly, the court granted summary judgment against the Commission. On appeal, the Commission argued that the district court had misstated material facts and misapplied governing legal principles in ruling, as a matter of law, that the bus drivers are independent contractors. The Seventh Circuit, however, affirmed.

Foreign Corporations

In *Denty v. Smithkline Beecham Corp.,* 109 F.3d 147 (3d Cir.), cert. denied, 118 S. Ct. 74 (1997), the Commission filed an *amicus curiae* brief to argue that the ADEA covers an employee's claim that he was denied promotions with a foreign corporation for jobs located outside the United States where the employee worked in the United States for an American subsidiary of the foreign corporation and the promotions were an employment opportunity available to the employee by virtue of his employment status with the American-based subsidiary. The Third Circuit disagreed, ruling that because the plaintiff sought promotions to positions in the United Kingdom and Australia, "the relevant work site for ADEA purposes . . . is the location of these positions." Thus, the court affirmed the district court's ruling that the ADEA did not cover the plaintiff's promotion claims.

6. Mandatory Arbitration

In *EEOC v. Kidder, Peabody & Co.,* 156 F.3d 298 (2d Cir. 1998), the Commission sued under the ADEA, alleging that Kidder's investment banking department had engaged in a pattern or practice of firing employees on the basis of their age. The complaint originally sought both injunctive and monetary relief, but when the defendant discontinued its investment banking business, the Commission withdrew its request for injunctive relief. All nine of the persons for whom the Commission sought monetary relief had signed U-4-type registration applications containing arbitration agreements. The defendant moved to dismiss, arguing that the Commission cannot seek monetary relief in a judicial forum for an employee who has promised to arbitrate. The district court agreed and dismissed the lawsuit.

On appeal, the Commission argued that because it has independent statutory authority to enforce the ADEA, it is unaffected by a private individual's agreement to arbitrate. The Second Circuit, however, held that "an arbitration agreement between an employer and employee precludes the EEOC from seeking purely monetary relief for the employee under the ADEA in federal court." The court did acknowledge that the Commission may typically pursue a claim for injunctive relief even where an agreement to arbitrate is a condition of employment, but since no injunctive relief was sought, the court affirmed the dismissal.

In *Nieminski v. John Nuveen & Co.,* No. 96-C-1960 (N.D. Ill. Jan. 23, 1997), the Commission filed an *amicus curiae* brief advancing three arguments against mandatory arbitration: 1) because employment disputes were not required to be arbitrated at the time the plaintiff executed her Form U-4, she did not knowingly agree to arbitrate her Title VII and ADEA claims; 2) the Older Workers Benefit Protection Act ("OWBPA") prohibits enforcement of an agreement that requires an individual, as a condition of employment, to forego the statutory rights of action provided under Title VII and the ADEA; and 3) there were serious deficiencies in the arbitration procedures that would make it impossible for the plaintiff to vindicate her rights. The court, however, granted the employer's motion to dismiss and to compel arbitration.

In *Rosenberg v. Merrill Lynch, Pierce, Fenner & Smith Inc.,* 995 F. Supp. 190 (D. Mass.), aff'd, 163 F.3d 53 (1st Cir. 1998), the Commission filed an *amicus curiae* brief in the district court to argue, among other things, that mandatory arbitration of an age discrimination claim is inconsistent with the provisions of the Older Workers Benefit Protection Act. The Commission further argued that the arbitration arrangement established in the Form U-4 signed by the plaintiff did not adequately protect the statutory rights of a discrimination claimant because there was substantial evidence demonstrating that the New York Stock Exchange's arbitration procedures are systematically biased against discrimination claimants. Finally, the Commission argued that the arbitration provision was unenforceable because it did not meet the standard for a knowing agreement to arbitrate. The court held that the plaintiff's age discrimination claim was not subject to mandatory arbitration, given the compelling evidence that she could not effectively vindicate her ADEA rights in the NYSE's arbitration system. In denying enforcement of the arbitration agreement, the court took specific note of the Commission's position, as advanced in

its *amicus curiae* brief, condemning compulsory arbitration as "undermining the labor and civil rights protections [the Commission] is charged with enforcing." On appeal, the Commission also participated as an *amicus curiae*. The First Circuit affirmed, holding that the arbitration agreement did not meet the standard set forth in the 1991 Civil Rights Act because the agreement did not specify which matters would be arbitrated, and the employer never gave the plaintiff a copy of the rules, which did specify arbitrable matters. The court, therefore, held that the district court properly denied the motion to compel arbitration.

In *Chisholm v. Kidder, Peabody Asset Management, Inc.*, No. 97-7828 (2d Cir. July 9, 1998), the Commission filed an *amicus curiae* brief urging the court of appeals to vacate the decision of an arbitration panel of the National Association of Securities Dealers ("NASD"). The Commission argued that the arbitration panel's decision could not stand because the panel did not provide a written explanation of its decision, thus precluding meaningful review. The court, however, found no basis for concluding that the arbitration panel ignored the law or the evidence. The court, therefore, affirmed the judgment of the district court.

In *Seus v. John Nuveen & Co.*, 146 F.3d 175 (3d Cir. 1998), petition for cert. filed, 67 U.S.L.W. 3323 (Oct. 19, 1998), the Commission filed *amicus curiae* briefs in the district and appellate courts asking the courts to deny enforcement of an arbitration provision. The plaintiff had asserted a number of claims of discrimination under Title VII and the ADEA. The defendant moved to dismiss the action and compel arbitration pursuant to the terms of a securities registration agreement (Form U-4) that the plaintiff was required to execute as a condition of her employment. The Commission filed an *amicus curiae* brief in the district court, arguing that the plaintiff did not knowingly agree to arbitrate her claims, and, furthermore, that federal law prohibits enforcement of an agreement that requires an individual, as a condition of employment, to forego the statutory rights of action provided under Title VII and the ADEA. The district court, however, granted the motion to dismiss. On appeal, the Commission filed an *amicus curiae* brief, urging the Third Circuit to deny enforcement of the arbitration provision. Nevertheless, the court affirmed the judgment of the district court.

In *Halligan v. Piper Jaffray, Inc.*, 148 F.3d 197 (2d Cir. 1998), the Commission filed an *amicus curiae* brief urging the court to vacate the decision of an arbitration panel. The plaintiff had been forced out of his employment at the age of 69, and he initiated arbitration proceedings with the National Association of Securities Dealers ("NASD") because he had previously signed, as a condition of employment, a securities registration statement (Form U-4) containing a mandatory arbitration provision. In support of his ADEA claim, the plaintiff mounted a substantial direct evidence case. The arbitration panel received evidence from both sides and issued an award in favor of the employer, but the panel did not provide a written explanation for its decision.

The Commission argued that the panel's decision could not stand because the panel did not provide a written explanation for its decision, thus precluding meaningful review. The court embraced much of the Commission's argument. The court vacated the decision of the arbitration

panel, ruling that the panel "manifestly disregarded the law or the evidence or both" in ruling against the employee. The court remanded the case for a new trial in district court on the plaintiff's ADEA claim.

In *Shankle v. B-G Maintenance Management of Colorado, Inc.*, ____ F.3d ____, No. 97-1130 (10th Cir. Jan. 5, 1999) (brief filed on June 19, 1997), the Commission filed an *amicus curiae* brief to argue that an arbitration agreement requiring an employee to pay half of the arbitration fees was unenforceable. In this case, the mandatory arbitration provision included a fee-sharing agreement under which an individual filing a claim was liable for one-half of the cost of arbitration. Consideration for the agreement to arbitrate was continued employment. The plaintiff initially refused to sign but the employer threatened to fire him immediately if he did not sign the agreement. When the employer later fired the plaintiff, he filed charges alleging violations of the ADEA, ADA, and retaliation. He invoked the arbitration procedures pursuant to the agreement. He then received a letter stating that the arbiter charged $250.000 per hour, plus $125.00 per hour travel time and $45.00 per hour for paralegal time. The plaintiff could not afford arbitration, and he accordingly withdrew his request. When the plaintiff filed suit in federal district court, the employer moved to compel arbitration. The district court denied the employer's motion.

On appeal, the Tenth Circuit affirmed. The court emphasized that an arbitral forum is an acceptable forum in which to bring discrimination claims unless "the terms of an arbitration agreement actually prevent an individual from effectively vindicating his or her statutory rights." In the court's view, any arbitration agreement that prohibits use of the judicial forum to resolve statutory claims "must also provide for an effective and accessible alternative forum." Consistent with the arguments made by the Commission, the court concluded that requiring the plaintiff to pay half of the arbitrator's fee denied him an accessible forum. Thus, it held the arbitration agreement unenforceable.

7. Older Workers Benefit Protection Act - - Waiver

In *Long v. Sears Roebuck & Co.*, 105 F.3d 1529 (3d Cir. 1997), cert. denied, 118 S. Ct. 1033 (1998), the Commission filed an *amicus curiae* brief arguing that an individual need not tender back benefits received in consideration for a waiver of ADEA claims in order to challenge the waiver as invalid under the Older Workers Benefit Protection Act. As part of his termination, the plaintiff had signed a document entitled "General Release and Waiver," which provided for 26 weeks of severance pay in exchange for a waiver of all claims, including those arising under the ADEA. When the plaintiff filed suit under the ADEA, the employer moved for summary judgment, arguing that the plaintiff had waived his right to bring an ADEA action. The employer argued further that even if the waiver was invalid under the OWBPA, the plaintiff had ratified the waiver by retaining the severance pay. The district court ruled that the plaintiff's ADEA claim was barred because he never tendered back the consideration for the waiver.

On appeal, the Third Circuit agreed with the Commission's arguments and held that "where a release of ADEA claims fails to comply with the provision of the OWBPA, the common law doctrines of ratification and tender back should not be applied to bar an employee's ability to pursue claims under the ADEA." The court, therefore, reversed and remanded.

In *Blackwell v. Cole Taylor Bank, Inc.,* 152 F.3d 666 (7th Cir. 1998), the Commission filed an *amicus curiae* brief urging the court to invalidate a waiver agreement. Several plaintiffs had sued their former employer for age discrimination. In answering the complaint, the defendant asserted that the claims were barred by the waiver agreements the plaintiffs had signed after they resigned. The district court agreed, holding that the waivers met the basic requirements of the Older Workers Benefit Protection Act ("OWBPA") because they were knowing and voluntary. The Commission filed an *amicus curiae* brief arguing that the plaintiffs signed their waivers in connection with either an exit incentive program or group termination program, and that, because the waivers did not meet the requirements for group waivers, they were not knowing and voluntary within the meaning of the OWBPA. The Seventh Circuit agreed with this argument and held that a jury could find that the waivers were invalid because they were signed in connection with an exit incentive program (and failed to meet the requirements for such waivers), but affirmed summary judgment for the defendant on the factual merits of the case.

8. Retaliation

In *EEOC v. Klein's All Sport Distributors, Inc.*, No. 94 CV 922(N.D.N.Y. March 5, 1997), the Commission alleged that the two charging parties were discharged in retaliation for age discrimination charges filed by their parents. The case was resolved through a consent decree providing each charging party with $40,000 in monetary relief.

The Commission alleged in *EEOC v. Korean Air Lines Company,* No. C97-1031 (W.D. Wash. December 2, 1998), that defendant airline retaliated against charging party, a passenger sales representative, for complaining of sex and age discrimination by giving her a poor performance evaluation and repeatedly instructing her to retract her complaints. The case was resolved through a consent decree providing charging party with $240,000 in monetary relief.

9. Willfulness

In *EEOC v. Papé Lift, Inc.*, 115 F.3d 676 (9th Cir. 1997), a jury found that the employer had willfully violated the ADEA and awarded the Commission $377,266.65 in back pay, front pay, and liquidated damages. The district court, however, granted the defendant's post-trial motion for judgment as a matter of law and eliminated the liquidated damages and front pay awards. The district court found that despite a supervisor's comments that the charging party was "old and burnt out," there was no evidence that the employer willfully violated the ADEA. The district court also found that the charging party was not entitled to front pay. The court stated that even if most older workers cannot gain comparable work after being fired, the

charging party was still obligated to search for work and to "lower his sights" in seeking new employment.

The Commission appealed, arguing that the district court had erred in vacating the liquidated damages and front pay awards. The Ninth Circuit agreed and reinstated the jury's verdict in its entirety. On the issue of willfulness, the court held that a jury could find that the age-related comments alone evidenced a willful violation of the ADEA. The court stated that an ADEA plaintiff may establish willfulness using the same evidence that it used to establish liability. On the issue of front pay, the court noted the Commission's evidence that the jobs available to the charging party were unlike, or paid significantly less than, his former job. The court ruled that an ADEA plaintiff is not required to accept a dissimilar job or a similar one with a significantly lower salary in order to mitigate damages. The court stated that the jury's finding that the employer failed to carry its burden of demonstrating the availability of suitable work was well-supported by the evidence.

In *EEOC v. Massey Yardley Chrysler Plymouth, Inc.*, 117 F.3d 1244 (11th Cir. 1997), the Commission filed suit alleging that the employer harassed and constructively discharged the charging party because of her age, in willful violation of the ADEA. The jury returned a verdict of liability on both counts, but awarded only about six months of back pay and found the violation was not willful. Thereafter, the Commission moved for judgment as a matter of law on willfulness, sought additional back pay, and requested equitable relief. At the same time, the employer moved for judgment as a matter of law on the issue of liability. The district court denied all motions without comment.

On appeal, the Eleventh Circuit affirmed in part and vacated in part. The court first upheld the denial of the employer's motion for judgment as a matter of law on liability for hostile environment harassment. In so doing, the court acknowledged that in cases of harassment, some remarks may be so patently offensive that a jury can infer that the harassers knew the comments were unwelcome. Next, the court rejected the Commission's argument that the employer's conduct was willful as a matter of law. The court, however, vacated the denial of the Commission's motions with respect to back pay and equitable relief. As to back pay, the court held that a district court has authority, in some cases, to increase an award of back pay beyond what a jury awarded. As to the request for injunctive relief, the court confirmed that because the Commission acts to vindicate the public interest in preventing discrimination, its ability to obtain injunctive relief is broad.

V. OVERVIEW OF THE OFFICE OF LEGAL COUNSEL

A. Mission of the Office of Legal Counsel

The Office of Legal Counsel is the Commission's principal legal advisor. Its customers are the Commissioners, headquarters program offices, field offices and those affected by Commission-enforced laws, regulations, and policy statements. The Office mission is to develop policy guidance and provide legal advice regarding the federal employment discrimination statutes. The ultimate goal of the Office is the elimination of unlawful employment discrimination through voluntary compliance efforts backed up by a sound and balanced enforcement program.

B. Organizational Structure

Coordination and Guidance Services (C&GS). Coordination and Guidance Services, which carries out the Office's policy development role, operates under the direction of an Associate Legal Counsel. C&GS performs several major Commission functions, including:

- administering the Commission's interagency coordination mandate under Executive Order 12067;
- serving as central locus for developing Commission policy under all EEOC-enforced statutes including the Age Discrimination in Employment Act (ADEA);
- providing policy advice to the Commission, headquarters and field offices; and
- providing advice to the public in response to written and oral requests, and through public presentations.

C&GS drafts a range of policy documents for the Commission, including:

- **Regulations and Guidelines** which provide substantive and interpretive guidance.
- **Volume II of the Compliance Manual** which explains generally how to interpret and apply the laws enforced by EEOC, to assist the public in understanding the laws and EEOC staff in investigating complaints.
- **Enforcement Guidances and Policy Statements** which present a more in-depth analysis of particularly complex or novel issues.
- **Formal Opinion Letters**, provided at the discretion of the Commission, which respond to requests from the public for interpretations of the law and EEOC policies on which the requestor may be able to rely as a defense to liability in future enforcement actions.

- **Commission Decisions** which apply and interpret the law and policies in actual cases pending before the Commission.

- **Memoranda of Understanding** with other federal agencies designed to ensure consistent enforcement of the federal employment discrimination laws and to eliminate duplication of effort.

- **Informal advice** to the Commission, its staff, and members of the public through options papers, legal memoranda, responses to correspondence, training, speeches, and other forms of technical assistance and outreach.

VI. PROGRAM ACTIVITIES ON BEHALF OF OLDER AMERICANS

A. Regulations

Legislative Regulation on Waivers of ADEA Rights and Claims – Under section 7 (f) of the ADEA, added by the Older Workers Benefit Protection Act of 1990 (OWBPA), individuals may waive any ADEA right or claim provided the waiver agreement is "knowing and voluntary." Section 7 (f) sets out minimum statutory requirements for determining whether a waiver is knowing and voluntary. The final EEOC regulations provide much needed guidance to assist employees and employers in understanding their respective rights and obligations under the ADEA's waiver provisions. The regulations will be particularly helpful to the public in the context of corporate downsizings where departing employees are frequently offered enhanced benefits in exchange for a waiver agreement.

EEOC developed the final regulation through the use of negotiated rulemaking procedures. This was the first time EEOC has used this process. A Negotiated Rulemaking Advisory Committee made up of twenty representatives of employee rights organizations, plaintiffs' attorneys, labor organizations, state and local governments, management attorneys, industry organizations, and EEOC representatives transmitted a recommended rule to the Commission on September 6, 1996. The recommendation represented a consensus of all Committee members. EEOC published the recommended rule for public comment on March 10, 1997. After careful consideration of the comments, the Commission voted to promulgate final regulations reflecting the consensus recommendations of the Committee. The regulations became effective on July 7, 1998.

The Commission's use of negotiated rulemaking procedures enabled it to reach out to a broad range of interests affected by the ADEA and to obtain, at the earliest stages of the process, their perspectives and concerns. The regulations should assist both employees and employers in framing knowing and voluntary waiver agreements that are mutually beneficial.

Notice of the proposed regulatory project was given in EEOC' 1998 regulatory agenda. The proposed regulation will be published in the Federal Register for public comment prior to a final disposition.

B. Enforcement Guidances

1. Non-Waivable Employee Rights under ADEA and Other Equal Employment Opportunity Commission Enforced Statutes - - issued by the Commission in April 1997. This guidance sets forth EEOC's position that an employer may not interfere with the protected right of an employee to file a charge, testify, assist, or participate in any manner in an investigation, hearing, or proceeding under Title VII of the Civil Rights Act of 1964, the Americans with Disabilities Act (ADA), the Age Discrimination in Employment Act (ADEA), or the Equal Pay Act (EPA). The Commission views these employee rights as non-waivable.

This position is built on two cornerstones: (a) interference with these protected rights is contrary to public policy; and (b) the anti-retaliation provisions of the civil rights statutes prohibit such conduct. This enforcement guidance, issued by the Commission on April 10, 1997, draws substantial support from language contained in the ADEA making clear that no waiver agreement may affect the Commission's enforcement responsibilities nor be used to justify interfering with the protected right to file a charge or participate in an investigation or proceeding conducted by the Commission.

2. Enforcement Guidance on Application of ADEA and Other EEOC-Enforced Laws to Contingent Workers Placed by Temporary Employment Agencies and Other Staffing Firms -- issued by the Commission in December 1997. This guidance sets forth EEOC's view that contingent workers are "employees" of one or more "employers" and thus protected under the federal employment discrimination laws. The guidance analyzes, among other issues, joint employment relationships, third part interferer theory, and the application of remedies where there is more than one employer.

3. Enforcement guidance on Supreme Court's decision in EEOC and Walters v. Metropolitan Educational Enterprises, Inc. - - issued by the Commission in May 1997. This guidance issues practical advice on how to count employees to determine jurisdictional prerequisites under the laws enforced by EEOC.

4. Policy Statement on Mandatory Binding Arbitration of Employment Discrimination Disputes as a Condition of Employment - - issued by the Commission in July 1997. This policy statement sets forth the policy arguments against the use of mandatory binding arbitration agreements that are made a condition of employment. The statement, issued in 1997, applies to the ADEA and other EEOC-enforced statutes.

C. Compliance Manual Sections

The Compliance Manual is the basic guide to EEOC-enforced laws for Commission investigators and attorneys. In May 1998, the Commission issued **Compliance Manual Section 8, Retaliation.**

D. Interagency Coordination Efforts

- Reached consensus with OFCCP, GAO, and DOD on revisions to DOD's proposed contract regulations setting standards for reimbursement of government contractors who have paid departing employees to waive and release their EEO rights under the ADEA and other EEOC-enforced statutes.

- Met with SEC representatives to discuss the NASD rule on mandatory binding arbitration of employment discrimination claims under the ADEA and other EEOC-enforced statutes.

- Laid the groundwork for future coordination efforts with NIOSH when it begins its study of testing mechanisms for public safety personnel pursuant to reenactment of the ADEA exemption permitting the use of certain age limitations for hiring and discharge decisions in the public safety arena.

E. Miscellaneous Informal Advice

- **Small Business Information** -- finalized and released on EEOC Home Page on Internet in October 1997. This document assists the small employer in understanding and complying with the ADEA and other EEOC-enforced statutes.

- OLC researched and prepared case summaries on selected EEO topics under the ADEA and other EEOC-enforced statutes for a Fair Employment Practices Agency (FEPA) Update Manual. This updated Manual was made available to FEPA officials at an EEOC sponsored seminar at which FEPA officials were briefed on recent developments and enforcement techniques under the ADEA and other federal employment discrimination laws.

- OLC provided technical assistance and commented on draft legislation permitting the use of age-targeted voluntary retirement incentive programs at institutions of higher education. A bill, carefully tailored to protect the rights of older tenured professors, was signed into law in 1998.

- OLC prepared and transmitted a legal memorandum to EEOC Field Offices analyzing the use of age-targeted voluntary retirement incentives at institutions of higher education.

- Numerous interviews were given to magazines, news services, and television stations (including one interactive television program, broadcast in Lithuania and Estonia) on a wide variety of topics, including the ADEA.

- OLC prepared and transmitted a legal memorandum to EEOC Field Offices analyzing the restoration of the ADEA exemption for law enforcement officers and firefighters. Information on the restoration of the exemption was also provided to members of the public.

- OLC provided extensive guidance regarding the ADEA and other EEOC-enforced statutes in response to telephone and written inquiries from the public. In 1997 and 1998, OLC staff handled a combined total of approximately 18,500 telephone inquiries and nearly 300 written requests, including Congressional inquiries, for legal advice and guidance. Approximately 10% of the telephone inquiries and 20% of the written inquiries involved ADEA issues.

- OLC also engaged in extensive liaison activities with numerous groups representing different EEOC stakeholders with a need for information on ADEA topics. For example, OLC engaged in outreach on ADEA issues with AARP, members of plaintiff's and employer's bars, and employer organizations such as the EEAC, and the National Federation of Independent Business Owners regarding the informational needs of small businesses;

- Over the course of 1997 and 1998, OLC made presentations on the ADEA and other EEOC-enforced statutes on approximately 140 occasions. These presentations include participation in EEOC sponsored technical assistance programs, training for EEOC staff, and speeches/lectures for EEOC stakeholders.

- OLC's Field Liaison function continued to serve EEOC Field Operations throughout 1997 and 1998. The volume of calls from Field Office personnel ranged from 40 to100 per week, many requiring research in order to respond. The inquiries stem from pending or prospective charges/investigations and the OLC responses are instrumental not only in expediting the charge process, but also in reaching the correct legal conclusion with respect to many highly complex fact situations. Among the most frequently asked questions under the ADEA are those involving waivers of rights and claims, employee benefits, reductions in force, the role of disparate impact theory in ADEA cases, the role of cost considerations in ADEA cases, and refusals to hire older applicants on the basis of so-called "overqualification."

- OLC provided representatives to participate in the commencement of the United Nations' International Year of Older Persons. The program will focus on, among other things, the tremendous resource that older persons represent for the world's economies as we enter

an era when many countries face a declining number of qualified younger persons to fill available positions.

ITEM 19—FEDERAL COMMUNICATIONS COMMISSION

SUMMARY OF 1997 AND 1998 ACTIVITIES AFFECTING OLDER AMERICANS

This report summarizes the major 1997-1998 activities of the Federal Communications Commission ("FCC" or "the Commission) affecting older Americans.

A number of these actions were taken to implement statutory requirements or Commission policies on behalf of the general public and all telecommunications consumers, including the millions of Americans with some kind of hearing, vision, speech or other disability. rather than specifically on behalf of older Americans. However, since many older Americans may be in declining health, e.g., losing hearing or vision, or be especially vulnerable to unscrupulous business practices in telecommunications services, older Americans have benefited from the various disability-related and consumer protection activities describedbelow.

Disabilities Issues Task Force

The Disabilities Issues Task Force was formed in March 1995 to serve as the agency's main point of contact and coordination on all disability access initiatives. The Task Force works to ensure that the Commission promotes access to telecommunications by individuals with disabilities, including many older Americans.

In the past two years, the Commission has made significant efforts to strengthen the cross-agency Disabilities Issues Task Force in order to highlight, among other things, the importance of making technology available to everyone. The Task Force was central in providing advice and expertise on major rulemaking proceedings, including proceedings that did the following: strengthened closed captioning rules so that persons who are deaf or hard-of-hearing will have access to more programs on television; proposed new rules for telecommunications relay services and proposed to require the provision of speech-to-speech relay service; advocated that industry provide solutions to the problem of compatibility between digital wireless phones and TTYs; and proposed rules to make telecommunications services and equipment accessible to persons with disabilities.

The Task Force has worked to raise the profile of the needs of persons with disabilities in the telecommunications area through organizing speeches, statements, and demonstrations at the FCC of equipment and how persons with disabilities would benefit from it. We have also sought to ensure that the voices of people with disabilities and their advocates are heard at the FCC.

The Disabilities Issues Task Force is also working toward proper implementation and compliance with Section 508 of the Rehabilita-

tion Act, which imposes accessibility requirements on electronic and information technology developed, maintained, procured, or used by federal agencies. The Task Force also is making efforts to improve the Commission's compliance with Section 504.

Section 255 (Access to Telecommunications)

Section 255 of the Communications Act, added by the Telecommunications Act of 199 provides that telecommunications equipment manufacturers and service providers must make their equipment and services accessible to those with disabilities, to the extent that it is readily achievable to do so. The Commission proposed rules to implement this section in 1998. We expect final rules to be adopted in 1999.

Common Carrier Bureau (CCB)

Some of the most important policy actions of the FCC affecting older Americans have been initiated by theCommission's CCB. This bureau regulates wireline communications in the telecommunications industry.

Hearing Aid Compatibility.—An example of a CCB issue that affects senior citizens is hearing aid compatibility and volume control (HAC/VC). This subject is of special relevance to older Americans because many people who lose their hearing later in life depend on HAC telephone with VC to be able to use the telephone.

The Hearing Aid Compatibility Act of 1988 required the Commission to establish rules that ensure reasonable access to telephone service by persons with hearing disabilities, and to seek to eliminate the disparity between hearing aid users and non-users in obtaining access to the telephone network.

To resolve various compliance issues, and recommend new rules to replace original rules suspended in 1993, the Commission in the spring of 1995 established a 19-member Hearing Aid Compatibility Negotiated Rulemaking Committee. Its members represented all interested parties, including the Commission, telephone equipment manufacturers, employers, hospitals, nursing homes, hotels and motels and persons with disabilities, including some older Americans.

On July 3, 1996, the Commission adopted final rules, many of which were recommended to it by the rulemaking committee in its report to the FCC of August, 1995. In general, the FCC's final rules required eventually all wireline telephones in workplaces, in confined settings (e.g., hospitals and nursing homes) and in hotels and motels to be hearing aid compatible according to certain timelines. In addition, telephones that are newly acquired or are replacement telephones eventually will have to have volume control features. Workplaces with fewer than 15 employees were exempted, except for telephones provided directly for employees with hearing disabilities. Finally, the date of November 1, 1998, adopted by the FCC in July 1996 for implementation of the volume control features in all telephones manufactured or imported for use in the United States, was later extended on reconsideration to January 1, 2000.

Slamming and Cramming.—"Slamming" is the practice of switching a person's long distance telephone company without the customer's permission. "Cramming" is the inclusion of unauthor-

ized or unexplained charges on a person's phone bill. Older Americans are especially vulnerable to such anti-consumer activity. In 1998, the Commission proposed new rules to ensure that carriers do not use misleading or confusing forms that consumers sign to change their long distance service, to ensure that consumers do not pay any charges to a slamming company. These rules will be effective in May, 1999. CCB has significantly stepped up enforcement actions against slamming and cramming. With over $8.4 million of fines assessed and another $8 million pending.

Truth In Billing.—To further protect customers, the Common Carrier Bureau has initiated a rulemaking to require telephone bills to be clearer and better organized, and to highlight new charges. This will give customers the tools they need to make sure they have not been improperly charged.

Consumer Information. The bureau continues to produce customer information to help all customers better understand and make choices regarding phone service. Information is available on how to select a carrier, how to get the best rates, and on which companies have the worst complaint records.

Universal Services.—The Telecommunications Act of 1996 established certain principles for the Commission to follow in revising and expanding the scope and definition of "universal service" in telecommunications services for all Americans, including older Americans. Among the explicit provisions established by this landmark legislation were financial support in access to advanced telecommunications services for health care providers, including hospitals, health clinics, and libraries, all of which serve many older Americans.

Lifeline/Link Up Services.—The Commission has made significant changes to its Lifeline and Link Up programs. The federal lifeline program provides between $3.50 and $7 per month to reduce low-income consumers' monthly telephone bills. The amount of federal support will vary depending on decisions made by the local state commission. All eligible low-income consumers receive at least a $3.50 reduction on their telephone bill from the federal universal service program. The reduction applies to a single telephone line at a qualifying consumer's residence.

Lifeline consumers also can receive toll blocking (which prevents the placement of any long-distance calls) or toll control (which limits the amount of long-distance calls to a pre-set amount selected by the consumer).

Link Up offers eligible low-income consumers a reduction in the local telephone company's charges for starting telephone service (the reduction is one-half of the telephone company's charge, or $30, whichever is less); and a deferred payment plan for the remaining charges.

Wireless Telecommunications Bureau

In 1997-98, the Wireless Telecommunications Bureau undertook a number of activities that affected older Americans:

Wireless Enhanced 911.—In 1997, the Commission reaffirmed its commitment to the rapid implementation of the technologies needed to bring emergency assistance to wireless callers throughout the United States, and modified its wireless 911 rules to require cov-

ered wireless carriers to transmit all wireless 911 calls to public safety authorities without respect to a carrier's call validation process. In addition, the Commission has been working with individuals representing the wireless industry (carriers and manufacturers), manufacturers of Text Telephone (TTY) equipment, emergency and relay service providers, and consumer organizations that represent individuals who are deaf or hard-of-hearing, to develop solutions so that digital wireless systems will be able to comply with the Commission's requirement that wireless carriers have thecapability of transmitting 911 calls from individuals using TTYs.

Spectrum for Public Safety.—The Wireless Bureau authored a number of items to promote the use of radio by public safety entities. The primary item was a Report and Order which adopted service rules for the new 700 MHz public safety band. The bureau also has chartered a public safety advisory committee to assist the Commission in working with public safety agencies at all levels on matters of equipment upgrading and compatibility.

Universal Licensing Service.—The bureau is in the process of adopting a universal licensing system, which will greatly enhance the ability of the public to file applications and access licensing data remotely.

Billing and Disabilities Access Issues.—The bureau's Enforcement Division has resolved numerous complaints and inquiries of interest to older Americans, including wireless billing issues and disabilities access issues.

Cable Services Bureau

Video Accessibility.—Older Americans with hearing and sight disabilities can now be helped by a number of technologies related to television, especially closed captioning and video description. These two technologies are designed to increase "video accessibility." Closed captioning provides important benefits primarily for individuals with hearing disabilities by displaying the audio portion of a television signal as printed words on the television screen. Video description benefits individuals with visual disabilities by providing audio descriptions of a program's key visual elements that are inserted during the natural pauses in the program's dialogue.

In the 1996 Act, Congress directed the Commission to ensure that closed captioning is available to persons with hearing disabilities and to assess the appropriate method for phasing video description in the marketplace to benefit persons with visual disabilities. As a first Step, Congress required the Commission to submit a report addressing these issues. The Commission submitted its Report to Congress on July 29, 1996.

Closed Captioning.—The 1996 Act also directed the Commission to prescribe rules and implementation schedules for the closed captioning of video programming, regardless of the entity that provides the programming to consumers or the category of programming. In August 1997, the Commission established rules to ensure that video programming is made accessible through closed captioning. In September 1998, in response to petitions for reconsideration, the Commission modified and clarified the closed captioning rules to

better comply with the statutory mandate to provide accessibility to persons with hearing disabilities. The rules establish timetables that gradually increase the amount of closed captioning provided on programs. For programming first published or exhibited on or after January 1, 1998, the effective date of the rules, the Commission established benchmarks to be met every two years until 100% of such programming is required to be captioned as of January 1, 2006. For programming first published or exhibited prior to -January 1, 1998 ("pre-rule programming"), mandatory captioning is phased-in over a ten year. As of January 1, 2008, the end of this transition period, 75% of the pre-rule programming on each channel must include closed captioning. The rules also require video programming distributors (e.g., television station operators or cable operators) to generally pass through to consumers any captions they receive with the programming they distribute. Video programming distributors also must continue to provide captioned programming at substantially the same level as the average level of captioning that they provided during the first six months of 1997, even if that amount of captioning exceeds the requirements under the transition schedules.

Video Description.—The 1996 Act required the Commission to report to Congress on appropriate methods and schedules for phasing video description into the marketplace and other technical and legal issues related to the widespread deployment of video description. Video description is a method of making video programming accessible to persons with visual disabilities. It adds narration about actions taking place or other aspects of a program (e.g., a description of the set), that are not obvious from the existing dialogue. The descriptions are inserted during pauses in the dialogue.

In the July 1996 Report to Congress, the Commission indicated that there is a lack of experience with developing and assessing the best means for promoting its use since it is a newer service. Since the record on video description before the Commission at the time of the 1996 Report was insufficient to assess appropriate methods and schedules for phasing in video description, the Commission sought additional information and comment in the context of the 1997 Annual Report to Congress on the Status of Competition in Markets for the Delivery of Video Programming. With respect to video description, in the 1997 Annual Competition Report, the Commission found that the most widespread video descriptiontechnology uses the second audio programming ("SAP") channel, a subcarrier that allows each video programming distributor to transmit a second soundtrack. Continued public funding could foster the development of video description services to the point where widespread implementation of video description could become feasible, and could ultimately create a commercial market for video description. The advances of digital technology may allow the development and expansion of video description to occur more quickly than occurred in the case of closed captioning.

Senior Citizen Discounts.—Senior citizen discounts benefit older Americans who often have limited incomes. By enacting Section 623(e)(1) into its system of rate regulation pursuant to the 1992 Cable Act, Congress intended to encourage cable operators to offer, and to continue to offer through existing franchise agreements, rea-

sonable discounts to senior citizens or other economically disadvantaged groups. In response to a recent Petition for Declaratory Ruling, the Commission upheld a previously issued informal letter ruling stating that it would not interfere with senior citizen discounts previously allowed for in local franchise agreements.

Office of Engineering and Technology (OET)

OET has taken action to prevent radio frequency interference to medical telemetry devices from digital television and land mobile services. Medical telemetry devices are typically used in health care institutions to monitor the vital signs of critically ill patients, many of whom are elderly. OET worked closely with the Federal Drug Administration (FDA), the medical community and equipment manufacturers to identify new, interference- free spectrum for the next generation of medical telemetry devices.

OET is in the process of considering steps that may be necessary to ensure that personal computers equipped with TV tuners, and new digital television receivers, are capable of displaying closed captions. If appropriate, rule making to address these matters may be initiated in the future.

OET continues to assist other Commission offices on issues of particular interest to the elderly. OET has, for example, provided extensive engineering support to the Wireless Telecommunications Bureau in the effort to ensure that wireless radio services are compatible with TTY services. OET also has provided engineering support for the Commission's task force addressing implementation of Section 255 of theTelecommunications Act of 1996, which requires that telecommunications services are accessible to the disabled.

Office of Managing Director/Personnel

As part of the Commission's ongoing efforts to recruit from many diverse sources, the Commission does seek out older Americans by, for example, sending vacancy announcements to organizations whose membership consists of older Americans.

Office of Public Affairs (OPA)

OPA continued during 1997-98 to expand its outreach to older Americans, particularly its effort to help older Americans participate in the expanding telecommunications revolution, while protecting themselves against fraudulent activity that occurs.

OPA has an aggressive campaign to distribute print literature and videos, instructing all Americans, including senior citizens, on how to avoid misleading schemes, and what to do if one becomes a victim of these schemes. OPA makes available information about the Commission's National Call Center, and on how to file a complaint with the Commission. This material is distributed to senior citizen organizations, so that those organizations can, in turn, redistribute it to their members. This information also is directly distributed to senior citizens through the community meetings on telephone-related topics in which OPA participates, and through the Commission's web site.

For example, information about the Cable Consumer Bill of Rights has been distributed by OPA to senior citizen organizations, as has information to help seniors protect themselves against slam-

ming and cramming. OPA also distributes information in multiple languages, to reach senior citizens from various cultures that make up the American fabric.

Additional Information

Anyone who wishes more information on any of these activities can contact the Commission through the Office of Public Affairs at 202/418–0500, the Commission's National Call Center at 1–888–CALL–FCC (225–5322), or the Commission's web site on the Internet at www.fcc.gov. For more information about this report, feel free to contact Greg Lipscomb at the Commission's Office of Legislative and IntergovernmentalAffairs (OLIA), 202/418–1900, fax 202/418–2806.

ITEM 20—FEDERAL TRADE COMMISSION

1997–1998 REPORT

STAFF SUMMARY OF FEDERAL TRADE COMMISSION ACTIVITIES AFFECTING OLDER AMERICANS

The Federal Trade Commission strives to protect the ability of consumers to make informed choices from a competitive range of goods and services. Consumers lose the ability to make fully informed choices when they are deceived, strong-armed or given only half of the truth about a product or service. They may lose a competitive range of options through the interference of things like price-fixing agreements or anticompetitive mergers. Some of the Commission's work has involved particular practices or industries that are of special significance to older consumers. This report describes those aspects of our work from calendar years 1997 and 1998. The first section of the report describes Commission efforts to eliminate frauds that target older consumers. The second section reports Commission activities relating to the health concerns of senior citizens, since older Americans often face increased health problems and therefore may be vulnerable to injury from misleading health claims made about products or services or from anticompetitive conduct by companies in the health care markets. The third section discusses Commission law enforcement activities of particular importance to older consumers in other areas. The final section of the report addresses the Commission's consumer education initiatives that may be of particular benefit to older consumers.

FRAUD INITIATIVES

In 1997 and 1998, the frauds that most affected older Americans included telemarketing fraud generally, bogus prize promotions, investment frauds, charitable solicitations, recovery rooms, credit fraud, cross-border fraud and internet fraud. This Report discusses each below.

Telemarketing fraud

The "Script": Well, isn't that a coincidence, Mrs. _____[Name]_____. My grandmother lives in _____[City]_____, too! Now I'm earning money for college by selling magazines. If you would just give me your checking account number, then I'll send you complimentary copies of your favorite magazines to try.

Deceptive telemarketing continues to plague the elderly. The FTC has taken an international and collaborative approach to attacking this problem. First, as described in more detail later in this

report, the Commission took strides toward an ambitious goal—a telemarketing database collecting complaint data from law enforcement and consumer protection offices in the United States and Canada. "Consumer Sentinel" now contains approximately 150,000 complaints contributed by more than 150 law enforcement offices. The FTC and others can identify high impact law violations, and target law enforcement efforts accordingly. This enhances our ability to protect the elderly, who are often the intended targets of fraudulent telemarketers.[1] Telemarketers find older citizens to be attractive targets, knowing that older persons may have significant assets from a lifetime of saving, including self-directed retirement accounts. These telemarketers also know that the victim may be ashamed of falling for a scam, and often will not tell friends and family about their losses and will be desperate to make the money back. The telemarketers then have other con artists "reload" the victim with more offers until the victim has no more to give, monetarily or psychologically.

The Telemarketing Sales Rule (TSR), 16 CFR Part 310, was promulgated by the FTC as directed by Congress in the Telemarketing Consumer Fraud and Abuse Prevention Act of 1994, 15 U.S.C. §6101. The TSR imposes general requirements for all telemarketers and addresses specific fraudulent practices. Under the TSR, telemarketers must promptly disclose certain information in telephone calls to consumers, including their identities, the fact that they are making a sales call, and the nature of the goods or services they are offering. The Rule also prohibits telemarketers from misrepresenting the services or products they sell and from debiting a consumer's checking account without the consumer's express authorization. The TSR also outlaws a number of telemarketing practices such as credit card laundering. In addition to addressing the conduct of telemarketers, the TSR also bars third parties from providing substantial assistance to telemarketers—specifically, assistance such as providing consumer lists, marketing materials, or appraisals of investment offerings—when the person "knows or consciously avoids knowing" that the telemarketer is engaged in unlawful conduct. Violations of the TSR may result in civil penalties of as much as $11,000 per violation, and consumers who have lost over $50,000 are able to sue under the TSR to recoup their losses.

Using the Telemarketing Sales Rule and the data from Consumer Sentinel, the FTC and state Attorneys General continue to bring individual fraudulent telemarketers into federal court to face a variety of allegations. In addition, the Commission continues to use both the Rule and its FTC Act authority to conduct coordinated law enforcement "sweeps," working with state Attorneys General, state securities officials, the FBI, the U.S. Postal Service, and other agencies. The Commission continues to forge new alliances to coordinate actions against fraudulent telemarketers. In many cases, once the FTC concludes its civil case against telemarketers, state and federal criminal prosecutors bring criminal charges against the

[1] Consumers complaining to the FTC about telemarketing activity often indicate that they are older consumers. Older Americans account for 60 percent of the fraud victims who call the National Consumers League's National Fraud Information Center. The FBI estimates that as many as 80 percent of the victims are older consumers.

FTC defendants.[2] During 1997 and 1998, the Commission brought over 110 federal court actions stopping fraudulent operations that cost consumers almost $450 million a year and over $1.2 billion over the lives of these schemes.

Prize promotions

Older Americans are often the targets of prize promotions, an egregious type of fraud usually conducted through telemarketing or direct mail. In 1997, more than 42% of the complaints logged into Consumer Sentinel pertained to prize promotions, sweepstakes, and gifts. In response to numerous law enforcement actions by the FTC and its partners against deceptive direct mail promotions, the percentage of complaints about prize promotions dropped in 1998 to 24% of the complaints in Consumer Sentinel. In a typical scheme, telemarketers make unsolicited calls or mail notification cards to consumers stating that they have won a valuable prize, such as a vacation, car, cash or jewelry. Consumers are told that they should purchase some product such as vitamins, cosmetics or magazine subscriptions and they will then receive the prize.[3] The TSR requires that, in any prize promotion, telemarketers must disclose that no purchase or payment is required to win a prize, and must provide information about the odds of winning the prize and how to participate in the promotion at no cost. 16 CFR §310.3(a)(1)(iv).

In both 1997 and 1998, the FTC led a broad based coalition of private and public sector partners in an unprecedented law enforcement initiative cracking down on companies that used deceptive mailpieces, e-mails, and unsolicited faxes to obtain payment for prize promotions from duped consumers, many of whom were senior citizens. The Commission's partners included the U.S. Postal Inspection Service, the American Association of Retired Persons, the National Association of Attorneys General, the Council for Better Business Bureaus, the Yellow Pages Publishers Association, and all 50 states. The consumer and business education campaign featured a bandit-in-the-mailbox logo, with the message "Boot the Bandit From the Mailbox." More than one hundred law enforcement actions were brought by the law enforcement entities as part of Project Mailbox.

Investment frauds

Telemarketer: You're investing in the latest technology for the future of America. It's simple: you invest today and I guarantee a 100% return in six months or you get your money back.

Fraudulent telemarketers are eager to cheat senior citizens out of lifetime savings or to make false promises of exceptionally high

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[2] Following the Commission's civil action against a nest of fraudulent business opportunity sellers in FTC v. Southwest Necessities, Inc., No. 94-6848-Civ (Hurley) (SD Fla.), the U.S. Attorney for the Southern District of Florida brought criminal charges against the same defendants and their cohorts, including "singers", paid references, who hooked victims into this scam. The same one-two punch resulted following our case against deceptive timeshare reseller Ernie Taft. FTC v. Gold Crown Express, 4:97-0532-12 (D. S.C.). The FTC action resulted in a judgment of more than $3 million against the defendant. Following the filing of our suit, the U.S. Attorneys in South Carolina and Colorado each also obtained convictions under mail, wire and bank fraud statutes, leading to the incarceration of Mr. Taft.

[3] Commission records indicate that some consumers have actually lost tens of thousands of dollars to prize promotion telemarketers.

investment returns. Older Americans who are anxious about financing their retirement are particularly vulnerable to these investment pitches. The stock market boom of the mid–1990's also led many investors to seek and expect high returns. Fraudulent telemarketers were only too happy to respond to these desires, peddling bogus investment opportunities ranging from gemstones, gold and silver mining, and oil drilling investments to telecommunications, entertainment industry and Internet related businesses. The telemarketers invariably assured consumers that they would realize a substantial return on their investment, usually in a short period of time and with minimal risk. The amounts of individual losses often were quite high, sometimes $5,000 to $20,000 or more per person. In one case, an 83 year old widow lost over $70,000 to a scam hawking investments in infomercials. Older citizens taken by these scams often are not in a position to recoup their losses.

"Field of Schemes" Investment Fraud Sweep—In 1997, the Commission brought coordinated actions against nine alleged purveyors of investment and pyramid frauds who touted everything from gold-silver mines to Internet "virtual shopping malls." In addition to the FTC actions, the North American Securities Administration (NASAA), state securities regulators in 21 states, the SEC and CFTC, brought over sixty law enforcement actions. The FTC actions stopped over $150 million in fraudulent sales from these bogus offerings. Two of the FTC cases involved supposed profits to be made through alleged pyramid schemes. In one case, Rocky Mountain International Silver and Gold, Inc., the alleged scheme masqueraded as a multi-level marketing operation selling silver and gold coins through direct mail and then the Internet. In the other case, JewelWay, the defendants made deceptive earnings claims inducing an estimated 150,000 consumers to invest an average of $1,000 with a chance to earn up to $2,250 a week in an illegal multi-level marketing plan to sell fine jewelry. In the FTC's case Intellicom Services, Inc., 12 corporate defendants and 10 individual defendants promised enormous profits from Internet access businesses and Internet shopping malls. The FTC alleged that the telemarketers sold over $30 million in this scheme. In the Dayton Film matter, the FTC alleged misrepresentations in the sale of movie production investments with a claim of profits of 500 percent on the films. Another case, Coastal Gaming, involved investment in a casino gambling ship venture with expected returns of 100 to 300 percent. Other cases involved the sale of investments in gold and silver mines (Tippecanoe), gemstones (Windsor & White), and oil and gas drilling (Gulfstar) and rare stamps (Equifin). The courts in eight of the cases issued injunctive relief that included asset freezes and the appointment of receivers. Final court orders for permanent injunctions and consumer redress have been entered against defendants in the Dayton Films, JewelWay, Tippecanoe, Coastal Gaming, Equifin, and Gulfstar matters, the Windsor & White and Intellicom matters are partially settled with permanent injunctions against some defendants, and the Rocky Mountain matter is still pending.

Operation Risky Business.—In August 1998, the Commission, together with the SEC and North American Securities Administrators Association, coordinated a federal and state initiative aimed at

entertainment and media scam promoters peddling movie, gambling, infomercial, and Internet business as investments. The Commission, SEC, and 20 states filed over 60 law enforcement actions against telemarketing companies. These companies had taken in more than $100 million from consumers touting bogus investments. As a result of Operation Risky Business, the FTC and its partners launched an intensive consumer education effort and received extensive nationwide press coverage of this operation.

Miscellaneous Investment Frauds.—The Commission followed through on cases reported in 1995 and 1996 with settlements in several telecommunication fraud cases. In Falconcrest, the FTC obtained a permanent injunction and over $1.2 million in consumer redress orders. In Metropolitan Communications, the Commission obtained a permanent injunction and over $1.7 million in redress judgments. In our Operation Roadblock cases against purveyors of investments in Federal Communication Commission wireless licenses, we have obtained permanent injunctions and over $5.8 million in redress judgments against six sets of defendants. Finally, the Commission obtained a settlement in an earlier case against National Art Publishers, a movie poster investment case, for a permanent injunction and redress in the amount of $150,000.

Charitable solicitations

In April 1997, the Commission announced the most comprehensive action ever taken against charity fraud—"Operation False Alarm." In this sweep, the Commission and officials from all 50 states conducted a law enforcement sweep and public educational campaign targeting "badge fraud." In this type of scam, telemarketers (also known as "telefunders" in the nonprofit sector) call senior citizens and other consumers to solicit donations in the name of some real or fictitious charity. The schemers often misrepresent that they are local police officers or fire fighters, when in fact they are professional solicitors. Also, the telemarketers frequently misrepresent where consumers' donations will be used and state that donations will go toward local causes or benefits like bullet proof vests for the local police force. Donations seldom make it to these causes. Rather, most donations are taken by the solicitors themselves. Overall, "Operation False Alarm" included 57 law-enforcement or regulatory actions against various telefunders. The Commission itself filed five cases in federal court and settled one administrative action.

In the fall of 1998, the Commission followed "Operation False Alarm" with another comprehensive sweep, "Operation Missed Giving." This sweep targeted not only "badge fraud," but also misleading solicitations made on behalf of purported veterans groups, children's health organizations, and other charitable causes. "Operation Missed Giving" involved 39 law-enforcement or regulatory actions aimed at fraudulent fundraising, including five federal court actions filed by the FTC. The Commission and its partners timed the project to precede the holiday season when many consumers receive requests for money, and the project included a campaign to educate the public about wise giving.

On the day that "Operation Missed Giving" was announced, AARP also coordinated and conducted a "reverse boilerroom." Vol-

unteers from AARP and representatives from the FTC, the Department of Justice, the FBI, and the National Association of Attorneys General called previous victims of telemarketing fraud throughout the day. Working from a prepared script, they gave tips about how to avoid certain types of charity fraud and what to do to make the most of charitable donations. Participants in the "reverse boiler-room" made over 4500 phone calls in the span of nine hours and reached more than 1100 telemarketing fraud victims.

Recovery rooms

In a particularly insidious type of telemarketing, "recovery room" con artists prey on persons who have already been victimized by telemarketers. Telemarketers obtain the names and addresses of these victims by purchasing, or trading for, lists of victims from other fraudulent operations. The recovery room salesperson then falsely promises the victims that, for a fee, the telemarketer can help them obtain the promised prize or money lost in a previous telemarketing scam. Often, telemarketers represent themselves as governmental entities or as agents hired to locate victims and distribute money back to them. After the consumer sends in the requested fee, the company invariably fails to deliver the refund or prize, thereby exacerbating the victim's losses. In past Commission recovery room cases, older consumers are frequently specific targets. In one case, 81% of the consumers were at least 65 years of age and 23% were at least 80 years old. In another case, 82% were at least 65 and 32% were at least 80 years old.

In a case begun in 1995, the defendant, Meridian Capital Management, allegedly made unsolicited telephone calls to consumers who had been victims of various investment frauds, often involving Federal Communications Commission wireless telecommunications licenses. For a fee of 10% of the consumer's previous investment, Meridian claimed it could recover all or a substantial portion of the money invested. In 1996–1997, the Commission obtained default judgments for $1.6 million against Meridian and several individual defendants, and stipulated or court-ordered permanent injunctions were entered against all defendants. With Commission staff acting as Special Assistant U.S. Attorneys, the U.S. Department of Justice in 1998 obtained indictments charging 17 defendants involved in the Meridian scam with the crimes of conspiracy, mail fraud, and wire fraud. In addition, seven of the defendants were charged with money laundering. Eleven of these defendants have pled guilty and are awaiting sentencing.

Our law enforcement efforts and the deterrent effect of the TSR have paid off with respect to the incidence of this type of conduct. The volume of consumer complaints concerning recovery rooms logged into Consumer Sentinel in 1998 dropped to 187, dramatically less than the 869 complaints regarding this conduct recorded in 1995, despite the fact that the complaint system now contains complaints from far more law enforcement entities.

Credit fraud

Credit-related scams also claim hard earned dollars of older American who get taken in by bogus credit repair services and advance fee loan schemes.

Bogus credit repair firms promise that, for a fee, they will remove negative, though accurate, information contained in consumers' credit reports. Since credit reporting bureaus legally may include verifiable, negative information in consumers' reports for a period of seven years, and bankruptcies for ten years, credit repair companies cannot deliver the service they promise. The TSR prohibits credit repair companies from obtaining payment until six months after they have, in fact, fulfilled their promise to clean up credit histories. This year the Commission continued its efforts against credit repair schemes, announcing a nationwide crackdown called "Operation Eraser." In this joint federal/state effort legal action was taken against 31 different companies. The FTC itself handled cases against 20 companies. This law enforcement effort also served as the platform for a consumer education program on how to avoid such scams which is detailed at the end of this report.

In 1998, the Commission also brought complaints against two different companies, alleging that the companies advertised low interest rate debt consolidation loans and in return provided minimal bill paying services in return for advance fees.

Cross-border fraud

"Cooperative and successful law enforcement activities with our Canadian colleagues in the past few years are encouraging. Nevertheless, cross-border scams seem to be a growth industry." Commissioner Orson Swindle, November 10, 1998 speech.

In the mid-1990's, senior citizens in the U.S. began to receive a growing number of solicitations from fraudulent telemarketers operating out of Canada. Between 1996 and 1997, complaints about Canadian telemarketers rose from 7% to 23% as a proportion of the total number of telemarketing complaints received by the FTC. In 1998, complaints about Canadian companies rose to 30% of the total complaints in Consumer Sentinel. In the last two years, the Commission has redoubled its efforts to fight cross-border telemarketing fraud and raise the profile of the problem. During high-level diplomatic meetings, the Commission was instrumental in putting telemarketing fraud on the agenda of Prime Minister Chretien and President Clinton during their meeting in the spring. Commission staff then actively participated in the U.S.-Canada Bilateral Working Group on Cross-Border Telemarketing Fraud, a task force formed at the direction of the two leaders.

The Bilateral Working Group met in June and September of 1997, and discussed issues ranging from extradition and mutual legal assistance treaties, to legal reforms and information-sharing. Over that same period, Commission staff discussed enforcement and diplomatic goals with U.S. counterparts at the State Department, the Justice Department, the FBI, the Federal Communications Commission, the U.S. Postal Inspection Service, U.S. Customs, and the National Association of Attorneys General. During the summer of 1997 Commission staff also joined small U.S. delegations traveling to meet federal and provincial law enforcement officials in Canada. In November 1997, the Bilateral Working Group issued a comprehensive report entitled "United States-Canada Cooperation Against Cross-Border Telemarketing Fraud." The report was drafted with significant input from the FTC and out-

lined the scope of cross-border telemarketing fraud, as well as a number of solutions and policy recommendations.

Among its findings, the Bilateral Working Group emphasized the need to share more information among U.S. and Canadian law enforcement officials. Quickly addressing this need, the Commission constructed Consumer Sentinel, the first electronic fraud database available to law enforcement on both sides of the border. Announced in December of 1997, Consumer Sentinel allowed law enforcement officials to access consumer complaints quickly and easily through a secure Internet connection.[4] Complaints came from a variety of organizations including the FTC, the National Fraud Information Center (a project of the U.S. National Consumers League) and PhoneBusters, a Canadian project operated by the Royal Canadian Mounted Police and the Ontario Provincial Police.

Throughout 1998, Consumer Sentinel expanded rapidly. The database now contains almost 150,000 fraud complaints, including thousands of new complaints contributed by local Better Business Bureaus from across the country.[5] Over 150 law enforcement offices from across the U.S. and Canada are now members of Consumer Sentinel, including the Department of Justice, numerous U.S. Attorney offices, the FBI, the U.S. Postal Inspection Service, state Attorneys General and state securities offices, local prosecutors and sheriffs, as well as the Royal Canadian Mounted Police, and other Canadian law enforcement. Besides complaint data, Consumer Sentinel has expanded to include law enforcement "Alerts," a library of sample pleadings to use in fraud cases, lists of law enforcement contacts, law enforcement publications like "FraudBusters," and a database listing 12,000 undercover tapes collected by the San Diego Boiler Room Task Force.

In addition to building and maintaining Consumer Sentinel, the Commission has taken a number of law enforcement actions against cross-border telemarketing fraud in 1997 and 1998. The Commission continued to attack the problem of advanced fee loans, and in January 1998, announced actions brought by the Commission and several state agencies against 37 more perpetrators of this type of fraud. Later that year, the Commission obtained a settlement against Tracker Corporation of North America over allegations that they had operated out of the U.S. and Canada and misrepresented their credit card protection services.

In 1997 and 1998, the Commission also targeted the growing problem of illegal foreign lottery solicitations. Not only did the Commission sue peddlers of foreign lottery tickets directly,[6] but the Commission also targeted U.S. card processors alleged to have provided assistance to lottery ticket traffickers.[7] Realizing the need for criminal as well as civil law enforcement in this area, the Commis-

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[4] Consumer Sentinel is not open to the general public. Access to the web site is limite authorized law enforcement members who are given unique user names, passwords, and robust encryption software.

[5] To date, over 30 local Better Business Bureaus have agreed to contribute their complaints to Consumer Sentinel, including the BBB's from Seattle, Chicago, Dallas, and Washington, DC.

[6] *FTC* v. *Win USA Services Ltd., et al.,* C98–1614Z (W.D. WA) and *FTC* v. *Pacific Rim Pools International,* C97–1748R (W.D. Wash. 1997).

[7] *FTC* v. *Woofter Investment Corporation and Patsy M. Barbour,* (D. Nevada) CV–S–97–00515–HDM (RLH)) (D. Nevada).

sion's Seattle Regional Office now has a staff member prosecuting lottery scams as an appointed Special Assistant U.S. Attorney.

Cross-border health fraud is another growing problem that affects millions of people, especially senior citizens, in this country and abroad. To address this type of fraud, the Commission, in 1997, led a "North American Health Claim Surf Day" and was joined by the FDA and CDC, the FCC, health and consumer agencies from Canada and Mexico, the Attorneys General of 18 states, and several nonprofit groups. In just a few hours of searching the Internet, the group found over 400 sites that promoted questionable treatments or cures for heart disease, cancer, AIDS, diabetes, arthritis, and multiple sclerosis. The next year the Commission focused on claims related to these six diseases in a Surf Day conducted on a broader scale. The 1998 "International Health Claim Surf Day" included participants from 80 agencies and organizations from 25 countries that "surfed" the Internet looking for potentially false or deceptive claims about the treatment, prevention, or cure of the same six serious illnesses. This international team found more than 1,200 offending sites and sent them warning messages. The Task Force also kicked off *Campana Alerta I and II,* two sweeps targeting deceptive Spanish-language ads for health care products that included a total of seven FTC enforcement actions, four Spanish-language radio public service announcements, and a Spanish-language television public service announcement jointly-released in the U.S. and Mexico. In addition, the Task Force participated in a crackdown on Mexican border clinics offering "cures" for cancer, AIDS, and multiple sclerosis.

Building on these actions, the Commission, FDA, Health Canada, and the Secretaria de Salud of Mexico announced the adoption of an agreement on Joint Strategies to Combat Health Fraud on December 10, 1998. The agreement provides a formal framework for cooperation and states that the participating agencies will: (1) cooperate in the detection of cross-border health fraud; (2) inform counterpart foreign agencies as soon as practicable of significant investigations involving activities in their country; (3) consider counterpart agency requests to investigate domestic activities and to coordinate related enforcement activities; and (4) work to develop and disseminate joint consumer and business education messages about health fraud.

Internet fraud

Seniors are joining the Internet community at a rapid pace. An estimated 40% of Americans over the age of 50 have personal computers, and of these, 72% have Internet access.[8] Senior citizens communicate with children and grandchildren through e-mail, peruse web sites for news and entertainment, and use the Internet to research travel and business opportunities.[9] Although the Inter-

[8] In contrast, computer ownership among people over 50 was only 29% three years ago. *See* statistics on "The Graying of the Internet," a report published by Charles Schwab & Co., Inc. and SeniorNet.org, reported at http://www.headcount.com/globalsource/profile/index.htm?choice=ussenior&id=144".

[9] 72% of Internet users over the age of 50 regularly use e-mail to communicate with friends and family; over 50% use the Internet to research topics and read the news; and approximately 40% frequently use the Internet to pursue hobbies, explore travel options, or research investments. *See* "The Graying of the Internet," above.

net offers new ways to communicate, invest, and shop, unfortunately it also provides a new haven for scam artists. To ensure that the fraud does not undermine consumer confidence and weaken the online marketplace, the Commission has attacked Internet fraud through both aggressive law enforcement and public education.

The Commission has brought over forty federal actions against Internet fraud, twenty-four cases in 1997 and 1998 alone. Most of these actions have targeted traditional types of fraud that have moved online—pyramid schemes, credit repair fraud, deceptive investments and business opportunities, etc. However, a few actions have targeted scams that could only have arisen from new technology, such as "modem hijacking."

Although many Internet schemes target the general population, some online scams hit senior citizens especially hard. Fraudulent online health claims are an example. The Commission has brought several actions against marketers of dubious health products, including a company, American Urological Clinic and David Brady, that advertised an herbal impotence remedy called "Vaegra" and a company, TrendMark International, that made unsubstantiated weight loss claims.

Surf Days, such as those targeting fraudulent health claims, have become part of a broader attempt by the Commission to protect the public through education. Surf Days enable the Commission to contact businesses that may be injuring consumers, not out of malice, but out of ignorance over what the law requires. In an effort to reach out and educate online business, the Commission has led or conducted over a dozen Surf Days in 1997 and 1998, covering topics ranging from online privacy to coupon fraud. In addition, the Commission has published a set of online advertising guidelines for new and small businesses entitled, "The Rules of the Road."

HEALTH-RELATED ACTIVITIES

It is critical that all consumers have accurate information about the costs and benefits of health care services, devices, drugs and related products. While health care is a subject of concern for all of our citizens, it is of disproportionate concern to the aging. The Commission works to ensure that consumers are not harmed by deceptive claims about the health benefits of products or services. In addition, the Commission's antitrust law enforcement activity targets unlawful activity that decreases competition among providers of health care goods and services. Older Americans (along with their younger counterparts) benefit from lower costs and higher quality health care services as a result of robust competition.

CONSUMER PROTECTION IN HEALTH-RELATED MATTERS

Health claims for OTC drugs, devices, foods, and dietary supplements

Advertising for any product must be truthful, not misleading, and substantiated. . . .

Accurate information about the safety and health benefits of over-the-counter drugs, devices, foods, and dietary supplements are particularly important to older consumers who may have specific

nutritional needs or suffer from medical conditions associated with aging. The Commission is responsible for making sure that advertising about the health benefits of these products is truthful, not misleading and substantiated by solid scientific support and coordinates closely with the Food and Drug Administration, which has primary responsibility for the safety and labeling of these products.[10]

In a case currently on appeal, the Commission successfully challenged misleading representations that Doan's Pills, a national advertised analgesic, is more effective in relieving back pain than other over-the-counter pain relievers. Continuing to attack deceptive claims in the multi-million dollar "hair restoration" industry, the Commission concluded two successful actions against marketers of nationally advertised baldness products. The Commission also took action against the marketer of eyeglasses that misleadingly claimed to improve users' vision when driving at night.

The Commission has also continued to pursue false or unsubstantiated advertising claims relating to the nutrient content and health benefits of foods. For example, the Commission settled charges over a national advertising campaign for Promise margarine that focused on consumers' heart health concerns with its "Get Heart Smart" slogan. In that case, the FTC challenged, as unsubstantiated, claims that Promise margarine spreads help reduce the risk of, heart disease, as well as false low-fat and low-saturated-fat claims. In addition, the FTC settled charges with the nationwide Pizzeria Uno restaurant chain regarding false claims touting a line of thin-crust pizzas as "low fat." Finally, the FTC entered a consent agreement with Abbott Laboratories for claims relating to their Ensure nutritional beverage. The complaint in that case challenged claims that doctors recommend Ensure for healthy, active people, and claims that Ensure would provide vitamins in an amount comparable to a typical multi-vitamin supplement.

The most dramatic growth in health-related marketing has been in the dietary supplement industry, a category that includes vitamins, minerals, herbs and hormones. It is estimated that more than 100 million U.S. consumers use supplement products for a wide variety of health-related benefits. The elderly may be particularly vulnerable to false or misleading claims, since supplement marketing often relates to conditions associated with aging. The Commission has undertaken a number of initiatives over the past two years to ensure that consumers are presented with truthful and accurate information about the health benefits of supplement products.

The Commission continues to maintain an active enforcement presence in this area. Since 1996 the Commission has taken action against several dietary supplement advertisers for making a wide variety of health claims, including claims relating to medical conditions and diseases that afflict the elderly. Most recently, the Commission obtained a court order temporarily halting the marketing operations of the American Urological Corp. and other related par-

[10] Both advertising and labeling of prescription drugs fall within FDA's area of jurisdiction, although the FTC has provided input to FDA on certain aspects of the advertising of these products.

ties for false claims about the effectiveness of its impotence treatment products. The matter is currently pending in federal district court and involves various multiple ingredient supplement products, including a product called "Vaegra," the name of which closely resembles the prescription drug Viagra.

Other Commission actions include a consent agreement with MegaSystems International, Inc. and related parties settling charges about false and unsubstantiated claims for a variety of products concerning health and weight loss. The MegaSystems consent required that the respondents pay a total of $1.1 million, including $500,000 into an escrow account to repay consumers. The Commission also settled charges against Bogdana Corp. relating to Cholestaway, a calcium carbonate supplement. Among other things, the company claimed the supplement would lower blood cholesterol and blood pressure and treat heart disease. The Bogdana consent also settled charges relating to another supplement, Florasource, which was touted to reduce the risk of and treat chronic fatigue syndrome, AIDS and other diseases.

Since 1996 the Commission has brought a number of actions to curb fraudulent advertising directed at Spanish-speaking consumers. A number of these actions involved supplement products being promoted to treat health conditions associated with aging. For example, a recent consent agreement settled charges against Nutrivida, Inc. and Frank Huerta involving a Spanish language informercial promoting Cartilet, a shark cartilage supplement, for treatment of cancer, rheumatism, arthritis, diabetes, fibroids, bursitis, circulatory problems, and cysts. A consent agreement with Venegas Inc. addressed FTC charges of unsubstantiated claims for a multiple ingredient supplement "Alen," purported to delay the aging process, eliminate anemia, and help diabetics produce insulin. Other actions include a settlement with Efficient Labs for the charges relating to the marketing of "Venoflash" to remove clogs in the circulatory system and treat varicose veins and hemorrhoids, and a settlement with Mountain Springs L.L.C. for the marketing of a cat's claw supplement to strengthen the immune system and treat a wide variety of ailments.

Most recently, the Commission issued a business guide for the dietary supplement industry to provide clear and detailed guidance on how to comply with the requirement that advertising claims relating to health and safety must be substantiated by competent and reliable scientific evidence. The guide provides specific examples to illustrate longstanding FTC advertising principles on how to develop adequate scientific support for the benefits of supplements and how to describe those benefits fairly and accurately. As additional guidance to industry, the Commission simultaneously released a report on the results of an FTC staff consumer research project that examined a number of issues relating to consumer understanding of disclosures in food and supplement advertising. The results of this Food Copy Test indicate, among other things, that qualifying information about the health benefits of these products must be presented in strong and direct language.

Other health-related services

Older consumers make up a large part of the market for a variety of health-related services and, as a result, are vulnerable to fraudulent practices and misleading claims from some bad actors in this industry. The Commission in 1997–1998 took numerous law enforcement actions in the area of health-related services.

In 1998, the Commission accepted for comment a consent agreement that prohibits the American College for Advancement in Medicine (ACAM) from making unsubstantiated and false advertising claims that non-surgical, EDTA "chelation therapy" is effective in treating atherosclerosis, and that the effectiveness of the therapy has been proven by scientific studies.

The Commission in 1998 also obtained a consent order against Eye Care Associates and its owner, Sami El Hage, O.D., primary sources of an orthokeratology service called "Controlled Kerato-Reformation" orthokeratology (CKR). Under the consent order, the respondents are prohibited from claiming that CKR or any similar procedure corrects nearsightedness and astigmatism. In addition, the final order requires Dr. El Hage to have competent and reliable scientific evidence before making any health benefit claims about the procedure.

In a similar case, in 1997, the Commission obtained a consent order against Mid-South PCM Group and its owner, J. Mason Hurt, O.D., a leading marketer of an eye care treatment called "recise Corneal Molding" orthokeratology (PCM ortho-k). PCM ortho-k uses a series of special contact lenses purportedly to reduce or eliminate dependence on eyeglasses and contact lenses. The service is marketed as a non-surgical alternative to laser PRK (photorefractive keratectomy) and RK (radial keratotomy). The consent order prohibits Dr. Hurt from claiming that orthokeratology can cure vision deficiencies permanently, and requires Dr. Hurt to possess competent and reliable scientific evidence for any success or efficacy claims.

Finally, in 1997, Commission staff provided substantial assistance to the American Academy of Ophthalmology in developing its industry "Guidelines for Refractive Surgery Advertising," which were issued that same year. The Guidelines set voluntary standards for advertising claims regarding the safety, efficacy and success of refractive surgery services, including radial keratotomy (RK), photorefractive keratectomy (PRK), and LASIK (laser assisted in-situ keratomileusis).

Diet and weight loss products and services

New Triple Medical Breakthrough: "Blast" 49 pounds off in only 29 days . . . "Obliterate" 5 inches from your waistline . . . .

The quest to lose weight, cut fat, and gain muscles continues to lure the investment of older consumers. The Commission in 1997–1998 has been active in this area, and has taken numerous actions involving diet and weight-loss products, programs, and services. As part of its continuing effort to ensure that consumers get accurate and reliable information about weight loss products and programs, the Commission initiated "Operation Waistline," a coordinated, long-term consumer education and law enforcement program. The goals of this program were to alert consumers to misleading and

deceptive weight loss claims, to steer them to accurate information about healthy weight loss, and to continue to bring law enforcement actions against those in the industry who violate the law.

As part of this coordinated effort, in March 1997 the Commission announced settlements in seven law enforcement actions focusing on advertisements promoting quick and easy weight loss for products ranging from fat burning dietary supplements to skin patches and shoe insoles.

In addition, the Bureau of Consumer Protection sent letters to more than 100 publications that ran the weight loss advertisements challenged in the Commission's complaints. The letters called on these publications to step up their advertising review efforts to prevent blatantly deceptive weight loss ads from reaching consumers.

Three additional consent settlements involving promotions for weight loss and purported health benefits of chromium picolinate were finalized and announced earlier in 1997: Nutrition 21, Universal Merchants, Inc., and Victoria Bie, doing business as Body Gold.

In a separate law enforcement action, Commission attorneys completed the trial phase in the case against Slim America, Inc., a seller of over $11 million in bogus weight loss products. The defendants' ads and product literature featured Super-Formula as a "New Triple Medical Breakthrough" consisting of three different "weight loss weapons." The advertisements, published in magazines such as Ladies Home Journal, stated that Super-Formula could effectuate dramatic weight loss and remove inches from a user's body size in a short period of time. Ads boasted that Super-Formula could "blast" up to 49 pounds off user in only 29 days, "obliterate" 5 inches from waistlines, and "zap" 3 inches from thighs, without dieting or exercising. In 1997, the federal district court granted a temporary restraining order, asset freeze, and appointment of receiver, pending the court's final decision. The decision on the Commission's petition for a permanent injunction and consumer redress is pending.

In addition to weight-loss products, many older consumers purchase services from diet clinics. The Commission, having obtained fourteen consent orders against such firms in 1992–1996, continued this program in 1997 by announcing settlements of administrative complaints, issued in 1993, against Weight Watchers International, Inc., and Jenny Craig, Inc. Weight Watchers International, Inc. agreed to settle a case concerning the substantiation for advertising claims made by the company. The proposed settlement covers future claims, including testimonial claims, about weight loss and weight loss maintenance. The Commission also obtained a settlement agreement from Jenny Craig, Inc. to resolve deceptive advertising charges relating to the program's weight loss, weight loss maintenance, price and safety claims, as well as its use of consumer testimonials and endorsements.

Finally, in October, 1997, the Commission's Bureau of Consumer Protection spearheaded a major consumer protection effort by bringing together representatives from science, academia, the health care professions, state and federal agencies, commercial providers of weight loss products and services, and organizations promoting the public interest to discuss how providers could improve

the quality and quantity of information consumers receive about weight loss products and services. This seminal event has resulted in agreement among a broad-based coalition on voluntary guidelines for consumer disclosures by providers of weight loss products and services as well as new consumer education initiatives. The coalition, to be called the "Partnership for Healthy Weight Management," looks forward to a formal public launch in early-1999.

ANTITRUST LAW ENFORCEMENT IN THE HEALTH CARE SECTOR

Antitrust enforcement in the health care area, while infinitely varied in detail, tends to fall into one of four general categories. Most of our cases involve: (1) anticompetitive agreements among health care providers; (2) agreements to restrict advertising of health-related services; (3) hospital mergers; or (4) mergers among pharmaceutical companies. All of these activities are of particular importance to older consumers, because their health care needs tend to be greater than those of other age groups, as is the percentage of their income that they devote to this purpose.

Anticompetitive agreements

In January of 1998, Mylan raised the wholesale price of clorazepate from $11.36 to approximately $377.00 per bottle of 500 tablets.

One of the core areas of antitrust enforcement is against anticompetitive agreements. These are agreements among the providers of a good or a service, to increase prices or to decrease product quality, or to in some other way artificially reduce the level of competition between them. Such agreements may deprive consumers of the ability to obtain goods of competitive price and quality in a free market economy.

An example is the Commission's ongoing litigation against four pharmaceutical firms involved in the sale of anti-anxiety drugs that are prescribed over 20 million times a year. One of the defendants in this action is Mylan, the nation's second largest maker of generic drugs. Mylan produces, among other products, the drugs lorazepam and clorazepate, which are widely prescribed to the elderly to treat anxiety and hypertension. According to the Commission's complaint filed in federal court, Mylan entered into exclusive agreements with the principal manufacturer of the active ingredients used in the drugs. These agreements meant that other, competing drug companies were unable to obtain new supplies or to increase their rate of production. As a result, Mylan allegedly attained monopoly power and was able to dramatically increase its prices without fear of competitive consequences. In January of 1998, the company raised the wholesale price of clorazepate from $11.36 to approximately $377.00 per bottle of 500 tablets. And, in March, Mylan raised the wholesale price of lorazeparn from $7.30 for a bottle of 500 tablets to approximately $190.00. The complaint alleged that as a result of the price increases, some consumers had to stop taking these drugs or to reduce the quantity they take.

The remedy being sought in the Mylan litigation will make this case particularly important to consumers. The usual FTC antitrust remedy is an injunction that brings the improper conduct to a halt and restores competition from that point forward. Here, however,

the conduct is particularly egregious, and the harm to consumers is particularly great. Mylan's price increases cost consumers at least $120 million in higher prices—prices paid in part by elderly and infirm patients who can afford them least. Therefore, the Commission has asked the federal district court to order disgorgement, under which Mylan's improper profits must be repaid.

In addition to the litigated case in Mylan, the Commission obtained at least nine consent agreements during the years 1997–1998, under which health care providers agreed to cease using a variety of anticompetitive practices.

In RxCare of Tennessee, a consent order settled charges that a leading provider of pharmacy network services in that state, which was owned and operated by pharmacists, used a "most favored nation" clause (MFN) in order to discourage member pharmacies from discounting, and to limit price competition in their dealings with pharmacy benefits managers and third-party payors. The MFN clause at issue required that if a pharmacy in the RxCare network accepted a reimbursement rate from any other third-party payor that is lower than the RxCare rate, the pharmacy must accept that lower rate for all RxCare business in which it participates. In light of RxCare's market power (the network includes 95% of all chain and independent pharmacies in Tennessee and accounts for a substantial portion of business volume) the MFN clause made pharmacies risk substantial losses in their core business if they granted special discounts to patients covered by other plans, and thereby tended to discourage such discounts. The order bars RxCare from having the MFN clause in its pharmacy participation agreements. C–3662 (consent order) 62 Fed. Reg. 4769 (January 31, 1997).

In Montana Associated Physicians, a physician association (MAPI) and a physician-hospital organization (BPHA) in Billings, Montana signed a consent order in which they agreed, for a 20 year period, not to: (1) boycott or refuse to deal with third-party payors such as insurance companies or HMOs; (2) collectively determine the terms upon which the member physicians would deal with such payors; or (3) fix the fees charged for any physician services. MAPI also is prohibited from advising physicians to raise, maintain, or adjust the fees charged for their medical services, or creating or encouraging adherence to any fee schedule. The order does not prevent these associations from entering into legitimate joint ventures that are non-exclusive (that is, that do not restrict to rights of participants to take part in other networks as well) and involve the sharing of substantial financial risk. Other types of joint ventures are subject to prior approval of the Commission. The order settles complaint charges that MAPI blocked the entry of an HMO into Billings, obstructed a PPO that was seeking to enter, recommended physician fee increases, and later acted through BPHA to maintain fee levels. C-3704 (consent order) 62 Fed. Reg. 11,201 (March 11, 1997).

In Mesa County Physicians, the complaint alleged that the Mesa County IPA, an organization whose members include 85% of all physicians and 90% of primary care physicians in Mesa County, Colorado, acted to restrain trade by combining to fix prices and other competitively significant terms of dealing with payors, and by collectively refusing to deal with some third party payors, such as

new health-care plans. This conduct hindered the development of alternative health care financing and delivery systems, and resulted in higher prices for physician services. The complaint alleged that the IPA, through its alliance with the Rocky Mountain Health Maintenance Organization, created a substantial obstacle to the ability of other payers to establish physician panels in Mesa County. The complaint also alleged that the IPA's Contract Review Committee negotiated collectively on behalf of the IPA's members with several third party payers using a set of guidelines and fee schedule that had been approved by the IPA Board. The consent agreement that has been accepted subject to public comment prohibits the Mesa County IPA from: (1) engaging in collective negotiations on behalf of its members; (2) collectively refusing to contract with third party payers; (3) acting as the exclusive bargaining agent for its members; (4) restricting its members from dealing with third party payers through an entity other than the IPA; (5) coordinating the terms of contracts with third-party payers with other physician groups in Mesa County or in any county contiguous to Mesa County; (6) exchanging information among physicians about the terms upon which physicians are willing to deal with third-party payers; or (7) encouraging other physicians to engage in activities prohibited by the order. The order also requires the Mesa IPA to notify its members and certain third parties about the order, amend its "Physician Manual" to bring it into compliance with the order, and abolish the Contract Review Committee. The IPA is also required to publish and distribute copies of the complaint and order to its members. The proposed order, however, allows the respondents to engage in: (1) any "qualified clinically integrated joint arrangement" (with prior notice to the Commission); and (2) conduct that is reasonably necessary to operate any "qualified risk-sharing joint arrangement" as set forth in the DOJ/FTC Statements of Antitrust Enforcement Policy in Health Care. D–9284 (proposed consent order) 63 Fed. Reg. 9549 (February 25, 1998).

In College of Physicians-Surgeons of Puerto Rico, the Federal Trade Commission and the Commonwealth of Puerto Rico filed a final order and a stipulated permanent injunction in federal court against the College (a group of 8,000 physicians) and three physician independent practice associations. The complaint charged that the defendants attempted to coerce the Puerto Rican government into recognizing the College as the exclusive agent for bargaining with the public corporation responsible for administering a health insurance system that provides medical and hospital care to indigent residents. The complaint also charged that to achieve their goals, members of the College called for an eight day strike during which they ceased providing non-emergency services to patients. The order prohibits the defendants from boycotting or refusing to deal with any third party payer, refusing to provide medical services to patients of any third party payer, or jointly negotiating prices or other more favorable economic terms. The order also calls for the College to pay $300,000 to the catastrophic fund administered by the Puerto Rico Department of Health. The order does not prevent the defendants from participating in joint ventures that involve financial risk-sharing or which receive the prior approval of

the Commission, from petitioning the government, or from communicating purely factual information about health plans. FTC File No. 97 10011, Civil No. 97–2466–HL (District of Puerto Rico) (October 2, 1997).

In Urological Stone Surgeons, the consent order settled charges that three companies (Urological Stone Surgeons, Inc., Stone Centers of America, L.L.C., and Urological Services, Ltd.) and two doctors providing lithotripsy services at Parkside Kidney Stone Centers illegally fixed prices for those services. The centers were owned by a large proportion of the urologists practicing in the Chicago metropolitan area, and the urologists using the Parkside facility account for approximately 65% of urologists in the area. The complaint alleged that the proposed respondents agreed to use a common billing agent (Urological Services, Ltd.), established a uniform fee for lithotripsy professional services, prepared and distributed fee schedules for services, and billed a uniform amount either from the fee schedule or as an amount negotiated on behalf of all urologists at Parkside. The complaint also alleged that the billing agent contracted with third party payors based on a uniform percentage discount off the urologist's charge for professional services, or a uniform global fee that included professional services, charges for the lithotripsy machine, and anesthesiology services. According to the complaint, the collective setting of fees for lithotripsy services was not reasonably necessary to achieve efficiencies from the legitimate joint ownership and operation of the lithotripsy machines, nor were the urologists sufficiently integrated so as to justify the agreement to fix prices for their professional services. The final consent order prohibits the proposed respondents from fixing prices, discounts, or other terms of sale or contract for lithotripsy professional services, requires the proposed respondents to terminate third-party payer contracts that include the challenged fees at contract-renewal time or upon written request of the payor, and requires the respondents to notify the FTC at least 45 days before forming or participating in an integrated joint venture to provide future services. C–3791 (final consent order issued April 10, 1998).

In Institutional Pharmacy Network, the complaint alleged that five institutional pharmacies in Oregon unlawfully fixed prices and restrained competition among themselves, leading to higher reimbursement levels for serving Medicaid patients in long-term care institutions. The five pharmacies are Evergreen Pharmaceutical, Inc., NCS Healthcare of Oregon, Inc., NCS Healthcare of Washington, Inc., United Professional Companies, Inc., and White, Mack & Wart, Inc. They compete to provide prescription drugs and services to patients in long term care institutions, and provide institutional pharmacy services for 80% of the patients in Oregon receiving such services. According to the complaint, the pharmacies formed IPN to offer their services collectively to managed care organizations that provide health care services to Medicaid recipients, and to maximize their leverage in bargaining over reimbursement rates, but did not share risk or provide new or efficient services. The final order prohibits IPN and the institutional pharmacy respondents from entering into similar price fixing arrangements. The order, however, allows the respondents to engage in: (1) any "qualified clinically integrated joint arrangement" (with prior notice

to the Commission); and (2) conduct that is reasonable necessary to operate any "qualified risk-sharing joint arrangement" as set forth in the DOJ/FTC Statements of Antitrust Enforcement Policy in Health Care. File No. 961–0005 (final order issued August 21, 1998).

In M.D. Physicians of Southwest Louisiana, the consent order settled charges that a physician group, composed of a majority of the physicians in the Lake Charles area of Louisiana, fixed the prices and other terms on which it would deal with third party payors, collectively refused to deal with third party payors, and conspired to obstruct the entry of managed care. According to the complaint, the group was formed in 1987 as a vehicle for its members to deal concertedly with the entry of managed care, and until 1994 the members of MDP dealt with third party payors only through the group. As a result of this conduct, the complaint alleged, MDP restrained competition among physicians, increased the prices that consumers paid for physician services and medical insurance coverage, and deprived consumers of the option of managed care. The order prohibits MDP from engaging in collective negotiations on behalf of its members, orchestrating concerted refusals to deal, fixing prices or terms on which its members deal, or encouraging or pressuring others to engage in any activities prohibited by the order. The order does allow MDP to operate any "qualified risk-sharing joint arrangement" or, upon prior notice to the Commission, any "qualified clinically integrated joint arrangement," as reflected in the 1996 FTC/DOJ Statements of Antitrust Enforcement Policy in Health Care. C–3824 (final consent order issued August 31, 1998).

In Dentists of Juana Diaz, a group of dentists, constituting a majority of the practitioners in Juana Diaz, Coamo, and Santa Isabel, Puerto Rico, signed a proposed consent order prohibiting them from fixing prices and engaging in an illegal boycott of a government program that provides dental care for indigent patients. According to the complaint, the dentists threatened a boycott of the program if they were not reimbursed at certain prices, and then in fact boycotted the program. After several months, the dentists' price demands were met and they agreed to participate. The order prohibits the dentists from jointly boycotting or refusing to deal with third party payers, or collectively determining any terms or conditions for dealing with third party payers. The order does allow the dentists to operate any "qualified risk-sharing joint arrangement" or, upon prior notice to the Commission, any "qualified clinically integrated joint arrangement," as reflected in the 1996 FTC/DOJ Statements of Antitrust Enforcement Policy in Health Care. FTC File No. 981–0154 (proposed consent order issued September 16, 1998).

In Puerto Rican Pharmacy Association, the Asociacion de Farmacias Region de Arecibo (AFRA) and Ricardo Alvarez Class agreed to settle Federal Trade Commission charges that they fixed prices and engaged in an illegal boycott in order to obtain higher reimbursement rates for pharmacy goods and services under Puerto Rico's government managed care plan for the indigent. AFRA is an association of approximately 125 pharmacies operating in northern Puerto Rico, and Alvarez is a pharmacy owner in Manati, Puer-

to Rico, and one of AFRA's officers. Under the settlement, AFRA's members would be prohibited from jointly negotiating prices or other economic terms for pharmacies and jointly boycotting, threatening to boycott, or refusing to provide pharmacy goods and services to any payer or provider. FTC File No. 981–0153 (provisionally accepted December 14, 1998).

Restraints on advertising

Without the ability to advertise low prices, members of a profession have less incentive to offer such prices in the first place, and less ability to communicate them effectively even if they are offered.

One particular type of anticompetitive agreement calls for separate mention. This is the agreement among members of a professional association that they will cease or restrict the use of advertising. Such agreements raise particular difficulties for antitrust enforcers, because they involve, not only the issue of an agreement to restrict competition, but also other issues involving consumer information and consumer protection problems. But it is clear that a raw case of advertising restraints can have strongly adverse effects for consumers. Without the ability to advertise low prices, members of a profession have less incentive to offer such prices in the first place, and less ability to communicate them effectively even if they are offered.

An example of this type of case is the case against the California Dental Association (CDA), which the Commission is currently litigating before the Supreme Court. The Commission originally issued a complaint charging that the CDA had unreasonably restricted its dentist members' truthful and nondeceptive advertising of the price, quality, and availability of their services. One part of this conduct effectively prohibited advertising of senior-citizen discounts. In March, 1996, the Commission issued an opinion and order affirming an ALJ's decision finding that the California Dental Association's rules violated Section 5 of the FTC Act. The Commission's order required CDA, among other things, to cease and desist from restricting truthful, nondeceptive advertising (including truthful, nondeceptive superiority claims, quality claims, and offers of discounts); to remove from its Code of Ethics any provisions that include such restrictions; and to contact dentists who have been expelled or denied membership in the last 10 years based on their advertising practices and invite them to re-apply. The order also requires CDA to set up a compliance program to ensure that its constituent societies interpret and apply CDA's rules in a manner that is consistent with the order.

The Commission's order was upheld by the Ninth Circuit Court of Appeals in *California Dental Assn.* v. *FTC,* 128 F.3d 720 (9th Cir. 1997), but the CDA has obtained review in the Supreme Court. The Commission's brief there was filed on December 11, 1998, and the case was argued on January 13, 1999.

Anticompetitive mergers

Recent changes in the structure of the health care system, including the growth of HMOs, have resulted in increased pressure for cost containment. These pressures have been felt throughout

the health care system, which has responded with efforts to decrease costs and to improve efficiency. Mergers have been one tool for reducing costs. While such efforts are generally beneficial to consumers, they can be harmful if they lead to an anticompetitive outcome in a particular market.

One such merger was challenged by the Commission in the Mediq case. This case involved Mediq's proposed $100 million acquisition of Universal Hospital Services. The transaction would have combined the nation's two largest firms that rent movable medical equipment—such as respiratory, infusion, and monitoring devices—to hospitals, and would have given Mediq a dominate share of the rental markets both nationally and in many major metropolitan areas across the nation. Many hospitals and their group purchasing organizations expressed concern that the merger would have led to higher rental prices because hospitals and hospital chains would not switch from renting to buying expensive equipment that may sit idle for long periods, even in the face of a significant price increase. The FTC filed a complaint seeking a preliminary injunction to block the merger pending an administrative trial, and the parties then abandoned the transaction. (D. D.C., Civ. Action. No. 97–1916)

Hospital mergers

As in other industries, the Commission approaches hospital mergers in a cautious and considered way.

Among other mergers in the health care industry, we have seen an increasing number of hospital mergers. As in other industries, the Commission approaches those mergers in a cautious and considered way. The Commission has found that the vast majority of hospital mergers pose no competitive problems; only a relative handful of them are investigated. The agency challenges only those specific mergers that it has reason to believe are likely to have anticompetitive results, and it seeks a remedy that is carefully tailored to eliminate only the anticompetitive part of the transaction while allowing the remainder to proceed.

Enforcement actions are taken when the circumstances warrant, however. In Tenet Healthcare the agency secured a preliminary injunction against the proposed merger of the only two commercial acute care hospitals in Butler County, Missouri. The FTC was joined by the Attorney General of Missouri in challenging this merger. The case had particular significance. It broke a string of five consecutive losses in government challenges to hospital mergers. "This shows that the antitrust laws do apply to local hospital markets," agency officials noted at the time, "and it also shows that we and the Department of Justice remain committed to litigating these complex and difficult cases where the facts warrant it." The case is now on appeal to the Eighth Circuit Court of Appeals.

In another case the agency was able to obtain the necessary divestiture through a negotiated consent agreement. In OrNda Healthcorp, the Commission reached an agreement settling charges that the acquisition of the firm, coincidentally by Tenet Healthcare as well, would substantially lessen competition for general acute care services in the San Luis Obispo, California area in violation of Section 7 of the Clayton Act and Section 5 of the FTC Act. Tenet

and OrNda were the second and third largest chains of general acute care hospitals in the nation, and the two leading providers of acute care hospital services in San Luis Obispo County. Tenet owns 195-bed Sierra Vista Regional Medical Center in San Luis Obispo, and 84-bed Twin Cities Community Hospital in Templeton; OrNda owned 147-bed French Hospital Medical Center in San Luis Obispo. OrNda also owned 70-bed Valley Community Hospital in Santa Maria, about 30 miles south of the city of San Luis Obispo and just south of San Luis Obispo County. According to the complaint, the combination of the three largest of the five hospitals in San Luis Obispo County would eliminate competition between Tenet and OrNda, significantly increase the high level of concentration for acute care hospital services, and increase the market share of Tenet to over 71%. The consent order required Tenet to divest French Hospital Medical Center and other related assets in San Luis Obispo County, to an acquirer approved by the Commission, by August 1, 1997. That divestiture has been completed, to a small non-profit hospital system. See Tenet Healthcare Corporation/ OrNda Healthcorp, C–3743 (consent order) (January 26, 1998).

During the past two years the Commission has also taken an important step to ensure the integrity of its remedial orders (whether litigated or consent) involving hospital mergers. In Columbia/HCA Healthcare the Commission put additional teeth in its program by obtaining a $2.5 million civil penalty to settle charges that the firm violated a 1995 order to divest hospitals in Utah and Florida in a timely manner. This was the second largest penalty ever imposed for failure to divest within contemplated time periods.

Pharmaceutical mergers

Pharmaceutical prices are particularly important to older consumers. It has been reported that the roughly 13 percent of our population that is over the age of 65 consumes more than one-third of all prescription drugs dispensed, and that this percentage is increasing. Excluding insurance premiums, medicines account for 34% of the health-care costs paid by older people—a larger share than goes for doctor visits (31%) or for hospital stays (14%). Pharmaceutical costs must be frequently paid out of pocket: about 19 million elderly people have little or no insurance coverage for drug purchases. All these figures confirm that antitrust enforcement in the pharmaceutical industry will have a disproportionate benefit for older citizens. The Commission was accordingly active during 1997 and 1998 in the role of protecting competition in this area, focusing on oversight of merger activity in both the manufacturing and distribution sectors.

One of our largest cases involved distribution of drugs. The Drug Wholesalers matter was striking for the sheer number of consumers protected. In this case, the FTC secured a preliminary injunction in federal district court, preventing the proposed mergers of the nation's four largest pharmaceutical wholesalers into two companies. The agency challenged McKesson Corp.'s acquisition of AmeriSource Health Corp., and Cardinal Health, Inc.'s acquisition of Bergen Brunswig Corp. The four firms together hold approximately 80 percent of the wholesale pharmaceutical market. In court, the agency argued, successfully, that the two mergers might

substantially reduce competition for drug wholesaling services—a market that is important to virtually every consumer in the country. The Commission believes that its action in this one case has saved consumers more than $ 100 million per year.

In 1998 the FTC also announced an agreement with Merck and Co., Inc. (Merck), a leading pharmaceutical manufacturer, and its subsidiary, Merck-Medco Managed Care, LLC (Medco), resolving antitrust concerns resulting from Merck's acquisition of Medco. The Commission had alleged that Merck's acquisition of Medco, the largest pharmacy benefits manager (PBM) in the United States, might substantially lessen competition in the manufacture and sale of pharmaceuticals, and in the provision of PBM services, leading to higher prices and reduced quality. PBMs serve as middlemen in the provision of prescription drugs to managed care plans. The settlement required Medco to take steps to diminish the effects of any unwarranted preference that might be given to Merck's drugs over those of Merck's competitors in connection with the pharmacy benefit management services that it provides.

The agency also monitors mergers among the actual manufacturers of pharmaceuticals. A particularly important case of this type involved the merger of Ciba-Gigy Ltd. and Sandoz Ltd. to form a new pharmaceutical firm called Novartis. On reviewing the merger the Commission became concerned that it might reduce competition in one area where the two firms had previously been the leading forces. This involved the development and commercialization of gene therapy products, which are expected to begin offering significant improvements in the treatment of cancer and other diseases and medical conditions by the year 2000. Before approving the merger, therefore, the Commission negotiated a consent agreement requiring licensing of certain specified gene therapy technology and patent rights. This was designed to restore competition in the development and commercialization of gene therapy treatments for cancer and graft-versus-host disease research and treatment. That agreement was made final in April, 1997, and the required divestitures were approved in September of the same year.

COMMISSION ACTION IN OTHER FIELDS

Funeral services: Consumer protection

This is one time when consumers are easy prey for the less than forthright. The Funeral Rule helps you avoid overpaying. . . .

On average, a funeral costs in excess of $4,000, and can easily cost $10,000 or more. It is among the most expensive of consumer purchases, and it typically comes at an emotionally difficult time, and often is a first-time purchase. To make informed choices under these circumstances, consumers need ready access to accurate information about the range of funeral goods and services offered and the prices charged. The Commission's Funeral Industry Practices Rule, 16 CFR Part 453, is designed to ensure that the need for this kind of straightforward information is met, by requiring providers of funeral goods and services to provide itemized price information and other material disclosures to consumers initiating discussions about funeral arrangements. This Rule is of considerable importance to older Americans and their families.

In the first decade after the Rule became effective, the Commission pursued a conventional enforcement approach, investigating complaints from consumers and competitors, and, where violations were found, bringing law enforcement actions for civil penalties. From 1984 through 1994, this approach resulted in 43 enforcement actions against funeral homes for failing to comply with the Rule. These enforcement efforts, however, were not effective to bring the industry into compliance with the Rule. Surveys showed that about two-thirds of industry members failed to comply with the "core" Rule requirements—i.e., failed to provide itemized price lists of available goods and services to consumers seeking to arrange a funeral.

Realizing that a new strategy was needed to improve this situation, the Commission staff implemented a more proactive "sweeps" approach based upon test shopping large numbers of funeral homes in selected regions. A key element in planning and executing the sweeps was to partner with the Commission's consumer protection law enforcement counterparts at the state and local level. After an initial pilot sweep by FTC staff alone in Florida, FTC staff joined with the Attorneys General of Tennessee, Mississippi, and Delaware, conducting four sweeps in 1995 and 1996. Investigators posing as consumers test shopped funeral homes in those states for Rule compliance. Eighty-nine funeral homes were test shopped in the course of those sweeps, and 20 homes were found not to be in compliance; enforcement actions were brought against each of those 20 homes. Thus, in a little more than a year the Commission brought nearly half as many enforcement actions as had been filed in the entire first decade of Rule enforcement.

The Commission's initiation of the sweeps enforcement approach produced a strong impact upon the funeral industry, prompting the National Funeral Directors Association (NFDA), in September 1995, to submit a proposal to the Commission for bolstering the level of industry compliance through a self-certification and training program. The Commission agreed to this proposal in January 1996. The first component of this innovative program is the Funeral Rule Offenders Program (FROP), which offers a non-litigation alternative to bring homes found to be in violation rapidly into compliance with "core" Rule requirements violations of the Rule. Under FROP, if a funeral home is identified by investigators as having failed to provide the required price lists, the home may, at the Commission's discretion, be offered the choice of a conventional investigation and potential law enforcement action resulting in a federal court order and civil penalties as high as $11,000 per violation, or participation in FROP. Violators choosing to enroll in FROP make voluntary payments to the U.S. Treasury or state Attorney General, but those payments generally are less than the amount the Commission would seek as a civil penalty. NFDA attorneys then review the home's practices, revise them so they are in compliance with the Funeral Rule, and then conduct on-site training and testing.

The Commission, in cooperation with state Attorneys General, continued to conduct Funeral Rule sweeps, providing non-complying homes with the choice of enrollment in FROP or a conventional law enforcement proceeding. The first round of sweeps conducted

after initiation of FROP were conducted in Massachusetts, Oklahoma, Ohio, Colorado, and Illinois. The results of those sweeps indicated that compliance among funeral homes had improved significantly since 1994. Specifically, nearly 90 percent of funeral homes subjected to test shopping in 1996 were found to be in compliance with the core Rule requirements. In 1997 and 1998, the Commission and its state partners conducted sweeps in New Jersey, Arkansas, California, Washington, Pennsylvania, Georgia, Texas, Iowa, Florida, Minnesota, Michigan, Louisiana, and Utah, among others. These enforcement activities resulted in test shopping of over 600 funeral homes across the country, and 72 violators have been offered an opportunity to enroll in FROP in lieu of litigation.

The integrated approach of massive sweeps combined with the FROP option for identified violators appears to be effective in sharply raising and maintaining the level of industry compliance. Continuing to pursue this approach is a high priority for the Commission. In addition, the Commission will shortly initiate a periodic regulatory review of the Funeral Rule to assess whether the continuing need for the Rule, and whether it could be modified to increase its effectiveness in protecting consumers or reducing industry compliance costs.

Competition activities involving funeral homes and cemeteries

We review mergers to ensure that every local market retains enough funeral providers to give consumers a competitive range of alternatives. The Commission is also active in watching for antitrust problems in the funeral and cemetery industries. Where mergers take place between two chains providing such services, examine them for overlaps in particular local markets, in order to ensure that every local market retains enough providers to give consumers a competitive range of alternatives.

As part of this program, the Commission recently investigated a large proposed acquisition. This acquisition would have involved possibly significant consolidations of funeral homes in at least 42 communities, and possibly significant consolidations of perpetual care cemetery services in at least seven communities. The proposed acquisition was eventually abandoned, in part, according to the companies involved, because of the pending investigation.

Living trusts

In 1997, cease and desist orders were made final against two companies, The Administrative Company and Pre-Paid Legal Services, who misled elderly consumers regarding the benefits and appropriateness of living trusts and the specific living trusts that the companies sold. In the order settling the allegations with the FTC, the companies are prohibited from making misrepresentations about living trusts, required to make certain disclosures and one company was required to make a partial reimbursement to consumers.

Mail or telephone order merchandise

The Commission's Mail or Telephone Order Merchandise Rule, 16 CFR Part 435, requires a seller of merchandise ordered by mail, telephone or computer to ship goods within the time promised or

within 30 days, notify consumers of delays, and give consumers the option to cancel an order and receive a refund. In issuing the original Mail Order Rule in 1975, the Commission noted that consumers with mobility problems, including older consumers, frequently order by mail and may also find it difficult to return merchandise. On March 1, 1994, the Commission amended the Rule to include telephone sales. Supporting this amendment was evidence submitted by the AARP indicating that a significant percentage of persons age 65 and older order products by telephone.

The Commission staff works closely with industry members and trade associations to obtain compliance with the Rule, and it initiates law enforcement actions where appropriate. During 1997 and 1998, the FTC obtained eight consent decrees resolving alleged Rule violations, resulting in judgments for civil penalties totaling $1,894,186, and consumer redress totaling $440,643. Two of these civil penalty judgments, against Dell Computer Corporation for $800,000 and Iomega Corporation for $900,000, are the largest non-fraud penalties ever imposed under the Rule.

"Made in USA" claims

Many Americans prefer to purchase products made in the United States and are interested in the country of origin of the products they buy. According to recent survey data, older Americans are especially interested in this information. In December 1997, the Commission concluded a comprehensive review of "Made in USA" and other U.S. origin claims in product advertising and labeling, and determined to continue to hold "Made in USA" advertising and labeling claims to the "all or virtually all" standard that the Commission has traditionally applied. As part of the review, the Commission received more than one thousand written comments, the majority of which strongly supported the Commission's traditional standard.

The Commission also issued an Enforcement Policy Statement outlining the factors the Commission will consider in determining whether a U.S. origin claim is "deceptive." Under the Commission's standard, voluntary, unqualified U.S. origin claims must be supported by evidence that a product is "all or virtually all" made in the United States. The policy further states that a "product that is all or virtually all made in the United States will ordinarily be one in which all significant parts and processing that go into the product are of U.S. origin. In other words, where a product is labeled with an unqualified 'Made in USA' claim, it should contain only a de minimis, or negligible, amount of foreign content."

Door-to-door sales

The Cooling-Off Rule, 16 CFR Part 429, requires that consumers be given a three-day right to cancel certain sales occurring away from the seller's place of business (often known as "door-to-door sales"). In addition, the Commission, in some administrative cease and desist orders against companies engaged in door-to-door sales, has required companies to allow consumers the right to cancel purchases not covered under the Rule. The Rule and these orders can particularly benefit older Americans who are retired and at home,

and who may be exposed more frequently to high pressure sales tactics by door-to-door or other sellers.

In 1998, the Commission, with the National Association of Consumer Agency Administrators and the National Association of Home Builders Remodelers Council, announced a joint consumer education campaign to provide consumers with a tool kit to protect themselves from home improvement fraud. The kit, "Home Improvement: Tools You Can Use," offers tips consumers can use to head off problems in advance. It is described in more detail in the Consumer Education section of this report. In the materials, consumers are advised to make sure the three-day right to cancel is included in home improvement contracts signed in the consumer's home or at a location other than the contractor's permanent place of business. This right to cancel can help older Americans, who AARP has noted are most vulnerable to unscrupulous door-to-door sellers, cancel ill-considered financial commitments that would otherwise result in financial liens against their homes.

Credit and other financial issues

Whether consumers are in the red or in the black, they must be alert to the possibility of credit fraud. . . . It's hazardous to financial health and well-being . . . .

The Commission responds to numerous credit and related financial issues affecting virtually every consumer. The impact of being harassed about a debt, denied for a loan or subject to credit fraud can be particularly devastating to seniors who may have limited choices for credit and limited resources to informed and objective financial advice.

Debt Collection Practices.—Each year, the Commission receives thousands of consumer complaints regarding harassing and abusive behavior by debt collectors. Many of these letters and telephone calls come from senior citizens. In 1997 and 1998, the Commission brought a number of actions and resolved several actions initiated in prior years, against debt collectors for violations of the Fair Debt Collection Practices Act (FDCPA), 15 U.S.C. §§1692–1692*o*.

In October 1998, one of the largest collection agencies in the country, Nationwide Credit, Inc., agreed to pay a $1 million civil penalty to settle allegations that the company had violated the FDCPA by harassing consumers, making false and misleading representations to consumers, impermissibly contacting third parties about consumers' debts, failing to send required validation notices, and failing to verify debts when requested to do so by consumers. Other actions in 1997 and 1998 against National Financial Services, Lundgren & Associates, P.C., Trans-Continental Affiliates, and United Compucred Collections yielded similar settlements of alleged harrassment, abuse and misrepresentation against debtors.

Equal Credit Opportunity Act.—Among other things, the Equal Credit Opportunity Act (ECOA), 15 U.S.C. §1691 *et seq.*, prohibits creditors from discriminating based on age in determining whether or not to extend credit. The ECOA's implementing Regulation B prohibits creditors from discounting or refusing to consider an applicant's income from a pension or other retirement benefit or from denying credit because an applicant, on the basis of age, does not qualify for credit-related insurance. The ECOA also prohibits dis-

crimination based on the fact that an applicant's income is derived from a public assistance source, including Social Security, which is more likely to be received by the elderly. To help detect discrimination in mortgage credit based on age or other prohibited factors (such as sex or race), Regulation B requires mortgage lenders to take written applications for credit and to record the race/national origin, sex, marital status, and age of applicants. The ECOA also requires written notice to consumers of the reasons for a denial of credit. The Truth in Lending Act (TILA), a related statute, requires that all borrowers receive accurate disclosure of the cost of credit.

In 1997, the Commission entered into two separate but related settlement agreements with The Money Tree, Inc. (Money Tree), a Georgia-based lender and its president. The complaint in the first action charged that Money Tree violated the ECOA by discriminating against elderly consumers and those who received income from public assistance. The complaint alleged that Money Tree discriminated against elderly applicants by discouraging them from applying for credit, denying their applications if they did apply, or offering them credit on less favorable terms than younger applicants because credit-related insurance was not available due to the applicants' age. The complaint alleged that Money Tree discriminated against applicants who received income from public assistance, including Social Security, by imposing stricter loan terms on those applicants than on employed applicants, regardless of income level, and by collecting, or trying to collect, loan payments from public assistance customers before they were due. Further, the complaint alleged that Money Tree required, as a condition of the extension of credit, that applicants who received public assistance participate in a program in which their public assistance payments were deposited into a bank designated by Money Tree while employed applicants were not required to participate in such a program. Under the agreement to settle the ECOA charges, Money Tree paid $75,000 in civil penalties and was barred from discrimination in the future against elderly applicants and applicants who receive public assistance.

The second agreement involving Money Tree settled charges that Money Tree violated the TILA by requiring applicants to purchase some combination of credit-related insurance or auto club membership in order to obtain a loan. These "extras" cost consumers who borrowed $150 to $400 an estimated additional $80, plus interest. The TILA and its implementing Regulation Z require that such mandatory charges be included in the finance charge and annual percentage rate (APR) disclosed to the consumer. According to the complaint, Money Tree failed to do this, and instead, wrongfully included the extras in the amount financed in violation of the TILA and Regulation Z. The complaint also alleged that Money Tree engaged in unfair practices in violation of the FTC Act by inducing consumers to sign statements asserting that they had voluntarily purchased the extras, when in fact, they were required to pay for the extras as a condition of receiving the loan. The redress plan under the second agreement required Money Tree to offer all of its current customers the opportunity to cancel the credit-related insurance and to obtain cash refunds or credits.

In 1998, the Commission filed suit against a Washington, D.C. area mortgage lender for violations of the ECOA and Regulation B, among other charges. The complaint against Capital City Mortgage Corporation (Capital City) states that, "[i]n many instances, defendants's borrowers are minority and/or elderly persons living on fixed or low incomes in Washington, D.C., Maryland, and Virginia, who borrow primarily for personal, family, or household purposes." The complaint alleges that Capital City makes high interest rate (20 to 24 percent) loans to those borrowers and that the loans are often interest-only balloon loans in which a borrower, after making payments for the term of the loan, still owes the entire amount of the loan principal. These loans are often secured by the borrowers' homes and typically are made based on the worth of the home rather than on the borrower's creditworthiness or income.

The Commission complaint alleged that this company and its president violated the ECOA and Regulation B by failing to take written applications for mortgage loans; failing to collect required information about the race/national origin, sex, marital status, and age of applicants; failing to provide written notice of adverse action; or when providing notice of adverse action, failing to provide the applicant with: (1) the correct principal reason for the action taken or (2) the correct name and address of the Federal Trade Commission, the federal agency that administers compliance with the ECOA with respect to Capital City. The Commission is seeking civil penalties and injunctive relief for violations of the ECOA.

Home Equity Lending Abuses.—The Commission is taking a variety of steps to address reported abuses in the subprime home equity market, which may disproportionately affect elderly borrowers who are more likely to have equity in their homes. First, the Commission is increasing its enforcement activities to halt subprime lenders who are engaged in abusive lending practices. At the same time, the Commission has been working with states to increase and coordinate enforcement efforts. The Commission also is educating consumers in order to help them avoid potential home equity lending abuses.

The Commission's complaint against Capital City alleged numerous violations of a number of federal laws resulting in serious injury to borrowers, including the loss of their homes. The Commission's complaint alleges that the defendants engaged in deceptive and unfair practices against borrowers at the beginning, during, and at the end of the lending relationship, in violation of Section 5 of the FTC Act. The complaint alleges that the defendants deceived borrowers about various loan terms; for example, by making representations that a loan was an amortizing loan that would be paid off by making payments each month. In fact, the loan was an interest-only balloon loan with the entire loan principal amount due after all of the monthly payments were made. The complaint also alleges that the defendants deceived borrowers during the loan period with phony charges of inflated monthly payment amounts, overdue balances, arrears, service fees, and advances. In addition, the complaint alleges that the defendants deceived borrowers regarding amounts owed to pay off the loans. Further, the complaint alleges that the defendants violated the FTC Act by: withholding some loan proceeds while requiring a borrower to make monthly

payments for the entire loan amount; foreclosing on borrowers who were in compliance with their loan terms; and failing to release the company's liens on title to borrowers' homes even after the loans were paid off. The complaint states that, after foreclosing, Capital City would buy the properties at auction for prices much lower than the appraised value of the properties. In addition to the Commission's allegations of violations of the FTC Act, ECOA, and FDCPA discussed above, the Commission also charged Capital City with violations of the TILA.

In addition to its casework and ongoing investigations of alleged home equity abuses by other lenders, the Commission is sharing its knowledge and experience with other enforcement agencies and with consumers. During 1997, the Bureau of Consumer Protection's Division of Credit Practices (now the Division of Financial Practices) held joint law enforcement sessions on home equity lending abuses with state regulators and law enforcers in six cities around the country. These training sessions were conducted to assist states in exercising their relatively new enforcement authority under the Home Ownership and Equity Protection Act (HOEPA) amendment to the TILA, a law intended to curb abuses in high rate, high fee mortgage lending, and to share information about recent trends.

Jodie Bernstein, Director of the Commission's Bureau of Consumer Protection, testified before the Senate Special Committee on Aging on home equity abuses in the subprime lending market on March 16, 1998. The Commission recognizes that abuses in the home equity lending market are a serious national problem. Due to sharp growth in the subprime mortgage industry, it appears that the abuses by subprime lenders are on the rise. As a result of unfair and deceptive practices, and other federal law violations by certain lenders, vulnerable borrowers—including the elderly—are facing the possibility of paying significant and unnecessary fees and, in some cases, losing their homes. Using its enforcement authority, the Commission continues to work to protect consumers from these abuses.

CONSUMER EDUCATION ACTIVITIES AFFECTING OLDER CONSUMERS

In addition to its law enforcement activities, the Commission, through its Office of Consumer and Business Education (OCBE), is involved in preparing, promoting and distributing a variety of consumer publications and broadcast materials in print and on the Web. Many of the subjects are of significant interest to older consumers. In addition, in the past two years, staff members of the Commission and the Commission have spoken to news reporters [11] and local groups such as the Pueblo Advisory Council on Aging and the Colorado Coalition for Elder Rights and Adult Protection on issues of particular interest to older adults.

Summary of 1997–1998 consumer education activities

During calendar years 1997–1998, the Commission published more than 150 education materials covering a broad range of consumer protection topics. More than 45 are of special interest to

[11] For example, staff in the Denver regional office participated with other law enforcement and the AARP in a television show on telemarketing fraud, which evoked more than 2,000 calls to the station.

older Americans. Most FTC consumer publications are not age-specific. However, publications on certain topics, such as telemarketing scams, health care, funeral services, investments, credit issues, and the Internet, highlight many of the needs and concerns of older citizens. In order to reach consumers, the message gets delivered through brochures, one-page alerts, bookmarks, postcards, and public service announcements on the Web and in the classified ad sections of newspapers.

Elder care issues

An estimated 22.4 million U.S. households—nearly one in four—now are providing care to a relative or friend aged 50 or older or have provided care during the previous 12 months, according to a recent survey by the National Alliance for Caregiving and the American Association of Retired Persons (AARP). Other surveys suggest that today's Baby Boomers—adults born between 1946 and 1965—likely will spend more years caring for a parent than for their children. A/PACT ("Aging Parents Adult Children Together") is a series of 10 articles produced by the Federal Trade Commission in partnership with AARP that introduce elder care issues to aging parents and their adult children. The articles provide information and encourage families to explore options and make careful decisions that can help maximize independence, comfort and quality of life. The series begins with an article about protecting elders against fraud. Subsequent articles introduce care needs like daily money management services, making homes safe for elders, alternative living arrangements, and long-term care insurance. The articles are written by medical, legal, financial and gerontology experts, as well as caregiver support organizations. Each article includes a list of resources for more information. The series was distributed by the FTC, AARP, and a number of other private-sector partners.

Informing consumers about common frauds

The FTC produced education pieces that focus on a variety of fraudulent enterprises and offer tips on how to recognize and avoid these scams. One offensive scheme involves fraudulent charitable fundraising. As part of Operations False Alarm and Missed Giving, the Commission published the following consumer materials with the National Association of Attorneys General (NAAG): *Make Your Donations Count, Charitable Donations: Give or Take, and Dialing for Dollars: When Fund-raisers Call.* The publications identify deceptive fundraising schemes and suggest ways to avoid becoming a victim.

In connection with its efforts to inform consumers about fraudulent prize promotions, the Commission published materials with NAAG and the U.S. Postal Inspection Service: *Is There a Bandit in Your Mailbox? Wanted: The Bandit in Your Mailbox, The Mailbox Bandit and How to Spot the Bandit in Your Mailbox.* The materials tell consumers how to recognize and avoid mass mail scam artists who use direct mail, e-mail and illegal, unsolicited faxes to hype bogus sweepstakes, travel scams, chain letters, illegal foreign lotteries and sham prize offers.

Additional telemarketing brochures issued during 1997–98 include: *Telemarketing Travel Fraud* with the American Society of Travel Agents, *Reloading Scams: Double Trouble for Consumers, Putting Cold Calls on Ice and Magazine Subscription Scams.*

At the local level, the elderly in many cultures and communities seek advice on business transactions from their religious leaders, particularly where they may not have adult children, lawyers, or accountants to consult. Commission staff continued the partnership, that began in 1995, with the Harlem Consumer Education Council and the Harlem Branch Office of the New York State Attorney General. Workshops were conducted at a Harlem church for ministers, priests, and rabbis on a wide range of consumer issues, including the continued victimization of older Americans via telemarketing fraud and door-to-door sales.

Commission staff also continue to reach out to seniors through conferences, presentations and participation with various partner-led education efforts. For example, in Denver, Colorado, Commission staff continued to team with the Colorado Attorney General, the Denver District Attorney, the Better Business Bureau, and the American Association of Retired Persons (AARP) to sponsor a conference to educate seniors about all types of fraud, including telemarketing fraud, under the group name Seniors Against Fraud and Exploitation (SAFE). In the Seattle area, commission staff also continued to train student and senior volunteers to give presentations on telemarketing fraud to senior centers.

Finally, Commission staff participated in two "reverse boilerrooms" coordinated by AARP: one in Illinois the other in Denver. The reverse boilerroom is a means of providing consumer education to persons whose names appear on lead, or "mooch," lists and therefore are particularly likely to be contacted by fraudulent telemarketers. The volunteers in a reverse boilerroom call consumers on the lists, talk with them about the risks of telemarketing fraud, and inform them that their names and telephone numbers are circulating among real boilerroom scam artists.

Health

Recent advances in treating impotence have opened the floodgates for bogus remedies for this condition. The Commission produced *The Truth About Impotence Treatment Claims* to help consumers evaluate claims that many want to believe but shouldn't.

As part of Project Workout with the American College of Sports Medicine, the American Council on Exercise, the American Orthopaedic Society of Sports Medicine and Shape Up America!, the Commission published a series of materials on buying exercise equipment: *Pump Fiction: Tips for Buying Exercise Equipment, The Muscle Hustle: Test Your Exercise I.Q. and Avoiding the Muscle Hustle.*

Other health-related publications produced during this period include: *Sound Advice on Hearing Aids and Generic Drugs: Saving Money at the Pharmacy.*

Funerals

Consumers continue to request copies of *Caskets and Burial Vaults and Funerals: A Consumer Guide* which explain their rights

under the FTC's Funeral Rule. During this period OCBE distributed more than 320,000 copies of the brochures and received nearly 14,000 hits on the FTC web site.

Credit and financial matters

Credit and financial issues that have a direct impact on older consumers were among the topics of several publications distributed by the FTC in 1997–98. *Getting Credit When You're Over 62, How to Dispute Credit Report Errors, Credit and ATM Cards: What To Do If They're Lost or Stolen, Fair Credit Reporting and Avoiding Credit and Charge Card Fraud emphasize and explain consumer rights under the law.*

OCBE also participated in the Financial Services Education Coalition (FSEC) to produce *Helping People In Your Community Understand Basic Financial Services: A Community Educators Guide.* The Guide, which also contains a series of consumer fact sheets, is intended for use with a variety of audiences who do not have accounts with financial institutions or who need basic information about how to use accounts. The precipitating factor for the formation of the Coalition was the Department of the Treasury's EFT 99 initiative requiring Direct Deposit for most federal payments by January 2, 1999.

On the "homefront" during 1997, OCBE worked with the D.C. Office of the Corporation Counsel and the D.C. Department of Consumer and Regulatory Affairs to produce, promote and distribute the Consumer Alert *Thinking About a Home Improvement? Don't Get Nailed.* This successful effort was expanded and taken nationwide in 1998 with the National Association of Home Builders Remodeler™ Council and the National Association of Consumer Agency Administrators. The consumer education kit, *Home Improvement: Tools You Can Use,* contains just about everything an organization needs to execute a community education campaign to help consumers learn about home improvements and how to avoid becoming a victim of fraudulent contractors. The kit includes: campaign backgrounder; instructions and content list; *Home Sweet Home . . . Improvement*—Facts for Consumers; two consumer quizzes: *Test Your Skills at Hiring a Home Improvement Contractor; Test Your Skills at Avoiding a Home Repair Nightmare;* bookmark—*Home Improvement. Tips for Hiring a Contractor;* two scripts for radio PSAs; a community forum script/presentation—*Seven Key Words to Hammer Home the Message;* sample proclamation; glossary of home improvement terms; sample press release—*Local Officials on Home Improvement. Don't Get Nailed;* newsletter article—*Hiring a Home Improvement Contractor. Don It Get Nailed;* sample editorial; and two sets of "ads" for the appropriate sections of the classifieds or phone directories—home improvement and home repair and maintenance.

The Commission also published *High-Rate, High-Fee Loans (Section 32 Mortgages)* to alert homeowners to their rights under the Home Ownership and Equity Protection Act (HOEPA). In conjunction with the filing of the Capital City complaint, the Commission put out two publications to help consumers recognize and avoid home equity scams and abuses: *Avoiding Home Equity Scams and Home Equity Loans: Borrowers Beware.*

Additional housing-related brochures include: *After a Disaster. Hiring a Contractor, Avoiding Home Equity Scams, Home Equity Loans: Borrowers Beware, Reverse Mortgages: Cashing in on Home Ownership and Home Equity Loans: The Three Day Cancellation Rule.*

Internet

The Commission has worked hard to bring consumers up to speed about the Internet. The Commission recently posted the privacy information page, a one-stop site for consumers to find out how to protect their personal information. In cooperation with NAAG, the Commission issued *Site-Seeing on the Internet: A Consumer's Guide to Travel in Cyberspace,* highlighting the kinds of services available in cyberspace and offering tips on protecting personal information. Other Interned-related consumer publications include: *Net-Based Business Opportunities: Are Some Flopportunities?, Cybersmarts: Tips for Protecting Yourself When Shopping Online* with American Express Company, Call For Action, and the Direct Marketing Association, *Online Auctions: Going, Going, Gone and How to Be Web Ready.*

The Commission is also attempting to use new technologies such as the internet to reach consumers who might get taken by the slick appeal of con artists on the internet. The FTC has posted eleven "teaser" sites. These are fake scam sites that contain solicitations and phrases like those found on fraudulent web pages. As a consumer clicks through a "teaser" site, he or she eventually arrives at a warning that states, "If you responded to an ad like this one, You Could Have Been Scammed!" The consumer then receives some helpful tips and may link back to FTC.GOV for more information about how to avoid online fraud.

Access to FTC publications

In addition to disseminating print versions of its materials through a well-developed distribution mechanism, all consumer publications produced by the agency are available online through FTC ConsumerLine at www.ftc.gov.

In December 1997, the FTC debuted the U.S. Consumer Gateway at www.consumer.gov the first Internet site to provide "one-stop" access to federal consumer information. The Gateway offers information from federal agencies arranged by subject. Each of the site's 10 major subject areas, including Food, Health, Money, Product Safety, and Technology, has subcategories allowing consumers to locate and link to appropriate and late-breaking information quickly and easily. The web site is a cooperative effort among federal agencies, including the Food and Drug Administration, National Highway Traffic Safety Administration, Securities and Exchange Commission, Department of Agriculture, Federal Deposit Insurance Corporation, Environmental Protection Agency, Federal Communications Commission, Treasury, Federal Reserve Board, Centers for Disease Control and Prevention, and the State Department Bureau of Consular Affairs. The initiative to develop consumer.gov was led by the FTC's Bureau of Consumer Protection. As the "host" agency, the FTC maintains the site server and provides technical support.

CONCLUSION

This report summarizes Commission programs from 1997 and 1998 that may be of particular interest or usefulness to older Americans. Through its law enforcement and consumer education efforts, the Commission strives to provide a fair and competitive marketplace where older consumers, and their younger counterparts, can make decisions and choose their purchases from a competitive range of options and on the basis of complete and truthful information.

ITEM 21—GENERAL ACCOUNTING OFFICE

CALENDAR YEARS 1997 AND 1998 REPORTS AND CORRESPONDENCE ON ISSUES AFFECTING OLDER AMERICANS

During calendar years 1997 and 1998, GAO issued 132 reports on issues affecting older Americans. Of these, 70 were on health, 3 on housing, 35 on income security, and 24 on the Department of Defense (DOD) and veterans.

HEALTH ISSUES

Alzheimer's disease: Estimates of prevalence in the United States (GAO/HEHS–98–16, 01/28/98)

At least 1.9 million Americans age 65 years or older suffered from Alzheimer's Disease in 1995, more than half of whom experienced moderate to severe cases of the illness. The prevalence of Alzheimer's increases sharply with age: Most of the estimated 1.9 million cases were among persons aged 75 to 89. Projecting the number of persons with Alzheimer's Disease gives some indication of the long-term care and research challenges facing the United States as people grow older. On the basis of projections of longevity, GAO estimates that more than 2.9 million Americans will suffer from the disease by the year 2015; of these, more than 1.7 million will need active assistance in personal care. Because of the uncertainty surrounding current estimates of Alzheimer's Disease, several studies are now underway, supported by the National Institute on Aging, that should provide better estimates of the prevalence of Alzheimer's Disease among African-Americans, Hispanics, and other subpopulations.

California nursing homes: care problems persist despite Federal and State oversight (GAO/HEHS–98–202, 07/27/98)

Overall, despite federal and state oversight, some California nursing homes are not being monitored closely enough to guarantee the safety and welfare of their residents. Unacceptable care continues to be a problem in many nursing homes. GAO found that nearly one in three California nursing homes was cited by state surveyors for serious or potentially life-threatening care problems. Moreover, GAO believes that the extent of serious care problems portrayed in federal and state data is likely to be understated. Nursing homes generally could predict when their annual on-site reviews would occur and, if inclined, could take steps to mask problems. GAO also found irregularities in homes' documentation of the care provided to their residents, such as missing pages of clinical notes needed to explain a resident's injury later observed by a phy-

sician. Finally, GAO found many cases in which California Department of Health Services surveyors did not identify serious care problems, including dramatic weight loss, failure to prevent bed sores, and poor management of incontinence. Even when the state identified serious shortcomings, the Health Care Finance Administration's (HCFA) enforcement policies have not ensured that the deficiencies are corrected and stay that way. For example, California state surveyors cited about one in 11 nursing homes in GAO's analysis--accounting for more than 17,000 resident beds--for violations in both of their last two surveys that resulted in harm to residents. Yet HCFA generally took a lenient stance toward many of these facilities. GAO recommends a less predictable schedule of inspections for all nursing homes and prompt imposition of sanctions when violations are found. GAO summarized this report in testimony before Congress; see: *California nursing homes: Federal and State oversight inadequate to protect residents in homes with serious care violations (GAO/T–HEHS–98–219, July 28, 1998)*

Cancer clinical trials: Medicare reimbursement denials (GAO/HEHS–98–15R, 10/14/97).

Pursuant to a congressional request, GAO determined the potential effect of the proposed Medical Cancer Clinical Trial Coverage Act by estimating the current rate at which Medicare carriers deny reimbursements for routine patient care costs when beneficiaries are enrolled in cancer clinical trials.

GAO noted that: (1) its survey method did not allow it to give a precise national estimate of the rate at which reimbursement is denied for Medicare beneficiaries enrolled in cancer clinical trials; and (2) the results suggest that denial of reimbursement is relatively rare, given the populations and time period of its review.

Comments on H.R. 4229: A Proposal for a home health prospective payment system (GAO/HEHS–97–144R, 05/28/97).

Pursuant to a congressional request, GAO reviewed H.R. 4229, introduced in the 104th Congress, which would require the Health Care Financing Administration (HCFA) to establish, after congressional approval, a prospective payment system (PPS) for Medicare home health care 4 years after enactment that would pay fixed rates for episodes of care.

GAO noted that: (1) home health agencies (HHA) would be paid on a per visit basis with rates for each type of visit equal to the national average Medicare payment in 1994, adjusted for geographic wage differences and updated for inflation using the Medicare home health market basket index; (2) the transitional payment methods would give HHA incentives to reduce costs per visit, but would provide little if any incentive for many agencies to control the number of visits furnished; (3) Medicare's increased costs for home health have been driven much more by increased numbers of visits per beneficiary and more beneficiaries being served than by growth in cost per visit; (4) basing the limits on episodes in phase II would at best provide weak incentives to control the number of visits; (5) as GAO reported in 1996, the average number of visits is skewed by a substantial portion of patients who receive extraordinarily high numbers of visits and by the significant vari-

ation in the average number of visits supplied by different HHAs; (6) thus, while over time such a payment method might provide incentives to hold down the growth in visits per episode, the short-term effects are not likely to be significant; (7) a potential problem with an episode payment system with stronger cost control incentives is that HHAs might respond by reducing the number of visits during the episode, potentially lowering the quality of care; (8) another problem with the phase II proposal is that it uses the 18 case mix categories for HCFA's PPS demonstration project, which HCFA has stated are not sufficiently developed for general use and explain less than 10 percent of the variation in cost across patients; (9) efforts to identify fraud and abuse indicate that substantial amounts of noncovered care are likely to be reflected in HCFA's home health care utilization data; (10) similar concerns exist regarding the home health cost data base; (11) the percentage of HHAs subjected to field audits has generally decreased over the years, as has the extent of auditing done at the facilities that are audited; (12) for these reasons, there is little assurance that HCFA's cost data reflect only reasonable costs that are related to patient care, and using these data to set payment rates and determine extra payments to HHAs could result in windfall profits for them; (13) GAO believes that it is questionable whether savings would be realized by Medicare if H.R. 4229 was adopted; and (14) moreover, mechanisms do not exist to protect beneficiaries from potential quality of care problems that could arise from the incentives to shorten visit times and decrease the number of visits in an episode of care.

Federal health programs: Comparison of Medicare, the Federal Employees Health Benefits Program, Medicaid, Veterans' Health Services, Department of Defense Health Services, and Indian Health Services (GAO/HEHS–98–231R, 08/07/98)

GAO compared the Medicare program with five other federal health programs: the Federal Employees Health Benefits Program (FEHBP); the Medicaid and Department of Veterans' Affairs (VA) health programs; the Department of Defense's (DOD) TRICARE health program; and the Indian Health Service (IHS). GAO also compared key features of these programs, including: (1) administrative structures, including the number of pages of legislation and regulation; (2) benefit design, including benefits covered and out-of-pocket costs to beneficiaries; (3) costs, including per capita costs and growth rates; and (4) patient and provider satisfaction.

GAO noted that: (1) the programs' approaches to financing health care for their eligible populations differ markedly; (2) these differences are generally attributable to the programs' serving different eligible populations and the programs' evolving relatively independently; (3) FEHBP serves as an insurance purchaser by contracting with several hundred private health plans to offer health benefits to nearly 9 million federal employees, retirees, spouses, and dependents; (4) FEHBP administrators negotiate premiums and benefits with participating health plans, but the program does not directly reimburse claims or directly provide health care services; (5) the largest federal health programs, Medicare and Medicaid, have traditionally acted as insurers for their bene-

ficiaries by reimbursing private health care providers for a defined set of health care services; (6) thus, Medicare and Medicaid administrators directly perform or contract for many of the claims handling and health care provider relations responsibilities that private health plans provide for FEHBP; (7) both Medicare and Medicaid, however, have increasingly allowed or required their enrollees to choose alternative benefit packages offered by health maintenance organizations and other private managed care plans more closely resembling FEHBP by serving as insurance purchasers for at least a portion of their enrollees; (8) VA's and IHS' health programs are mainly direct health care providers that own hospitals and other health care facilities and employ or contract directly with physicians and other health care professionals to provide services to eligible beneficiaries; (9) DOD's TRICARE also mainly provides direct health care services but integrates its direct delivery system with private health plans and providers, thereby also serving as an insurance purchaser; (10) these direct care programs' approach involves the federal government's owning and operating a network of health care facilities and managing health care professionals as employees, a distinctly different approach to financing health care than that used by FEHBP, Medicare, or Medicaid; (11) in addition, several federal health programs perform a public role beyond financing health care services for their eligible populations; and (12) these roles include funding or conducting health care research or graduate medical education; providing additional funds to hospitals that serve large populations of low-income people; establishing physician and hospital payment systems that are adapted by other federal health programs and private health plans; and providing public health services.

Health care services: How continuing care retirement communities manage services for the elderly (GAO/HEHS–97–36, 01/23/97)

Continuing care retirement communities provide their residents with various services—from housing to long-term care to recreation--in an effort to bring the benefits of managed care to the elderly. About 350,000 residents live in 1,200 of these communities nationwide, most of which are private, nonprofit agencies, often with religious affiliations. The communities GAO report examined managed to meet the needs of both healthy residents and those with chronic conditions. They use active strategies to promote health, prevent disease, and detect health problems early by encouraging exercise, proper nutrition, social contacts, immunizations, and periodic medical exams. Many of these communities also have teams of nurses, social workers, rehabilitation specialists, doctors, and dieticians to plan and manage residents' care. Active monitoring of residents with chronic diseases, such as arthritis, hypertension, and heart disease, is an integral part of this coordinated, multidisciplinary approach to managing care. Although the health benefits of these practices are generally recognized, little evidence exists to demonstrate health care cost savings.

HCFA: Inpatient hospital deductible and hospital and extended care services coinsurance amounts for 1999 (GAO/OGC–99–9, 11/05/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on inpatient hospital deductible and hospital extended care services coinsurance amounts for 1999. GAO noted that: (1) the new rule would announce coinsurance amounts for services furnished in calendar year 1999 under Medicare's hospital insurance program; and (2) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicaid Program—Coverage of personal care services (GAO/OGC–97–64, 09/30/97)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on Medicaid coverage of personal care services. GAO noted that: (1) the rule would revise the requirements for Medicaid coverage of personal care services furnished in a home or other location as an optional benefit, effective for services furnished on or after October 1, 1994; and (2) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicaid Program—State allotments for payment of Medicare part B premiums for qualifying individuals in Federal fiscal year 1998 (GAO/OGC–98–28, 02/09/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on the Medicaid program. GAO noted that: (1) the rule would announce the federal fiscal year 1998 state allotments that are available to pay Medicare Part B premiums for two new eligibility groups and describe the methodology used to determine each state's allotment; and (2) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare and Medicaid programs; hospital conditions of participation; identification of potential organ, and eye donors and transplant hospitals' provision of transplant-related data (GAO/OGC–98–58, 07/07/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on Medicare and Medicaid programs' hospital conditions on participation, identification of potential organ, tissue, and eye donors, and transplant hospitals' provision of transplant-related data. GAO noted that: (1) the rule would: (a) revise current hospital conditions of participation relating to organ procurement by modifying the relationship between hospitals and organ procurement organizations (OPOs) in order to increase the number of organs available for donation and transplantation; (b) require that a hospital have an agreement with an OPO, under which it will contact the OPO in a timely manner about individuals who die or whose death is imminent in the hospital; (c) require hospitals to have an agreement with at least one tissue bank and eye bank for referrals; (d) require hospitals to collaborate with the OPO in notifying families of potential donors of their donation options and work cooperatively with OPOs, tissue,

and eye banks, in educating hospital staff on donation issues, reviewing death records to improve identification of potential donors, and maintaining potential donors while testing and placement of organs occurs; and (e) require transplant hospitals to provide organ-transplant-related data as requested by the Organ Procurement and Transplantation Network, the Scientific Registry, and OPOs; and (2) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare and Medicaid programs—Salary equivalency guidelines for physical therapy, respiratory therapy, speech language pathology, and occupational therapy services (GAO/OGC–98–30, 02/23/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on salary equivalency guidelines. GAO noted that: (1) the rule would revise the salary equivalency guidelines for Medicare payments for the reasonable costs of physical therapy, respiratory therapy, speech language pathology and occupational therapy services furnished under arrangements by an outside contractor; and (2) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare—Physician fee schedule for calendar year 1998 and payment policies and relative value unit adjustments and clinical psychologist fee schedule (GAO/OGC–98–10, 11/12/97)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on changes affecting Medicare Part B payment. GAO noted that the rule: (1) implements changes relating to physician services, including geographic practice cost index changes, clinical psychologist services, physician supervision of diagnostic tests, establishment of independent diagnostic testing facilities, the methodology used to develop reasonable compensation equivalent limits, payment to participating and nonparticipating suppliers, global surgical services, caloric vestibular testing, and clinical consultations; (2) implements provisions in the Balanced Budget Act of 1997 relating to practice expense relative value units, screening mammography, colorectal cancer screening, screening pelvic examinations, and EKG transportation; and (3) finalizes the 1997 interim work relative value units and issues interim work relative value units for new and revised codes for 1998. GAO noted that HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare Program: Changes to the hospital inpatient prospective payment systems and fiscal year 1999 rates (GAO/OGC–98–70, 08/14/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on changes to the hospital inpatient prospective payment systems and fiscal year 1999 rates. GAO noted that: (1) the final rule would revise the Medicare hospital inpatient prospective payment systems for operating costs and capital-related costs to implement applicable statutory requirements; (2) the final rule would implement applicable statutory requirements concerning the payment for the direct costs

of graduate medical education; and (3) HCFA complied with the applicable requirements in promulgating the rule.

HCFA: Medicare Program—Establishment of the Medicare+Choice Program (GAO/OGC–98–60, 07/13/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on the establishment of the Medicare Plus Choice program. GAO noted that: (1) the rule would implement provisions of the Balanced Budget Act of 1997 which established a new Medicare Plus Choice program that significantly expands the health care options available to Medicare beneficiaries; (2) under the program, eligible individuals may elect to receive Medicare benefits through enrollment in one of an array of private health plan choices beyond the original Medicare program or the plans now available through managed care organizations; and (3) HCFA complied with applicable requirements in promulgating the rule with the exception of the 60-day delay in the effective date required by the Small Business Regulatory Enforcement Fairness Act of 1996.

HCFA: Medicare Program—Limited additional opportunity to request certain hospital wage data revisions for FY 1999 (GAO/OGC–99–20, 12/08/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on providing hospitals with a limited additional opportunity to request certain hospital wage data revisions for fiscal year (FY) 1999. GAO noted that: (1) the final rule would provide hospitals with a limited additional opportunity to request certain revisions to their wage data used to calculate the FY 1999 hospital wage index; and (2) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare Program—Medicare coverage of and payment for bone mass measurements (GAO/OGC–98–59, 07/09/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on Medicare coverage and payment for bone mass measurements. GAO noted that: (1) the final rule with comment period would provide for uniform coverage of, and payment for, bone mass measurements for certain Medicare beneficiaries for services finished on or after July 1, 1998; (2) the rule would implement section 4106(a) of the Balanced Budget Act of 1997; and (3) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare Program—Prospective payment system and consolidated billing for skilled nursing facilities (GAO/OGC–98–50, 05/27/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on Medicare's prospective payment system and consolidated billing for skilled nursing facilities. GAO noted that: (1) the rule would implement provisions of the Balanced Budget Act of 1997 related to Medicare payment for skilled nursing facility services; (2) these provisions would include the implementation of a Medicare prospective pay-

ment system for skilled nursing facilities, consolidated billing, and a number of related changes; (3) the retrospective payment system described in the rule replaces the retrospective reasonable cost-based system currently utilized by Medicare for payment of skilled nursing facility services under Part A of the program; and (4) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare Program—Revisions to payment policies and adjustments to the relative value units under the physician fee schedule for calendar year 1999 (GAO/OGC–99–15, 11/17/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on payment policies and adjustments to the relative value units under the physician fee schedule for calendar year 1999. GAO noted that: (1) the rule would make several policy changes affecting Medicare Part B payments; (2) the changes that relate to physicians' services include: (a) resource-based practice expense relative value units; (b) medical direction rules for anesthesia services; and (c) payment for abnormal Pap smears; (3) the rule would also revise HCFA's payment policy for nonphysician practitioners, for outpatient rehabilitation services, and for some drugs and biologicals; (4) it further allows physicians, under certain circumstances, to opt out of Medicare and to provide covered services through private contractors and permits payment for professional consultations via interactive telecommunications systems; and (5) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare Program—Schedule of limits on home health agency costs per visit for cost reporting periods beginning on or after October 1, 1997 (GAO/OGC–98–25, 01/27/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on the Medicare Program's schedule of limits on home health agency (HHA) costs per visit for cost reporting periods beginning on or after October 1, 1997. GAO noted that: (1) the notice sets forth a revised schedule of limits on HHA costs that may be paid under the Medicare Program for cost reporting periods beginning on or after October 1, 1997; (2) in addition, the notice provides, in accordance with the Balanced Budget Act of 1997, that: (a) there be no changes in the home health per visit limits for cost reporting periods beginning on or after July 1, 1997, and before October 1, 1997; (b) the establishment of the cost per visit limitations for cost reporting periods beginning on or after October 1, 1997, be based on 105 percent of the median of the labor-related and nonlabor per visit costs for freestanding HHAs; (c) there be no updates in the home health costs limits for cost reporting periods beginning on or after July 1, 1994, and before July 1, 1996; and (d) the wage index value that is applied to the labor portion of the per visit limitations be based on the geographical area in which the home health service is located; and (3) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Medicare Program—Schedule of per-beneficiary limitations on home health agency costs for cost reporting periods (GAO/OGC–98–44, 04/24/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Adminstration's (HCFA) new rule on the schedule of per-beneficiary limitations on home health agency costs for cost reporting periods. GAO noted that: (1) the new rule would set forth a new schedule of limitations on home health agency costs under the Medicare program; and (2) HCFA complied with the applicable requirements in promulgating the rule.

HCFA: Medicare Program—Scope of Medicare benefits and application of the outpatient mental health treatment limitation to clinical psychologist and clinical social worker services (GAO/OGC–98–47, 05/08/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) final rule on the scope of Medicare benefits and application of the outpatient mental health treatment limitation to clinical psychologist and clinical social worker services. GAO noted that: (1) the final rule would conform the requirements for Medicare coverage of services furnished by a clinical psychologist or as an incident to the services of a clinical psychologist and for services furnished by a clinical social worker with section 6113 of the Omnibus Budget Reconciliation Act of 1989, section 4157 of the Omnibus Budget Reconciliation Act of 1990, and section 147(b) of the Social Security Act Amendments of 1994 (SSA '94); (2) the rule would also address the outpatient mental health treatment limitation as it applies to clinical psychologist and clinical social worker services; (3) the final rule would also conform the Medicare program to section 104 of the SSA '94, which provides that a Medicare patient in a Medicare-participating hospital who is receiving qualified psychologist services may be under the care of a clinical psychologist with respect to those services, to the extent permitted by state law; and (4) HCFA complied with applicable requirements in promulgating the rule.

HCFA: Monthly actuarial rates and monthly supplementary medical insurance premium rate beginning January 1, 1999 (GAO/OGC–99–10, 11/05/98)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on the Medicare Program monthly actuarial rates and monthly supplementary medical insurance premium rates. GAO noted that: (1) the rule would announce the monthly actuarial rates for aged (age 65 or over) and disabled (under age 65) enrollees in the Medicare Supplementary Medical Insurance (SMI) program; (2) it would also announce the monthly SMI premium rate to be paid by all enrollees during 1999; (3) the monthly actuarial rates for 1999 are $92.30 for aged enrollees and $103.00 for disabled enrollees; (4) the monthly SMI premium rate is $45.50; and (5) HCFA complied with the applicable requirements in promulgating the rule.

Health Care Financing Administration: Medicare Program—Changes to the hospital inpatient prospective payment systems and fiscal year 1998 rates (GAO/OGC–97–62, 09/17/97)

Pursuant to a legislative requirement, GAO reviewed the Health Care Financing Administration's (HCFA) new rule on the changes to Medicare hospital inpatient prospective payment systems. GAO noted that: (1) the rule would revise the Medicare hospital inpatient prospective payment systems for operating costs and capital-related costs to implement necessary changes resulting from the Balanced Budget Act of 1997, P.L. 105–33, and changes arising from HCFA's continuing experience with the system; (2) because of the recent enactment of the Balanced Budget Act of 1997 on August 5, 1997, the changes mandated by the act were not included in the notice of proposed rulemaking and, therefore, were not available for public comment; (3) HCFA has issued this final rule with a comment period on those changes so the public may submit comments until October 28, 1997; and (4) HCFA complied with applicable requirements in promulgating the rule.

High-risk program: Information on selected high-risk areas (GAO/HR-97-30, 05/16/97)

This report contains additional information on 12 areas included in GAO's list of government programs at high risk for waste, fraud, abuse, and mismanagement: defense inventory management, Medicare, supplemental security income, information security, contract management at the Department of Energy, student financial aid, air traffic control modernization, NASA contract management, Customs Service financial management, farm loan programs, National Weather Service modernization, and asset forfeiture programs. It includes descriptions of key open GAO recommendations relevant to each area, the implementation status of those recommendations, and remaining challenges to addressing these high-risk problems. Where possible, GAO has identified the federal dollars involved with each program and discusses federal dollars at risk from abusive or wasteful practices.

High-risk series: Medicare (GAO/HR-97-10, 02/97)

In 1990, GAO began a special effort to identify federal programs at high risk for waste, fraud, abuse, and mismanagement. GAO issued a series of reports in December 1992 on the fundamental causes of the problems in the high-risk areas; it followed up on the status of these areas in February 1995. This, GAO's third series of high-risk reports, revisits these troubled government programs and designates five additional areas as high-risk (defense infrastructure, information security, the year 2000 problem, supplemental security income, and the 2000 decennial census), bringing to 25 the number of high-risk programs on GAO's list. The high-risk series includes an overview, a quick reference guide, and 12 individual reports. The high-risk series may be ordered as a full set, a two-volume package including the overview and the quick reference guide, or as 12 separate reports describing in detail these vulnerable government programs. GAO summarized the high-risk series in testimony before Congress (GAO/T–HR–97–22). Information on the

challenges that the federal government faces in safeguarding Medicare is included in this high-risk report.

High-risk series: An overview (GAO/HR–97–1, 02/97)

In 1990, GAO began a special effort to identify federal programs at high risk for waste, fraud, abuse, and mismanagement. GAO issued a series of reports in December 1992 on the fundamental causes of the problems in the high-risk areas; it followed up on the status of these areas in February 1995. This, GAO's third series of high-risk reports, revisits these troubled government programs and designates five additional areas as high-risk (defense infrastructure, information security, the year 2000 problem, supplemental security income, and the 2000 decennial census), bringing to 25 the number of high-risk programs on GAO's list. The high-risk series includes an overview, a quick reference guide, and 12 individual reports. The high-risk series may be ordered as a full set, a two-volume package including the overview and the quick reference guide, or as 12 separate reports describing in detail these vulnerable government programs. GAO summarized the high-risk series in testimony before Congress (GAO/T–HR–97–22, 2/13/97). A separate high-risk report on Medicare issues (GAO/HR–97–10) provides expanded information from the Medicare summary included in this overview report.

Long-term care: Consumer protection and quality-of-care issues in assisted living (GAO/HEHS–97–93, 05/15/97)

Several federal agencies have jurisdiction over consumer protection and quality of care in assisted living facilities. However, states have the primary responsibility for developing standards and monitoring care. State approaches to oversight vary: some states regulate these facilities under standards developed for the board and care industry, others have developed standards and licensing requirements specifically for assisted living facilities, and some are in the process of developing them. But little is known about the effectiveness of these state approaches or about the extent of problems that assisted living residents may be experiencing. Moreover, concerns have been raised that the rapid growth in the assisted living industry may be outpacing many states' ability to monitor and regulate care. According to some experts, consumers can find themselves in a facility unable to meet their needs. To determine whether an assisted living facility is appropriate for them, prospective residents rely on information supplied by the facility, including contracts that set forth residents' rights and provider responsibilities. However, one recent study found that contracts varied in detail and, in some cases, were vague and confusing. Overall, little is known about the accuracy and adequacy of information furnished to individuals and their families who are considering assisted living. GAO believes that further research may be needed on these consumer protection and quality-of-care issues.

Medicaid: Divestiture of assets to qualify for long-term care services (GAO/HEHS–97–185R, 07/28/97)

Pursuant to a congressional request, GAO reviewed the prevalence of asset transfers to qualify for Medicaid benefits. GAO also

responded to specific questions regarding the new criminal provision of the Health Insurance Portability and Accountability Act.

GAO noted that: (1) it is difficult to determine from available studies the prevalence of divestitures that are made with the purpose of becoming eligible for Medicaid; (2) several limited-scope studies, however, have shown that some individuals do shelter their assets—through transfers, conversions, and other divestitures—despite legislative efforts to discourage this type of activity; (3) for example, studies based on case file reviews in two states showed that from 13 to 22 percent of people who applied for nursing home and other long-term care benefits through Medicaid have transferred their assets; (4) however, the studies also found that divested assets often are not sufficient to pay for even 1 year of nursing home coverage—in some cases, the assets that were transferred could not pay for a single month of such care; and (5) the law's implications for individuals who transfer assets with the purpose of becoming eligible for Medicaid—the only type of divestiture that is subject to criminal penalty—are not clear in several respects.

Medicaid fraud and abuse: Stronger action needed to remove excluded providers from Federal health programs (GAO/HEHS–97–63, 03/31/97)

The Office of Inspector General (OIG) at the Department of Health and Human Services has excluded thousands of providers from participating in federal health care programs because of health care fraud, abuse, or quality-of-care problems. Weaknesses in the exclusion process, however, allow many unacceptable providers to remain on the rolls of federal health programs. These shortcomings include a lack of controls at OIG field offices to ensure that all state referrals are reviewed and acted on promptly, inconsistencies among OIG field offices as to the criteria for excluding providers, lack of oversight to ensure that states make appropriate exclusion referrals to the OIG, and problems that states experience in trying to identify and remove from their programs providers that appear on the OIG's exclusion list. These weaknesses place the health and safety of beneficiaries at risk and compromise the financial integrity of Medicaid, Medicare, and other federal health programs. OIG officials attribute many of these problems to repeated cutbacks in resources during the past several years. Recent legislation, however, addresses this concern by providing the OIG with extra funding, specifically for dealing with health care fraud. Officials said that some of this funding will be used to hire additional staff to process exclusion referrals. The legislation also includes tools and resources to facilitate the identification of unacceptable providers. These tools include a system of unique billing numbers for health care providers and an adverse action data bank, which will record information on any action taken against a health care provider.

Medicare: Application of the False Claims Act to hospital billing practices (GAO/HEHS–98–195, 07/10/98)

The Justice Department is using the False Claims Act, originally enacted during the Civil War to combat contract fraud, to deal with

cases in which hospitals improperly bill Medicare. Justice's use of the False Claims Act includes two major multistate initiatives involving hospitals: the 72-Hour Window Project and the Lab Unbundling Project. The 72-Hour Window Project investigates whether hospitals have separately billed Medicare for outpatient services covered by the Medicare inpatient payment, such as preadmission tests done within 72 hours of admission. Hospitals that do so are, in effect, double-billing Medicare. The Lab Unbundling Project investigates whether hospitals have billed Medicare separately for each blood test done concurrently on automated equipment or billed Medicare for medically unnecessary tests. Under the 72-Hour Window Project, about 3,000 hospitals received demand letters for recovery of overpayments, and about $58 million had been recovered as of April 1998.

Medicare: Clarification of provisions regarding private contracts between physicians and beneficiaries (GAO/HEHS–98–98R, 02/23/98)

GAO reviewed information about section 4507 of the Balanced Budget Act of 1997 (BBA) and issues regarding beneficiaries' access to physicians and their options for private contracting.

GAO noted that: (1) available information indicates that Medicare beneficiaries have ready access to physicians; (2) overall, about 96 percent of physicians accept and treat Medicare patients; (3) while 4 percent of beneficiaries report difficulty obtaining physician care, the amount that Medicare reimburses physicians does not appear to be the cause of this difficulty; (4) Medicare beneficiaries continue to be able to pay out of pocket whenever they do not want a claim submitted on their behalf or when they want to obtain services Medicare does not cover; (5) in addition, section 4507 of the BBA offers beneficiaries a new option for obtaining services from physicians willing to enter into private contracts; (6) however, much of the information that GAO reviewed on this topic contained inaccurate statements or omitted important details; and (7) for example, several documents falsely claimed that the private contracting provisions of the BBA limit, rather than expand, beneficiaries' options for seeking care from physicians.

Medicare: Comparison of Medicare and VA payment rates for home oxygen (GAO/HEHS–97–120R, 05/15/97)

Pursuant to a congressional request, GAO compared the rates paid for home oxygen by Medicare and the Department of Veterans Affairs (VA). GAO noted that: (1) Medicare's fee schedule allowances for home oxygen are significantly higher than the rates by VA, which uses competitive contracting arrangements; (2) Medicare's monthly rate, including allowances for portable units, was about $320 for each home oxygen patient for the first quarter of fiscal year (FY) 1996; (3) during that same period, VA paid about $155 per month for each patient, according to GAO's analysis of all oxygen supplies, services, and portable units provided to a nationwide sample of 5,000 VA patients; (4) GAO analyzed differences between the Medicare and VA oxygen programs that could make servicing a Medicare patient more costly than servicing a VA patient; (5) GAO's analysis included consideration of the administra-

tive burden associated with filing Medicare claims; (6) on the basis of this analysis, GAO concluded that adding a 30-percent adjustment to VA's payment rates adequately reflects the higher costs suppliers incur when servicing Medicare beneficiaries; (7) the VA payment rate, after the 30-percent adjustment, was about $200 per month, or $120 less than Medicare; and (8) if Medicare had paid oxygen suppliers at the adjusted VA rates, the Medicare program would have saved over $500 million in FY 1996.

Medicare: Concerns with physicians at teaching hospitals (PATH) audits (GAO/HEHS–98–174, 07/23/98)

About 1,200 hospitals in the United States have graduate medical education programs to train doctors in medical specialties after they have completed medical school. In December 1995, the University of Pennsylvania, without admitting wrongdoing, entered into a voluntary settlement with the Justice Department, agreeing to pay about $30 million in disputed billings and damages for Medicare billings by teaching physicians. This settlement resulted from an audit done by the Department of Health and Human Services' Office of Inspector General (OIG). Concerned that such problems might be widespread, the OIG, in cooperation with the Justice Department, launched a nationwide initiative—now commonly known as Physicians at Teaching Hospitals (PATH) audits—to review teaching physician compliance with Medicare billing rules. As of April 1998, five additional PATH audits had been resolved, resulting in settlements, in three of these cases, totaling more than $37 million. The PATH initiative has generated considerable controversy. The academic medical community disagrees with the OIG about the billing and documentation standards that were in effect during the periods under review. The medical community also contends that the Justice Department is coercing settlements from teaching institutions through threats of federal lawsuits. This report determines (1) whether the Department of Health and Human Services' OIG has a legal basis for conducting PATH audits, (2) whether the OIG has followed an acceptable approach and methodology in conducting the audits, and (3) the significance of the billing problems cited in selected audits.

Medicare: Coverage of pumps used to administer intravenous drugs (GAO/HEHS–99–16R, 11/16/98)

Pursuant to a congressional request, GAO reviewed the advantages and disadvantages of providing Medicare coverage for disposable infusion pumps, focusing on: (1) the clinical benefits and limitations of disposable infusion pumps; (2) the factors that affect whether a durable or disposable infusion pump is less expensive to use for home infusion; (3) some Medicaid and private insurance plans' home infusion therapy coverage policies; and (4) issues raised by Medicare's policy that links coverage of intravenous (IV) drugs to the use of durable infusion pumps.

GAO noted that: (1) views on benefits and limitations of disposable infusion pumps vary across providers and by type of IV drug; (2) for example, most clinicians and pharmacists GAO interviewed said that disposable infusion pumps can be used to administer IV antibiotics and IV antivirals; (3) they also agreed that disposable

pumps were not appropriate for IV pain medications; (4) however, there was no clear consensus on the use of disposable infusion pumps with other infusion drugs, such as certain chemotherapy drugs; (5) factors affecting the relative cost of disposable versus durable infusion pumps are the type of IV drug being administered and the frequency and duration of the patient's infusion therapy regimen; (6) private health insurers GAO contacted pay suppliers a per diem rate for home infusion therapy regardless of the type of pump used; (7) the per diem rate allows suppliers to choose the type of pump they believe will appropriately deliver the IV drugs at the lowest cost; (8) the IV drugs used with infusion pumps are paid for separately; (9) Medicare, on the other hand, generally does not cover self-administered drugs; (10) however, the Health Care Financing Administration's (HCFA) policy is to pay for IV drugs that must be administered with a durable infusion pump; (11) this raises several issues; (12) under current Medicare policy, if disposable infusion pumps become appropriate for a broader range of IV drugs, Medicare coverage of some IV drugs could be eliminated; and (13) if legislation expands Medicare coverage to include disposable infusion pumps, HCFA may need to reconsider its policy for determining which IV drugs to cover.

Medicare: Data limitations impede measuring quality of care in Medicare ESRD Program (GAO/HEHS–97–137R, 07/11/97)

GAO reviewed the quality of care provided to Medicare end-stage renal disease (ESRD) patients, focusing on: (1) accepted performance standards for measuring quality of care provided to ESRD patients; and (2) the quality of care furnished to ESRD patients between providers such as chain-affiliated and unaffiliated dialysis facilities, and between health maintenance organizations (HMO) and providers paid through the standard Medicare ESRD program.

GAO noted that: (1) most experts GAO interviewed and applicable literature GAO reviewed agree that clinical indicators measuring dialysis effectiveness, anemia, and nutritional status—urea reduction ratio, hematocrit levels, and serum albumin levels, respectively—are valid performance indicators for measuring the quality of care ESRD patients receive; (2) these indicators are currently used by the Health Care Financing Administration (HCFA) to evaluate the care furnished to Medicare beneficiaries with ESRD; (3) almost all experts GAO interviewed and applicable literature GAO reviewed also agreed that these indicators were correlated with morbidity and mortality, the ultimate outcome measures; (4) GAO was unable, however, to evaluate the differences between the quality of ESRD care furnished in chain-affiliated and unaffiliated dialysis facilities or the care provided by HMOs and providers in the standard Medicare ESRD program because of limitations with data availability; (5) existing HCFA data about chain affiliation of dialysis facilities is unreliable; (6) when GAO matched ESRD bene ficiaries in HCFA's Core Indicators files with HCFA data on ESRD beneficiaries who belong to HMOs, GAO found too few beneficiaries belonging to HMOs in each annual sample to give GAO confidence in the results; (7) even after GAO combined the three annual files, the sample size was too small to permit GAO to make reliable inferences about differences in quality of care between the HMO and

non-HMO ESRD populations when comparing beneficiaries with similar characteristics such as age, gender, race, socioeconomic status, and health conditions; (8) if HCFA maintained up-to-date information about the chain affiliations of dialysis facilities and included a larger sample of HMO enrollees in its Core Indicators Project, a comparison could be made of different types of providers and delivery systems that would give GAO confidence in the results; and (9) HCFA program officials agreed and said they would consider collecting data to perform these analyses.

Medicare: Effective implementation of new legislation is key to reducing fraud and abuse (GAO/HEHS–98–59R, 12/03/97)

Pursuant to a congressional request, GAO reviewed Medicare fraud and abuse in both fee-for-service and managed care programs, focusing on: (1) the impact of inadequate payment safeguard funding on efforts to combat abusive billing; (2) ineffective oversight of fee-for-service payments and operations and Medicare managed care plans; and (3) challenges that lie ahead for the effective implementation of recent legislation that addresses fraud and abuse.

GAO noted that: (1) Medicare's size, complexity, and rapid growth make it an attractive target for fraud and abuse; (2) efforts by the Health Care Financing Administration (HCFA), the agency responsible for administering the program, to improve the program safeguards have not been adequate to prevent substantial losses, in part because the resources available to avoid inappropriate payments have been underutilized or not deployed as effectively as possible; (3) because of budget constraints, reviews of claims and related medical documentation and site audits of providers' records have become inadequate to keep up with the dramatic increases in Medicare activity; (4) in addition, Medicare's information systems and claims monitoring processes have not been uniformly effective at spotting indicators of potential fraud, such as suspiciously large increases in reimbursements, improbable quantities of services claimed, or duplicate bills submitted to different contractors for the same service or supply; (5) insufficient oversight has also resulted in little meaningful action taken against Medicare health maintenance organizations (HMO) found to be out of compliance with federal law and regulations; (6) although HCFA has required these HMOs to prepare corrective action plans, it has not employed other available remedies; (7) accumulated evidence of in-home sales abuses coupled with high rates of rapid disenrollment for certain HMOs also indicates that some beneficiaries are confused or are being misled during the enrollment process and are dissatisfied once they become plan members; (8) in addition, consumer information that could help beneficiaries distinguish the good plans from the poor performers has not been made publicly available, limiting the ability of beneficiaries to make informed choices about competing plans; (9) this in turn limits the use of competition to drive out poor quality; (10) recent legislation—the Health Insurance Portability and Accountability Act of 1996 and the Balanced Budget Act of 1997—refocuses attention on various aspects of Medicare fraud and abuse through new program safeguard funding, new civil and criminal penalties, and new program authorities; and (11) however,

while the implementation of these provisions offers the potential to reduce Medicare losses attributable to unwarranted payments, HCFA's history of lengthy delays in implementing legislation gives rise to concern about whether the authorities granted will be deployed promptly and effectively.

Medicare: Fraud and abuse control pose a continuing challenge (GAO/HEHS–98–215R, 07/15/98)

Pursuant to a congressional request, GAO reviewed fraud and abuse in both Medicare's fee-for-service and managed care programs, focusing on: (1) the impact of inadequate program safeguard funding on efforts to combat improper Medicare payments; (2) ineffective management and oversight of fee-for-service payments and operations; and (3) ineffective oversight of Medicare managed care plans.

GAO noted that: (1) although the majority of health care providers participating in Medicare provide quality services and bill the program properly, its size, complexity, and rapid growth make it an attractive target for fraud and abuse; (2) more specifically, the Health Care Financing Administration's (HCFA) past program safeguard efforts have been hindered because budgetary constraints have reduced resources for these efforts as the number of claims has grown; (3) although the Health Insurance Portability and Accountability Act of 1996 (HIPAA) provided HCFA an ensured and increasing funding source for program safeguard efforts, shortcomings in HCFA's management of these efforts have contributed to Medicare losses; (4) for example, HCFA has been slow to employ the funds Congress provided under HIPAA; (5) HCFA has agreed to set contractor program safeguard budgets in a more timely manner in the next fiscal year; (6) in addition, HCFA has not adequately screened providers before admitting them to the Medicare program but is beginning to take steps to tighten admission standards for home health agencies, a well-known problem area; (7) Medicare's managed care program is vulnerable to other forms of fraud and abuse that could be reduced through competition among health maintenance organizations (HMO); (8) HCFA's oversight of the Medicare HMOs has often been ineffective; and (9) furthermore, HCFA's efforts to comply with the Balanced Budget Act of 1997 and provide information about HMO performance to beneficiaries, so that they can make informed choices when selecting an HMO, have been slower than necessary.

Medicare: HCFA can improve methods for revising physician practice expense payments (GAO/HEHS–98–79, 02/27/98)

Medicare physician fee schedule sets forth payments to doctors for more than 7,000 services and procedures, ranging from routine office visits to surgery. Medicare's physician fee schedule payments, which totaled $43 billion in 1997, also influence physicians' non-Medicare income because many other insurers base their payments on Medicare's. The fee schedule was instituted in 1992 to link payments to the resources physicians use to provide a service, rather than to physicians' charges for a service. In June 1997, the Health Care Financing Administration (HCFA) published a notice of proposed rulemaking in the Federal Register describing proposed revi-

sions to the fee schedule. HCFA estimated that the revision would generally increase Medicare payments to physician specialties that provide more office-based services. Some physician groups argued that HCFA based its proposed revisions on invalid data and that the reallocations of Medicare payments would be too severe. This report evaluates HCFA's proposed practice expense revisions and presents information on HCFA's ongoing efforts to refine its data and methodologies. GAO discusses (1) HCFA's approach to estimating the practice expenses directly associated with each medical service or procedure, (2) two methodologies HCFA used to adjust the direct expense estimates, (3) practice expenses excluded or limited by HCFA, (4) HCFA's method for assigning indirect practice expenses to each medical service or procedure, and (5) the potential impact of the new fee schedule allowances on beneficiary access to care.

Medicare: HCFA's use of anti-fraud-and-abuse funding and authorities (GAO/HEHS–98–160, 06/01/98)

Medicare, because of its size and mission, is an attractive target for exploitation. GAO included Medicare in its list of government programs at high risk for waste, fraud, and abuse. (See GAO/HR–97–10, Feb. 1997.) In addition, the Department of Health and Human Services (HHS) Office of Inspector General (OIG) recently estimated that in 1997, 11 percent, or $20 billion, of Medicare fee-for-service payments were inappropriate. The Health Insurance Portability and Accountability Act of 1996 provides important new resources and tools to fight health care fraud, abuse, and inappropriate payments. These new resources include increased funding for anti-fraud-and-abuse activities for the HHS OIG, as well as for the Justice Department and the FBI. The act also established the Medicare Integrity Program, which ensures increasing funding for Medicare program safeguard efforts and authorizes the hiring of specialized anti-fraud contractors. This report assesses the Health Care Financing Administration's (HCFA) progress in implementing the Medicare Integrity Program. GAO provides information on (1) what additional resources and authorities Congress provided to HCFA through the program, (2) how HCFA has made use of these resources and authorities to better protect Medicare funds, and (3) how HCFA plans to use these authorities and resources in the future.

Medicare: Health Care Fraud and Abuse Control Program financial report for fiscal year 1997 (GAO/AIMD–98–157, 06/01/98)

The Health Care Fraud and Abuse Control (HCFAC) Program, which is administered by the Department of Health and Human Services' (HHS) Office of the Inspector General and the Department of Justice, established a national framework to coordinate federal, state, and local law enforcement efforts to detect, prevent, and successfully prosecute health care fraud and abuse. HHS and Justice are required to issue a joint annual report to Congress on the (1) amounts appropriated to the Federal Hospital Insurance Trust Fund and the source of such amounts and (2) amounts appropriated from the trust fund for the HCFAC Program and the justification for the expenditure of such amounts. The first report,

issued in January 1998, covered fiscal year 1997 deposits to the trust fund and the allocation of the HCFAC appropriation. GAO must submit a report that identifies (1) the amounts deposited to the trust fund and the sources of such amounts, (2) the amounts appropriated from the trust fund for the HCFAC program and the justification for the expenditure of such amounts, (3) the expenditures from the trust fund for HCFAC activities not related to Medicare, and (4) any savings to the trust fund, as well as any other savings, resulting from expenditures from the trust fund for the HCFAC program.

Medicare: Home health agencies with high visit rates skew averages (GAO/HEHS–97–139R, 06/02/97)

Pursuant to a congressional request, GAO reviewed Medicare's reimbursement of home health agencies (HHA), focusing on whether: (1) there are reasons why proprietary HHAs provide more visits than voluntary and governmental agencies; (2) there is any justification for the extra visits; and (3) the skewing effect of the high visit rates by proprietary agencies could be removed when calculating the number of visits for purposes of devising a prospective payment system (PPS) for home health.

GAO noted that: (1) its work and the work of others has consistently shown that proprietary agencies provide more visits per beneficiary than agencies of other types; (2) however, while an agency could provide more visits on average than other agencies for legitimate reasons, none of the factors GAO and others explored provided an explanation related to patient need for the differences in utilization among agency types; (3) in developing a PPS, one way to lessen the influence on visit rates of HHAs that consistently furnish more visits is to use the median number of visits, the point at which half of patient cases (or episodes of care) have fewer visits and half have more, rather than using the average number of visits to determine payment rates for episodes of care; (4) using the median could be combined with an "outlier" payment system for exceptional cases that justifiably have high numbers of visits so that HHAs are not financially disadvantaged by patients who need extraordinary care; (5) GAO also has concerns about the adequacy of the Health Care Financing Administration's (HCFA) current data on home health visit rates and costs for setting PPS rates; (6) GAO's concern stems from the low levels of medical reviews and cost report audits conducted by Medicare's intermediaries during the 1990s; and (7) thorough reviews and audits should be performed on a projectable sample of HHAs and the results used to adjust HCFA's data bases before PPS rates are set.

Medicare: Home oxygen program warrants continued HCFA attention (GAO/HEHS–98–17, 11/07/97)

In fiscal year 1996, nearly 480,000 Medicare beneficiaries received supplemental oxygen at home at a cost of about $1.7 billion. GAO found that Medicare pays about 38 percent more for home oxygen supplies than the competitive marketplace rates paid by the Department of Veterans Affairs (VA). In some cases, Medicare obtains even fewer oxygen benefits despite paying higher prices. The Balanced Budget Act of 1997 includes provisions that should bring

Medicare's reimbursement rates more in line with the competitive marketplace rates paid by VA. The act also requires developing service standards for home oxygen suppliers that serve Medicare patients, as well as monitoring patient access to home oxygen equipment. However, concerns have been raised that these rate reductions could reduce Medicare beneficiaries' access to portable units, which do not offer suppliers the attractive profit margins associated with lower-cost oxygen concentrators.

Medicare: Impact of changing transportation policy for portable equipment is uncertain (GAO/HEHS–98–82, 05/18/98)

The Health Care Financing Administration (HCFA) has reduced payments to some providers who perform electrocardiogram (EKG) and ultrasound examinations in nursing homes and in beneficiaries' residences. In the past, Medicare had allowed these providers of portable diagnostic tests to receive, in addition to the fee for doing the test, a separate payment for transporting the necessary equipment. Effective January 1, 1996, HCFA eliminated separate transportation payments for ultrasound services. HCFA also eliminated separate payments for EKG services effective January 1, 1997, but these payments were temporarily restored by the Balanced Budget Act of 1997. Some claim that eliminating separate transportation payments could ultimately increase Medicare outlays and adversely affect beneficiaries. They argue that providers will be less willing to provide EKG and ultrasound services without a separate transportation payment, forcing Medicare to pay for ambulances to transport homebound patients or nursing home residents to hospitals for these diagnostic tests. This report studies how changes to HCFA's payment policies would affect Medicare beneficiaries. GAO identifies and analyzes (1) the Medicare recipients, places of service, and providers who might be affected the most; (2) the numbers of services that would be affected by the change in policy; and (3) the effect on Medicare's program costs.

Medicare: Improper activities by Mid-Delta Home Health (GAO/OSI–98–5, 03/12/98)

Mid-Delta Home Health is one of the largest home health care providers in Mississippi, employing more than 600 people who deliver home health care through 16 offices throughout the state. Medicare reimbursement to Mid-Delta for home health care and rural health clinic services from 1993 through 1996 totaled nearly $78 million. During this period, Medicare reimbursed Mid-Delta for payroll costs that, in GAO's opinion, were improperly claimed because they did not represent actual costs to the provider. The company's owner regularly asked employees to return to the company the cash value of unused leave and 20 percent or more of bonuses received. The owner also maintained a list of "special employees" to whom she gave larger bonuses if they agreed in advance to return a portion of them to the company. Mid-Delta then billed Medicare for these costs. GAO also questions other costs submitted by Mid-Delta Home Health for Medicare reimbursement. For example, the owner's daughter was paid a salary as an executive even though she was attending school full-time. GAO also questions the reasonableness of the daughter's $65,000 bonus in 1996. Medicare

also reimbursed Mid-Delta for the payroll costs of some employees whose jobs involved marketing activities—a nonreimbursable expense under Medicare rules. In addition, nurses working for Mid-Delta Home Health have alleged that staff visited Medicare beneficiaries whose eligibility or need for visits was doubtful. GAO's review of 41 patient files found that 34 percent of the individuals' eligibility for Medicare-reimbursed services was questionable. GAO summarized this report in testimony before Congress; see: *Medicare: Improper Activities by Mid-Delta Home Health* (GAO/T–OSI–98–6, Mar. 19, 1998).

Medicare: Many HMOs experience high rates of beneficiary disenrollment (GAO/HEHS–98–142, 04/30/98)

Included in the Balanced Budget Act of 1997 is a mandate that the Health Care Financing Administration (HCFA) make comparative information available to Medicare beneficiaries, including data on health plan disenrollment rates, so that they can make informed choices about health maintenance organizations (HMO). The disenrollment data will be required by the fall of 1999, but it is unclear whether HCFA must publish disenrollment data for HMOs in business less than two years. GAO evaluated the feasibility of computing voluntary disenrollment rates for HMOs from readily available data, and analyzed the extent to which these rates vary among plans. Disenrollment rates varied substantially; in many markets, the highest disenrollment rates exceeded the lowest by more than fourfold. Although the data indicates that competing plans vary widely in their ability to retain members, they do not reveal why.

Medicare: Most beneficiaries with diabetes do not receive recommended monitoring services (GAO/HEHS–97–48, 03/28/97)

At least 10 percent of Medicare beneficiaries are diagnosed with diabetes. Although experts agree that close medical and patient monitoring is important to slow or prevent complications of the disease, Medicare beneficiaries are not receiving recommended levels of physicals, eye exams, blood tests, and other screening services. Several factors may contribute to low use of monitoring services, including doctors' lack of awareness of the latest recommendations and patients' lack of motivation to maintain adequate self-management care. Efforts by Medicare health maintenance organizations (HMO) to improve diabetes care have been varied but generally limited. The Health Care Financing Administration (HCFA) also has begun to test preventive care initiatives for diabetes and has targeted this area for special emphasis. But like the efforts of Medicare HMOs, HCFA's initiatives are quite recent, and the agency does not yet have results that would allow it to evaluate their effectiveness. GAO summarized this report in testimony before Congress; see: *Medicare: Provision of Key Preventive Diabetes Services Falls Short of Recommended Levels* (GAO/T–HEHS–97–113, Apr. 11, 1997).

Medicare: Need to hold home health agencies more accountable for inappropriate billings (GAO/HEHS–97–108, 06/13/97)

Despite many studies documenting inflated billings for home health care benefits, Medicare reviews of home health care claims have decreased in recent years. GAO tested 80 high-dollar claims that had been processed without review and found that in 46 of the claims, 43 percent of the total charges—or more than $135,000—were later denied after being reviewed by a Medicare claims-processing contractor. The reasons for the denials included failure to substantiate medical necessity, noncoverage of services or supplies, and inadequate documentation, including the absence of physician orders. Private insurers use controls that, although not readily adaptable to Medicare's coverage terms or billing rules, are instructive regarding claims monitoring. For example, the insurers employ professional staff, such as nurses, to determine in advance the legitimacy of requests for home health services. Reduced funding for payment safeguards in recent years helps explain the marked absence of adequate claims reviews by Medicare contractors. Ten years ago more than 60 percent of home health claims were reviewed. In 1996, Medicare reviewed only two percent of all claims. GAO suggests a plan that would identify habitual abusers of the system and make them bear the financial burden of investigative reviews.

Medicare: Need to overhaul costly payment system for medical equipment and supplies (GAO/HEHS–98–102, 05/12/98)

In 1996, Medicare part B (which generally covers non-hospital-based care) paid over $4.6 billion for medical equipment, supplies, prosthetics, and orthotics—in other words, durable medical equipment (DME). Congress included provisions in the Balanced Budget Act of 1997 authorizing the Health Care Financing Administration (HCFA) to more quickly adjust Medicare's fee schedule allowances by up to 15 percent per year. This report reviews two problems that HCFA must overcome to use its new authority effectively. First, HCFA must better identify products billed to Medicare. The only product identifiers on the claims are HCFA billing codes that cover broad ranges of products, quality, and prices. For example, a single billing code is used for more than 200 different urological catheters, whose wholesale prices range from $1 to $18 each. The claim allowance is set at $11 for all catheters in this group; without better product identification, HCFA cannot know what it is paying for. The second problem with Medicare's DME payment system is that the fee schedule allowances are often out of line with current market prices. HCFA's new price-adjusting authority should help, but HCFA and its contractors do not have sufficient current product and price information for the thousands of DMEs covered. Another issue is that the fee schedule applies to individuals and to large institutional claimants, even though large institutions buy at significant discounts.

Medicare: Problems affecting HCFA's ability to set appropriate reimbursement rates for medical equipment and supplies (GAO/HEHS–97–157R, 06/17/97)

Pursuant to a congressional request, GAO reviewed the problems associated with setting appropriate Medicare reimbursement rates for medical equipment and supplies.

GAO noted that: (1) the Health Care Financing Administration (HCFA) does not know specifically what products it is paying for when it pays Medicare claims for medical equipment and supplies, according to GAO's work to date; (2) HCFA does not require suppliers to identify specific products on their Medicare claims; (3) instead, suppliers use HCFA billing codes, some of which cover a broad range of products of various types, qualities, and market prices; (4) because Medicare pays suppliers the same amount for all the products covered by a billing code, the reimbursement system gives suppliers a financial incentive to provide Medicare patients with the least costly products covered by a billing code; (5) in addition, because Medicare claims do not identify the specific product provided, HCFA lacks the information it needs to ensure that each billing code is used for comparable products; (6) to identify specific medical equipment and supplies, the Department of Defense and some other major purchasers are beginning to require suppliers to use a universal product numbering system; (7) this system, which can also be used for bar coding the products, enables purchasers and insurers to identify specific products being used and track reimbursements for each product and groups of similar products as well as the market prices of specific products; (8) HCFA officials, on the other hand, have not begun exploring the possibility of using the universal product numbering system in the Medicare program; (9) Medicare reimburses large suppliers and individual beneficiaries the same amounts for medical equipment and supplies, even though large suppliers negotiate substantial discounts with manufacturers and wholesalers, while individual beneficiaries pay retail prices; (10) large suppliers provide some products, such as urological catheters and drainage bags, to nursing homes and home health agencies, which then provide them to individual Medicare beneficiaries; (11) in turn, the large suppliers can bill Medicare directly and get reimbursed at fee-schedule rates based on historical charges and catalog prices; and (12) HCFA has not considered establishing a separate fee schedule for products provided to nursing home and home health patients that accounts for their suppliers' substantially lower acquisition costs compared with the cost of products beneficiaries purchase directly.

Medicare billing: Commercial system could save hundreds of millions annually (GAO/AIMD–98–91, 04/15/98)

More than three years after GAO recommended that Medicare acquire commercial software to detect inappropriate billings—which could save hundreds of millions of dollars each year—the Health Care Financing Administration (HCFA) has tested the software and plans to install it. Incorrect codings, fraudulent and otherwise, cost Medicare about $1.7 billion in improper payments in 1997. This report analyzes HCFA's progress in testing and acquiring a commercial system for identifying inappropriate Medicare

bills, the consequences of HCFA's initial management decisions, and its current plans for immediate implementation. GAO summarized this report in testimony before Congress; see: *Medicare Billing: Commercial System Will Allow HCFA to Save Money* (GAO/T–AIMD–98–166, May 19, 1998).

Medicare computer systems: Year 2000 challenges put benefits and services in jeopardy (GAO/AIMD–98–284, 09/28/98)

The Health Care Financing Administration (HCFA) and its contractors are severely behind schedule in repairing, testing, and implementing the mission-critical computer systems supporting Medicare. HCFA has recently begun to improve its management of Year 2000 issues, including establishing a Year 2000 organization and hiring independent contractors to assist in overseeing the work. However, because of the complexity and magnitude of the problem and HCFA's late start, the repairs lag far behind schedule. Less than one-third of Medicare's 98 mission-critical systems had been fully renovated as of June 30, 1998, and none had been validated or implemented, according to HCFA. Compounding this difficult task is the absence of key management practices HCFA needs to adequately direct and monitor its Year 2000 project. HCFA also has not effectively managed the identification and correction of its electronic data exchanges. Because of the magnitude of the tasks ahead and the limited time remaining, it is unlikely that all of the Medicare systems will be compliant in time to guarantee uninterrupted benefits and services into the year 2000.

Medicare dialysis patients: Widely varying lab test rates suggest need for greater HCFA scrutiny (GAO/HEHS–97–202, 09/26/97)

Medicare is the leading payer for dialysis and other medical treatments for end-stage renal disease. Medicare enrollment by kidney patients more than doubled between 1984 and 1994, while expenditures more than trebled—to $8.4 billion. Medicare does not scrutinize the level of laboratory tests for patients on dialysis, and GAO found that similar patients received laboratory tests at widely different rates. At one extreme, Medicare may be paying for excessive tests, while at the other, patients may not be receiving the tests needed to monitor their condition. Fee-for-service reimbursement does not give physicians adequate incentives to order tests judiciously, and neither Medicare nor its claims processing contractors routinely analyze the kind of claims data that GAO reviewed when it found anomalies. GAO recommends that Medicare profile doctors ordering laboratory tests for Medicare dialysis patients and notify contractors of unusual test rates. In addition, Congress should consider holding physicians liable when they order excessive tests.

Medicare fraud and abuse: Summary and analysis of reforms in the Health Insurance Portability and Accountability Act of 1996 and the Balanced Budget Act of 1997 (GAO/HEHS–98–18R, 10/09/97)

Pursuant to a congressional request, GAO: (1) summarized the anti-fraud and abuse reforms enacted in the Health Insurance Portability and Accountability Act (HIPAA) and Balanced Budget

Act (BBA); and (2) determined whether and how the legislation responds to GAO recommendations and those of the Department of Health and Human Services' (HHS) Inspector General.

GAO noted that: (1) the provisions in HIPAA and BBA offer the potential to improve program management significantly; (2) together they address Medicare's enforcement tools, payment safeguards, and pricing and payment method problems; (3) in addressing several aspects of waste, fraud, and abuse, the acts incorporate a substantial proportion of recommendations to the Congress and matters for congressional consideration; and (4) in many instances, the acts also address recommendations that GAO and the HHS Inspector General have made directly to the Department, by either emphasizing priorities or dispelling ambiguities about authority.

Medicare HMO enrollment: Area differences affected by factors other than payment rates (GAO/HEHS–97–37, 05/02/97)

Enrollment nationwide in the Medicare managed care program has more than tripled during the past decade—from about 1 million enrollees in 1987 to 3.8 million in 1996—but differences in enrollment by state and by market area are striking. In such cities as Portland, Oregon, and Tucson, Arizona, health maintenance organizations (HMO) have enrolled more than 40 percent of the Medicare beneficiaries. By contrast, HMO enrollment in most rural areas is negligible. Although the linkage of payment rates to risk HMO enrollment may be important in some areas, dramatic differences in enrollment are often associated with other factors. The presence of HMOs, population density, and the number of Medicare beneficiaries, especially those familiar with managed health care, all spur enrollment growth—and their absence hinders it. In addition, the health care benefits provided by employers in a market area can affect beneficiaries' willingness to enroll in risk HMOs. The rapid growth in risk HMO enrollment is likely to continue as employers encourage retirees to join HMOs and as HMOs pursue various strategies for expanding their Medicare business.

Medicare HMO institutional payments: Improved HCFA oversight, more recent cost data could reduce overpayments (GAO/HEHS–98–153, 09/09/98)

A growing number of seniors—about 5 million out of 38 million Medicare beneficiaries—receive care through health maintenance organizations (HMO) that participate in Medicare's risk contract program. Unlike fee-for-service providers, which are paid on a per-claim basis, these HMOs receive from Medicare a monthly fixed sum per enrolled beneficiary—a capitation rate—and assume the risk of providing beneficiary health care, regardless of the actual costs involved. The estimated 2.6 million beneficiaries in nursing homes and other long-term care facilities often incur greater-than-average Medicare-covered expenses. Consequently, the "institutional" risk adjuster generally raises capitation payments for Medicare HMO enrollees in such facilities. However, some of the facilities GAO visited that HMOs had classified as institutional residences provided no medical care but rather offered recreational activities for seniors capable of living independently. The Health Care Financing Administration (HCFA) acted on this finding by

narrowing the definition of eligible institutions, effective January 1, 1998. Even with more stringent criteria, however, HCFA relies on the HMOs to determine which beneficiaries qualify for institutional status. HCFA conducts only limited reviews, about every two years, to confirm the accuracy of HMO records. The task of ensuring accurate data may be further complicated by HCFA's policy allowing HMOs three years to retroactively change institutional status data in beneficiary records. HCFA generally waits two years to verify that HMOs have corrected inaccurate record-keeping systems, even when serious errors have been identified. Moreover, HCFA continues to use 20-year-old cost data to determine payment rates for institutionalized enrollees. As a result, HCFA overcompensates HMOs for their enrolled, institutionalized beneficiaries. Although HCFA has revised its definition of eligible institutions, concerns remain that HCFA's oversight of payments for institutional status is inadequate.

Medicare HMOs: HCFA can promptly eliminate hundreds of millions in excess payments (GAO/HEHS–97–16, 04/25/97)

Medicare's method for paying risk contract health maintenance organizations (HMO)—Medicare's primary managed care option—was designed to save the program five percent of the costs for beneficiaries who enrolled in HMOs. Contrary to expectations, however, these HMOs have not produced savings for Medicare. Research sponsored by Medicare and others have found that the program has actually spent more for HMO enrollees than if they had stayed in fee-for-service plans. Researchers attribute this outcome to "favorable selection," or the tendency for healthier persons to enroll in HMOs. To reduce excess Medicare payments to HMOs by several hundred million dollars a year, the current Medicare HMO rate-setting formula should be modified to include cost data on HMO enrollees, who tend to be healthier as a group than other Medicare beneficiaries. The current formula relies on costs of fee-for-service beneficiaries only.

Medicare HMOs: Potential effects of a limited enrollment period policy (GAO/HEHS–97–50, 02/28/97)

Congress has recently considered making Medicare's policies more consistent with those of other large health care purchasing organizations by establishing a limited time each year when Medicare beneficiaries could enroll in a particular plan and by restricting disenrollment outside that period. To assist Congress in considering the effects of such a policy change, this report assesses how a limited enrollment period would affect Medicare, private health plans, beneficiaries, and employers who provide Medicare supplemental benefits to retirees. GAO examines the potential effects of policy changes on (1) the growth of Medicare's managed care program, (2) employers' attempts to administer their respective benefits seasons, (3) taxpayer savings measured against beneficiary protections, and (4) the resources needed by the federal agency that runs Medicare's day-to-day operations.

Medicare HMOs: Setting payment rates through competitive bidding (GAO/HEHS–97–154R, 06/12/97)

GAO reviewed the Health Care Financing Administration's (HCFA) proposed use of competitive bidding as an alternative method for setting Medicare health maintenance organization (HMO) payment rates, focusing on: (1) the potential advantages of competitive bidding in the Medicare HMO program; (2) the main features of HCFA's planned competitive bidding demonstration in Denver; and (3) HMO's key objections to it.

GAO noted that: (1) Medicare's current system for setting HMO payment rates, which is based on local fee-for-service spending, generates excess payments to some health plans; (2) these excess payments are substantial, perhaps $2 billion annually, and are likely to grow as the managed care program grows; (3) alternative payment mechanisms could reduce excess HMO payments and help Medicare, and taxpayers, realize the savings potential of managed care; (4) competitive bidding is one such alternative mechanism that might be successfully employed in certain markets; (5) to succeed, a competitive bidding system must provide health plans an incentive to submit bids that reflect no more than the plans' expected costs and a reasonable profit; (6) allowing plans to choose to remain outside of the competitive bidding process and collect the adjusted average per capita cost-based rate, while other area plans submit competitive bids, would unravel the fundamental incentives of competitive bidding; (7) similarly, the plans that bid, but bid high relative to their competitors must face some consequence; (8) the mechanism proposed by HCFA for the Denver demonstration, and recommended by the Physician Payment Review Commission, is to require high bidders to charge beneficiaries a premium, making it harder for high bidders to gain market share; (9) this is a much weaker consequence than excluding high bidders from the marketplace, as is done in the Arizona Medicaid program; (10) however, HCFA's mechanism has the advantage of preserving the widest possible choice of plans for Medicare beneficiaries; (11) GAO recognizes that HCFA's legislative authority does not explicitly address the type of competitive bidding demonstration planned for Denver; and (12) HCFA may already possess the necessary authority, however, in the interest of facilitating demonstrations that test new methods of paying HMOs, including competitive bidding, GAO continues to believe, as it stated in its 1995 report, that the Congress should consider enacting legislation to give HCFA explicit authority to mandate HMO participation in demonstration projects.

Medicare home health: Differences in service use by HMO and fee-for-service providers (GAO/HEHS–98–8, 10/21/97)

Health maintenance organizations (HMO) manage Medicare-provided home health care more actively than do fee-for-service providers, emphasizing shorter-term rehabilitation goals. Differences between HMO and fee-for-service providers are most apparent in the use of home health aides. In the fee-for-service programs, the use of home health aides to provide long-term care for patients with chronic conditions is growing, whereas the six HMOs that GAO visited do not provide such services on a long-term basis. Although fee-for-service providers have less effective controls for pre-

venting unnecessary services, the Medicare program lacks the data needed to determine if the chronically ill are adequately served by HMOs.

Medicare home health agencies: Certification process ineffective in excluding problem agencies (GAO/HEHS–98–29, 12/16/97)

Becoming a Medicare-certified home health agency is relatively easy—probably too easy, given the large number of problem agencies cited in various studies in recent years. If owners of home health agencies have not been previously barred from Medicare, they can obtain certification without having any health care experience. Although certified home health agencies must be periodically recertified, serious deficiencies in the process allow problems to go undetected. Once certified, home health agencies have little reason to fear that they will suffer serious consequences from failing to comply with Medicare's conditions of participation and associated standards. Few problem home health agencies are terminated from the program; instead, they are given repeated opportunities to correct their shortcomings, even if the same deficiencies occur from one survey to the next. Moreover, the Health Care Financing Administration has not implemented a range of penalties to sanction problem home health agencies, even though Congress gave it the authority to do so more than 10 years ago.

Medicare home health benefit: Impact of interim payment system and agency closures on access to services (GAO/HEHS–98–238, 09/09/98)

Until 1996, Medicare spending for home health care had been rising dramatically, consuming about $1 in every $11 of Medicare outlays in 1996, compared with $1 in every $40 in 1989. To control this rapid cost growth, the Health Care Financing Administration was required to implement a prospective payment system that sets fixed, predetermined payments for home health services. Until that system is developed, home health agencies will be under an interim payment system that imposes limits on the cost-based payments they receive. The limits provide incentives to control per-visit costs and the number and mix of visits for each user. Industry representatives claim that the system's new cost limits have caused some home health agencies to close or some beneficiaries, particularly those with high-cost needs, to have difficulty obtaining care. This report (1) identifies the potential impact of the interim payment system on home health agencies; (2) determines the number, distribution, and effect of recent home health agency closures; and (3) assesses whether the interim payment system could be affecting beneficiaries' access to services, particularly beneficiaries who are expensive to serve.

Medicare home health care benefit (GAO/HEHS–97–70R, 02/11/97)

Pursuant to a congressional request, GAO reviewed: (1) the potential effects of shifting the Medicare home health care benefit from the part A trust fund to the part B trust fund; and (2) Medicare and Congressional Budget Office (CBO) projections of home health costs and utilization and made rough estimates of the dollar effects of the proposal.

GAO noted that: (1) it found three potential effects from shifting most home health costs from part A to part B; (2) as expected, the depletion date for the part A trust fund would be extended because the majority of home health payments would no longer come from that fund; (3) CBO estimated last year that the shift would add about 3 years to the 2001 depletion date it then estimated; (4) the shift would result in the need for more general revenues to fund part B in direct proportion to the costs shifted from part A; (5) available information indicates about $95 billion would be needed over the fiscal year 1998 through 2002 period, assuming no other changes to the home health benefit are made; (6) the administration and others also propose additional changes to the home health benefit designed to hold down its cost growth, and to the extent that such proposals are implemented, the amount shifted from part A to part B would be reduced; (7) the shift, however, would not affect the reported budget deficit amount because both funds are included in the unified budget, and the increase in general fund expenditures would be offset by an equal decrease in part A trust fund expenditures; and (8) Medicare beneficiaries would not be affected except that they would have less opportunity to appeal home health denials to administrative law judges because the dollar threshold for such appeals is $100 under part A but $500 under part B.

Medicare managed care appeal process for denials of care: A comparison with recommendations from the President's Quality Commission (GAO/HEHS–98–155R, 05/08/98)

Pursuant to a congressional request, GAO reviewed information on Medicare managed care appeals to help Congress consider legislation on national appeal rights for private-sector health care consumers, focusing on: (1) comparing the President's Advisory Commission on Consumer Protection and Quality in the Health Care Industry's recommended appeal process with that required by the Medicare program; and (2) describing the appeals reviewed by Medicare's external appeals contractor, the Center for Health Dispute Resolution (CHDR).

GAO noted that: (1) the Quality Commission recommended an appeals process that is very similar in structure to the process used by the Medicare managed care program in that both require that individuals receive timely notification of appeal rights and appeal decisions and both require an expedient process for certain kinds of cases for internal and external appeals; (2) virtually all internal appeals that are not completely favorable to the beneficiary are automatically subject to Medicare's external review process, while the Quality Commission restricts external review to appeals that involve experimental issues, circumstances that jeopardize the health or life of the patient, or services that exceed a significant financial threshold that has not been specified; (3) the effect of these differences on the number and types of appeals seen in the Quality Commission's appeal process would depend on how its recommendations are implemented; (4) while appeals from fewer than three-tenths of one percent of Medicare managed care enrollees actually reach the external review process, GAO's review of CHDR appeals indicates that it provides an important protection for bene-

ficiaries at a modest cost to the program; (5) the majority of CHDR's decisions uphold a managed care plan's denial of a service; (6) in about two-thirds of the overturned cases, CHDR found that the plans had made an inappropriate clinical decision and that the care involved in the appeal was medically necessary and met Medicare's clinical coverage criteria; (7) because of differences between Medicare enrollees and the commercially insured, Medicare's experience with external appeals may not apply to this population; (8) while Medicare enrollees can disenroll in any given month and therefore may choose to disenroll rather than appeal a dispute with their plan, many commercially insured managed care enrollees may not have this option; (9) the commercially insured population may also have fewer appeals per capita; and (10) these differences make it difficult to predict the volume or type of appeals that would be seen in the external appeals process for the commercially insured based on Medicare's experience.

Medicare managed care: Payment rates, local fee-for-service spending, and other factors affect plans' benefit packages (GAO/HEHS–99–9R, 10/09/98)

Pursuant to a congressional request, GAO provided information on Medicare's health maintenance organizations (HMO), focusing on: (1) the key differences between Medicare's traditional fee-for-service (FFS) and managed care programs; (2) how Medicare historically set the monthly capitation rates paid to managed care plans and why these rates varied among counties; (3) how the Balanced Budget Act of 1997 (BBA) affected rates and the rate-setting process; (4) how the Health Care Financing Administration (HCFA) approves managed care plans' benefits and premiums; and (5) what requirements HCFA places on plans to notify beneficiaries about impending benefit and premium changes.

GAO noted that: (1) most Medicare beneficiaries can choose to receive health care services through a traditional FFS arrangement or a managed care organization; (2) there are several key differences between the two health care systems; (3) for beneficiaries, some of these differences involve trade-offs; (4) for example, compared to Medicare FFS, managed care plans typically cover more services and impose lower out-of-pocket cost; (5) however, a beneficiary in FFS can obtain care from any provider who receives Medicare payments, while a beneficiary in a managed care plan is typically limited to providers authorized by that plan; (6) another difference is how medical care is paid for; (7) in FFS, Medicare makes a separate payment for each covered service provided, while managed care plans receive a fixed monthly capitated payment for each beneficiary they enroll; (8) before 1998, payments to managed care plans were tightly linked to per capita Medicare FFS spending in each county to reflect the dramatic variation in health care costs and use; (9) as a result, capitation rates varied with the demographic characteristics of the beneficiary and his or her county of residence; (10) for example, in 1997, a managed care plan would receive $767 per month for serving a beneficiary in Richmond County (Staten Island), New York, compared to $221 for serving a similar beneficiary in Arthur County, Nebraska; (11) moreover, plans in relatively high-payment counties tend to offer a richer benefit pack-

age compared to plans in low-payment counties; (12) BBA will likely gradually reduce the geographic variation in managed care payments and benefit packages; (13) at the same time, because the legislation was designed to slow the growth of Medicare spending, benefit packages offered by managed care plans may become less generous; (14) managed care plans must contract with HCFA before they can serve Medicare beneficiaries; (15) contracts normally begin in January and run for one year; (16) at a minimum, plans must provide all FFS-covered benefits; (17) if HCFA determines a plan's projected Medicare profits will exceed its normal profit level, the plan is required to enhance its benefit package, set aside funds for future use, or both; (18) although plans can increase benefits or reduce the fees they charge at any time, they do so only with HCFA approval; and (19) in addition, Medicare requires that all plans notify members 30 days before a change takes place.

Medicare transaction system: Success depends upon correcting critical managerial and technical weaknesses (GAO/AIMD–97–78, 05/16/97)

By the year 2000, Medicare, the nation's largest health insurer, expects to process more than 1 billion claims and pay $288 billion in benefits annually. To keep up, Medicare plans to spend $1 billion to replace nine separate automated processing systems with the Medicare Transaction System (MTS). MTS is intended to improve service; cut operating costs; improve contractor oversight; better protect against waste, fraud, and abuse; and accommodate managed care and other alternative payment methodologies. However, since GAO issued its first analysis in 1992, project costs have soared from $151 million to $1 billion. GAO concludes that the benefits of MTS will not be realized unless the Health Care Financing Administration (HCFA) overcomes serious management and technical weaknesses in three areas. First, HCFA needs to greatly improve management of its interim Medicare processing environment. Second, MTS should be better managed as an investment. HCFA has not followed practices that are essential if management is to make informed technology investment decisions, including preparing a valid cost-benefit analysis and considering viable alternatives. Third, HCFA has not adequately applied sound systems development practices necessary to reduce risk. GAO summarized this report in testimony before Congress; see: *Medicare Transaction System: Serious Managerial and Technical Weaknesses Threaten Modernization* (GAO/T–AIMD–97–91, 5/16/97).

Medigap insurance: Compliance with federal standards has increased (GAO/HEHS–98–66, 03/06/98)

Millions of Medicare beneficiaries depend on private insurance to cover Medicare's deductibles and coinsurance. From 1988 through 1995, the Medigap insurance market grew from $7 billion to more than $12 billion, with most of the growth occurring before 1993. During this eight-year period, loss ratios—the percentage of premiums returned to policyholders as benefits—averaged 81 percent and ranged from a low of 76 percent in 1993 to a high of 86 percent in 1995. Loss ratio standards are currently set at 65 percent for policies sold to individuals and 75 percent for policies covering

groups. In 1994 and 1995, more than 90 percent of the policies in effect for three years or more met these loss ratio standards. Although applicable law provides for refunds if loss ratio standards are not met, no refunds were required in 1994 and only two were required in 1995 because most of these policies' loss experience was based on too few policyholders to be considered credible. A primary reason for requiring refunds was to give insurers an incentive to meet loss ratio standards, and it appears that the incentive is working.

Private health insurance: Declining employer coverage may affect access for 55- to 64-year-olds (GAO/HEHS–98–133, 06/01/98)

Too young to qualify for Medicare, many near elderly (55- to 64-year-olds) are considering retirement or gradually moving out of the workforce. These events may be related to declining health, job displacement, or simply the desire for more leisure time. Because health insurance for most Americans is an employment-related benefit, retirement may necessitate looking for another source of affordable coverage. However, insurance bought directly in the individual market or temporary continuation coverage purchased through an employer are typically expensive and may not always be available. Affordability, moreover, may be exacerbated by both declining health and the reduction in income associated with retirement. For some near elderly, an alternative to retiring without insurance is simply to continue working. This report assesses the ability of Americans aged 55 to 64 to obtain health benefits through the private market—either employer-based or individually purchased. GAO discusses the near elderly's (1) health, employment, income, and health insurance status; (2) ability to obtain employer-based health insurance if they retire before becoming eligible for Medicare; and (3) use of and costs associated with buying coverage through the individual market or employer-based continuation insurance. GAO summarized this report in testimony before Congress; see: *Private Health Insurance: Employer Coverage Trends Signal Possible Decline in Access for 55- to 64-Year-Olds* (GAO/T–HEHS–98–199, June 25, 1998).

Retiree health insurance: Erosion in employer-based health benefits for early retirees (GAO/HEHS–97–150, 07/11/97)

Health insurance coverage for retirees paid by former employers is steadily declining; some employers have stopped offering such coverage and others have raised the premiums paid by retirees. Reductions in employer-based private insurance afflict both early retirees and those who rely on it to fill gaps in Medicare and looms as a major issue for baby boomers nearing retirement. This report reviews (1) private sector and government surveys of changes in retiree access to and participation in employer-based health coverage; (2) the health benefit plan in effect at the Pabst Brewing Company during 1996 (Pabst notified about 750 retirees of its Milwaukee plant that it planned to terminate their health benefits within a month); (3) data from health insurance carriers on the cost of alternative sources of coverage for early retirees in Wisconsin, where Pabst is located, and other selected states; (4) applicable federal and state laws and legal precedents; and (5) earlier GAO work.

Rural primary care hospitals: Experience offers suggestions for Medicare's expanded program (GAO/HEHS–98–60, 02/23/98)

To maintain health care services in rural communities, Congress authorized limited-service hospitals, known as rural primary care hospitals, to operate in seven states—California, Colorado, Kansas, New York, North Carolina, South Dakota, and West Virginia. In October 1997, Congress replaced rural primary care hospitals with critical access hospitals, which were authorized to operate nationally. Existing rural primary care hospitals were eligible to participate in Medicare as critical access hospitals. GAO found that rural primary care hospitals were an important source of inpatient and outpatient care for Medicare beneficiaries in rural areas. Medicare payments to these hospitals for inpatient stays were, however, somewhat higher than payments would have been to full-service rural hospitals. A chief reason for this was that about 21 percent of the inpatient cases had lengths of stays that exceeded the 72-hour maximum in effect at the time, and eight percent would have exceeded the 96-hour limit for critical access hospitals. The Health Care Financing Administration (HCFA) has not established a way to enforce the length-of-stay limit, and GAO believes that one is needed to give critical access hospitals an incentive to adhere to the limit. For critical access hospitals and peer review organizations that are authorized to grant waivers to the 96-hour limit, HCFA also needs to define the conditions and the circumstances under which it would be appropriate to waive the requirement. HCFA also has not established a way to check compliance with the requirement that a doctor certify that patients admitted to rural primary care hospitals—now critical access hospitals—are expected to be discharged within the maximum allowed length-of-stay limit. Such a mechanism should underscore the importance of certification and its intent to ensure that only the appropriate kinds of patients are admitted.

Specialty care: Heart attack survivors treated by cardiologists more likely to take recommended drugs (GAO/HEHS–99–6, 12/04/98)

Pursuant to a congressional request, GAO reviewed the potential differences in treatment patterns for health maintenance organizations (HMO) patients treated by specialists and those treated by generalist physicians, focusing on: (1) the proportion of Medicare heart attack survivors enrolled in HMOs who take cholesterol-lowering drugs, beta-blockers, and aspirin; and (2) whether Medicare heart attack survivors in HMOs regularly treated by a cardiologist are more likely to take cholesterol-lowering drugs, beta-blockers, and aspirin than those who do not have regular cardiology appointments.

GAO noted that: (1) the ongoing use of cholesterol-lowering drugs and beta-blockers reported by Medicare heart attack survivors enrolled in HMOs generally parallels the patterns for heart attack survivors in the U.S. health care system overall; (2) as others have found for the general patient population, GAO found a much smaller proportion of respondents reported taking cholesterol-lowering drugs (36 percent) or beta-blockers (40 percent) than would be expected if everyone who would benefit from using these drugs were taking them; (3) Medicare HMO heart attack survivors with regu-

lar cardiology care—40 percent of GAO's survey respondents—were more likely to take the recommended drugs than those without regular appointments with a cardiologist; (4) enrollees who saw cardiologists regularly for their cardiac care were approximately 50 percent more likely to take cholesterol-lowering drugs and beta-blockers—a finding consistent with other comparisons of care provided by cardiologists and generalists; (5) although factors such as age, education, self-reported health status, and the presence of other illnesses also influenced who took cholesterol-lowering drugs and beta-blockers, they did not account for the higher use levels observed among patients who had routine cardiology appointments; (6) still, even patients of cardiologists often did not take one or both of these drugs; (7) by contrast, the overall use of aspirin was much higher—71 percent—and while regular patients of cardiologists were still more likely to take aspirin, the difference between them and other patients was smaller and not statistically significant (75 percent versus 68 percent); (8) on the whole, GAO's results for heart attack survivors treated by cardiologists and generalist physicians in Medicare HMOs are consistent with those of other studies of physician specialty differences in the United States; and (9) GAO's finding that patients under the regular care of cardiologists are more likely to take recommended medications reinforces the findings of the small number of other studies of physician specialty differences that are specifically concerned with HMO members and extends those findings to an older population and to a different medical condition.

HOUSING ISSUES

Assisted housing: occupancy restrictions on persons with disabilities (GAO/RCED–99–9, 11/12/98)

The Housing and Community Development Act of 1992 allows the owners of federally assisted housing projects to establish occupancy policies that favor elderly tenants over nonelderly tenants with disabilities. These owners are not required to obtain approval from the Department of Housing and Urban Development (HUD) before imposing such a restriction, nor to notify HUD once a restriction occurs. As a result, little information is available on the law's effect. However, concerns have been raised that the law may make it harder for nonelderly persons with disabilities to obtain affordable housing. Since fiscal year 1997, Congress has appropriated funds for new Section 8 rental housing certificates and vouchers for the exclusive use of nonelderly persons with disabilities. This report discusses (1) the extent to which the occupancy policies of eligible projects restrict occupancy to the elderly and the portion of units in eligible projects actually occupied by nonelderly persons with disabilities and (2) the use of Section 8 certificates and vouchers to help nonelderly persons with disabilities affected by the act.

Housing for the elderly: Information on HUD's section 202 and HOME Investment Partnerships programs (GAO/RCED–98–11, 11/14/97)

The Department of Housing and Urban Development (HUD) reported in 1996 that at least 1.4 million elderly persons needed, but

were not receiving housing assistance. Most of these individuals had extremely low incomes, were paying more than half of their income for rent, or lived in homes that were physically inadequate. Two HUD programs—Section 202 Supportive Housing for the Elderly and HOME Investment Partnerships—are receiving funds each year to make new multifamily rental housing available to the elderly. This report compares the Section 202 program and the HOME program in the following three areas: (1) the amount and the types of new multifamily rental housing that each program has provided for the elderly; (2) the sources of each program's funding for multifamily rental projects; and (3) the availability of support services for elderly residents. GAO visited projects in four states with relatively high concentrations of low-income elderly residents and numbers of Section 202 and HOME-funded projects—California, Florida, North Carolina, and Ohio.

Public housing: Impact of designated public housing on persons with disabilities (GAO/RCED–98–160, 06/09/98)

The provisions of the Housing and Community Development Act of 1992 allowing public housing authorities to designate units as elderly-only have had little impact on the availability of public housing for disabled people. Seventy-three of the 3,200 public housing authorities had allocation plans approved by the Department of Housing and Urban Development as of November 1, 1997, allowing them to designate 24,902 of their units as elderly—only about 36 percent of their total housing stock for the elderly and the disabled. Nearly all of these designated units had been available previously to tenants who were elderly or who had disabilities but were younger than 62, although few were actually occupied by younger people with disabilities. GAO's survey found that, as of November 1, 1997, the number of elderly residents and disabled residents in these and other housing units for which they were eligible had not changed substantially since the housing authorities began submitting allocation plans. Designating public housing units as elderly-only may have more impact in the future, depending on how many more housing authorities opt to do so and on what the housing alternatives are for younger people with disabilities.

INCOME SECURITY ISSUES

Employee benefits: Status of the UMWA Combined Benefit Fund (GAO/HEHS–99–7R, 10/02/98)

Pursuant to a congressional request, GAO provided information on the current state of the United Mine Workers of America (UMWA) Combined Fund, focusing on: (1) the current population of beneficiaries; (2) the medical benefits provided to all classes of beneficiaries; (3) the extent to which the benefits provided by the fund represent the beneficiaries' primary medical coverage; (4) the major components of expenditures by the Combined Fund; and (5) how long the fund will remain solvent and able to cover beneficiaries.

GAO noted that: (1) the Combined Fund provides benefits to 71,337 individuals; (2) because Combined Fund benefits are only available to individuals who were eligible to receive and receiving

benefits on July 20, 1992, the number of beneficiaries declines over time; (3) other beneficiaries include parents of mine workers, unmarried children of mine workers under the age of 22, unmarried dependent grandchildren under the age of 22, dependent children of any age who are mentally impaired or disabled before the age of 22, and surviving dependent children of deceased miners; (4) the Combined Fund provides beneficiaries with an array of medical benefits; (5) of the 71,337 individuals receiving benefits through the Combined Fund, 65,146 are also covered by Medicare; (6) Combined Fund officials could not provide GAO with the exact number of beneficiaries covered by private insurance; (7) however, they estimate that the number of beneficiaries is negligible; (8) according to the June 1998 actuarial projections, the major expenses of the Combined Fund are medical benefits, death benefits, and administrative costs; (9) in 1997, medical expenses constituted approximately 90 percent of expenditures, with death benefits and administrative costs amounting to about 3 percent and 7 percent, respectively; (10) these expenses vary with both the size of the beneficiary pool and trends in the costs of medical treatment; (11) since a finite number of beneficiaries is covered by the Combined Fund, the beneficiary pool will likely decline as recipients die, driving down the number of individuals claiming benefits; (12) conversely, medical costs are expected to rise, thereby increasing per-capita medical expenses; (13) thus, as the beneficiary pool decreases over time, medical expenses may become a larger component of Combined Fund expenses in the future; (14) if the Combined Fund becomes insolvent, the cost of borrowing to pay benefits may add to expenses; (15) it is difficult to accurately project the future solvency of the Combined Fund, primarily because of uncertainties created by the recent Supreme Court decision; (16) the June 1998 Court ruling will likely reduce the number of firms that are required to pay into the fund; and (17) regardless of the ultimate effect of the ruling on fund revenues, actuarial estimates made just before the decision show that the fund will be insolvent by 2000 and that its deficit will grow to between $107 million and $619 million by 2007, depending on the variation in Medicare-related expenses.

Federal pensions: Judicial survivors' annuities system costs and benefit levels (GAO/GGD–97–87, 06/27/97)

This report reviews certain aspects of the Judicial Survivors' Annuities System, which provides annuities to the surviving spouses and dependent children of deceased federal judges and other judicial officials. Legislation passed in 1992 enhanced the benefits available under the system and reduced the amounts that participating judges and other judicial officials were required to contribute toward the plan's costs. GAO is required to review the system's costs every three years and determine whether participants' contributions covered one-half of the costs. If the contributions are less than half of these costs, GAO must determine what adjustments would be needed to achieve the 50-percent figure. GAO is also required to compare the Judicial Survivor Annuities System to the survivor benefit plans for other federal workers.

Federal pensions: Relationship between pensions and final salaries for retired former members of Congress (GAO/GGD–97–178R, 09/26/97)

Pursuant to a congressional request, GAO responded to a series of questions concerning the relationship between pensions and the final salaries of retired members of Congress, focusing on: (1) determining the number of former members, if any, whose pensions have come to exceed the final salaries that they earned while working; (2) explaining why these members' pensions came to exceed their final salaries; and (3) determining the difference, if any, in these members' pension amounts had the current cost-of-living adjustment (COLA) policy been in effect without interruption since 1962, and also determining any difference in the number of retired members whose pensions would have exceeded their final salaries.

GAO noted that: (1) seventy-six, or about 19 percent, of the 404 former members of Congress who were living and on the federal retirement rolls as of October 1, 1995, were receiving pensions that had come to exceed their final salaries when these salaries were not adjusted for inflation; (2) however, when final salaries were adjusted for inflation—i.e., expressed in constant dollars—only one former member was receiving a pension that was larger than the final salary; (3) using constant dollars provides a more meaningful way to compare monetary values across time; (4) three factors played an important role in explaining why members' pensions came to exceed their unadjusted final salaries: (a) the number and size of COLAs that former members received; (b) a former member's years of federal service; and (c) whether a member had chosen a survivor annuity benefit; (5) GAO's analysis of the effects that COLA policies have had on the pensions of retired former members of Congress and GAO's prior analysis of general employees suggest that these polices have played an important role in maintaining the purchasing power of retiree pensions since automatic COLAs began; (6) the effects COLA policies actually have had on retiree pension amounts cannot be summarized easily because of the numerous changes that have been made in COLA policies over the past 35 years; (7) COLA policy changes have affected individual retirees differently, depending on when their retirements began; (8) if current COLA policy—that is, the COLA policy enacted in 1984, which established the formula and schedule used today by the Office of Personnel Management—had been in effect without interruption since 1962, the pensions of some former members would have been larger than the pensions that they actually received, and the pensions of other former members would have been smaller; and (9) the changes that would have occurred in the former members' pension amounts under current policy were enough to cause about a two percentage point (2.0) increase in the number of former members whose pensions would have come to exceed their unadjusted final salaries.

Federal pensions: Relationship between retiree pensions and final salaries (GAO/GGD–97–156, 08/11/97)

About 27 percent of the 1.7 million retirees who were receiving federal pensions as of October 1995 were receiving pensions that had come to exceed their final salaries. However, when their sala-

ries were adjusted for inflation and expressed in constant dollars, no retiree was receiving a pension that was larger than his or her final salary. Three factors helped explain why the pensions exceeded the retirees' unadjusted final salaries: the number and the size of cost-of-living adjustments (COLA) that retirees had received, the number of years that they had been retired, and the number of years that they had worked for the federal government. COLAs have played an important role in maintaining the purchasing power of retiree pensions. However, the COLA policies of the late 1960s and 1970s overcompensated for inflation and will continue to affect the pensions of those retirees who receive them as long as they are alive. If the current COLA policy—that is, the policy that was enacted in 1984—had been in effect without interruption since automatic COLAs began in 1962, the pensions of some retirees would have been different. GAO's analysis suggests that a majority of those who retired before 1970 would have received smaller pensions had the current COLA policy been continuously in effect during their retirement, and about 90 percent of those who retired after 1970 would have received larger pensions.

Federal retirement: Comparison of high-3, 4, and 5 salary factors (GAO)/GGD–97–84R, 04/25/97)

Pursuant to a congressional request, GAO provided information on the effects of changing the high-3 salary factor in the formulas that are currently used to compute Civil Service Retirement System (CSRS) and Federal Employees Retirement System (FERS) pension benefits.

GAO noted that: (1) employees retiring under either CSRS or FERS would need to work longer to receive annuities under a high 4 or high 5 that would be comparable to the annuities they would have received under a high 3, before any change in the annuity computation factor; (2) the amount of extra time, however, is measured in months rather than years; (3) reasons why include the fact that an employee's pay normally increases when he or she works longer, thus, so does the employee's annuity at retirement; (4) employees who work into the next calendar year in order to earn comparable annuities can receive general schedule pay increases early in the calendar year as well as step increases; and (5) in addition, the extra time employees work is added to their years of creditable service, which also increases the value of their annuities at retirement.

Federal retirement: Federal and private sector retirement program benefits vary (GAO)/GGD–97–40, 04/07/97)

GAO found no clearcut answer to the question of whether the two largest federal civilian retirement programs offer greater or smaller benefits than those offered by private sector retirement programs. The benefits available from the Federal Employees Retirement System (FERS) and the Civil Service Retirement System (CSRS) can be smaller, similar, or greater than those offered by the private sector, depending on a range of variables. Chief among these factors are the (1) ages at which employees retire and at which programs provide unreduced benefits, (2) extent to which employees and employers contribute to the defined contribution

plans that are integral components of FERS and most private sector programs, and (3) impact of cost-of-living adjustment practices on benefit amounts over the long term. In fact, FERS and CSRS can provide quite different benefit amounts because of their different designs. As a rule, greater benefits are available from FERS than from CSRS, but FERS employees must contribute larger percentages of their salaries to receive the higher benefits.

Financial management: Review of the military retirement trust fund's actuarial model and related computer controls (GAO)/AIMD–97–128, 09/09/97)

The Defense Department's (DOD) Military Retirement Trust Fund was created to oversee the accumulation of funds to finance, on an actuarially sound basis, military retirement and survivor benefit programs. With total actuarial liabilities of $548 billion as reported in its financial statements for fiscal year 1996, the Fund has significant implications for the consolidated governmentwide financial statements that GAO plans to audit beginning in fiscal year 1997. In preparation for that audit, GAO contracted with an independent public accounting firm, KPMG Peat Marwick LLP, to review (1) the methods and assumptions used by the DOD Office of the Actuary to calculate the fund's pension liability as of September 30, 1996, and (2) the effectiveness of computer controls at the facilities that are responsible for receiving, formatting, and processing the actuarial information. This report presents the findings of that review.

Improving financial condition of the Pension Benefit Guaranty Corporation and insured pension plans (GAO)/HEHS–99–37R, 12/18/98)

Pursuant to a congressional request, GAO provided information on: (1) the Pension Benefit Guaranty Corporation's (PBGC) projections of its financial condition and assumptions used to prepare these projections; and (2) the funding status of the plans it insures and its strategy for investing its assets.

GAO noted that: (1) PBGC uses different methodologies to forecast the financial condition of its single-employer and multi-employer insurance programs; (2) PBGC relies on extrapolations of its past claims experience and past economic conditions to develop forecasts for the single-employer program; (3) the optimistic and intermediate forecasts project surpluses at the end of fiscal year (FY) 2007 of $8 billion and $6.9 billion, respectively, while the pessimistic forecast projects a deficit of $17.1 billion; (4) PBGC uses plan-specific historical data in projecting whether multiemployer plans will become insolvent and require its assistance; (5) PBGC projects that the multiemployer program should remain financially strong and that the program's surplus, $219 million in FY 1997, should continue to grow; (6) the funding status of many single-employer plans has improved; (7) between 1980 and 1995, the proportion of fully funded single-employer plans (plans with assets equal to or exceeding benefits earned by participants) increased from 58 percent to 65 percent; (8) overall, funding among multiemployer plans has improved since 1980, and in 1995 about 60 percent of multiemployer plans were fully funded; (9) at the end of FY 1997, PBGC

reported having about $15.6 billion in assets available for investment; and (10) in accordance with its investment policy, these assets are invested primarily in equities and fixed income securities.

Integrating pensions and Social Security: Trends since 1986 tax law changes (GAO/HEHS–98–191R, 07/06/98)

Pursuant to a congressional request, GAO provided information on the impact of the 1986 change in the tax code integration provision, focusing on: (1) how integrated plans were modified to conform with the new provision; and (2) trend data relating to integrated plans.

GAO noted that: (1) the actuaries and studies GAO consulted indicated that the Tax Reform Act of 1986 (TRA86) may not have had an immediate impact on many integrated plans because in 1986 these plans appeared to already meet the new integration provision; (2) in 1986, most plans using the offset method of integration generally reduced pension benefits by no more than 50 percent, and relatively few excess plans used a formula that withheld all benefits from the plans' lower-paid workers; (3) for plans not already in compliance with the new TRA86 integration provision, plan sponsors' reactions to TRA86 varied; (4) TRA86 increased plan costs for those sponsors who had to modify their plans to comply with the new integration provision; (5) an increasing proportion of sponsors of integrated plans are using the general test, even though initial cost remains high, because it offers design flexibility that can reduce the sponsors' yearly contribution costs; (6) the Internal Revenue Service (IRS) conducted a targeted study of integrated defined contribution plans for fiscal year 1993 to determine whether they complied with the TRA86 pension integration provision; (7) it found that 3 of the 80 plans it audited required changes to bring them into compliance; (8) the IRS is now conducting a targeted study to determine the level of compliance; (9) data from surveys conducted by private employee benefits consultants show a decline in the proportion of pension plans that are integrated; (10) Bureau of Labor Statistics data show that the percentage of participants in large and medium private firms covered by integrated defined benefit plans declined from 62 percent in 1986 to about 51 percent in 1995; (11) it is unclear whether the TRA86 integration changes are working as intended, in part because plan sponsors can use the general test to avoid the special integration provision restrictions; (12) according to IRS officials, the TRA86 changes clearly prevent plans from eliminating employees' pension benefits through integration if they adhere to the TRA86 integration provision; (13) however, they acknowledged that a plan whose integration formula exceeded the integration provision restrictions could remain qualified by passing the general test; and (14) neither the actuaries nor the benefit rights advocate GAO contacted were able to provide any specific examples of benefits being eliminated by integration, and GAO found no examples in the literature it reviewed.

Pension Benefit Guaranty Corporation: Financial condition improving, but long-term risks remain (GAO/HEHS–99–5, 10/16/98)

The Pension Benefit Guaranty Corporation (PBGC) insures the pensions of about 42 million participants in 45,000 private defined benefit pension plans. During 1997, PBGC paid $824 million to retirees in plans that had terminated with insufficient assets to pay promised benefits. PBGC's financial condition has improved significantly in recent years. The agency has posted a surplus for the past two fiscal years—after having had a deficit for more than 20 years. The financial health of most insured, underfunded plans has also improved, but underfunding among some large plans continues to pose a risk to the agency. The improved financial condition of PBGC and the plans that it insures has resulted from better funding of underfunded plans and economic improvements, such as the extended national economic expansion and growth in the stock market. At this time, it is difficult to isolate the effects of the 1994 pension reform legislation on plan funding from other factors, such as the continued economic expansion. However, risks to the agency's long-term financial viability remain. PBGC is developing a new single-employer program forecasting model to estimate the probability of bankruptcies and terminations of underfunded plans under various economic conditions. In addition, PBGC has already improved its methodology for forecasting the financial status of the multiemployer program. PBGC has also improved its techniques for estimating its liability for plans that are likely to require future financial assistance and is now more closely monitoring the companies with underfunded plans that represent its biggest risks. Moreover, PBGC is strengthening its oversight through more audits of premium payments and audits of fully funded terminated plans and is working closely with plan sponsors to decrease plan regulatory and administrative burdens. Still, PBGC needs to continue its efforts to reduce the time it takes to assume control of terminated plans, improve the timeliness of final determinations of participants' benefits, and monitor the performance of contractors that assist PBGC in administering the insurance programs.

Pension Plans: Status of labor's economically targeted investments clearinghouse (GAO/HEHS–98–99R, 02/27/98)

Pursuant to a congressional request, GAO provided information on the Department of Labor's contract to establish and operate an economically targeted investments (ETI) clearinghouse, focusing on: (1) whether the applicable federal statutes and regulations were fully adhered to in selecting the ETI Clearinghouse contractor; (2) how much was budgeted for and paid to the contractor; (3) what Labor staff resources were involved in setting up and operating the ETI Clearinghouse; (4) work that the contractor performed; and (5) the current status of the ETI Clearinghouse.

GAO found that Labor complied with the applicable federal procurement law and regulation in awarding the ETI Clearinghouse contract to Hamilton Securities. The entire contractor selection process was competitive among three vendors. Labor held negotiations with each vendor. Of the $1,520,411 base period contract awarded in September 1994 for the 2-year period, Labor's share of the approved contract expenses was to be 55 percent, and the con-

tractor's share was the remaining 45 percent. For the 2-year base period, Labor approved payments of $774,723 of the $780,000 initially budgeted to reimburse Hamilton Securities for approved contract expenses. Labor estimates that about 16 individuals from seven departmental offices spent nearly 630 hours from January 1993 through December 1997 on the ETI Clearinghouse project. Labor personnel activities included ETI Clearinghouse contract procurement, development, analysis, policy research, and monitoring.

Based on its analysis of material provided by Labor, GAO believes that Hamilton Securities successfully completed each of the eight required contract tasks by the end of the contract base period. Among other things, the contractor developed an ETI database and created a clearinghouse web site for use by members of the pension community. In August 1996, Labor decided not to exercise the option year permitted by the September 1994 contract because the contract requirements had been met by the end of the 2-year base period. After the base period contract ended in September 1996, Hamilton Securities continued to operate the ETI Clearinghouse but without any further Labor financial support. In December 1997, the firm decided to cease clearinghouse operations. Labor cited operational difficulties and long-term revenue concerns as the reasons for Hamilton Securities' decision to discontinue these operations.

Private pensions: Plan features provided by employers that sponsor only defined contribution plans (GAO/GGD–98–23, 12/01/97)

This report identifies the general features of defined contribution plans in the private sector. Defined contribution plans provide retirement benefits that are based on employer and/or employee contributions to individual employee accounts and the investment experience of those accounts. GAO describes patterns in the plans' (1) eligibility requirements for employee participation, (2) arrangements for employer and participant contributions, (3) eligibility requirements for employee rights to accrued benefits, (4) employee investment options, (5) loan and other provisions for participant access to plan assets while still employed, and (6) options for withdrawal of benefits upon separation or retirement. GAO also presents information on the six features for the Thrift Savings Plan—the defined contribution plan component of the Federal Employees Retirement System—for comparison. GAO also summarizes the explanations provided in retirement literature and by pension experts with whom GAO consulted on why employers might decide to sponsor more than one pension plan for the same groups of employees.

Railroad retirement: Enhancing portability would raise cost and policy concerns (GAO/GGD–98–168, 08/10/98)

The Railroad Retirement program, established in 1937, is among the older retirement programs for private sector employees in the country. In 1997, the program had about 254,000 active participants and provided pension benefits to about 742,000 retirees, spouses, and survivor and disability annuitants. During the past 30 years, the railroad industry has experienced extensive downsizing. Also, about 60 percent of employees who begin railroad service

leave the industry with less service than they need to qualify for a pension under the program. Consequently, there has been discussion of possible legislation to enhance the portability of Railroad Retirement benefits. This report discusses (1) which, if any, Railroad Retirement benefits are portable; (2) what changes could be made to the Federal Employees' Retirement System (FERS) that might enhance the portability of Railroad Retirement benefits into FERS for former railroad employees who secure federal jobs and the cost and administrative implications of those changes for FERS and whether such changes could be made cost-neutral to FERS; and (3) what changes could be made to Railroad Retirement that might enhance the overall portability of its retirement benefits and what are the cost and administrative implications of these changes for Railroad Retirement.

Retirement income: Implications of demographic trends for Social Security and pension reform (GAO/HEHS–97–81, 07/11/97)

The U.S. elderly population has tripled since 1940 and will more than double by 2050, according to Census Bureau projections. The population of "very old"—those aged 85 and older—will increase fivefold. The elderly are expected to make up 20 percent of the U.S. population as early as 2030 compared with 13 percent today. These dramatic demographic trends raise questions about the future financing, availability, and protection of retirement income for the nation's elderly.

This report provides information on (1) demographic and economic trends affecting retirement income, (2) the status of Social Security's long-term financing problems and proposals to address them, and (3) the extent of pension coverage and retirement saving and how to ensure that Americans can count on them throughout their retirement years.

Social Security: Better payment controls for benefit reduction provisions could save millions (GAO/HEHS–98–76, 04/30/98).

Under the Government Pension Offset provision, enacted in 1977, the Social Security Administration (SSA) must reduce social security benefits to persons whose entitlement to social security benefits is based on another person's (usually their spouse's) social security coverage. Their social security benefits are to be reduced by two-thirds of the amount of their government pension. Under the Windfall Elimination Provision, enacted in 1983, SSA must use a modified formula to calculate the social security benefits that people earn when they have had a limited career in covered employment. The modified formula reduces the amount of payable benefits. With regard to the Government Pension Offset provision, spouse and survivor benefits were intended to provide some social security protection to spouses with limited working careers. The Government Pension Offset reduces spouse and survivor benefits to persons who do not meet this limited working career criterion. With regard to the Windfall Elimination Provision, Congress was concerned that the social security benefit formula provided unintended windfall benefits to workers who had spent most of their careers in noncovered employment. This report discusses how well

SSA administers the two provisions and identifies ways to overcome administrative deficiencies.

Social Security: Different approaches for addressing program solvency (GAO/HEHS–98–33, 07/22/98)

The aging of the baby boomers, lower fertility rates, and increasing longevity have eroded the long-term solvency of the Social Security program. The system's annual cash surpluses are now projected to decline substantially beginning around 2008, and by 2013, benefit payments are expected to exceed cash revenues. The Social Security Trust Funds are forecast to be depleted by 2032, at which time revenues will be able to pay no more than 75 percent of promised benefits. With a national debate underway on how best to resolve Social Security's long-term financing problems, GAO reviewed the various perspectives underlying the solvency debate, reform options within the current program structure, and issues that might arise if Social Security were restructured to include individual retirement accounts.

Social Security: Implications of extending mandatory coverage to State and local employees (GAO/HEHS–98–196, 08/18/98)

The Social Security Act of 1935 excluded state and local government employees from coverage because of concerns about the federal government's right to impose a tax on state governments and because many state and local employees were already covered by public pension plans. Over the years, Congress has extended mandatory Social Security coverage to workers not covered by a public pension plan and voluntary coverage to other state and local government workers. The Social Security Administration estimates that 5 million state and local government workers, with annual salaries totaling $132.5 million, are currently not covered by Social Security. This report examines the implications of extending mandatory coverage to all newly hired state and local employees. Specifically, GAO discusses the implications of mandatory coverage for the Social Security program and for public employers, employees, and pension plans. GAO also identifies potential legal or administrative problems associated with mandatory coverage.

Social Security: Mass issuance of counterfeit-resistant cards expensive, but alternatives exist (GAO/HEHS–98–170, 08/20/98)

Since legislation was enacted in 1986 requiring employers to review documents of prospective employees to establish their right to work in the United States, the Social Security card has become one of the primary documents used to determine employment eligibility. However, concerns have deepened that the card is easily counterfeited and does not prevent individuals from illegally working in the United States. As a result, some Members of Congress have asked, on several occasions, the Social Security Administration (SSA) and the Congressional Budget Office (CBO) to estimate the cost of issuing a counterfeit-resistant card. In 1996, the Illegal Immigration Reform and Immigrant Responsibility Act required SSA to develop a prototype counterfeit-resistant card made of a durable tamper-resistant material with various security features that could be used to establish reliable proof of citizenship or legal non-

citizenship status. That Act also required SSA to estimate and compare the cost of producing and disseminating several types of enhanced cards to all living number holders over 3-, 5-, and 10-year periods. Earlier that year, a Member of Congress asked CBO to estimate the cost of issuing a counterfeit-resistant card, believing an earlier SSA estimate of producing such a card was high. This report (1) explains differences in CBO's and SSA's estimates for replacing the Social Security card, (2) evaluates SSA's estimates for the cost of issuing a more secure card, and (3) presents additional issuance options.

Social Security Administration: Information on monitoring 800 number telephone calls (GAO/HEHS–98–56R, 12/08/97)

Pursuant to a congressional request, GAO reviewed the Social Security Administration's (SSA) teleservice monitoring operations, focusing on: (1) requirements by laws and regulations regarding proper telephone monitoring practices and steps SSA has taken to gain consent for its telephone monitoring practices; and (2) best practices in telephone monitoring.

GAO noted that: (1) under the current law, SSA cannot monitor telephone calls unless its monitoring practices fall within a statutory exception; (2) one exception generally relates to the type of telephone equipment provided to a business and whether it is used for business purposes; (3) another exception requires the consent of at least one party to a conversation; (4) the SSA Office of Inspector General did not determine whether SSA meets the first exception, but SSA believes it does; (5) also, the agency has taken steps to gain consent for telephone monitoring from the public and its employees; (6) SSA has negotiated agreements with the American Federation of Government Employees to more often notify employees when particular calls will be monitored and has added a recorded message to its 800 number to notify callers that their calls may be monitored; (7) SSA is also developing a new regulation that will formally notify its employees and the public of its monitoring practices; (8) regarding best practices, there are some similarities and differences between SSA's telephone monitoring practices and those identified in a key study of private companies considered to be the best in the 800 number business; (9) for example, the approach SSA supervisors use to monitor broader unit-level performance is similar to private sector best practices; (10) SSA's approach to monitoring for quality assurance differs from private industry's best practices; and (11) rather than immediate supervisors' performing the quality monitoring function, SSA maintains a separate unit to monitor for quality to ensure that benefits are paid accurately.

Social Security Administration: More cost-effective approaches exist to further improve 800-number service (GAO/HEHS–97–79, 06/11/97)

Every day, thousands of people contact the Social Security Administration (SSA) to file claims for disability or retirement benefits, check to see that their records are up to date, obtain a Social Security card, or ask questions about the agency's programs. To reach its goal of providing world-class service to the public, SSA is

working to improve its toll-free 800-number service. Since the 800 number became widely available in 1989, SSA has struggled to keep pace with caller demand. Moreover, once callers reach SSA, they are limited to simple transactions, such as ordering Social Security card application forms or making appointments to file benefit claims. SSA has initiatives underway to improve caller access to its 800 number and to expand the range of available transactions. This report reviews (1) how well SSA's 800 number provides service to the public and (2) the steps that SSA needs to take to ensure that upgrades to the 800 number are cost-effective.

Social Security Administration: Responses to subcommittee questions about the on-line PEBES service (GAO/AIMD–97–121R, 06/20/97)

Pursuant to a congressional request, GAO provided answers to questions relating to its May 6, 1997, testimony on the Social Security Administration's (SSA) use of the Internet to provide Personal Earnings and Benefits Estimate Statements (PEBES) to individuals.

GAO noted, among other things, that (1) discussions concerning SSA's use of the Internet to disseminate PEBES should include a focus on systems security because there have been recent problems in implementing currently available commercial encryption processes, and computer systems that use these processes have been successfully attacked; (2) in making information readily available via the Internet, many opportunities for serious misuse of sensitive information exist, and these must be carefully considered and communicated to those individuals whose information might be placed at risk; (3) because of the sensitive information contained in the PEBES system, effective risk management is necessary to ensure that the most appropriate technical safeguards are identified and implemented to protect against security threats; (4) in light of the increasing importance of information security and the pattern of widespread problems that has emerged, it is essential that federal agencies implement information security programs that proactively and systematically assess risk, monitor the effectiveness of security controls, and respond to identified problems; and (5) as the senior official designated to oversee information resources management, SSA's chief information officer should have primary responsibility for ensuring that the on-line PEBES initiative represents a sound information technology investment based on factors such as the project's cost, risk, return on investment, and support for mission-related outcomes.

Social Security Administration: Significant challenges await new commissioner (GAO/HEHS–97–53, 02/20/97)

The Social Security Administration (SSA) is ahead of many federal agencies in developing strategic plans; measuring its service to the public; and producing complete, accurate, and timely financial statements. This gives SSA a sound foundation from which to manage significant current and future challenges. The aging of the baby boomers, coupled with longer life expectancy and the declining ratio of contributing workers to beneficiaries, will place unprecedented strains on the Social Security program in the 21st century.

SSA, however, has yet to do the research, analysis, and evaluation needed to inform the public debate on the future financing of Social Security—the most critical long-term issue confronting the agency. Also challenging SSA have been disability caseloads that have grown by nearly 70 percent during the past decade. At this critical juncture, leadership is essential so that SSA can take the following steps to ensure success in the years ahead: inform the national debate on Social Security financial issues; complete its redesign of the disability claims process and promote return to work in its disability programs; enhance efforts to ensure program integrity, while quickly and effectively implementing many reforms; and make the technology enhancements and workforce decisions needed to meet increasing workloads with fewer resources.

Social Security Administration: Significant progress made in year 2000 effort, but key risks remain (GAO/AIMD–98–6, 10/22/97)

Unless timely corrective action is taken to address the Year 2000 problem, the Social Security Administration (SSA), like other federal agencies, could face critical computer system failures at the turn of the century. If left uncorrected, this could result in Social Security benefit checks being issued incorrectly, or not on time, beginning in January 2000. This report discusses the adequacy of steps taken by SSA to ensure that computing problems arising from the year 2000 are fully addressed, including its oversight of state Disability Determination Services' (DDS) Year 2000 program activities.

GAO noted that while the agency deserved credit for its leadership in addressing the Year 2000 issue, the agency remained at risk that not all of its mission-critical systems would be corrected before January 1, 2000. At particular risk were systems that had not been assessed for the 54 state DDSs that provide vital support to SSA in administering its disability insurance programs. SSA also faced the challenge of ensuring that its critical data exchanges with federal and state agencies and other businesses are Year 2000 compliant. Finally, GAO noted that SSA's risk could be magnified if the agency does not develop contingency plans to ensure the continuity of its critical systems and activities should systems not be corrected in time.

In light of the importance of SSA's function to most Americans and the risks associated with the Year 2000 program, GAO recommended that SSA (1) expeditiously complete the assessment of state DDS mission-critical systems; (2) strengthen its monitoring and oversight of state DDS activities; (3) include information on the status of DDS activities in SSA's quarterly reports to the Office of Management and Budget; (4) expeditiously complete the agency's compliance coordination with all data exchange partners, and (5) develop contingency plans for ensuring the continued operation of core business functions if planned corrections are not completed in time or if systems fail to operate as intended.

Social Security Administration: Software development process improvements started but work remains (GAO/AIMD–98–39, 01/28/98)

The Social Security Administration (SSA) is in the process of redesigning its work processes and modernizing its computer systems to better serve a growing beneficiary population and improve productivity. The agency plans to switch from centralized, mainframe-based computer processing to a more distributed, client/server processing environment, in which the Intelligent Workstation/Local Area Network will serve as the basic automation infrastructure. Software developed for the new client/server systems will be critical to ensuring that the modernized processes work as intended and achieve the desired productivity outcomes. However, software development has been cited by many experts as one of the riskiest and most costly aspects of systems development. Moreover, SSA has recognized weaknesses in its own software development capability and has begun taking steps to improve its processes for developing software.

This report discussed the status of SSA's software process improvement efforts and noted a number of actions that SSA was taking to improve its capability, including launching a formal improvement program and acquiring the assistance of the Software Engineering Institute to assess current process weaknesses and implement improvements. However, the report also noted that SSA's software process improvement program lacked measurable goals and baseline data needed to measure the progress and success of the improvement efforts. To strengthen SSA's software process improvement program, GAO recommended that SSA develop and implement plans that explicitly articulate a strategy and time frames for (1) developing baseline data, (2) identifying specific, measurable goals for the improvement initiative, and (3) monitoring and measuring progress in achieving these goals.

Social Security Administration: Subcommittee questions concerning information technology challenges facing the commissioner (GAO/AIMD–98–235R, 07/10/98)

Pursuant to a congressional request, GAO provided information on the challenges the Social Security Administration (SSA) faces in preparing its information systems for the new century and in implementing technology initiatives, such as the Intelligent Workstation/Local Area Network (IWS/LAN) and the on-line Personal Earnings and Benefits Estimate Statement (PEBES) system.

GAO noted that (1) SSA was making good progress in its efforts to become Year 2000 compliant and the agency had taken numerous actions that demonstrated a sense of urgency and commitment to achieving readiness for the change of century; (2) although SSA stated that 100-megahertz workstations specified in its IWS/LAN contract met the agency's current needs, it was uncertain whether these workstations would adequately support all of the agency's future software needs; (3) SSA did not include a technology refreshment clause for IWS/LAN, but the contract did include two other clauses that would allow the agency to replace equipment originally specified in the contract with upgraded technology; (4) staff in certain state Disability Determination Services offices had expressed

valid concerns about the effectiveness of SSA's network management control over IWS/LAN, and dissatisfaction with the service and technical support received from the contractor following its installation; (5) weaknesses in SSA's software development capability raised significant concerns about the agency's ability to effectively develop the software that will be needed to support its operations into the next century; and (6) implementation of the on-line PEBES systems remained suspended and the agency was continuing to evaluate alternatives for protecting the privacy and security of sensitive information that would be transmitted via the Internet.

Social Security Administration: Technical and performance challenges threaten progress of modernization (GAO/AIMD–98–136, 06/19/98)

To better serve a growing beneficiary population and improve productivity, the Social Security Administration (SSA) is redesigning its work processes and modernizing its computer systems. The Intelligent Workstation/Local Area Network (IWS/LAN) project is intended to provide the basic automation infrastructure needed to increase SSA's processing abilities. The first phase of the planned project is a seven-year, approximately $1 billion effort to acquire more than 56,000 intelligent workstations and 1,700 local area networks. This report (1) discusses the status of SSA's implementation of IWS/LAN, (2) assesses whether SSA and state Disability Determination Services' (DDS) operations have been disrupted by the installation of network equipment, and (3) assesses SSA's practices for managing its investment in IWS/LAN.

The report contains a number of recommendations aimed at strengthening SSA's management of its IWS/LAN investment, including (1) assessing the adequacy of the workstations specified in the IWS/LAN contract to determine the number and capacity of workstations required to support the initiative; (2) working with the state Disability Determination Services to resolve network management concerns; and (3) establishing a formal oversight process for measuring the actual performance of each phase of IWS/LAN.

Social Security advocacy: Organizations that mail fund-raising letters (GAO/HEHS–97–69, 06/18/97)

As part of their fund-raising efforts, some groups mail letters to the elderly claiming that Social Security has "dire financial troubles" or that the trust funds are being "mishandled" and requesting financial contributions to combat alleged threats to the program. The media have criticized some letters for using scare tactics to solicit millions of dollars in donations from the elderly. This report focuses on the following seven organizations that use Social Security issues in fund-raising letters: the American Conservative Union, the Council for Citizens Against Government Waste, the National Committee to Preserve Social Security and Medicare, TREA Senior Citizens League, the Seniors Coalition, the 60/Plus Association, and the United Seniors Association, Inc. (USA). The report discusses (1) the bases for the groups' tax exemption; (2) the services they provide; (3) their sources of income, income subject to taxes, and expenses; (4) their financial relationships with other

businesses; and (5) the characteristics of their Social Security-related fund-raising letters.

SSA: The agency's relationship with the Office of Management and Budget since becoming an independent agency (GAO/HEHS–98–235R, 08/26/98)

Pursuant to a congressional request, GAO reviewed the Social Security Administration's (SSA) dealings with the Office of Management and Budget (OMB) since it became an independent agency, focusing on: (1) SSA's current practices when dealing with OMB on budget, legislative, and policy matters; and (2) whether these current practices are in compliance with the law.

GAO noted that: (1) since becoming an independent agency, SSA has continued to work with OMB on all budget, legislative, and policy matters; (2) according to SSA officials, two key differences in SSA's relationship with OMB since independence are: (a) the agency now works directly with OMB rather than going through the Department of Health and Human Services and (b) the President is now required to submit the Commissioner's budget for SSA to Congress along with the President's own budget; (3) during the annual budget process, SSA receives guidance from OMB to help it prepare a budget proposal; (4) once approved by OMB, SSA's budget is transmitted to Congress as part of the President's budget; (5) SSA continues to submit its legislative and regulatory proposals and testimonies to OMB for review prior to publication; (6) OMB officials told GAO that OMB's relationship with SSA is similar to that of other agencies within the executive branch of the government; (7) SSA's independence gives the agency more visibility within the executive branch and allows it to express agency concerns and views directly to OMB and Congress; (8) SSA officials told GAO that the budget provision in SSA's independence law, which requires the Commissioner to identify his budget needs separately in the President's budget, strengthens the agency's position in budget negotiations with OMB; (9) SSA officials believe that the agency's current relationship with OMB complies with the law; (10) these officials believe that, even though SSA is independent, it is still part of the executive branch; (11) therefore, SSA still needs to obtain OMB clearance when promulgating regulations, presenting testimony, and making legislative recommendations; (12) GAO agrees that SSA is not constrained by the independence legislation from submitting its regulations, testimony, and legislative recommendations to OMB; (13) GAO agrees with OMB and SSA officials that SSA's budget presentation, prepared in consultation with OMB and as submitted by the President, complies with the independence law and the federal budget process; (14) even so, Congress has other options should this information not satisfy its needs; (15) the budget provision in SSA's independence law is intended to provide information to Congress on SSA's budget needs, yet in practice the information provides a brief summary only and omits detail; and (16) if Congress would like more detailed or different information on SSA than what appears in the President's budget submission, the law authorizes Congress to obtain this information directly from SSA.

SSA benefit estimate statement: Adding rate of return information may not be appropriate (GAO/HEHS–98–228, 09/02/98)

Legislation was proposed that would require Social Security to include an individual rate of return estimate on the Personal Earnings and Benefit Estimate Statement that virtually every worker will begin receiving in 2000. The goal would be to enable workers to compare the current Social Security program with other investments, including alternatives being discussed in the congressional debate about how to restore Social Security's long-term solvency. GAO found that substantial disagreement exists about whether the rate of return concept should be applied to Social Security. Supporters point out that providing this information would educate people about the return that they will receive on their contributions. Others contend that it is inappropriate to use rate of return estimates for Social Security because the program is designed to pursue social insurance goals, such as assuring that low-wage earners have an adequate income in their old age or providing for dependent survivors. In addition, actual rates of return for individuals can vary substantially from the estimates because of various uncertainties, such as a worker's retirement age and future earnings. To be clearly understood, the underlying assumptions and their effect on the estimates should be explained in any presentation of rate of return information. Moreover, comparing rate of return estimates for Social Security with estimates for private investments could be difficult for several reasons. For example, the comparisons would need to indicate whether the estimates for other investments include the transaction and administrative costs and the differences in risk associated with Social Security and private investments. Finally, providing rate of return information on the statements could further complicate and lengthen an already complex and difficult-to-understand document.

SSA benefit estimate statements: Additional data needed to improve workload management (GAO/HEHS–97–101, 05/20/97)

Congress passed legislation in 1990 requiring the Social Security Administration (SSA) to begin providing the public with annual statements about its Social Security earnings records and estimates of the amount of benefits persons may receive. Starting in fiscal year 2000, SSA must mail Personal Earnings and Benefit Estimate Statements to nearly every U.S. worker aged 25 and older—an estimated 123 million people. SSA projects that printing, mailing, and personnel costs associated with this effort will total nearly $77 million in fiscal year 2000 alone. Although SSA believes that it is prepared for the increased workload arising from this initiative, it has not adequately assessed the added work likely to stem from questions about and corrections to the statements. SSA lacks reliable data on either the number of people who call or visit SSA with questions about their statements or the number of earnings corrections resulting from statement mailings. SSA could better manage the potential workload if it began to collect more complete and accurate data now on the effects of mailing the mandated statements.

Social Security financing: Implications of Government stock investing for the trust fund, the Federal budget, and the economy (GAO/AIMD/HEHS–98–74, 04/22/98)

Allowing the Social Security trust fund to invest in the stock market is a complex proposal that has potential consequences for the trust fund, the U.S. economy, and federal budget policy. For the Social Security trust fund, stock investing offers the prospect of higher returns but greater risk. Higher returns would allow the trust fund to pay benefits longer, even without other program changes. However, if stock investing is implemented in isolation, the trust fund would inevitably have to liquidate its stock portfolio to pay promised benefits, and it would be vulnerable to losses in the event of a general stock market turndown. Although stock investing is unlikely to solve Social Security's long-term financial imbalance, it could reduce the size of other reforms needed to restore the program's solvency.

For the federal budget, stock investing would have the immediate effect of increasing the reported unified deficit or decreasing any reported unified surplus because, under current budget scoring rules, stock purchases would be treated as outlays. Any money used to buy stocks would no longer be invested in Treasury securities, reducing the Treasury's available cash and more clearly revealing the underlying financial condition of the rest of the government. Without compensating changes in fiscal policy, stock investing would not significantly alter the impact of federal finances on national saving and the economy. GAO summarized this report in testimony before Congress; see: *Social Security Financing: Implications of Stock Investing for the Trust Fund, the Federal Budget, and the Economy* (GAO/T–AIMD/HEHS–98–152, Apr. 22, 1998).

Social Security reform: Implications for women's retirement income (GAO/HEHS–98–42, 12/31/97)

On average, Social Security pays lower retirement benefits to women than to men, primarily because women tend to have lower lifetime earnings. Social Security reforms that would create individual private savings accounts and change the way that benefits are distributed are most likely to affect women and men differently. Working women earn less than men, on average, and would have less money to invest in their individual accounts. Also, women are often more cautious investors than men, and may be less likely to invest in potentially higher yielding, though riskier, assets such as stocks, a tendency that puts them at risk of accumulating relatively less money in their accounts at retirement. Moreover, even if men and women enter retirement with equal amounts in their individual accounts, women may receive a lower monthly benefit if they buy an individual annuity because it is adjusted for their greater longevity.

SSA: Cycling payment of Social Security benefits (GAO/OGC–97–24, 02/25/97)

Pursuant to a legislative requirement, GAO reviewed the Social Security Administration's (SSA) new rule on cycling payment of Social Security benefits. GAO noted that: (1) the rule would establish additional days throughout the month on which Social Security

benefits would be paid; and (2) SSA complied with applicable requirements in promulgating the rule.

401(k) pension plans: Extent of plans' investments in employer securities and real property (GAO/HEHS–98–28, 11/28/97)

Policymakers and the pension community are concerned about 401(k) plans in which decisions on how to invest plan assets, particularly employee contributions, are made exclusively by employers. This concern was prompted mainly by two cases in which employers invested a large part of the 401(k) plan assets in their companys' securities or real property. Later business reversals then forced the employers into bankruptcy, reorganization, or liquidation. In one case, employees lost their jobs and almost all of their pension benefits because the value of the employer's securities decreased significantly. This report (1) provides information on the extent to which 401(k) plan assets are invested in employers' securities and real property, (2) examines the protection and any possible problems associated with recent amendments to title I of the Employee Retirement Income Security Act of 1974 (ERISA), and (3) identifies alternative mechanisms that might safeguard the retirement benefits of participants in 401(k) plans in which the employer decides how to invest assets.

401(k) pension plans: Loan provisions enhance participation but may affect income security for some (GAO/HEHS–98–5, 10/01/97)

More employees are likely to participate in 401(k) pension savings plans when they are allowed to borrow from those plans. Moreover, participants in plans that allow borrowing contribute, on average, 35 percent more to their pension accounts than do participants in plans that do not permit borrowing. GAO found that relatively few plan participants—less than eight percent—have one or more loans from their pension accounts. Blacks and Hispanics, lower-income persons, participants who have recently been turned down for a loan, and workers who are also covered by other pension plans are more likely to borrow from their pension account than are other participants. The loan provisions of many pension plans provide for loan repayment at favorable interest rates, which may be lower than the investment yield that could have been earned had the money been left in the pension account. Consequently, the borrower will have a smaller pension balance at retirement because the interest paid to the account is less that what could have been earned from investing in equities. On the other hand, borrowing can help plan participants meet other financial goals. For example, borrowing for education or training could boost a family's lifetime income and, hence, retirement income.

VETERANS AND DOD ISSUES

Consumer-directed personal care programs: Department of Veterans Affairs and Medicaid experience (GAO/HEHS–98–50R, 01/16/98)

Pursuant to a congressional request, GAO reviewed the Department of Veterans Affairs' (VA) Aid and Attendance (A&A) program

as well as selected state Medicaid programs that permit consumers to hire their own personal care attendants, focusing on whether: (1) the government might be paying twice for persons in nursing homes who also received A&A benefits; (2) there are any existing public programs that could serve as a model for Medicaid; and (3) there is sufficient knowledge about consumer-directed personal care to recommend one of these programs as a model.

GAO noted that: (1) while such programs exist, the information currently available is not sufficient to determine whether any of the existing consumer-directed personal assistance programs that allow consumers to pay or participate in paying attendants could serve as a model for Medicaid; (2) in terms of the programs in place, they tend to differ both in their mechanisms for paying attendants and in whether they monitor the use of the payments; (3) VA does not monitor the use of A&A allowance, taking the position that has no authority to tell veterans how to use the benefit; (4) state programs want to ensure that the employer taxes are paid for personal care attendants, and this can present difficulties for the consumer/employer, who must satisfy all Internal Revenue Service reporting requirements, and for the state, which generally prefers not to be the employer of record; (5) in most cases, the state or a fiscal intermediary makes payments and handles the taxes; and (6) although there has been no rigorous evaluation of any of these programs to date, the four-state Cash and Counseling Demonstration, sponsored by the Robert Wood Johnson Foundation and the Department of Health and Human Services, will produce important information on its cost-effectiveness—but not until 2001.

Defense health care: Fully integrated pharmacy system would improve service and cost-effectiveness (GAO/HEHS–98–176, 06/12/98)

The rapid rise in health care costs, the closure of military treatment facilities, and the rising number of retired military beneficiaries have prompted the Defense Department (DOD) to continually reengineer its health care delivery system. DOD's TRICARE health care system provides most of its care at Army, Navy, and Air Force facilities, supplemented by civilian health care services arranged by regional TRICARE contractors. Among health care services, the pharmacy benefit is most in demand by military beneficiaries. As in the private sector, DOD's pharmacy costs have continued to grow relative to total health care costs. GAO estimates that DOD's pharmacy costs rose 13 percent between 1995 and 1997, while its overall health care costs increased two percent during that same period. This report discusses (1) the adequacy of the information that DOD and its contractors use to manage the pharmacy benefit; (2) the merits and the feasibility of DOD and its contractors applying commercial best practices, including a uniform formulary, in managing its pharmacy programs; (3) the merits or limitations of recent mail-order and retail pharmacy initiatives to secure discounted DOD drug prices; and (4) the potential effects that military treatment facility's funding and formulary management decisions can have on beneficiaries' access to pharmacies and TRICARE contractors' costs.

Information systems: VA computer control weaknesses increase risk of fraud, misuse, and improper disclosure (GAO/AIMD–98–175, 09/23/98)

Computer control weaknesses put critical operations at the Department of Veterans Affairs (VA), from health care delivery to benefit payments to home mortgage loan guarantees, at risk of misuse and disruption. In addition, sensitive information in VA's systems, including financial transaction data and medical records, is vulnerable to inadvertent or deliberate misuse, even destruction. GAO found significant weaknesses in VA's control and oversight of access to its systems. For example, VA did not adequately limit the access of authorized users or effectively manage user identifications and passwords. In addition, VA did not provide adequate physical security for its computer facilities, assign duties so that incompatible functions were segregated, control changes to powerful operating system software, or update and test disaster recovery plans to prepare its computer operations to maintain or regain critical functions in emergencies. A primary reason for VA's computer control problems is that the agency lacks a comprehensive computer security planning and management program.

Military retirees' health care: Costs and other implications of options to enhance older retirees' benefits (GAO/HEHS–97–134, 06/20/97)

Today, 4.3 million military retirees, their dependents, and survivors are eligible for care under the military health care system. However, because of changes during the past decade, including the establishment of a nationwide managed care program and the closure of many medical facilities, many military retirees fear that they will lose access to care. This report describes various proposals that have been made to enhance older retirees' military health care benefits and provides cost estimates for implementing them. These options, each of which would require legislation to implement, include (1) enrolling Medicare-eligible retirees in TRICARE Prime, a health maintenance organization, and paying for their care with Medicare funds; (2) using Defense Department (DOD) funds to pay retirees' Medicare part B premiums and to furnish Medigap policies; (3) providing the Civilian Health and Medical Program of the Uniformed Services as a Medicare supplement; (4) extending the Federal Employees Health Benefits Program to retirees as a Medicare supplement and using DOD funds to pay part of the premium; and (5) expanding DOD's current mail-order prescription program to Medicare-eligibles who do not live near military medical facilities. GAO also discusses the uncertainties about and limitations of these options.

National cemetery system: Opportunities to expand cemeteries' capacities (GAO/HEHS–97–192, 09/10/97)

In fiscal year 1996, the Department of Veterans Affairs (VA) spent $73 million to provide burial benefits for 72,000 veterans and their family members in national cemeteries. These burial grounds, however, are rapidly running out of space. As World War II veterans age, the number of deaths and internments in national cemeteries are rising and expected to peak sometime early in the next

century. Because of the depletion of available gravesites, more than half of the national cemeteries will be unable to accommodate casket burials of family members before then. VA has several options to deal with this situation, including establishing new national cemeteries, developing space to hold ashes of the deceased, and acquiring additional land adjacent to existing cemeteries. GAO found that increased use of cremation, which is growing in acceptance nationwide, could extend the capacity of existing cemeteries at the lowest possible cost. For example, the cost of a traditional cemetery would exceed $50 million, while the cost of an above-ground columbarium, which holds cremations, would total $21 million.

VA aid and attendance benefits: Effects of revised HCFA policy on veterans' use of benefits (GAO/HEHS–97–72R, 03/03/97)

Pursuant to a congressional request, GAO provided information on the: (1) historical purpose of the Department of Veterans Affairs' (VA) aid and attendance (A&A) benefits and the policies affecting the use of these benefits; (2) medical, demographic, and economic characteristics of veterans who receive these benefits; and (3) impact of the Health Care Financing Administration's (HCFA) 1994 A&A policy decision on state veterans nursing homes, including federal and state expenditures for the care of veterans in these homes. GAO did not independently verify the data received from VA or the state veterans nursing homes.

GAO noted that: (1) A&A benefits have historically been a means of providing additional disability benefits to veterans requiring assistance with activities of everyday living; (2) veterans receiving these benefits are generally among the oldest, poorest, and most disabled veterans; (3) HCFA's current A&A policy has increased state and federal Medicaid payments for the care of veterans in state veterans nursing homes; (4) while the increases potentially could be as much as $30 million annually, GAO estimated that the current financial impact is significantly less because of such factors as the relatively small number of Medicaid-eligible veterans residing in state nursing homes and the fact that many states have not yet implemented the current HCFA policy; and (5) HCFA's policy may also create an inequity by allowing Medicaid-eligible veterans in state homes to keep their A&A benefits, while non-Medicaid eligible veterans in these homes are required to use these benefits to pay for the cost of care.

VA community clinics: Networks' efforts to improve veterans' access to primary care vary (GAO/HEHS–98–116, 06/15/98)

In 1995, the Veterans Health Administration (VHA) announced plans to switch from a hospital-based system of care to a healthcare system rooted in primary and ambulatory care. VHA has restructured its facilities into 22 service delivery networks. VHA has strengthened the process that these networks are to use when establishing new community-based clinics, thereby addressing several of GAO's earlier recommendations. VHA has provided more detailed guidance and it has developed a more structured planning process. VHA's long-range goal is to increase the number of community-based clinics. To that end, VHA has approved 198 clinics, and network business plans show that 402 additional clinics are to

be established by 2002. The plans, however, do not address the percentage of current users who have reasonable access, or what percentage of those without reasonable access are targeted to received enhanced access through the establishment of new clinics. As a result, VHA's network business plans cannot be used to determine on a systemwide basis how well networks are using clinics to equalize veterans' access to primary care.

VA health care: Closing a Chicago hospital would save millions and enhance access to services (GAO/HEHS–98–64, 04/16/98)

GAO's analysis found that three hospitals can meet the health care needs of Chicago-area veterans. By reducing the number of VA hospitals in the Chicago area from four to three, the Veterans Health Administration (VHA) can save about $200 million during the next 10 years and possibly generate millions of dollars more through the sale or lease of the closed property. VHA has experienced a large supply of unused beds, and veterans' demand for VHA hospital care is expected to decline further as (1) treatments shift from inpatient to outpatient settings and (2) the Chicago-area veteran population continues to decrease. In addition, other Chicago public and private hospitals have about 5,700 excess beds, which VHA could use on a contract basis to meet veterans' inpatient needs closer to their homes.

VA health care: Medicare reimbursement for services to veterans (GAO/HEHS–98–145R, 04/28/98)

As part of its fiscal year 1998 budget submission, the Department of Veterans Affairs (VA) requested authority to collect, on a demonstration basis, Medicare funding for care provided to veterans with income above a statutory threshold (so called, high income veterans) who are eligible for both VA care and Medicare.

GAO noted that a Medicare HMO demonstration could offer such potential benefits as: (a) access to VA care for high-income, Medicare-eligible veterans who would otherwise not be served; and (b) enhanced access to or quality of care for veterans not enrolled in VA's demonstration. GAO cautioned that a demonstration could expose current VA users to such potential risks as delays in receiving services, denials of care, or reductions in quality of care. Risks for veterans could be minimized by VA's efforts to establish safeguards, including procedures to: (a) assess available operating capacity and link the number of demonstration enrollees to that level; and (b) monitor waiting times, care denials, and quality of care on an ongoing basis for veterans who use VA health care, but are not enrolled in VA's demonstration.

VA health care: More veterans are being served, but better oversight is needed (GAO/HEHS–98–226, 08/28/98)

In recent years, the Department of Veterans Affairs (VA) has launched two major initiatives to change the way it manages its $17 billion health care system. In fiscal year 1996, VA decentralized the management structure of its Veterans Health Administration, forming 22 veterans integrated service networks to coordinate the activities of hundreds of hospitals, outpatient clinics, nursing homes, and other facilities. VA expected the networks to improve

efficiency and patient access. In April 1997, VA began to phase in the Veterans Equitable Resource Allocation system to allocate resources to the 22 networks. Previously, each medical center received and managed its own budget. Concerned that some networks would be forced to take significant cost-saving measures to manage with the diminished resources they would receive under the Veterans Equitable Resource Allocation system and that these networks would, as a result, reduce veterans' access to care, Congress asked GAO to examine changes in access to care in two networks—one headquartered in Bronx, New York, and one headquartered in Pittsburgh, Pennsylvania. This report discusses (1) the changes in overall access to care, changes in access to certain specialized services, and a comparison of changes in these networks with VA's national data from fiscal years 1995 to 1997; (2) the extent to which VA headquarters and networks are working to equitably allocate resources to facilities within the networks; and (3) the adequacy of VA's oversight of changes in access to care.

VA health care: Resource allocation has improved, but better oversight is needed (GAO/HEHS–97–178, 09/17/97)

The Department of Veterans Affairs (VA) provides health care to about 2.6 million veterans each year, but veterans in different parts of the country traditionally have not had equal access to these services. A shift of the veteran population from the northeast and the midwest to the south and the west without appropriate reallocation of resources has created inequities in access to services. In April 1997, VA launched the Veterans Equitable Resources Allocation system as part of a strategy to improve the equity of veterans' access to health care. The system is designed to allocate resources to 22 regional VA health care networks, which are responsible for allocating resources to hospitals and clinics. This report assesses VA's (1) implementation of the Veterans Equitable Resources Allocation system, (2) monitoring of changes in health care delivery resulting from the system, and (3) oversight of the network allocation process used to give veterans equitable access to service.

VA health care: Status of efforts to improve efficiency and access (GAO/HEHS–98–48, 02/06/98)

The Department of Veterans Affairs (VA) has taken important steps to improve the efficiency of its health care system and veterans' access to it. VA medical centers have increased efficiency by expanding the use of outpatient care. Preventive care, including health assessments and patient education, has also increased, enabling patients to stay healthier and avoid expensive hospital stays. VA is further increasing efficiency by integrating services both within and among medical centers. VA is improving access to health care in several ways. For example, it has begun to emphasize primary care, in which generalist physicians see patients initially and coordinate any specialty care that patients may need. In addition, VA is providing outpatient care at additional community-based outpatient clinics, expanding evening and weekend hours for clinics, and exploring other innovations. As networks and medical centers continue to respond to incentives to improve the efficiency of their operations, headquarters' monitoring of the impact of such

responses is necessary to help ensure that they do not compromise the appropriateness of health care that veterans receive.

VA health care: VA is adopting managed care practices to better manage physician resources (GAO/HEHS–97–87, 07/17/97)

The Department of Veterans Affairs (VA) is in the midst of making fundamental changes in its health care delivery system because of budgetary pressures and increasing competition in the health care industry. Many of these initiatives are affecting the entire VA health care system; they will also affect how VA manages physician resources, including identifying the appropriate number and skill mix of physicians and monitoring productivity and quality of care provided. These initiatives involve changes in physician practice patterns and in resource allocation to help ensure effectiveness and efficiency. In this report, GAO discusses steps VA is taking and the challenges it faces in managing physician resources, including the need to balance multiple congressionally mandated missions.

VA health care: VA's plan for the integration of medical services in central Alabama (GAO/HEHS–98–245R, 09/23/98)

On June 11, 1998, The Department of Veterans Affairs (VA) submitted a plan for congressional approval to integrate services at medical facilities located in Tuskegee and Montgomery, Alabama. GAO noted that VA's plan contains the necessary information to understand the proposed integration of services at the Montgomery and Tuskegee facilities, including (1) how proposed changes should occur, (2) how such changes could benefit veterans and employees, and what steps will be taken to minimize adverse effects on veterans' access to care and employees' access to work sites. Most veterans responding to GAO's survey believed VA's plan contains the necessary information to understand the proposed integration of the Montgomery and Tuskegee facilities and most supported VA's plan because they believe that integrating the two facilities will increase VA's capacity to provide health care.

VA Hospitals: Issues and challenges for the future (GAO/HEHS–98–32, 04/30/98)

Use of the 173 hospitals run by the Department of Veterans Affairs (VA) has steadily declined during the past three decades; from 1963 through 1995, the average daily workload of VA hospitals declined 66 percent. This report identifies major issues and changes that Congress and the administration will face in the next few years concerning VA hospitals. GAO compares VA and community hospitals regarding (1) how hospital care evolved during the 20th century, including changes in supply and demand; (2) factors contributing to the declining demand; (3) the extent of excess capacity; and (4) actions taken to increase efficiency and compete for patients.

VA medical care: Increasing recoveries from private health insurers will prove difficult (GAO/HEHS–98–4, 10/17/97)

For more than a decade, the Department of Veterans Affairs (VA) has been authorized to recover from private health insurers some of its expenses in providing health care to veterans with no

service-connected disabilities. VA's recovery authority was expanded in 1990 to include care provided to veterans with service-connected disabilities, as long as that care was for treatment of conditions unrelated to the veterans' service-connected disabilities. In fiscal year 1996, VA sought to recover $1.6 billion but obtained only 31 percent of the billed amount—or $495 million—a five-percent decline from fiscal year 1995 recoveries. In its fiscal year 1998 budget submission, however, VA projects that it will be able to recover $826 million from private health insurers by fiscal year 2002. This is important because VA sought and was recently authorized to keep the money it recovers and to use it to supplement future appropriations. This report (1) identifies factors that limit VA's ability to recover more of its billed charges, (2) evaluates VA's ability to achieve its revenue targets by identifying factors that could decrease future recoveries and by assessing the potential for VA initiatives to boost medical care cost recoveries, and (3) evaluates the way that VA applies insurance payments to veterans' copayment liability for veterans in the discretionary care category.

The Veterans Benefits Administration: Clarifying information on implementing the results act performance requirements (GAO/HEHS–98–149R, 04/17/98)

Pursuant to a congressional request, GAO provided follow-up information on the Veterans Benefits Administration's (VBA) implementation of the Government Performance and Results Act of 1993.

GAO noted that (1) while federal agencies' planning efforts in implementing the Results Act, as well as, GAO's assessment of these efforts are still very much a work in progress, the Department of Human Services is one of the agencies with programs involving human services that had identified goals that largely focused on outcomes; (2) moving agencies towards result-oriented management and associated performance measures is a significant challenge and GAO believes judging the success or failure of the Results Act should turn on the extent to which information produced through the act's goal-setting and performance measurement practices helps inform policy decisions; (3) while we have made no recommendations, we have pointed out that the initial goals and measures for the VBA programs, as stated in VA's June 1997 draft strategic plan, were process-oriented and did not reflect program results and that VBA needs to coordinate with other agencies and effectively measure and assess its performance in meeting its goals; and (4) VA's Office of the Inspector General (OIG) reported that data on claims-processing times were inaccurate, the data reliability in the claims-processing system was questionable, and there was evidence of manipulation of data by regional office staffs. VBA is developing safeguards and plans for addressing the prevention of data manipulation.

Veterans benefits computer systems: Risks of VBA's year-2000 efforts (GAO/AIMD–97–79, 05/30/97)

Unless timely, corrective action is taken, the Veterans Benefits Administration (VBA), like other federal agencies, could face widespread computer failures at the turn of the century because of the "Year 2000" problem. In many computer systems, the Year 2000 is

undistinguishable from 1900. This could make veterans who are due to receive benefits appear ineligible. If this were to happen, issuance of benefits checks could be disrupted. VBA has tried to address this problem, but it can do more. First, the Year-2000 management office's structure and technical capabilities are inadequate. Second, key Year-2000 readiness assessment processes—determining the potential severity of the Year-2000 impact on VBA operations, inventorying its information systems, and developing contingency plans—have not been completed. Third, VBA lacks enough information on the costs or potential problems associated with its approach to making systems Year-2000 compliant. As a result, it cannot make informed choices about which systems must be funded to avoid disruptions in service and which can be deferred. Addressing these problems requires top management attention. Contributing to the challenges are the loss of key computer people, difficulties in obtaining information on whether interfaces and third-party products are Year-2000 compliant, and delays in upgrading systems at VBA data centers. GAO summarized this report in testimony before Congress; see: *Veterans Benefits Computer Systems: Uninterrupted Delivery of Benefits Depends on Timely Correction of Year-2000 Problems* (GAO/T–AIMD–97–114, June 26, 1997).

Veterans benefits modernization: VBA has begun to address software development weaknesses but work remains (GAO/AIMD–97–154, 09/15/97)

The Veterans Benefits Administration (VBA) is modernizing its information systems to strengthen its administrative operations. VBA has taken steps to improve its software development capability, including launching a software process improvement initiative, chartering a software engineering process group, and obtaining the services of an experienced contractor to help with software process improvements. Despite this progress, other software development improvements are needed. These include (1) a defined strategy to reach the repeatable level and a baseline to measure improvements, (2) a process improvement training program for its software developers, and (3) a process to ensure that VBA's software development contractors are at the repeatable level. Unless these deficiencies are addressed, VBA's software development capability will remain ad hoc and chaotic, putting the agency at risk for cost overruns, poor quality software, and schedule delays in software development.

Veterans Health Administration facility systems: Some progress made in ensuring year 2000 compliance, but challenges remain (GAO/AIMD–98–31R, 11/07/97)

Pursuant to a congressional request, GAO provided additional information on Year 2000 initiatives at the Department of Veterans Affairs (VA), focusing on the Veterans Health Administration's (VHA) failure to complete an inventory of the elevator, heating, air conditioning, lighting systems, and disaster recovery systems at its hospitals.

GAO noted that: (1) ensuring Year 2000 compliance for facility-related systems, as well as disaster recovery or backup systems, is a critical problem for both public and private organizations; (2)

many facilities built or renovated within the last 20 years contain embedded computer systems that control, monitor, or assist in operations, and many of these systems could malfunction due to vulnerability to the Year 2000 problem; (3) addressing the facility-related systems problems is especially critical for VHA, because it oversees 173 medical centers, 376 outpatient clinics, 133 nursing homes, and 39 domiciliaries; (4) VHA has made some progress, including: (a) its Year 2000 project office has established a project team to pull together a list of facility-related systems manufacturers; (b) its medical centers are developing an inventory and assessing their facility systems for Year 2000 compliance; and (c) VHA is working with the Chief Information Officer Council's newly formed Year 2000 Building Systems Subgroup on facility-related systems issues; and (5) VHA faces some major challenges, including: (a) it has a very short time frame to address the Year 2000 computing problem; (b) manufacturers may not promptly respond to VHA and may not know whether their products are Year 2000 compliant; (c) VHA is largely dependent upon manufacturers to determine whether a Year 2000 problem exists and how problems will be corrected; and (d) VHA must implement the manufacturers' recommendations for achieving Year 2000 compliance, validate the systems, develop contingency plans for failures and errors, and coordinate contingency plans with disaster recovery plans.

Veterans' health care: Chicago efforts to improve system efficiency (GAO/HEHS–98–118, 05/29/98)

In June 1996, the Department of Veterans' Affairs (VA) announced the integration of two Chicago hospitals—Lakeside and West Side hospitals—under one director. These hospitals became the VA Chicago Health Care System within the Great Lakes network, which encompasses parts of Illinois, Indiana, Michigan, and Wisconsin. The Great Lakes network runs 8 hospitals and 12 outpatient clinics. Lakeside and Westside, which are located about six miles apart in downtown Chicago, provide acute inpatient medical, surgical, and psychiatric care. Both hospitals are affiliated with medical schools. This report examines the effect that the integration has had on veterans, employees, and medical schools in the Chicago area. GAO describes (1) the VA Chicago Health Care System's integration process; (2) the integration decisions made; (3) the impacts on veterans, employees, and medical schools; and (4) the dollar savings resulting from these decisions.

Veterans' health care: Service delivery for veterans on Guam and the Commonwealth of the Northern Mariana Islands (GAO/HEHS–99–14, 11/04/98)

About 9,400 veterans live on Guam and the Commonwealth of the Northern Mariana Islands. On Guam alone, about 700 veterans received health care from the Department of Veterans Affairs (VA) in 1997, at a cost of $1.2 million. In addition to providing care through its outpatient clinic, VA bought care from the Navy and private providers on Guam, as well as from military and private providers in Hawaii and the continental United States. Veterans groups have raised concerns about the health care provided on Guam and the inconvenience of traveling to Hawaii and elsewhere

when appropriate care is unavailable on Guam. They have also raised concerns about the possibility that the Navy may reduce or eliminate services in its hospital on Guam. They believe that VA should establish an inpatient facility at the U.S. Naval Hospital on Guam. This report (1) describes how VA now meets veterans health care needs on Guam and the Northern Mariana Islands, (2) estimates these veterans' possible future demand for health care and assesses VA's ability to meet this demand, and (3) estimates the cost to establish a veterans' inpatient ward at the U.S. Naval Hospital on Guam.

Year 2000 computing crisis: Compliance status of many biomedical equipment items still unknown (GAO/AIMD–98–240, 09/18/98)

Biomedical equipment that relies on computers or computer chips, from cardiac monitoring systems to electronic imaging machines, may be adversely affected by the Year 2000 problem. Although this situation has serious implications for the delivery of health care to the nation's veterans, the Veterans Health Administration (VHA) still does not know the full extent of its Year 2000 problem or the cost to overcome it. This is because it has yet to receive compliance information from 27 percent of the biomedical equipment manufacturers on its list of suppliers or from the nearly 100 other manufacturers that VHA discovered were no longer in business. According to VHA, most manufacturers reporting noncompliant equipment cited incorrect display of date and/or time as problems—albeit ones that health care providers can work around. Some manufacturers, however, cited more serious problems that could jeopardize patient safety. For example, a miscalculation by a radiation therapy planning computer could cause a patient to receive a hazardous radiation dose. The Food and Administration (FDA), which oversees and regulates medical devices, has sent letters to biomedical equipment manufacturers asking for information on products affected by the Year 2000 problem. The response rate to FDA has been disappointing. It is critical that such information be obtained and publicized. GAO summarized this report in testimony before Congress; see: *Year 2000 Computing Crisis: Leadership Needed to Collect and Disseminate Critical Biomedical Equipment Information* (GAO/T–AIMD–98–310, Sept. 24, 1998).

Year 2000 computing crisis: Progress made in compliance of VA systems, but concerns remain (GAO/AIMD–98–237, 08/21/98)

GAO has reported in the past that unless timely corrective action is taken, the Department of Veterans Affairs (VA) could face widespread computer system failures at the turn of the century because of incorrect information processing involving dates. (See GAO/T–AIMD–97–174, Sept. 1997; GAO/T–AIMD–97–114, June 1997; GAO/AIMD–97–79, May 1997; and GAO/AIMD–96–103, June 1996.) In many systems, the year 2000 is indistinguishable from the year 1900, which could make veterans who are due to receive benefits and medical care appear ineligible. The upshot is that benefits and health care that veterans depend on could be delayed or interrupted. This report assesses the Year 2000 programs of the Veterans Benefits Administration and the Veterans Health Administration.

CALENDAR YEARS 1997 AND 1998 TESTIMONIES ON ISSUES AFFECTING OLDER AMERICANS

GAO testified 53 times before Congressional committees during calendar years 1997 and 1998 on issues relating to older Americans. Of these testimonies, 31 were on health, 11 on income security, and 11 on veterans and DOD issues.

HEALTH ISSUES

Balanced Budget Act: Implementation of key medicare mandates must evolve to fulfill congressional objectives (GAO/T–HEHS–98–214, 07/16/98)

The Balanced Budget Act of 1997 (BBA) contained more than 200 mandates for Medicare. These mandates amount to what are probably the most significant modifications to the Medicare program since its inception 30 years ago. In summary, this testimony found that the Health Care Financing Administration (HCFA) is making progress in meeting the legislatively established implementation schedules for BBA Medicare provisions. Since the passage of BBA in August 1997, almost three-fourths of the mandates with a July 1998 deadline have been implemented. However, HCFA officials have acknowledged that many remaining BBA mandates will not be implemented on time.

California nursing homes: Care problems persist despite Federal and State oversight (GAO/T–HEHS–98–219, 07/28/98)

This testimony summarizes a July 1998 report, *California Nursing Homes: Federal and State Oversight Inadequate to Protect Residents in Homes With Serious Care Violations* (GAO/HEHS–98–202, 7/27/98).

High-risk areas: Benefits to be gained by continued emphasis on addressing high-risk areas (GAO/T–AIMD–97–54, 03/04/97)

This testimony addresses solutions to the serious management problems (discussed two weeks before in GAO/T-HR–97–22), which cost taxpayers billions of dollars and undermine the quality of government services. GAO outlines the steps that need to be taken to fix these problems. (High-Risk Series, GAO/HR–97–1 through GAO/HR–97–14, February 1997)

High-risk areas: Update on progress and remaining challenges (GAO/T–HR–97–22, 02/13/97)

In 1990, GAO began a special effort to identify federal programs at high risk for waste, fraud, abuse, and mismanagement. GAO issued a series of reports in December 1992 on the fundamental causes of the problems in the high-risk areas; it followed up on the status of these areas in February 1995. GAO's third series of high-risk reports, revisits these troubled government programs and designates five additional areas as high-risk (defense infrastructure, information security, the year 2000 problem, supplemental security income, and the 2000 decennial census), bringing to 25 the number of high-risk programs on GAO's list. This testimony before Congress summarized the third series of high-risk reports. (*High-Risk Series,* GAO/HR-–7–1 through GAO/HR–97–14, February 1997)

Long term care: Baby boom generation presents financing challenges (GAO/T–HEHS–98–107, 03/09/98)

Long-term care presents a significant burden for many persons and for public programs. Long-term care in a nursing home can cost more than $40,000 per year, with many nursing home residents paying that out of their own pockets. In addition to this out-of-pocket spending, Medicaid and Medicare paid out more than $51 billion in 1995 for long-term care for the elderly. More than a million elderly persons with extensive disabilities live at home, relying on their families for assistance. The aging of the baby boomers, particularly as they reach age 85 and older, will have a dramatic impact on the numbers of persons needing long-term care and will challenge individuals, families, and public programs to finance and furnish that care. This testimony (1) provides an overview of current spending for long-term care for the elderly, (2) discusses the increased demand that the baby boomers will likely create for long-term care, (3) describes recent shifts in Medicaid and Medicare financing of long-term care, and (4) discusses the potential role of private long-term care insurance in helping to pay for this care.

Medicare automated systems: Weaknesses in managing information technology hinder fight against fraud and abuse (GAO/T–AIMD–97–176, 09/29/97)

GAO has included Medicare in its list of government programs at high risk for fraud and abuse. (See GAO/HR-97-10, Feb. 1997.) The Department of Health and Human Service's Inspector General estimates that Medicare overpayments totaled $23.2 billion in fiscal year 1996, or about 14 percent of total Medicare fee-for-service payments. Ongoing Medicare initiatives to combat fraud and abuse include (1) an arrangement with the Energy Department's Los Alamos National Laboratory in 1995 to research the potential identification of fraud and abuse patterns and, more recently, (2) an assessment of the feasibility of using commercial abuse-detection software. This testimony focuses on the Medicare Transaction System (MTS), the Health Care Financing Administration's (HCFA) principal information technology initiative to detect fraud and abuse, and recommendations GAO made to correct serious weaknesses in MTS management. GAO also describes the two continuing HCFA initiatives against fraud and abuse, including the agency's response to earlier GAO recommendations on the benefits of commercial abuse detection software. Finally, GAO frames the discussion in broader terms, examining underlying information technology management issues with an eye toward identifying causes and solutions so HCFA can use automated systems to successfully fight Medicare fraud and abuse.

Medicare billing: Commercial system will allow HCFA to save money, combat fraud and abuse (GAO/T–AIMD–98–166, 05/19/98)

This testimony summarizes the GAO report on *Medicare Billing: Commercial System Could Save Hundreds of Millions Annually* (GAO/AIMD–98–91, 04/15/98).

Medicare: Control over fraud and abuse remains elusive (GAO/T–HEHS–97–165, 06/26/97)

Medicare's size and mission make it an attractive target for exploitation. That wrongdoers continue to dodge safeguards underscores the need for increasingly sophisticated ways to protect against system abuses. Improved oversight and leadership at the Health Care Financing Administration (HCFA), the mitigation of risks involved in acquiring Medicare's new multibillion dollar automated claims processing system—the Medicare Transaction System, and the appropriate use of new anti-fraud-and-abuse funds should help stem substantial losses in the future. Moreover, as Medicare's managed care enrollment grows, HCFA needs to ensure that beneficiaries receive enough information about health maintenance organizations (HMO) to make informed choices and that the agency enforces HMO compliance with federal standards. How HCFA will use the funding and authority provided under the Health Insurance Portability and Accountability Act of 1996 to improve its oversight over Medicare expenditures has not yet been determined. However, HCFA's earlier efforts to oversee fee-for-service contractors, the acquisition of the Medicare Transaction System, and Medicare managed care plans were plagued by weak monitoring, poor coordination, and delays. In GAO's view, HCFA's prospects for successfully combatting Medicare fraud and abuse are unclear.

Medicare: HCFA can improve methods for revising physician practice expense payments (GAO/T–HEHS–98–105, 03/03/98)

This testimony summarizes an earlier GAO report with the same title (GAO/HEHS-98-79, Feb. 27, 1998), which evaluated the Health Care Financing Administration's (HCFA) proposed revisions of physician practice expense payments and presented information on HCFA's ongoing efforts to refine its data and methodologies.

Medicare: HCFA faces multiple challenges to prepare for the 21st century (GAO/T–HEHS–98–85, 01/29/98)

This testimony focuses on the Health Care Financing Administration's (HCFA) preparedness to run the Medicare program in the 21st century. Because the $200 billion Medicare program is critical to nearly all elderly Americans and to many of the nation's disabled, program management, excessive spending, and depletion of the Medicare Trust Fund have been the subject of much congressional scrutiny in recent years. GAO and others have frequently reported that too much is being spent inappropriately because of the fraudulent and abusive billing practices of health care providers. GAO discusses (1) HCFA's new authorities under recent Medicare legislation, (2) the view of HCFA managers on the agency's ability to carry out various Medicare functions, and (3) the steps HCFA needs to take to accomplish its objectives over the next several years.

Medicare: Home health cost growth and administration's proposal for prospective payment (GAO/T–HEHS–97–92, 03/05/97)

After relatively modest cost growth during the 1980s, Medicare expenditures for home health care have soared in recent years.

Home health care costs grew from $2.4 billion in 1989 to $17.7 billion in 1996—an average annual increase of 33 percent. Medicare's home health care costs have grown because a larger portion of beneficiaries use this benefit than in the past and the number of service used by each beneficiary has more than doubled. Several factors have increased use of the benefit. Legislation and coverage policy changes in response to court decisions liberalized coverage criteria for the benefit. These changes, in turn, transformed the nature of home health care from primarily posthospital care to more long-term care for chronic conditions. Finally, weaker administrative controls over the benefit, resulting from resource constraints, make the detection of inappropriate claims more unlikely. The administration's major proposals for home health care are designed to give providers greater incentives to operate efficiently by immediately tightening the limits on the cost per visit that will be paid and imposing a new cap on per-beneficiary costs. After these changes go into effect in 1999, home health payments would switch from a cost reimbursement to a prospective payment system. These two proposals are estimated to save $12.4 billion during the next five years.

Medicare: Improper activities by Mid-Delta Home Health (GAO/T–OSI–98–6, 03/19/98)

Testimony given on report entitled: *Medicare: Improper Activities by Mid-Delta Home Health* (GAO/T–OSI–98–5, Mar. 12, 1998).

Medicare: Inherent program risks and management challenges require continued federal attention (GAO/T–HEHS–97–89, 03/04/97)

Federal spending for Medicare, one of the largest government entitlement programs, totaled $197 million in fiscal year 1996. Because of the program's size and mission, Medicare remains at high-risk for waste, fraud, and abuse. That wrongdoers continue to find ways to dodge safeguards illustrates the need for constant vigilance and increasingly sophisticated ways to protect against gaming the system. Better oversight and leadership by the Health Care Financing Administration (HCFA), the appropriate application of new anti-fraud-and-abuse funds, and the mitigation of risks involved in acquiring the Medicare Transaction System—a major claims processing system—should help reduce future losses. Moreover, as Medicare's managed care enrollment grows, HCFA must ensure that payments to health maintenance organizations (HMO) reflect the cost of care, that beneficiaries receive enough information about HMOs to make informed choices, and that the agency uses its expanded authority to enforce HMO compliance with federal standards.

Medicare: Interim payment system for home health agencies (GAO/T–HEHS–98–234, 08/06/98)

A well-designed prospective payment system is the best way for Medicare to rationally control home health spending. Until such a system is implemented, however, the interim payment system will help constrain the growth in outlays. Yet concerns have been raised about the interim payment system. Specifically, the industry

doubts whether payments will be adequate and whether the payment limits will adequately account for differences in patient mix and treatment patterns across agencies. Another concern is that inefficient providers will have unduly high limits because the limits are based on historic payments that reflect inappropriate practices. GAO and the Department of Health and Human Services' Office of Inspector General have previously reported that Medicare has been billed for home health visits that may not have been needed, were inconsistent with Medicare policies, or were not even delivered. Thus, concerns about the overall adequacy of payments under the interim system may be unwarranted because the limits were based on historic costs, a portion of which were unreliable. Whether the payments to individual agencies will reflect legitimate differences across agencies is more difficult to determine.

Medicare: Provision of key preventive diabetes services falls short of recommended levels (GAO/T–HEHS–97–113, 04/11/97)

This testimony summarizes a report entitled *Medicare: Most Beneficiaries With Diabetes Do Not Receive Recommended Monitoring Services* (GAO/HEHS–97–48, 3/28/97).

Medicare: Recent legislation to minimize fraud and abuse requires effective implementation (GAO/T–HEHS–98–9, 10/09/97)

With the enactment of the Health Insurance Portability and Accountability Act of 1996 and the Balanced Budget Act of 1997, Congress has provided significant opportunities to strengthen areas in the Medicare program at high risk for fraud and abuse. How Medicare will use this legislation to improve its oversight of program expenditures remains to be seen, however. The outcome depends largely on how promptly and effectively the Health Care Financing Administration (HCFA) implements the various provisions. HCFA's past efforts to implement regulations, oversee Medicare managed care plans, and acquire a major information system have often been slow or ineffective. Now that many more demands have been placed on HCFA, GAO is concerned that the promise of the new legislation to combat health care fraud and abuse could be delayed or not realized at all.

Medicare and Medicaid: Meeting needs of dual eligibles raises difficult cost and care issues (GAO/T–HEHS–97–119, 04/29/97)

"Dual eligibles" are Medicare beneficiaries who are also eligible for some form of Medicaid support. In 1995, Medicare and Medicaid spending for the roughly 6 million dual eligibles totaled $106 billion, or nearly one third of these programs' combined expenditures. The dually eligible population is expected to grow, resulting in even greater health financing expenditures and care challenges. The dually eligible population consists of persons with a range of health needs—from the young to the very old, from the healthy to the chronically ill in nursing homes. Compared with Medicare-only beneficiaries, however, dually eligible beneficiaries are more likely to be in poor health and require costly care, including long-term care. Meeting their needs under two programs that are administered under different rules complicates matters in both fee-for-service and managed care environments. The potential to cover

posthospital and long-term care benefits under either program has resulted in costs being shifted between programs. Much of the financial burden falls on the federal government. To better coordinate acute and long-term care needs, some states are looking into enrolling their dually eligible populations in a single managed care plan. However, differences in Medicare and Medicaid requirements for commercial managed care participation could pose barriers.

Medicare HMOs: HCFA could promptly reduce excess payments by improving accuracy of county payment rates (GAO/T–HEHS–97–78, 02/25/97)

This testimony discusses the rates that Medicare pays health maintenance organizations (HMO) in its risk contract program, Medicare's principal managed care option. Medicare's method for paying risk contract HMOs was designed to save the program five percent of the costs for beneficiaries who enroll in HMOs. However, GAO testified that HMO rate-setting problems have prevented Medicare from realizing this saving. The program's rate-setting methods have resulted in excess payments to HMOs because HMO enrollees would have cost Medicare less if they had stayed in the fee-for-service sector. A recent estimate placed the total excess payments to HMOs at $2 billion annually. GAO's method of calculating the county rate would reduce payments more for HMOs in counties with higher excess payments and less for HMOs in counties with lower excess payments. GAO's method represents a targeted approach to reducing excess payments and could lower Medicare expenditures by at least several hundred million dollars each year.

Medicare HMOs: HCFA could promptly reduce excess payments by improving accuracy of county payment rates (GAO/T–HEHS–97–82, 02/27/97)

This testimony discusses the rates that Medicare pays health maintenance organizations (HMO) in its risk contract program, Medicare's principal managed care option. Medicare's method for paying risk contract HMOs was designed to save the program five percent of the costs for beneficiaries who enroll in HMOs. However, GAO testified that HMO rate-setting problems have prevented Medicare from realizing this saving. The program's rate-setting methods have resulted in excess payments to HMOs because HMO enrollees would have cost Medicare less if they had stayed in the fee-for-service sector. A recent estimate placed the total excess payments to HMOs at $2 billion annually. GAO's method of calculating the county rate would reduce payments more for HMOs in counties with higher excess payments and less for HMOs in counties with lower excess payments. GAO's method represents a targeted approach to reducing excess payments and could lower Medicare expenditures by at least several hundred million dollars each year.

Medicare home health: Success of balanced budget act cost controls depends on effective and timely implementation (GAO/T–HEHS–98–41, 10/29/97)

This testimony examines how the Balanced Budget Act of 1997 has addressed rapid cost growth in Medicare's home health benefit. This benefit is important to many beneficiaries recovering from ill-

ness or injury following hospitalization—the original purpose of the benefit. Of late, however, increasing numbers of beneficiaries have used the benefit for custodial-type care for chronic conditions. This change has helped to fuel growth in Medicare home health costs, which soared from about $2 billion in 1989 to nearly $18 billion in 1996. GAO's remarks focus on the following four areas: the reasons for the rapid growth of Medicare home health care costs in the 1990s, the interim changes in the act to Medicare's current payment system, establishment under the act of a prospective payment system for home health care, and efforts by Congress and the administration to strengthen program safeguards to prevent fraud and abuse in home health services.

Medicare home health agencies: Certification process is ineffective in excluding problem agencies (GAO/T–HEHS–97–180, 07/28/97)

As a result of changes to Medicare during the 1980s, more people are receiving home health services for longer periods of time. This has led to rapid growth in the number of certified home health agencies—from 5,700 in 1989 to nearly 10,000 at the beginning of 1997. During this same period, Medicare payments for home health care jumped from $2.7 billion to about $18 billion. These payments are projected to reach nearly $22 billion in fiscal year 1998. GAO testified that it is simply too easy for home health agencies to become certified. The certification of a home health agency as a Medicare provider is based on an initial survey that takes place soon after the agency begins operating, and there is little assurance that the home health agency is providing quality care. And because the requirements are minimal, Medicare certifies nearly all home health agencies seeking certification. Although many home health agencies are drawn to the program with the intent of providing quality care, some are attracted by the relative ease with which they can become certified and participate in this lucrative, growing industry. Once certified, home health agencies are unlikely to be terminated from the program or otherwise penalized, even when they have been repeatedly cited for substandard care or failure to meet Medicare's conditions for participation.

Medicare home health benefit: Congressional and HCFA actions begin to address chronic oversight weaknesses (GAO/T–HEHS–98–117, 03/19/98)

Home health care is an important Medicare benefit, allowing beneficiaries with acute-care needs, such as recovery from hip replacement, and chronic conditions, such as congestive heart failure, to receive care in their homes rather than in more costly settings, such as nursing homes and hospitals. Drawing on past GAO work on the home health care industry, this testimony summarizes (1) the general nature of beneficiary eligibility criteria, which opportunists exploit to provide excessive services; (2) diminished Medicare contractor review and audit effort, which makes it less likely that abusers will be caught; (3) weaknesses in Medicare's home health provider certification process; and (4) new tools that Congress has provided to strengthen oversight of the home health benefit, including provisions of the Health Insurance Portability and Accountability Act of 1996 and the Balanced Budget Act of 1997.

Medicare managed care: HCFA missing opportunities to provide consumer information (GAO/T–HEHS–97–109, 04/10/97)

Medicare beneficiaries need more and better information so that they can make informed decisions when choosing a health plan. Although Medicare is the nation's largest purchaser of managed care services, it lags behind other large purchasers in providing comparative information to beneficiaries. The need for this information grows more urgent each month as tens of thousands of beneficiaries join the 4 million beneficiaries who have already opted for Medicare managed care. The Health Care Financing Administration (HCFA) is moving in the right direction by making information available, but GAO believes that HCFA could, with relatively little time and effort, do much more. Requiring that health maintenance organizations use standard terminology and formats to describe benefits, producing comparison charts and ensuring that interested beneficiaries know how to get such charts, and analyzing and publishing comparative data already available (such as disenrollment rates) would greatly enhance the ability of Medicare beneficiaries to be wise consumers of managed care.

Medicare managed care: HMO rates, other factors create uneven availability of benefits (GAO/T–HEHS–97–133, 05/19/97).

Medicare risk health maintenance organization (HMO) plans are not available nationwide, and differences in premiums charged and benefits offered across the country have produced inequities for Medicare beneficiaries. In addition, the risk contract program has not realized the expected savings from enrolling beneficiaries in capitated managed care plans. Medicare's risk HMO payment system, which is built largely on fee-for-service costs, accounts for some, but not all, of the unevenness in Medicare's risk contract program. Differences in local medical prices and service utilization explain much of the variation in HMO capitation rates across counties. In turn, the variation in these rates explains some of the differences across locations in the availability of risk contract HMOs, the level of HMO premiums charged, and the richness of benefits offered. Other factors, however, also play an important role. GAO proposes correcting a flaw in Medicare's rate-setting method that contributes to excess payments to HMOs.

Medicare managed care: Information standards would help beneficiaries make more informed health plan choices (GAO/T–HEHS–98–162, 05/06/98)

GAO reported in 1996 that beneficiaries received little or no comparative information on Medicare health maintenance organizations. (See GAO/HEHS–97–23.) GAO recommended that the Health Care Financing Administration (HCFA) produce plan comparison charts; require plans to use standard formats and terminology in key aspects of their marketing materials; and publicize readily available plan performance indicators, such as disenrollment rates. In addition, Medicare+Choice provisions authorize new health plan options for Medicare beneficiaries and require HCFA to provide beneficiaries with comparative information on the Medicare+Choice options. This testimony discusses the extent to which HCFA's Medicare+Choice information development efforts are likely to (1)

enable beneficiaries to readily compare benefits and out-of-pocket costs using plan brochures and (2) facilitate the agency's approval of plans' marketing materials and other administrative work required of both HCFA and the health plans.

Medicare post-acute care: Cost growth and proposals to manage it through prospective payment and other controls (GAO/T–HEHS–97–106, 04/09/97)

After relatively modest growth during the 1980s, Medicare outlays for skilled nursing facilities and home health care have soared during the 1990s. Expenditures for inpatient rehabilitation facilities have grown rapidly since the mid-1980s. Skilled nursing facility payments rose from $2.8 billion in 1989 to $11.3 billion in 1996, while home health care costs grew from $2.4 billion to $17.7 billion during that same period. Rehabilitation facility payments increased from $1.4 billion in 1989 to $3.9 billion in 1994. During those periods, annual growth averaged 22 percent for skilled nursing facilities, 33 percent for home health care, and 23 percent for rehabilitation facilities. This testimony focuses on the reasons behind the cost growth and the administration's legislative proposals for these three Medicare benefits.

Medicare post-acute care: Home health and skilled nursing facility cost growth and proposals for prospective payment (GAO/T–HEHS–97–90, 03/04/97)

After relatively modest cost growth during the 1980s, Medicare's outlays for skilled nursing facilities and home health care have grown rapidly during the 1990s. Skilled nursing facility payments rose from $2.8 billion in 1989 to $11.3 billion in 1996, while home health care costs rose from $2.4 billion to $17.7 billion during the same period. This testimony discusses the reasons behind the costs growth for skilled nursing facilities and home health care and the administration's announced legislative proposals for these two Medicare benefits.

Medicare transaction system: Serious managerial and technical weaknesses threaten modernization (GAO/T–AIMD–97–91, 05/16/97)

This report summarizes the GAO report on *Medicare Transaction System: Success Depends Upon Correcting Critical Managerial and Technical Weaknesses* (GAO/AIMD–97–78, 05/16/97).

Nursing homes: Too early to assess new efforts to control fraud and abuse (GAO/T–HEHS–97–114, 04/16/97)

Although Medicaid is the largest single payer for nursing home care, Medicare pays a substantial portion of the health care costs of nursing home residents. For the opportunistic provider, a nursing home represents a vulnerable elderly population in a single location and the opportunity for multiple billings. Many nursing home patients are mentally impaired, and their care is controlled by the nursing home. Because these patients would not realize what items or services were billed on their behalf, some providers may take advantage of the situation by submitting fraudulent claims. GAO testified that fraudulent billing has occurred because

(1) the complexities of the reimbursement process invite exploitation and (2) poor control over Medicare claims has reduced the likelihood that inappropriate claims will be denied. GAO is encouraged by recent efforts to combat fraud and abuse—the pending implementation of provisions in the Health Insurance Portability and Accountability Act and a proposal made by the administration.

Private health insurance: Employer coverage trends signal possible decline in access for 55- to 64-year-olds (GAO/T–HEHS–98–199, 06/25/98)

This testimony summarizes the GAO report on *Private Health Insurance: Declining Employer Coverage May Affect Access for 55- to 64-Year-Olds* (GAO/HEHS–98–133, 06/01/98).

Retiree health insurance: Erosion in retiree health benefits offered by large employers (GAO/T–HEHS–98–110, 03/10/98)

Employer-provided insurance for retirees has experienced a slow but persistent decline since the early 1990s. Rising health care costs have spurred companies to find ways to control their benefit expenditures, including eliminating retiree coverage and increasing cost sharing. Moreover, a new financial accounting standard developed in the late 1980s has changed employers' perceptions of retiree health benefits and may have served as a catalyst to reduce retiree coverage. The Health Insurance Portability and Accountability Act of 1996 mandates continued access to health insurance for persons losing group coverage. The legislation does not, however, guarantee that the continued coverage will be affordable. Because state laws governing the operation of the individual market can vary, the premiums faced by early retirees vary substantially. Moreover, considering that large companies typically pay 70 to 80 percent of the premium, costs in the individual market may come as a rude awakening for early retirees. Persons who are already retired when a company terminates coverage are not eligible to temporarily continue that firm's health plan at their own expenses. COBRA coverage is only available to active employees who quit or retire or are fired or laid off. To address this potential gap in coverage when a former employer unexpectedly terminates health insurance, Congress and the President have proposed allowing affected retirees to purchase continuation coverage at a cost that reflects their higher utilization of services until they become eligible for Medicare.

INCOME SECURITY ISSUES

Social Security: Mandating coverage for State and local employees (GAO/T–HEHS–98–127, 05/21/98)

This testimony preceded a GAO report on mandatory coverage which expanded on the testimony. The report was entitled *Social Security: Implications of Extending Mandatory Coverage to State and Local Employees* (GAO/HEHS–98–196, 08/18/98).

Social Security: Restoring long-term solvency will require difficult choices (GAO/T–HEHS–98–95, 02/10/98)

Social Security, the foundation of the nation's retirement income system, provides 42 percent of all income for the elderly—about twice as much as any other single source. Because of significant demographic changes, however, Social Security now faces a serious long-term financing shortfall. This testimony discusses five fundamental choices that Social Security reforms will reflect: (1) balancing income adequacy and individual equity, (2) determining who bears risks and responsibilities, (3) choosing among various benefit reductions and revenue increases, (4) using pay-as-you-go or advance funding, and (5) deciding how much to save and invest in the nation's productive capacity.

Social Security Administration: Information technology challenges facing the commissioner (GAO/T–AIMD–98–109, 03/12/98)

During congressional testimony, GAO discussed generally the challenges that SSA faced in implementing its Year 2000 program and other information technology initiatives. GAO noted SSA's need to address three major risks in its Year 2000 program: (1) ensuring compliance of the state Disability Determination Services' (DDS) systems that support SSA in administering its disability programs, (2) ensuring that SSA's data exchanges with other federal agencies, state agencies, and private businesses were Year 2000 compliant, and (3) developing contingency plans to ensure business continuity in the event of systems failure. GAO also discussed ongoing issues concerning the implementation of IWS/LAN, including contractor concerns regarding the availability of the workstations specified in the IWS/LAN contract, DDS concerns regarding SSA's management of the network, and the need for IWS/LAN performance measures. In addition, this testimony discussed a recent GAO report on SSA's efforts to improve its software development process (see GAO/AIMD–98–39, Jan. 1998); it also updated testimony from last year on SSA's experiences in making personal earnings and benefits information available over the Internet (see GAO/T–AIMD/HEHS–97–123, May 1997).

Social Security Administration: Internet access to personal earnings and benefits information (GAO/T–AIMD/HEHS–97–123, 05/06/97)

This testimony updated the testimony described immediately above. See *Social Security Administration: Information Technology Challenges Facing the Commissioner* (GAO/T–AIMD–98–109, 03/12/98).

Social Security reform: Demographic trends underlie long-term financing shortage (GAO/T–HEHS–98–43, 11/20/97)

Increasing life expectancy and declining fertility rates pose serious challenges not just for the Social Security system but also for Medicare, Medicaid, the federal budget, and the economy as a whole. The aging of the baby boomers will simply accelerate this trend. Today, Social Security receives more from payroll taxes than it pays out in benefits. This excess revenue is helping to build substantial trust fund reserves that should help pay full benefits until

2029, according to Social Security's intermediate projections. At the same time, this excess revenue is helping to reduce the overall federal budget deficit, although it will begin to taper off after 2008. In 2012, Social Security benefit payments are projected to exceed cash revenues, and the federal budget will start to come under considerable strain as the general fund starts to repay funds borrowed from the trust funds.

Although Social Security's revenues now exceed its expenditures, those revenues are expected to be about 14 percent less than total projected expenditures over the next 75 years, according to Social Security Administration estimates. Various benefit reductions and revenue increases within the current program structure could be combined to restore financial balance. However, some observers believe that the program structure should be reevaluated. Reform is necessary, and the sooner it is addressed the less severe the adjustments will need to be.

Social Security reform: Implications for the financial well-being of women (GAO/T–HEHS–97–112, 04/10/97)

Proposed Social Security reforms affect the financial well-being of beneficiaries, especially women. Elderly unmarried women are much more likely to be living below the poverty line. Twenty-two percent of unmarried elderly women have income below the poverty threshold, compared with 15 percent of unmarried elderly men and only 5 percent of elderly married couples. Under current Social Security law, women tend to receive lower financial benefits than do men, primarily because they usually have lower lifetime earnings and work fewer years. Women's experiences under pension plans also differ from men's not only because of earning differences but also because of differences in investment behavior and longevity. Moreover, public and private pension plans do not offer the same social insurance protections that Social Security does. The Social Security Advisory Council's reform proposals aimed at resolving future financial problems confronting the system contain elements that may exacerbate the differences in benefits. For example, proposals that call for individual retirement accounts will pay benefits that are affected by investment behavior and longevity. Expected changes in women's labor force participation rates and increasing earnings will reduce but probably not eliminate these differences.

Social Security reform: Raising retirement ages improves program solvency but may cause hardship for some (GAO/T–HEHS–98–207, 07/15/98)

Many of the proposals before Congress to mitigate Social Security's long-term financial shortfall of nearly $3 trillion would raise either the normal retirement age, currently 65, the early retirement age, currently 62, or both. Increasing retirement ages is expected to help alleviate the financing problem by increasing the amount that individuals pay into the Social Security trust fund and reducing the benefits they draw out. GAO found that raising the Social Security retirement ages could improve long-term solvency for the program by increasing revenues and reducing benefits, but it is unclear whether employers will be willing to retain or hire older workers. Older blue-collar workers may be adversely affected

because they are at risk for certain health problems that limit their ability to continue working.

Social Security financing: Implications of Government stock investing for the trust fund, the Federal budget, and the economy (GAO/T–AIMD/HEHS–98–152, 04/22/98)

This testimony summarized GAO's report entitled *Social Security Financing: Implications of Government Stock Investing for the Trust Fund, the Federal Budget, and the Economy,* (GAO/AIMD/HEHS–98–74, April 22, 1998). In addition, it examined ways that government stock investing contrasts with stock investing through Social Security reforms that would create individual retirement savings accounts. With government stock investing, risks and returns would be shared collectively through the government rather than borne individually.

SSA's management challenges: Strong leadership needed to turn plans into timely, meaningful action (GAO/T–HEHS–98–113, 03/12/98)

The Social Security Administration (SSA) has been an independent agency since March 1995. This testimony discusses SSA's progress in addressing several challenges identified in earlier GAO reports. These challenges include the agency's need to strengthen its research and policy capacity so that it can address the solvency issue, address management and oversight problems with its Supplemental Security Income program, redesign its disability programs and promote beneficiaries' return to work, and meet its future workload demands.

Year 2000 computing crisis: Continuing risks of disruption to Social Security, Medicare, and Treasury programs (GAO/T–AIMD–98–161, 05/07/98)

The upcoming change of century poses a challenge to virtually all major organizations, public and private, including government programs with a high degree of interaction with the American public such as Social Security and Medicare. For this reason, GAO designated the Year 2000 computing problem as a high risk area for the federal government, and published guidance to help organizations successfully address the issue.

GAO briefly outlined what additional actions must be taken to reduce the nation's Year 2000 risks, and what its inquiries into Year 2000 readiness found at the Social Security Administration (SSA), the Health Care Financing Administration (HCFA), and the Department of Treasury.

The Year 2000 will present many difficult challenges in information technology and in ensuring the continuity of business operations, and has the potential to cause serious disruption to the nation and to the government entities on which the government depends, including the SSA, the HCFA, and the Department of the Treasury. These risks can be mitigated and disruptions minimized with proper attention and management. While these agencies and programs have been working to mitigate their Year 2000 risks, further action must be taken to ensure continuity of mission critical business operations.

Year 2000 computing crisis: Progress made at Department of Labor, but key systems at risk (GAO/T–AIMD–98–303, 09/17/98)

The Department of Labor has made progress in addressing the Year 2000 computing crisis, but risks remain in several areas, including making benefit payments to laid-off workers, collecting labor statistics, and ensuring accurate accounting for pension benefits. Some of the systems supporting these business areas are at risk. It is critical that contingency plans be developed to ensure business continuity in the event of systems failures.

VETERANS' & DOD ISSUES

Arlington National Cemetery: Authority, process, and criteria for burial waivers (GAO/T–HEHS–98–81, 01/28/98)

Since 1967, 196 waivers have been granted to allow burial at Arlington National Cemetery to persons not otherwise qualified, and at least 144 documented requests have been denied. Of the granted waivers, about 63 percent involved burials of persons in the same grave as someone already interred or expected to be interred. Although the Secretary of the Army has no explicit statutory or regulatory authority to grant waivers, it is legal for the Secretary to do so. GAO found that most waiver requests have been handled through an internal Army review process involving officials responsible for the administration of Arlington. However, this process is not followed in all cases. For example, in the case of presidential waiver decisions, the Army process is generally bypassed. Moreover, because the process is not widely understood, persons with high-level contacts sometimes appear to have an advantage. Finally, although those responsible for making waiver decisions appear to apply some generally understood criteria, these criteria, which are not formally established, are not always consistently applied or clearly documented.

Defense health care: Limits to older retirees' access to care and proposals for change (GAO/T–HEHS–97–84, 02/27/97)

When space and resources are available in military medical facilities, military retirees may receive care at little or no cost. When resources are unavailable, retirees under age 65 can seek medical care from the private sector, and the Defense Department's (DOD) Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) will cover the cost. But retirees age 65 or over lose the CHAMPUS benefit, and the only DOD-funded care they are eligible for is the space-available care at military facilities. In the last 10 years, one-third of military hospitals have been closed because of military downsizing, reducing space available for older retirees, a group that has grown 75 percent during the last 10 years to 1.2 million. In addition, DOD's managed health care system gives older retirees the lowest priority for access to space. GAO examines the costs and benefits of five proposed alternatives for addressing the issue of health care for older retirees: (1) Medicare subvention, (2) enrollment in the Federal Employees Health Benefit Program, (3) CHAMPUS as a secondary payer, (4) Medigap policies, and (5) a mail order pharmacy benefit. This testimony preceded the actual enactment and implementation of Medicare Subvention and

FEHBP for persons 65 or over on a trial basis. See *Military Retirees' Health Care: Costs and Other Implications of Options to Enhance Older Retirees' Benefits* (GAO/HEHS–97–134, 06/20/97), which was related to this testimony.

National cemetery system: Plans for addressing projected increases in veterans' burials (GAO/T–HEHS–98–157, 04/29/98)

This testimony summarizes a GAO report on *National Cemetery System: Opportunities to Expand Cemeteries' Capacities* (GAO/HEHS–97–192, 09/10/97).

VA health care: Lessons learned from medical facility integrations (GAO/T–HEHS–97–184, 07/24/97)

The Department of Veterans Affairs (VA) operates 173 hospitals and more than 200 freestanding outpatient clinics nationwide at a cost of about $17 billion a year. Two years ago, VA created 22 networks to help improve service delivery to the 3 million veterans who use its medical facilities each year. So far, networks have begun facility integrations in 18 geographic areas, involving a total of 36 hospitals. This testimony focuses on (1) the role of facility integrations in reshaping VA's health care delivery system and (2) lessons learned that could help enhance VA's process for planning and implementing ongoing and future facility integrations.

VA health care: Opportunities to enhance Montgomery and Tuskegee service integration (GAO/T–HEHS–97–191, 07/28/97)

The Department of Veterans Affairs (VA) is integrating its medical facilities in Tuskegee and Montgomery, Alabama. The two facilities' managerial, clinical, and patient support services are to be restructured into a single health care delivery system called the Central Alabama Veterans Health Care System, which is intended to provide the same or higher quality services at lower cost. GAO testified that VA officials have made significant progress in planning for this integration, and benefits have already been realized. Planning activities, however, have yet to be completed, including (1) key decisions on whether and how to restructure services, such as nutrition and food services; (2) assessments of the probable impact of clinical, administrative, and patient support service changes on veterans and employees; and (3) determinations of how savings will be reinvested to benefit veterans. Moreover, some stakeholders have found it difficult, if not impossible, to assess the reasonableness of VA's decisions and to ultimately "buy in" to them without the benefit of information from completed planning activities facilitywide. VA needs to complete its planning in sufficient detail to ensure that benefits are maximized and adverse impacts minimized.

Veterans' Affairs: Veterans Benefits Administration's progress and challenges in implementing GPRA (GAO/T–HEHS–97–131, 05/14/97)

In response to widespread management problems in the government, Congress has taken steps to fundamentally change the way that federal agencies go about their work. The Government Performance and Results Act, passed in 1993, requires agencies to

clearly define their missions, set goals, measure performance, and report on their accomplishments. This testimony discusses the progress made and the challenges faced by the Veterans Benefits Administration in implementing that legislation.

Veterans Affairs computer systems: Action underway yet much work remains to resolve year 2000 crisis (GAO/T–AIMD–97–174, 09/25/97)

This testimony discusses the progress being made by the federal government and, in particular, the Department of Veterans Affairs (VA) in ensuring that its automated information systems are ready for the upcoming century change. GAO summarizes the federal government's progress in addressing the Year 2000 problem, discusses action taken by VA as a whole, and examines steps taken by the Veterans Benefits Administration in response to recent GAO recommendations.

Veterans Benefits Administration: Progress and challenges in implementing the results act (GAO/T–HEHS–98–125, 03/26/98)

The Veterans Benefits Administration (VBA) received more than $22 billion in fiscal year 1997 to run programs that provide veterans, their dependents, and survivors with a host of benefits—from pensions to rehabilitation assistance to education and home loan assistance. This testimony discusses VBA's progress in implementing the Government Performance and Results Act of 1993, which requires agencies to clearly define their mission, set goals, measure performance, and report on their accomplishments.

Veterans benefits computer systems: Uninterrupted delivery of benefits depends on timely correction of year-2000 problems (GAO/T–AIMD–97–114, 06/26/97)

This testimony summarizes GAO's May 1997 report, *Veterans Benefits Computer Systems: Risks of VBA's Year 2000 Efforts,* GAO/AIMD 97–79, 5/30/97.

Veterans' health care: Challenges facing VA's evolving role in serving veterans (GAO/T–HEHS–98–194, 06/17/98)

The Department of Veterans Affairs (VA) operates one of the nation's largest health care systems including 400 service delivery locations, and 183,000 employees. This year, VA will serve about 2.9 million of the nation's 26 million veterans, at a cost of $19 billion. During the past 75 years, this health care role has evolved from one of rehabilitating disabled wartime veterans to also providing a health care safety net for veterans in peacetime. Today, VA is positioning itself as a competitive health care alternative for all veterans. More specifically, three years ago VA began to transform its health care system, in response to market changes and budgetary pressures, to make it more competitive with other health care providers. To aid in this transformation, Congress provided new revenue sources and reformed veterans' eligibility for care and VA's ability to purchase services from other providers. This testimony focuses on how the transformation of VA's health care system is progressing and what challenges VA faces as its role evolves.

Year 2000 computing crisis: Leadership needed to collect and disseminate critical biomedical equipment information (GAO/T–AIMD–98–310, 09/24/98)

This testimony summarizes GAO's September 1998 report, *Year 2000 Computing Crisis: Compliance Status of Many Biomedical Equipment Items Still Unknown* (GAO/AIMD–98–240, September 18, 1998).

RELATED GAO PRODUCTS

Aging issues: Related GAO reports and activities in calendar years 1995 and 1996 (GAO/HEHS–98–101, March 27,1998)

Aging issues: Related GAO reports and activities in fiscal year 1996 (GAO/HEHS–97–41, Dec. 31, 1996)

Aging issues: Related GAO reports and activities in fiscal year 1995 (GAO/HEHS–96–82, Mar. 6, 1996)

Aging issues: Related GAO reports and activities in fiscal year 1994 (GAO/HEHS–95–44, Dec. 29, 1994)

Aging issues: Related GAO reports and activities in fiscal year 1993 (GAO/HRD–94–73, Dec. 22, 1993)

ITEM 22—LEGAL SERVICES CORPORATION

SERVICE TO THE AGING

The Legal Services Corporation (LSC) was created by Congress in 1974 to provide access to civil legal aid to low-income Americans. The corporation receives an annual appropriation from Congress. In 1997, LSC funded some 269 local legal aid programs across the country, serving every county and congressional district in the nation.

Legal services clients are as diverse as our nation, encompassing all races and ethnic groups and ages. The problems that bring people to local legal services offices arise out of everyday life. Usually they relate to matters of family law. Housing, employment, government benefits, or consumer disagreements. Frequently they represent matters of crisis for clients and their families. The possible consequences may be as serious as the loss of a family's only source of income, homelessness, or the breakup of a family.

In 1997, LSC-funded programs served 193,261 Americans over the age of 60. Older Americans represented 10 percent of the clients served by legal services programs. Because of their special health, income, and social needs, older people often require legal assistance, especially in coping with the government-administered benefits on which many depend for income and health care.

Some local legal services programs have special elderly law units. But every program provides services to the elderly. Most LSC programs are listed in the blue or yellow pages of the phone book, usually listed under Legal Aid or Legal Services. You can also get a referral by calling LSC at (202) 336–8800; going to the LSC web site (www.lsc.gov); or writing Public Affairs, LSC 750 First Street NE, Washington, DC 20002.

ITEM 23—NATIONAL ENDOWMENT FOR THE ARTS

SUMMARY OF ACTIVITIES RELATING TO OLDER AMERICANS—FISCAL YEAR 1998

INTRODUCTION

The National Endowment for the Arts works to broaden public access to the arts for people of all ages throughout the country by strengthening the role of the arts in enriching educational experiences, enhancing the vitality of communities and promoting individual growth.

Realizing that cultural activities enrich the lives of all citizens, we enthusiastically seek ways to involve older adults in the arts as creators, students, volunteers, patrons, teachers and as audience members. Through funding, leadership initiatives and technical assistance, the Arts Endowment assures the continued participation of older Americans in the ever-widening kaleidoscope of arts activities.

OFFICE FOR ACCESS ABILTITY

The AccessAbility Office continues to serve as the advocacy and technical assistance arm of the Arts Endowment for older adults, individuals with disabilities and people living in institutions including long-term care. This Office works with grantees, applicants, organizations that represent the targeted populations, and other Federal agencies to educate and assist on the importance of making the best art more available to older citizens.

As part of her technical assistance efforts, the AccessAbility Coordinator organizes and conducts presentations at conferences to better educate participants concerning the value of and how to implement accessible programming. During this reporting period, workshops and panels were given at eight conferences including those of the National Council on Aging in Washington, D.C., the National Assembly of State Arts Agencies in Cleveland, Ohio, and the American Association of Museums in Los Angeles, CA.

The Arts Endowment received the Universal Design Leadership Award at the international conference, Designing for the 21st Century, for the Endowment's "substantial and effective leadership in encouraging and assisting universal design." Convened at Hofstra University in New York City on June 18–21, 1998, this was the first-ever international conference that focused on universal design. As documented in previous reports to the Special Committee beginning in 1990, the Arts Endowment has initiated and supported a variety of projects that address this important design process—which makes spaces and products usable by people of all abilities throughout their lifespans.

NATIONAL FORUM ON CAREERS IN THE ARTS FOR PEOPLE WITH DISABILITIES

The Arts Endowment convened the first "National Forum on Careers in the Arts for People with Disabilities" in partnership with four other Federal agencies: the U.S. Dept. of Education, the U.S. Dept. of Health and Human Services, the Social Security Administration and the John F. Kennedy Center for the Performing Arts. Convened June 14–16, 1998 at the Kennedy Center in Washington, D.C., 300 people of all ages from around the country discussed the myriad of issues facing people with disabilities in pursuit of the wide variety of arts careers. Participants included artists, arts administrators, rehabilitation professionals, educators and staff from Federal agencies. In addition, conference proceedings were audio and video-streamed over the internet, making it possible for hundreds more to participate as they provided valuable input via listservs.

Guidance from the eighteen-member planning committee, composed of select leadership from the arts, aging, rehabilitation and education fields, was invaluable in setting goals, selecting speakers and conducting the Forum. The Forum focused on three areas: education/training, funding and jobs. We were able to involve leaders in the arts, disability and funding fields including: Phyllis Frelich, the first deaf actor to receive the Tony award; Gordon Davidson, Artistic Director of the Mark Taper Forum; Dianne Pilgrim, Director of the Cooper Hewitt Museum of Design; Melissa Franklin, Director of Pew Fellowships in the Arts; Robert Cogswill, Director of the Folk Arts Program at the Tennessee Arts Commission; Jeremy Alliger, Artistic Director of Dance Umbrella; and Jordan Thaler, Casting Director of the Joseph Papp Theatre. The forum featured performances by artists with disabilities on the Kennedy Center's Millennium Stage, including the Cleveland Ballet's Dancing Wheels and jazz musicians Valarie Capers and Lisa Thorson.

I was pleased to address this enthusiastic body in my second keynote as Chairman of the National Endowment. My remarks included some of my goals for this agency:

> We must advance President Clinton's goal of health coverage for all Americans, addressing the health concerns of artists, and disseminating relevant information to the field. This includes the Endowment's work with the Actor's Fund of America to develop a national database of health insurance for artists.
>
> We must help the arts advance the concerns of our communities—from design and celebration to youth-at-risk, and through arts initiatives in non-traditional venues like long-term care facilities, correctional facilities and hospitals. It is in these settings that the arts can be a powerful tool to educate and enhance the quality of life.
>
> We must encourage and support lifelong learning in the arts, from kindergarten through grade twelve and through a lifetime of learning as well.
>
> We must broaden access to the arts for all Americans. This means geographical reach, and the use of advanced tech-

nologies—for example audio description, captioning, and universal design.

In panels and breakout sessions, Forum participants discussed models for pursuing education and jobs; and the concept of universal design, which has the potential to open up education and cultural institutions to everyone. And in almost every session, concerns were expressed about financial disincentives to receiving financial remuneration due to government program regulations (such as SSI, supplemental income and health benefits) that restrict receiving monetary awards for excellence in one's career field (i.e. apprenticeships, fellowships or National Heritage awards); and receiving irregular or infrequent compensation for art. We find that these rules affect many older artists including basketmakers, musicians, quilters and poets.

At the Forum's final session, participants formulated recommendations that address barriers to arts careers. They encouraged vigorous enforcement of government disability rights legislation; finding ways to end financial disincentives; working with government vocational rehabilitation to ensure that counselors are able to assist eligible people who chose arts careers; ensuring the definition of diversity includes disability; and establishing more arts related scholarship/internship programs for people with disabilities. Taking this important guidance into consideration, the Arts Endowment is presently working with our Federal partners to plan for the next steps to advance arts careers for Americans of all ages and abilities.

As the National Endowment for the Arts continues to work towards these worthy objectives, older adults will benefit even more from this agency's initiatives and funding.

UNIVERSAL DESIGN: DESIGNING FOR THE LIFESPAN

Through the competitive process, the Center for Universal Design at North Carolina State University in Raleigh, N.C. was selected to identify, describe and visually document fifty excellent examples of universal design from the disciplines of interior, landscape, graphic and product design, and architecture. The purpose of this effort is to encourage and assist the use of this valuable design process that makes the environment usable by people from childhood into their oldest years. The visuals and text will be produced on CD Rom and widely disseminated to schools of design, design professionals, city planners, as well as private and public sector leaders. This project will be completed within the year for review by the Special Committee in next year's report.

WORK IN PROGRESS

Our AccessAbility Office is working with the New England Foundation for the Arts in Boston to convene the fifth regional symposium on making the arts fully available to older adults and people with disabilities. These regional meetings have enjoyed a high degree of success where arts administrators participate in workshops and share their experiences to learn about the latest technologies, materials and models for making the arts fully accessible. "Clearing the Path: Arts Accessibility in New England" will take place in September 22–24, 1999 at the new Pequot Museum and Research

Center in Mashantucket, CT. The main reason that this new museum was selected for the symposium is because it was conceived and built with the elders of the Piquot tribe—to assure it meets the needs of older adults and that Native Americans' traditions and culture are authentically depicted throughout the museum.

Further, we are working with the National Assembly of State Arts Agencies (NASAA) and the National Endowment for the Humanities to update our 700 page "Design for Accessibility: An Arts Administrator's Guide" and put it on NASAA's Website. Produced in 1994 with NASAA, it is the most comprehensive guide to-date for making the arts accessible to older adults and individuals with disabilities. Through an interagency agreement, the Humanities Endowment joined with us to add humanities examples of accessible programming to the Guide and disseminate 2,000 print copies to its grantees.

ARTS ENDOWMENT FUNDING

Endowment supported programs continue to benefit people of all ages. Many projects specifically focus on older adults. For example:

Des Moines Metro Opera, Inc. in Indianola, Iowa was awarded a grant for Opera Iowa's three-state tour of "Rumpelstiltskin," a world premiere opera commissioned by Des Moines Opera and composed by Amy Tate Williams. The nine week tour includes workshops and performances in concert halls, retirement complexes, long-term care institutions and schools.

Grass Roots Art and Community Efforts (GRACE) in Hardwick, VT received funding for its weekly community visual arts workshops for older adults that culminate with an exhibition in Greensboro, Vermont's elementary school and library.

Hunter College of CUNY in New York City received a grant for the production of a documentary film by Menachem Daum and Oren Rudasky, "Trial by Fire: The Faith and Doubt of Aging Holocaust Survivors" that profiles the lives of five survivors and their families, with emphasis on how their faith in God was affected by the Holocaust.

Life Long Medical Care of Berkeley, CA received support for a ceramic and paint installation by artists Chere Mah and Susan Wick at the Over Sixty Health Center that is located in the senior housing community of South Berkeley. Members of the community donated objects that reflect personal or historical aspects of their community which the artists integrated into the two dimensional elements on the building's exterior and the three-dimensional art in the interior lobbies and courtyard.

The North Dakota Council on the Arts in Bismarck was awarded a grant for a traditional arts apprenticeship program and a series of performances in long-term facilities by folk artists.

Stuart Pimsler Dance and Theater of Columbus, Ohio received support for its "Caring for the Care Giver" program to create a performance work and workshops that address and provide outlets for the healing of care givers.

Other examples of Arts Endowment supported efforts that benefit older Americans are listed by arts discipline.

DANCE

Margaret Jenkins Dance Studio, Inc. of San Francisco, California received support for the creation, presentation and national touring of a dance-theater collaboration titled "Time After." This piece is an exploration in movement and words of personal and public issues at the critical juncture in the life of a choreographer, performer and older woman.

FOLK ARTS

Fellowships

Seven National Heritage Fellowships were awarded to artists who are age sixty five and older in recognition of their outstanding contributions to the traditional arts. They include:

Antonio De la Rosa is an accordionist from the Texas-Mexican ensemble in Riviera, Texas. Mr. De La Rosa was one of twelve children in a family of field laborers. As a child, he heard an accordion on the radio, acquired one, and learned to pick out the chords. He imitated the recordings of accordion pioneer Narciso Martinez and at age sixteen, went to nearby towns and played in small taverns. De La Rosa codified the instrumentation of the conjunto that endures to this day. In 1949, he made his first recorded disc featuring two polkas entitled "Sarita" and "Tres Rios." Soon his polkas made him a household word among the Texas-Mexican working class. He was inducted into the Conjunto Music Hall of Fame in San Antonio in 1982 and is considered "an icon of a style whose cultural power few musicians in the Americas can match."

Claude Williams, an African-American jazz/swing fiddler was born in Muskogee, Oklahoma, where, by the age of ten, he was playing the guitar, mandolin, banjo, and cello in his brother-in-law's string band. In 1928, Mr. Williams moved to Kansas City where he played and toured with a variety of bands, including Clouds of Joy led first by Terrance Holder. He worked with the Cole Brothers, featuring pianist and singer Nat "King" Cole. In 1937, Claude formed his own group and has toured with a variety of jazz bands for forty years. Further, Mr. Williams performed in the popular Broadway show "Black and Blue" and in a tour entitled "Masters of the Folk Violin."

Folk Arts' Grants

Documentary Arts Inc. in Dallas, Texas received a grant for the production of "Masters of Traditional Arts," an interactive digital program showcasing the arts and cultures of recipients of the Arts Endowment's National Heritage Fellowships for their lifetime achievements in the arts.

Elders Share the Arts Inc. in New York city received a grant to support a partnership with the Los Pleneros de la 21 to complete post production work and distribute the video, "Bomba! Dancing the Drum," a documentary about the Cepeda family, who are important artists in the Puerto Rico Bom.

University of Georgia in Athens received a grant for the restoration of important folk music tapes recorded in northern and coastal Georgia, which include performances by the McIntosh County Shouters, the Tanners and the Eller Brothers.

MEDIA ARTS

Dance Pioneers of Honolulu, Hawaii received support for the production of a video documentary intended for national broadcast on American choreographer and dancer Donald McKale. Produced in collaboration with Hawaii Television, "Donald McKale: Heartbeats of a Dancemaker" chronicles this artist's struggle from his Harlem roots to become a leading statesman and ambassador of American modern dance. McKale's distinguished career began in 1948 and has spanned choreography, direction, writing, education, and performance in dance, theater, film and television.

ETV Endowment of South Carolina in Spartanburg received funding for the production of a weekly radio series "Marian McPartland's Piano Jazz." The series features host Marian McPartland collaborating with fellow musicians to explore the world of jazz through a mix of performance and discussion. A part of the jazz through a mix of performance and discussion. A part of the jazz scene since the 1940's, McPartland is a preeminent jazz performer and thoughtful observer of music and musicians.

Film Arts Foundation FOR Search Films in San Francisco, California received funding for the production and post-production of a documentary film on gospel singer Marion Williams. The video, "Packin' Up: Marion Williams & the Philadelphia Gospel Women," is a one-hour portrait of one of America's greatest singers, and the important influences that her hometown, Philadelphia, had in the early development of black gospel music. The film used extensive archival footage and photographs, oral histories, contemporary performance footage, and taped interviews with Ms. Williams—where she describes her conscious decision to remain in gospel music rather than switching to a more lucrative career in secular blues and pop music.

New York Foundation for the Arts in New York City received support for the completion of a documentary film by Academy award-winning film maker Ira Wohl entitled "Best Man: Best Boy and All of Us Twenty Years Later." It is a follow-up piece to his 1979 Oscar-winning film, "Best Boy," about his 50- year-old developmentally disabled cousin, Philly, and his transition from life at home with his parents to a group house with other disabled residents. The sequel features Philly's extended family; his close relationship with his sister and his comfortable lifestyle within the group home.

Washington D.C. International Film Festival received support for its International festival that features films for older citizens and other underserved people in the Washington Metropolitan area. "Cinema for Seniors" offers free matinees of movie classics for older persons. The festival presents American independent films, cinema from around the world, classic restored Hollywood productions and special events for older adults.

MUSIC

Coro de Ninos de San Juan, Inc. in San Juan, Puerto Rico received support for its 1998 Christmas Concerts that involved a tour to five rural areas in Puerto Rico, including audiences of older adults and people with disabilities. Musicians presented classical,

traditional and international Christmas music with special attention to Puerto Rican Christmas traditions and the works of Puerto Rican composers.

Dorian Woodwind Quintet Foundation, Inc. of New York City received support for a domestic tour of the Dorian Woodwind Quintet and associated outreach activities. The Quintet tours domestically each year to six cities and towns that are often in economically distressed areas. They offer master classes, "informances" for school children, pre-concert lecture demonstrations, and visits to hospices, hospitals, centers for older adults, and nursing homes.

Helena Presents of Helena, Montana received support for "Cultural Crossings," a program of new work that involves multi-cultural and multi-disciplinary collaborations by performing artists throughout the Helena community. The "Cultural Crossings" concept includes intergenerational programming and older artists as part of its diverse mix. The overarching goals of the series are: to sensitize audiences to the complex issues of "difference," cultural diversity, and inclusion; empower community voices in support of tolerance; continue introducing aesthetic traditions and multi-disciplinary work; and show the power of art in its depiction of cultural identity and collaboration between cultures. Artists include: The National Theatre of the Deaf; and percussionist-rhythm dancer Keith Terry with Indonesian choreographer Wayan Dibia in their new project, "Perayaan: The Celebration."

Minnesota Orchestral Association in Minneapolis received support for the Minnesota Orchestra's statewide educational and outreach efforts including their Music Residency program where two to four musicians visit rural towns in Minnesota, and a program to reach seniors residents in convalescent and nursing homes. The project is designed to increase access statewide, specifically targeting needs of the older people living in isolated circumstances, inner-city youth and those living in rural Minnesota. Working with Minnesota Public Radio, they created a one-hour radio program and video for older adults living in nursing homes, convalescent centers, and hospices.

New Sounds Music, Inc. received support for a year-long artist's residency in Philadelphia by the PRISM Quartet, the Saxophone, MIDI Ensemble and composer Jennifer Higdon in collaboration with the Settlement Music School, Free Library of Philadelphia, and Kardon Institute of the Arts for People with Disabilities. The project involves a wide variety of arts education and outreach activities in the community for people of all ages.

Spokane Symphony Orchestra in Washington received support for the Symphony Ensembles for Education (SEED) program which provides underserved populations of all ages throughout the Inland Northwest with interactive and educational programming by Symphony Orchestra ensembles. Through the SEED program, the orchestra reaches audiences that traditionally have less access to live performances, including school children, older adults, families in rural and economically disadvantaged areas, and people with disabilities. Each program is specifically designed for the targeted audience with demonstrated sensitivity toward the audiences' needs and culture.

THEATER

Cornerstone Theater Company of Santa Monica, California received support to commission playwright Chay Yew to create a theater work produced in collaboration with Cornerstone's ensemble of older artists, guest artists, and members of Los Angeles' Chinese American communities at the Pacific Asia Museum. The artists involved local participants of all ages in the creation of this new theater piece, which serves as a source of pride, entertainment and cultural exploration for participants and audiences from the surrounding communities.

Stagebridge of Oakland, California received support for its "Storybridge," an intergenerational arts and literacy project. Stagebridge is using its experience in theater storytelling and training senior actors to develop "Storybridge". This project reaches 2,000 low-income older adults and 12,000 at-risk children. It incorporates three programmatic approaches: (1) Grandparents Tales uses drama to capture children's interest in language and stories. It involves a play about grandparents, performed in schools throughout Oakland by a multi-cultural, professional cast of older actors. The teachers receive twenty page curriculum guides to continue the dialogue in their classrooms; (2) Senior Storytellers in the Schools involves the development of ongoing relationships between older storytellers and students that helps to keep children interested in literature and storytelling; and (3) Storytelling Assemblies where Stagebridge recruits, trains, and places older adults as storytellers in schools in Oakland, Berkeley and San Francisco where the storytellers work once a week at schools, telling stories and talking with students.

VISUAL ARTS

Little City Foundation in Palatine, Illinois was awarded a grant for a multi-phase exhibition of artwork, created by student artists with developmental disabilities, in a variety of locations in the greater Metropolitan Chicago area. The exhibition grew out of a residency program of three guest artists who worked with the student artists at Little City Foundation's campus.

National Institute of Art and Disabilities (NIAD) of Richmond, California received support for the development of a new exhibition to promote public awareness concerning the creative abilities of adults with developmental disabilities. The exhibition consists of fifty of the best works on paper, canvas, and prints, as well as ceramic and textile pieces. The exhibition brochure includes photographs of each piece, brief biographical information on the artists, and an overview of NIAD.

ITEM 24—NATIONAL ENDOWMENT FOR THE HUMANITIES

NATIONAL ENDOWMENT FOR THE HUMANITIES REPORT ON ACTIVITIES AFFECTING OLDER AMERICANS IN FISCAL YEARS 1997 AND 1998

In 1997, an agency representative attended the Office of Personnel Management's "Celebrating Older Americans Conference" in order to gain information on resources and services available for older Americans and to learn about the issues that are important to them.

In 1998, the agency was again represented at the "Celebrating Older Americans Conference." In addition, staff members were informed of hyperlinks to internet sites for elder caregivers and notified of a conference dealing heavily with Alzheimer's disease, "Dimensions of Dementia."

Referral to the agency's employee assistance program COPE, Inc. is always available to Endowment employees for assistance in locating services or in dealing with issues and problems related to aging.

ITEM 25—NATIONAL SCIENCE FOUNDATION

NATIONAL SCIENCE FOUNDATION REPORT FOR DEVELOPMENTS IN AGING

The National Science Foundation, an independent agency of the Executive Branch, was established in 1950 to promote scientific progress in the United States. The Foundation fulfills this responsibility primarily by supporting basic and applied scientific research in the mathematical, physical, environmental, biological, social, and engineering sciences, and by encouraging and supporting improvements in science and engineering education. The Foundation does not support projects in clinical medicine, the arts and humanities, business areas, or social work. The National Science Foundation does not conduct laboratory research or carry out educational projects itself, rather, it provides support or assistance to grantees, typically associated with colleges and universities, who are the primary performers of the research.

The National Science Foundation is organized generally along disciplinary lines. None of its programs has a principal focus on aging-related research; however, a substantial amount of research bearing a relationship to aging and the concerns of the elderly is supported across the broad spectrum of the Foundation's research programs. Virtually all of this work falls within the purview of the Directorate for Social, Behavioral, and Economic Sciences and the Directorate for Engineering.

DIRECTORATE FOR SOCIAL, BEHAVIORAL, AND ECONOMIC SCIENCES (SBE)

The Directorate for Social, Behavioral, and Economic Sciences supports research in a broad range of disciplines and interdisciplinary areas through its Division of Social, Behavioral, and Economic Research. For example, sociological research is being supported which examines how the labor force participation and earnings of older Americans have been affected by recent economic trends; how Americans in their 50's cope with the dual pressures of supporting aging parents and grown children; how income distribution differs between the "young old" and the "old old," and how the degree of political activism of older Americans has changed overtime in the twentieth century. Projects within anthropology are being supported to examine how economic development affects patterns of caring for dependent elderly, and with cognitive psychology to examine the extent to which knowledge acquired in youth is retained in later life.

The SBE Directorate also supports several large-scale data gathering efforts which can be and have been used to study issues re-

lated to aging, although that is not their sole or even primary purpose. For example the Panel Study of Income Dynamics, which has been tracking a sample of more than 7,000 American families since 1968, provides information on changing household composition, labor force participation, income, assets, and consumption patterns as individual respondents grow older. The General Social Survey, which has carried out sample surveys of the U.S. adult population more or less annually since 1972, contains several attitudinal items dealing with the status of, and care for, the elderly. These surveys enable researchers to examine how attitudes toward the elderly have changed over time and how age groups differ across a wide range of opinion areas. The National Election Survey, which has studied American elections since 1952, provides information on how attitudes regarding candidates and issues vary across age groups. The SBE Directorate is also supporting a project that will make available to researchers in a consistent and readily usable form public use microdata from the U.S. censuses from 1850 through 1990. When completed, this project will make it possible to examine how the status and family relationships of older Americans have changed over the course of a century and a half.

DIRECTORATE FOR ENGINEERING (ENG)

The National Science Foundation's Directorate for Engineering seeks to enhance long-term economic strength, security, and quality of life for the Nation by fostering innovation, creativity, and excellence in engineering education and research. This is done by, supporting projects across the entire range of engineering disciplines and by identifying and supporting special areas where results are expected to have timely and topical applications, such as biotechnology and materials processing.

Aging-related research is primarily supported within the Directorate for Engineering through the Biomedical Engineering and Research to Aid Persons with Disabilities programs. Research funded in this program relates to issues of aging and the elderly due to the propensity for the elderly to develop physical disabilities. Many of the current projects are also of interest to NASA. Several of the effects of weightlessness on the human body are strongly similar to the effects of aging on the human body. Projects recently supported by this program include the following studies: Biophysical mechanisms of cartilage repair and generation; Mechanisms of drug delivery in the treatment of various diseases, including those associated with aging, such as diabetes; Simple, noninvasive, quantitative methods to assess postural instability associated with aging; Investigation of biodegradable polymer matrices to support the growth of bone and the generation of bone-like tissues for application in osteoporosis; A variety of activities involving joint replacement, including computer assisted design of orthopedic surgery, cementing techniques, failure detection techniques, and the pathophysiology of implant device-related infection; An image processing system for low vision people such as those with age related maculopathies; An artificial retina which will restore limited vision to people who are blind due to certain diseases; A visual speech articulation training aid for the hearing impaired; and Imaging modalities that allow physicians to perform a "virtual colonoscopy" in a non-invasive

fashion; Undergraduate projects by student engineers to design and fabricate custom designed devices and software for disabled individuals.

While some of these projects are not specifically directed toward problems of aging, all of these studies have potential for dealing with conditions prevalent among the elderly.

ITEM 26—PENSION BENEFIT GUARANTY CORPORATION

EXECUTIVE DIRECTOR'S MESSAGE (1997)

It gives me great pleasure to report that the Pension Benefit Guaranty Corporation has concluded a very rewarding year. Record earnings on investments enabled PBGC to record significant net income for both insurance programs, further strengthening the agency's financial footing.

Our highest priority now must remain PBGC's solvency. After more than 20 years of continuous deficits, we must maintain a reserve that will be sufficient to protect the program. The most recent gains came in a good economic period marked by high investment returns and low pension losses. The agency remains vulnerable to changing economic conditions, which can significantly affect the values of both its assets and its liabilities. Even with a strong economy last year, PBGC assumed responsibility for more than 160 underfunded plans, and underfunding continues to exist among ongoing defined benefit pension plans. We have achieved a surplus which can serve as a cushion to protect workers and retirees in the event of future economic downturns.

It is very important for PBGC to remain strong. With a healthy insurance program, workers and employers can have confidence in the defined benefit pension system. Workers can be confident their pensions are secure and their benefits will be there when they are ready for them. Employers can be confident that the cost of providing insurance coverage will be kept reasonable.

Our second priority is making PBGC a premier customer service organization—not only for the workers and retirees whom we protect, but also for the companies that pay our insurance premiums and for the pension professionals who advise them. PBGC has won many awards for its service to workers and retirees. Our goal now is to make sure we pay the same attention to the employers whose payments support the insurance program and the pension professionals who rely on our agency.

Our third priority is to promote defined benefit pension coverage for American workers. We want both workers and employers to take a new look at defined benefit pensions and to understand their value in providing American workers with a predictable, guaranteed lifetime pension. It is PBGC's mandate to promote defined benefit pensions and to bring the advantages of workplace pensions to a greater number of working Americans. I want PBGC to play a meaningful role in the ongoing public and private sector efforts to meet that challenge.

The improvement in PBGC's financial condition and service to the public is a fitting tribute to the leadership of my predecessor, Martin Slate, who passed away unexpectedly at midyear, and to

the creativity and diligence of the agency's staff. A significant number of people are affected by PBGC. We want to make sure that we continue the remarkable turnaround of the pension insurance program and serve them well.

DAVID M. STRAUSS,
Executive Director.

SAFEGUARDING SOLVENCY

PBGC developed a five-year Strategic Plan that provides long-term direction to the agency's activities and milestones for measuring progress along the way. The plan resulted from consultation with PBGC's stakeholders, including participants, pension professionals, and premium payers.

The Strategic Plan established four goals that support the Secretary of Labor's overall goal of enhancing retirement security. PBGC's goals are to:

- Strengthen financial programs and systems to keep the pension insurance system solvent;
- Provide high-quality services and accurate and timely payment of benefits to participants;
- Protect existing defined benefit plans and their participants and encourage new plans; and
- Improve internal management support operations.

PBGC's financial results for 1997 showed encouraging progress toward the agency's strategic goal of strengthening its financial programs and systems to keep the pension insurance system solvent. Record investment earnings enabled PBGC to further strengthen its financial base to support the insurance programs' long-term responsibilities. Valuable settlements generated through the Early Warning Program, in combination with the agency's vigorous litigation posture, protected the insurance program and tens of thousands of workers and retirees from pension losses.

FINANCIAL MANAGEMENT

PBGC's financial strength rests on a foundation of skilled, professional financial management. The agency's financial statements have received their fifth straight unqualified opinion from the agency's auditors, attesting to the consistency and integrity of its financial systems. The 1997 audit was again performed by Price Waterhouse LLP under the direction and oversight of PBGC's Inspector General.

Both PBGC insurance programs recorded significant financial gains in 1997, fueled largely by investment earnings. Investments of the larger single-employer program produced record income of nearly $2.7 billion. Premium income totaled nearly $1.1 billion, down slightly from the record level reached in 1996 because reduced underfunding led to lower variable-rate premium payments to PBGC. Investment gains enabled the single-employer program to record net income of $2.6 billion. As a result, the program's net surplus grew to nearly $3.5 billion.

The multiemployer program also continued to be financially strong, with net income of $95 million and an end-of-year net surplus of $219 million, based on assets of $596 million and liabilities

totaling $377 million primarily for future benefits and nonrecoverable future financial assistance. The net income, paced by investment gains, reversed a three-year period of moderate losses.

The agency took several steps during the year to improve compliance with premium obligations. Several of these initiatives were intended to create a more cooperative climate and forge a partnership with the employers who pay PBGC's premiums. With the assistance of focus groups and surveys, PBGC began to identify employers' concerns and make changes that would improve service and still ensure the agency's ability to safeguard workers' pensions and the pension insurance program. In addition to restructuring and lowering its premium penalties to encourage voluntary correction of premium payment errors, the agency set time limits to ensure that needed information is submitted timely for its premium audit program. PBGC also expanded the premium audit program nationwide after successfully testing the program in a limited geographic area. The pilot program had proven premium audits to be a cost-effective means of ensuring accuracy in premium payments.

INVESTMENT PROGRAM

The Corporation has approximately $15.6 billion of total assets available for investment, consisting of premium receipts accounted for in the Revolving Funds and assets from terminated trusteed plans and their sponsors accounted for in the Trust Funds. Under law, the Revolving Funds are required to be invested in fixed-income securities; current policy is to invest these funds only in Treasury securities. PBGC has more discretion in its investment of the Trust Funds, which are primarily invested in high-quality equities, with asset allocation designed for sound long-term performance.

The agency's investment in equities provides overall portfolio diversification and a higher long-term expected return, within prudent levels of risk. PBGC uses institutional investment management firms to invest its assets subject to PBGC oversight. PBGC's investment portfolio is structured to improve PBGC's financial condition in a stable manner over the long term. PBGC continually reviews its investment strategy to ensure that the agency maintains an investment structure that is consistent with its long-term objectives and responsibilities.

Investment Profile.—As of September 30, 1997, the value of PBGC's total investments, including cash, was approximately $15.6 billion. The Revolving Fund's value was $9.0 billion and the Trust Fund's value was $6.6 billion.

PBGC's fund allocation further shifted toward equities during 1997 due primarily to strong equity returns. Cash and fixed-income securities represented 61 percent of the total assets available for investment at the end of the year, as compared to 63 percent at the end of 1996, while the equity allocation stood at 38 percent of all investments compared to 36 percent one year earlier. A very small portion of the invested portfolio remains in real estate and other financial instruments.

INVESTMENT PROFILE

	Sept. 30—	
	1997	1996
Fixed-income assets:		
Average quality	AAA	AAA
Average maturity (years)	21.0	22.6
Duration (years)	10.5	10.1
Yield to maturity (%)	6.4	7.2
Equity assets:		
Average price/earnings ratio	26.0	19.7
Dividend yield (%)	1.6	2.0
Beta	1.04	1.08

Investment Results.—Fiscal year 1997 was a favorable year for capital market investments and PBGC's investment program. The broad stock market, as measured by the Wilshire 5000 Index that most closely reflects PBGC's equity portfolio, advanced 38.0%, while PBGC's equity portfolio returned 37.6%. PBGC's fixed-income program returned 13.5% for the year, while the Lehman Brothers Long Treasury Index gained 13.2%. For the year, PBGC reported income of nearly $1.1 billion from fixed-income investments and nearly $1.7 billion from equity investments. Other investments, including real estate and insurance contracts, produced a small gain of $8 million, for total investment income of almost $2.8 billion.

INVESTMENT PERFORMANCE

[Annual rates of return in percent]

	Sept. 30,—		Five years ended Sept. 30, 1997
	1997	1996	
Total invested funds	21.9	8.5	14.4
Equities	37.6	19.7	20.6
Fixed-income	13.5	2.2	10.9
Trust funds	35.6	18.6	19.1
Revolving funds	13.3	2.3	11.6
Indices:			
Wilshire 5000	38.0	18.9	20.6
S&P 500 Stock Index	40.4	20.3	20.8
Lehman Brothers Long Treasury Index	13.2	2.3	8.9

EARLY WARNING PROGRAM

The Early Warning Program, which helps PBGC prevent pension losses, continued to play a major role in safeguarding the solvency of the pension insurance program. Under this program, PBGC monitors companies with pension plans underfunded by at least $5 million to identify transactions that could jeopardize pensions. This effort enables PBGC to find such transactions at an early stage, when both PBGC and the company involved have the most flexibility to structure an agreement that protects the interests of the company, its workers and the pension insurance program. During 1997, while monitoring more than 500 companies, PBGC negotiators reached agreements valued at about $760 million with 17 companies, providing contributions, security, and other protections for the pensions of about 140,000 workers and retirees. Since its inception six years ago, the program has generated more than $15

billion in additional protection for the pensions of more than 1.6 million people. Specific agreements reached in 1997 included:

NCR Corporation.—NCR, a formerly wholly owned subsidiary of AT&T Corporation, was responsible for underfunded pensions covering more than 57,000 workers and retirees. AT&T planned to spin off NCR at the end of 1996. Under an agreement reached in November 1996, NCR provided security interests in various NCR properties totaling $80 million to guarantee the future funding of the pensions. In addition, the company agreed to continue full minimum funding contributions without applying an existing credit balance of more than $100 million for prior funding that exceeded the contributions required by law. Without the agreement, NCR could have used the credit balance to reduce or eliminate future contributions for a number of years. The agreement will remain in effect five years, after which it will expire once NCR achieves a specified financial rating.

Anchor Glass Container Corporation.—Anchor planned to sell its assets to a buyer who would also assume responsibility for the company's three pension plans, which covered some 15,600 workers and retirees and were underfunded by about $190 million. The sale would remove Anchor from the control of its Mexican parent, Vitro S.A., thereby relieving Vitro and its subsidiaries from responsibility for the Anchor pensions. When PBGC proposed to terminate the plans in order to preserve claims against Vitro for the pension underfunding, the buyer agreed to pay missed pension contributions totaling about $18 million at the close of the sale and to assume responsibility for all future contributions to the plans. Vitro agreed to guarantee payments of up to $70 million over 10 years should PBGC have to terminate any of the plans in the future. A separate firm acquired a smaller portion of Anchor covering about 500 workers and assumed responsibility for about $15 million of the total underfunding.

Del Monte Corporation.—Del Monte, with three pension plans that were underfunded about $90 million and covered more than 6,700 workers and retirees, was being purchased at part of a leveraged buyout. In April 1997, PBGC and the company reached an agreement to compensate the pension plans for the increased risk resulting from the transaction. Under the agreement, Del Monte will add $55 million in cash to its plans over the next five years, with the funding planned for the last three years secured by an irrevocable $20 million letter of credit. As a result of the agreement, the plans are expected to be close to fully funded at the end of the five-year period.

Amphenol Corporation.—Amphenol maintained eight plans that covered 6,800 workers and retirees and were underfunded by about $45 million. When bank financing for a planned leveraged buyout of Amphenol threatened to add significant debt to the company, PBGC initiated negotiations that led to a May 1997 agreement. The agreement gave PBGC a second interest for up to $45 million in stock of Amphenol's foreign subsidiaries as security for the pension underfunding. PBGC will get additional collateral for the underfunding if the banks financing the purchase later determine that they need more collateral to secure their loans. The agreement will be in effect for at least five years and will continue thereafter

until the pension plans are fully funded or Amphenol debt obtains an investment -grade rating.

Lockheed Martin Corporation.—Lockheed spun off some of its aerospace and defense communications units to a new, highly leveraged company called L–3 Communications Corporation. As part of the transaction, Lockheed also transferred seven pension plans covering nearly 3,000 workers and retirees of the divested businesses. While four of the plans were well funded, three were underfunded by about $40 million. In May 1997, PBGC and Lockheed negotiated a settlement under which Lockheed agreed to reassume sponsorship of the three underfunded plans if L–3 is unable to support the plans. The agreement will remain in effect until L–3 achieves an investment-grade financial rating.

Kerr Group, Inc.—A leveraged buyout of Kerr would have been financed primarily through debt secured by Kerr assets. Kerr maintained a pension plan covering 5,600 workers and retirees that was underfunded by about $41 million. PBGC determined that the proposed transaction would weaken its position relative to other creditors, thereby putting the insurance program at increased risk of loss, and filed a motion in district court to terminate the plan. Subsequent negotiations led to an agreement in August 1997 under which Kerr will continue to be responsible for the pension plan while accelerating funding of the plan. Kerr paid $3.5 million into the plan at the closing of the sale and will pay an additional $35.5 million through January 2003. PBGC obtained a second security interest in substantially all Kerr assets and withdrew its pending court action to terminate the plan. The agreement will remain in effect for at least five years and until Kerr meets other conditions.

LITIGATION

While preferring to negotiate solutions to pension issues, PBGC stands ready to use its independent litigation authority when necessary to enforce its legal positions and to protect the insurance program. At the end of the year, PBGC had 85 active cases in state and federal courts and 790 bankruptcy cases. Major cases in 1997 included:

Pineiro, Brooks, and Beaumont v. *PBGC.*—In September 1996, three former employees of Pan American World Airways filed suit in district court asking that the court replace PBGC with an independent trustee. PBGC had terminated and become trustee of three Pan Am pension plans underfunded by $914 million in 1991. The agency currently pays more than $100 million annually to 14,000 Pan Am retirees, and has issued benefit determinations to more than half of the Pan Am participants to whom PBGC owes benefits. It is expected that more than 95 percent of the Pan Am participants will receive all of their pension benefits earned under the plans.

PBGC filed a motion to dismiss the complaint and, in November 1997, the court dismissed all but one of the allegations in the suit as meritless. The court noted that there were no allegations that "estimated benefits are not being paid or that the amounts of estimated benefits that are being paid are incorrect." The only allegation the court left open, without ruling on the merits, concerns the timeliness of PBGC's notice of benefits to the Pan Am participants.

Despite complications caused by the deplorable condition of company records and the company's protracted bankruptcy proceedings, PBGC has been paying benefits to Pan Am retirees continuously since taking over the plans while making steady progress in completing its determination of the benefits owed to about 35,000 former Pan Am workers and retirees.

Copperweld Steel Company.—PBGC continued to pursue bankruptcy claims to recover amounts due PBGC and Copperweld's three terminated pension plans, which covered about 3,000 workers and retirees. The company's liquidation trustee contests the extent to which PBGC's claims for unpaid minimum funding contributions are entitled to priority under the Bankruptcy Code and whether the factors prescribed in PBGC's regulations appropriately measure PBGC's claims for unfunded benefit liabilities in terminated pension plans that are trusteed by PBGC. These issues are central to PBGC's ability to recover its losses from bankrupt employers. In December 1997, the bankruptcy court ruled for the liquidation trustee's positions in both issues. PBGC is determining what appropriate future steps it should take in the litigation.

CF&I Steel Corporation.—PBGC continued to pursue its claims against the reorganized CF&I for a CF&I plan that was underfunded by about $221 million when terminated in March 1992. In a November 1994 ruling, a district court denied priority to most of PBGC's claims for minimum funding contributions owed to CF&I's plan and for the plan's underfunding. The court also remanded the case to the bankruptcy court for reconsideration of the amount of PBGC's underfunding claim, ruling that the bankruptcy court erred in "deferring" to PBGC's interest rate assumption. The bankruptcy court subsequently revalued PBGC's claim for unfunded benefit liabilities from about $221 million to about $123 million based on a "discount rate" that differed from the assumptions prescribed by PBGC's regulation. The district court affirmed this ruling in April 1997. PBGC's appeal was pending in the Tenth Circuit Court of Appeals at yearend.

White Consolidated Industries, Inc.—White continued to contest PBGC's claims for estimated $120 million underfunding in pension plans that White transferred to Blaw Knox Corporation in 1985. PBGC is alleging that a principal purpose of White in entering into the transaction was to evade pension liabilities. PBGC has taken over all the Blaw Knox plans either because they ran out of money or because they would have been abandoned after Blaw Knox ceased business and sold its assets in 1994. Trial before the district court was completed during April 1997, but the court's decision was still pending at yearend.

MULTIEMPLOYER LITIGATION

Although most of the significant multiemployer plan issues, such as "arbitrate first," are now well-settled principles of law, some important questions remain.

In Board of Trustees, Bay Area Laundry and Dry Cleaning Pension Trust Fund v. *Ferbar Corp of CA, et al.,* the Supreme Court was asked to decide when the statute of limitations begins to run for an action to collect withdrawal liability under the Multiemployer Pension Plan Amendments Act of 1980. In December 1997,

the Court affirmed the position advocated by PBGC and the Solicitor General, who had filed a joint brief in July 1997 as "friends of the court." The Court held that the statute of limitations begins to run when an employer fails to make a scheduled withdrawal liability payment, and not on the (earlier) date the employer withdrew from the plan. The lower court's holding to the contrary could have significantly limited the ability of multiemployer plans to collect withdrawal liability.

PROVIDING HIGH-QUALITY SERVICES

PBGC's second strategic goal is to provide high-quality services and accurate and timely payment of benefits to participants. During the year, PBGC worked to improve service both to the people owed benefits and to the employers whose premium payments support the pension insurance program.

SINGLE-EMPLOYER PROGRAM

Through its single-employer program, PBGC oversees terminations of fully funded plans and guarantees payment of basic pension benefits when underfunded plans must be terminated. The single-employer program covers about 33 million workers and retirees in about 43,000 plans. While the number of people covered by the program has grown slightly over the past few years, the number of plans has decreased as small companies have terminated their plans. The decrease abated during 1997.

Standard Terminations.—An employer may end a fully funded plan in a standard termination by purchasing annuities or paying lump sums to participants. Standard terminations are subject to legal requirements governing notifications to participants and to PBGC and payment of benefits. PBGC may disallow standard terminations that do not comply with the requirements.

The number of standard terminations filed with PBGC continued to decline in 1997, albeit at a slower pace, falling by 8 percent to about 3,500. Most of these plans had 50 or fewer participants.

PBGC audits a statistically significant number of completed terminations to confirm compliance with the law and proper payment of benefits. These audits generally have found few and relatively small errors in benefit payments, which plan administrators are required to correct. The errors primarily are due to the use of incorrect interest-rate assumptions in valuing lump sum distributions to plan participants. PBGC's enforcement of its audit findings in 1997 resulted in payment of nearly $4 million of additional benefits to about 4,900 participants, about 5 percent of all participants in audited plans.

Shortly after the year ended, PBGC issued final rules that extended the deadlines and simplified the procedures companies must follow in standard terminations. The changes had been developed after PBGC conducted focus groups with pension professionals and also took participant concerns and PBGC's experience into account. The final rules also provided new model notices companies may use to inform workers and retirees about the intended termination of their plan and the guarantees offered by their states for annuity benefits if their annuity provider encounters financial difficulty.

The simplified requirements provided regulatory relief for employers while maintaining full protection for workers' pensions.

Distress and Involuntary Terminations.—Defined benefit plans that are not able to pay all promised benefits may be terminated either by the company responsible for the plan or by PBGC. An employer wishing to terminate an underfunded plan generally may do so only if the employer is being liquidated or if the termination is necessary for the company's survival. The employer must first prove to PBGC, or to a bankruptcy court if appropriate, that it and each of its affiliated companies meets one of the financial distress criteria set by law.

An underfunded plan also may be terminated involuntarily by PBGC when necessary to protect the interests of the participants or of the insurance program. PBGC must terminate any plan that does not have assets available to pay current benefits.

During 1997 the agency completed the termination of 165 underfunded plans, the vast majority of which were involuntary terminations by PBGC. In most cases termination was necessary because the sponsoring employer had gone out of business. Many of these plans had been under consideration for termination for a period of time and their actual termination dates occurred in earlier years, when the circumstances leading to their termination first arose.

Trusteed Plans.—PBGC typically becomes trustee of a plan only after it has been terminated, although not necessarily in the same year it was terminated. During the year, PBGC became trustee of 195 single-employer plans covering 54,000 people. At yearend, the agency was in the process of becoming trustee of an additional 90 plans terminated in 1997 or earlier. In all, including 10 multiemployer plans previously trusteed, a total of 2,510 terminated plans were trusteed or were being trusteed as of the end of the year. (This total also reflects the elimination of three single-employer plans included in last year's total, which no longer required PBGC to become trustee.)

Benefit Processing.—PBGC 's responsibility for benefit payments begins immediately upon becoming trustee of a terminated plan. Top priority is given to maintaining uninterrupted benefit payments to existing retirees and commencing payments to new retirees without delay. Concurrently, PBGC staff also begin to notify plan participants of PBGC's trusteeship and to obtain essential data and records on each individual participant, a difficult task frequently complicated by inadequate plan and employer records.

PBGC pays estimated benefits to retirees until it has confirmed necessary data and valued plan assets and recoveries from the plan's sponsor. PBGC then calculates the actual benefit payable to each participant according to the specific terms of that person's plan, statutory guarantee levels, and the funds available from plan assets and employer recoveries. Benefit calculation can be an intricate process since each trusteed plan is different and must be separately administered.

By the end of the year, PBGC was responsible for the current and future pension benefits of about 465,000 participants from single-employer and multiemployer plans. These include 205,800 retirees who received benefit payments totaling $824 million.

PBGC continued to accelerate its completion of individual benefit determinations. In 1997, PBGC issued more than 69,000 benefit determinations, exceeding the record number issued one year earlier. The heightened production is the direct result of the agency's advanced automated imaging, letter generation, and participant record management systems.

Benefit Payment Policies.—PBGC announced two important changes in policies affecting benefit payments to people in PBGC-trusteed plans. In one. PBGC will no longer charge for pre-retirement survivor annuity protection for any plan terminated on or after August 23, 1984. This insurance provides benefits to surviving spouses of workers who die before they retire and begin receiving benefits. The agency had been providing this protection as an option for plan participants, who were subject to a small fee if they accepted the insurance. PBGC now provides this coverage without charge. Under the other change, announced shortly after the year ended, PBGC will be revising how it recovers benefit overpayments made after the date of plan termination from plan participants. PBGC has been giving participants the choice of repaying overpayments either in a lump sum or through a permanent reduction (generally capped at 10 percent) in their benefit payment. With the change, which is expected to be final during 1998, the reduction will cease when the total amount collected matches the amount by which the person had been overpaid.

Appeals of Benefit Determinations.—PBGC's Appeals Board reviews appeals of certain PBGC determinations. Most of the appeals are from people disputing their benefit determinations. Typically, about 2 percent of all benefit determinations are appealed and that remained true this year. In 1997, the Appeals Board received 1,300 appeals and decided 927 appeals. Of these, the Board met to decide 122 appeals, 65 of which required changes in benefits primarily as a result of new facts, correction of calculation errors, or a different interpretation of plan provisions; the other 805 appeals were resolved based on prior Board decisions, settlements with organizations representing the appellants, Board staff efforts that led to new determinations, or more thorough explanations of the original determination.

Pension Search Program.—PBGC's efforts to link people missing from terminated pension plans with their retirement benefits continued to meet with success throughout the year. In addition to searching for workers and retirees missing in terminated underfunded plans that the agency now administers, PBGC conducts a missing participants clearinghouse to assist employers who are terminating fully funded plans to locate all people owed benefits. For the hardest-to-find people who have frustrated all previous searches by either their former employers or PBGC, the agency also maintains a listing on the Internet, which is called the Pension Search Directory.

During 1997, the second year of operation for the missing participants clearinghouse, 417 companies asked PBGC to find 4,734 missing people. Of these, 3,542 were due over $5.3 million in benefits and 1,192 were covered by annuity contracts that will pay their benefits when they are found. By yearend, PBGC had confirmed addresses for 554 of the missing people and paid nearly $1 million

in benefits to 510 of them. PBGC is continuing its search for valid addresses for the remaining missing people.

In 1997, the Pension Search Directory enabled PBGC to find more than 1,000 other people who were owed over $4 million in benefits plus interest. The total listing included about 4,600 people who had worked for some 780 companies and were owed over $12 million in pension benefits. The Directory is a joint public and private sector effort that is being assisted by more than 20 organizations and unions. It may be viewed on the Internet at http://search.pbgc.gov. The agency's Pension Search effort, with its innovative use of an on-line self-search listing and partnerships with private organizations, was recognized after the year ended with a Hammer Award from Vice President Al Gore's National Performance Review, the fifth such award received by PBGC. With this award, PBGC has won more Hammer Awards per employee than any other government agency.

MULTIEMPLOYER PROGRAM

The multiemployer program, which covers about 8.8 million workers and retirees in about 2,000 insured plans, is funded and administered separately from the single-employer program and differs from the single-employer program in several significant ways. The multiemployer program covers only collectively bargained plans involving two or more unrelated employers. For such plans, the event triggering PBGC's guarantee is the inability of a covered plan to pay benefits when due at the guaranteed level, rather than plan termination as required under the single-employer program. PBGC provides financial assistance through loans to insolvent plans to enable them to pay guaranteed benefits.

The significant reforms enacted in 1980 created several safeguards for the program, including a requirement that employers who withdraw from a plan pay a proportional share the plan's unfunded vested benefits. These safeguards have permitted PBGC to maintain multiemployer premiums at a constant, reasonably low level.

Plan Underfunding.—Based on Form 5500 data at the beginning of 1995—the most recent information available—multiemployer plans had total assets of $202.3 billion and liabilities of $217.0 billion. Overfunding among multiemployer plans as of the beginning of 1995 totaled about $12.6 billion. Underfunding among these plans totaled $27.4 billion, a decrease of $2.6 billion from the previous year resulting mainly from the higher interest rates that prevailed in 1994. The average funding ratio of underfunded plans slipped slightly from 81 percent to 80 percent because of the effect of declining investment returns on asset values.

Future developments in multiemployer underfunding and the financial condition of the multiemployer program depend on future economic and demographic factors such as interest rates, plan experience and investment performance, and the financial health of covered industries, particularly as reflected in industry employment levels.

Financial Assistance.—The multiemployer program has received relatively few requests for financial assistance. Since enactment of the reforms in 1980, PBGC has provided assistance to only 19 of

the 2,000 insured plans, with a total value of approximately $35 million net of repaid amounts. In 1997, only 14 of these plans were still receiving assistance of about $4 million annually.

CUSTOMER SERVICE

Premier customer service is a corporate priority and was a driving force behind a variety of PBGC initiatives during the year. While most of the agency's activity was aimed at those whom PBGC serves directly, two projects will also benefit the general public.

PBGC completed and issued a new reference publication, the "Pension Insurance Data Book 1996," which provides detailed statistics on the experience of the single-employer insurance program and on the pension plans that it protects. The "Data Book" is intended to contribute to informed analyses that will help ensure a sound pension system. PBGC also redesigned and expanded its Home Page and web-site on the Internet to make it more user-friendly and to highlight information of interest to workers, retirees, employers, and pension professionals.

Service Improvements for Participants.—PBGC annually surveys a sampling of people whose plans have been taken over by the agency to determine their level of satisfaction with PBGC services and identify areas for improvement. Past surveys indicated a general desire for better and more timely communications, leading PBGC to introduce regular newsletters, a Customer Service Center with a toll-free telephone number, and more understandable form letters for regular correspondence. The most recent survey showed increased satisfaction with PBGC, as 79 percent of the surveyed participants rated PBGC's overall customer service as "above average" or "outstanding." One of PBGC's goals under its strategic plan is to satisfy 90 percent of the participants by the year 2002. In response to the latest survey, PBGC added a new standard that pledges the agency to deal with routine matters in one telephone call. The agency also expanded the availability of its toll-free telephone number so that all participants have a single telephone number with which to reach PBGC on any matter.

In other areas of communication, PBGC simplified and clarified its benefit determination letters and benefit summaries, which are used to inform people of the amount of their guaranteed benefit, and its two most important explanatory pamphlets for participants in trusteed plans. In addition, while continuing to hold informational meetings for people in large, newly trusteed plans, PBGC developed a videotape for participants of smaller plans when meetings with PBGC representatives are not feasible.

Service Improvements for Employers.—In addition to easing deadlines and simplifying rules for terminations of fully funded pension plans, PBGC adopted several measures to improve service and provide reporting relief for the business community. The agency ended publication of its annual listing of the 50 companies with the most underfunded pension plans. PBGC determined that the list was no longer needed since full implementation of the reporting and funding reforms enacted in the Retirement Protection Act has provided better enforcement tools to protect pensions.

PBGC also waived a requirement that small companies notify the agency if they fail to make quarterly pension contributions. According to PBGC analysis of reports received during the year, this change will ease reporting burdens for small companies without harm to plan participants or the insurance program. In addition, PBGC also announced shortly after the end of the year that it generally would ask employers selected for the agency's premium audit program to provide only three years of premium-related information rather than the six years of information previously required, in order to ease the burden and expense of these audits. Agency audits will extend back beyond three years only if problems appear in the initial information.

PROMOTING DEFINED BENEFIT PENSIONS

Only defined benefit pensions offer a predictable, guaranteed, lifetime pension for America's working men and women and their families. For a company, defined benefit plans promote worker loyalty and retain an experienced workforce, and in some cases are the most economical way to provide adequate pensions for employees.

The decline in the number of defined benefit plans continued to slow in 1997. Employers ended about 3,500 fully funded plans during the year, compared to about 3,800 such terminations in 1996. As a result of the continuing terminations and mergers of ongoing plans, the number of insured single-employer pension plans fell from a high of 112,000 in 1985 to 43,000 in 1997. The drop has been primarily among small plans—those with fewer than 100 participants. The number of larger plans—with 1,000 participants or more—has remained relatively stable.

PBGC has a statutory mandate to encourage the maintenance and continuation of defined benefit pension plans. To carry out this mandate, PBGC focused effort in 1997 in several areas.

The agency discussed with employer groups ways for small businesses, where fewer than 25 percent of the workers are covered by any retirement plan, to provide federally insured defined benefit pension coverage. As the year ended, the Administration was developing a simplified defined benefit plan—later called SMART (Secure Money Annuity or Retirement Trust)—to provide small businesses with an easy- to-administer pension option that would provide predictable, guaranteed benefits for workers. The Administration's proposal builds on the bipartisan SAFE proposal developed by Representatives Earl Pomeroy of North Dakota and Nancy Johnson of Connecticut, among others, and combines many of the best features of defined benefit and defined contribution plans. The SMART plan eliminates many of the complex rules that now apply to defined benefit plans while ensuring that the tax benefits of the plan flow primarily to low and middle-income workers. The Administration's proposed plan would cover all eligible workers in small businesses with 100 or fewer employees, and employers would have predictable funding based on conservative assumptions that would keep earned benefits fully funded at all times. Participants would be guaranteed a minimum annual retirement benefit that could be increased if the return on plan investments exceeded specified con-

servative assumptions, and their benefits would be protected by PBGC.

PBGC also sought to spur interest in defined benefit plans by following one of the key principles of a customer-driven organization—listening more effectively to the concerns of our customers, including the employers who provide defined benefit plans and pay insurance premiums. PBGC developed mechanisms for two-way communication with employers and pension plan practitioners through focus groups, surveys, and through the Internet via e-mail. The agency sought to identify obstacles to the creation and maintenance of defined benefit pension plans arising from PBGC rules and procedures and to take corrective action where appropriate.

To set up an environment conducive to defined benefit plans, PBGC began to ease regulatory and administrative requirements to encourage the provision of defined benefit plans, while still carrying out its mandate to protect workers' pensions and the pension insurance program. PBGC will continue to build on the achievements of 1997 to ease the burdens on providers of defined benefit pensions.

Defined benefit plans offer distinct advantages to workers:

- Predictable benefits
- Secure benefits
- Lifetime benefits

To further encourage defined benefit pensions, PBGC has begun to seek opportunities to reach out with information and education strategies to communicate the value of defined benefit pension plans to both employers and employees. Defined benefit retirement plans offer numerous advantages. Workers can earn a reasonable retirement benefit even if they were not covered by a retirement plan earlier in their career, and they can know in advance what benefits they will receive at retirement. These retirement benefits are not dependent on the amount of salary that workers are willing or able to contribute, and the retirement benefit is not subject to fluctuations of the stock market. The benefit is paid as an annuity for the life of a worker, no matter how long the worker lives. The defined benefit plan must also pay a lifetime survivor annuity to the worker's surviving spouse, unless both the worker and spouse elect otherwise.

Defined benefit plans offer distinct advantages to employers:

- Valuable retirement benefits for workers
- Flexible benefit options
- Investment advantages

Defined benefit plans provide more flexibility for employers to design different types of benefits packages for their workforces. For example, a defined benefit plan can be used to accomplish corporate workforce goals by providing early retirement incentives. Employers also can choose to add valuable benefits such as extra spousal benefits, disability benefits, or cost-of-living adjustments. There are investment advantages as well for employers. The collective investment of plan assets can result in higher plan investment returns, and favorable interest rates and economic conditions can reduce an employer's contribution. Finally, PBGC guarantees to pay most of a worker's pension benefit if the employer cannot afford to pay the benefits or goes out of business.

Defined benefit pensions have and will continue to play an important role in the effort to provide American workers with a secure retirement.

SINGLE-EMPLOYER PROGRAM EXPOSURE

PBGC's expected future claims are dependent on two factors: the amount of underfunding in the pension plans it insures (i.e., the exposure), and the likelihood that plan sponsors encounter financial distress that results in bankruptcy and plan termination (i.e., the probability of claims).

Expected claims over the near term are related to underfunding in plans sponsored by firms that exhibit weakness in their creditworthiness. PBGC assigns plan sponsors to this category based upon factors such as whether the firm has a below-investment-grade bond rating. PBGC calculates underfunding for vested benefits using data from a variety of sources, including the annual confidential filings that companies with plans with at least $50 million in underfunding for vested benefits are required to make under Section 4010 of ERISA.

Underfunding by companies in this category is classified as PBGC's "reasonably possible" exposure, for purposes of PBGC's financial statements, as required under generally accepted accounting principles. As of December 31, 1996, baseline "reasonably possible" exposure was $21 billion, as compared to $22 billion one year earlier.

Expected claims in the longer term are more difficult to quantify either in terms of a single number or a limited range. That is, the amount of PBGC's future claims depends on many factors, including current underfunding among insured plans, changes in underfunding over time, and bankruptcies among plan sponsors. These factors are influenced by future economic conditions, most particularly those affecting interest rates, stock returns, and the rate of business failure.

Claims also depend importantly on the financial performance and the plan funding history of the individual insureds. If firms that enter bankruptcy also are those that sponsor underfunded defined benefit plans, then claims could be high even if overall economic conditions are favorable, and vice versa. It is not possible to predict either economic conditions or which particular firms will enter bankruptcy in the future. Indeed, PBGC needs to be prepared financially to handle a range of outcomes.

In assessing the longer term, underfunding in companies with investment-grade bond ratings also must be considered because, over time, some of these companies will experience deterioration of their financial condition. Although this underfunding is referred to as "remote" (to distinguish it from "reasonably possible"), PBGC will incur claims from some of these firms over the next ten years.

In previous years, we based our estimates of total pension underfunding on information received from companies during the process of creating a list of the 50 companies with the largest underfunded pensions. With the reporting requirements in the Retirement Protection Act of 1994 fully implemented, the agency discontinued the Top 50 process in 1997.

Using data obtained for the last Top 50 list, PBGC reported overall pension underfunding of $64 billion as of the end of 1995. While the agency does not have a comparable estimate for aggregate underfunding as of the end of 1996, various other indices used by PBGC indicate that a moderate reduction in underfunding did take place in 1996.

Underfunding is sensitive to changes in interest rates or stock returns, or the development of underfunding in some large firms. There is clear volatility in underfunding over time, as seen in the period from 1980 to 1995.

Likewise, claims vary substantially over time reflecting overall economic conditions, the performance of some particular industries, or the bankruptcy of a few very large companies. Volatility and the concentration of claims in a small number of terminations characterize PBGC expected claims. This volatility is apparent in the agency's historical claims experience.

Methodology for considering long-term claims.—No single underfunding number or range of numbers—even the reasonably possible estimate—is sufficient to evaluate PBGC's exposure and expected claims over the next ten years. There is too much uncertainty about the future, whether the performance of the economy or the performance of the companies that sponsor the insured pension plans.

The proper way to assess future claims is with advanced analytic tools such as stochastic models. The agency is now in the final stages of peer review of its stochastic model, the Pension Insurance Modeling System (PIMS). PIMS models future underfunding under current funding rules as a function of a variety of economic parameters and recognizes that all companies have some chance of bankruptcy, and that these probabilities can change significantly over time. The model recognizes the uncertainty in key economic parameters (particularly interest rates and stock returns). The model simulates the flows of claims that could develop under thousands of combinations of economic parameters and bankruptcy rates.

Until PIMS is fully peer-reviewed, we will continue to use our existing model that portrays three potential claims scenarios and does not assign probabilities to their occurrence.

Ten-Year Forecasts.—PBGC's current methodology for the ten-year forecasts relies on an extrapolation of the agency's claims experience and the economic conditions of the past two decades.

Forecast A is based on the average annual net claims over PBGC's entire history ($467 million per year) and assumes the lowest level of future losses. Forecast A projects steady improvement in PBGC's financial condition, resulting in a surplus of $8.0 billion at the end of 2007.

Forecast B, which assumes the mid-level of future losses, is based upon the average annual net claims over the most recent 11 fiscal years ($545 million per year). Forecast B projects net income levels that, while lower than Forecast A, still lead to a surplus of $6.9 billion at the end of 2007.

Forecast C is highly pessimistic and reflects the potential for heavy losses from the largest underfunded plans by assuming that the plans that represent the reasonably possible exposure will terminate uniformly over the next ten years in addition to a modest

number of lesser terminations each year. This forecast assumes $2.1 billion of net claims each year, resulting in a return to a deficit position and the steady growth of PBGC's deficit throughout the ten-year period to $17.1 billion.

The 1997 forecasts share several assumptions. Average annual net claims and projected claims are in 1997 dollars. The present value of future benefits is valued at 6.18% and using other actuarial assumptions that are consistent with assumptions used to value the present value of future benefits in the financial statements as of September 30, 1997. PBGC's assets are projected to earn 6.18% annually. Benefits for plans terminating in the future are assumed to grow at 4.38% annually until termination. Plan funding ratios are assumed to increase at 1.5% per year from historical averages and recoveries from plan sponsors are assumed to be constant at 10% of plan underfunding. The number of participants in insured single-employer plans is assumed to remain constant. The flat-rate portion of the single-employer premium is assumed to remain constant at $19 per participant. Receipts from the variable-rate portion of the premium are projected on the basis of a constant 30-year U.S. Treasury bond rate of 6.5%. Assumed administrative expenses are consistent with PBGC's 1999 President's Budget submission.

IMPROVING INTERNAL MANAGEMENT SUPPORT

With a strategic goal of improving internal management support operations, PBGC is committed to a strong infrastructure built on modern technology and comprehensive employee development.

TECHNOLOGY ADVANCES

PBGC continued to bring new automated information management systems on-line, using commercial off-the-shelf software as appropriate. Some of the new systems, such as a new trust fund accounting system, converted critical applications from outmoded mainframe computers to modern PBGC-based ″client-server″ systems using networked personal and small multi-user computers. Another system that will become operational in 1998 will account for revolving fund activities with the use of off-site Department of Commerce computers for which PBGC has made a special arrangement. Both of the new accounting systems will be part of PBGC's integrated core financial system.

The agency also worked to improve existing systems while applying finishing touches to the major new systems implemented within the past two years. Enhanced software for the Early Warning Program provides the program's financial analysts with easier access to the detailed information they need for their analyses, freeing them to handle more cases and address more issues. PBGC expanded the availability of the new participant information management and image processing systems that had been developed for insurance operations so that other departments could begin making use of the information in these systems. The agency also established an in-house Document Management Center to centralize and facilitate mail handling, imaging, and limited automated letter gen-

eration, and an off-site facility has been set up to handle large-scale production and mailing of automated letters.

While PBGC has not yet achieved full integration of its automated information systems, the systems it is developing do allow easier sharing of data. In addition, the agency adopted a corporate-wide systems development methodology that will ensure that all future information systems and applications will be developed consistent with existing corporate standards and systems.

PBGC's advances in technology are beginning to demonstrate value beyond the pension insurance program. During 1997, PBGC received special recognition from the Smithsonian Institution for using information technology "for the benefit of mankind." Information on the premium accounting system will be added to the Smithsonian's Permanent Research Collection of Information Technology at its National Museum of American History. Separately, in support of the President's initiative to strengthen the District of Columbia and in memory of PBGC's late Executive Director Martin Slate, the Department of Labor and PBGC donated 45 surplus computers to a local elementary school, increasing the accessibility of computers from one for every eight students to one for every four students. PBGC volunteers subsequently donated time and materials to wire the school for access to the Internet.

EMPLOYEE DEVELOPMENT

PBGC added new courses to expand its in-house employee training program, which also was renamed the Martin Slate Training Institute in memory of the late PBGC Executive Director. Secretary of Labor Alexis Herman joined PBGC's then-Acting Executive Director John Seal and Mr. Slate's widow, Dr. Caroline Poplin, in a June 1997 ceremony dedicating the newly named Training Institute in commemoration of Mr. Slate's commitment to employee training and development.

By yearend the agency had completed development of ten new technical courses and was in the process of developing six additional courses. The new courses focus on such areas as the agency's new information systems, pension law, and the processing and administration of terminated plans. Other innovations during the year included a new mentoring program for professional staff and an expert witness-attorney trial advocacy training program to sharpen the expert testimony skills of PBGC analysts and actuaries and the trial skills of PBGC attorneys.

EXECUTIVE DIRECTOR'S MESSAGE (1998)

I am happy to report that, for the third consecutive year, the Pension Benefit Guaranty Corporation's insurance programs generated an accounting surplus. Because of low claims, good investment performance, and adequate premium revenues, PBGC is financially healthier than ever before. But I am also very mindful that it was not so very long ago that PBGC's financial condition was precarious. As the U.S. General Accounting Office stated in its recent evaluation of PBGC, "While PBGC's financial condition has significantly improved, risks to the long-term financial viability of the insurance programs remain." We remain vigilant.

PBGC's improving financial position has allowed me to focus my efforts on strengthening and expanding the defined benefit system. We face an enormous challenge in helping to provide retirement security for the baby boom generation and others nearing retirement. If we are to achieve the goal of retirement income security for our aging workforce, I believe the solution must include defined benefit plans. Defined benefit plans provide a predictable, secure pension for life, and even small monthly benefit amounts can make a large difference in a retiree's standard of living.

I believe that the defined benefit system is in trouble. Both the number of plans and the number of workers whose primary pension is a defined benefit plan have declined dramatically. To remedy this, I asked a PBGC team to work with pension professionals and other stakeholders to find out what can be done to make defined benefit plans more attractive. We have received a lot of good ideas and we are working to develop them to strengthen and expand the defined benefit system. That will be my primary objective in 1999. It is important that we succeed. The retirement security of millions depends on our efforts.

DAVID M. STRAUSS,
Executive Director.

STRATEGIC PLANNING

PBGC continued to follow the five-year strategic plan first developed in 1997. The plan established four broad goals that form the framework for PBGC to structure both its short-term and long-term plans. PBGC's goals are to:

(1) protect existing defined benefit plans and their participants and encourage new plans,

(2) provide high-quality services and accurate and timely payment of benefits to participants,

(3) strengthen financial programs and systems to keep the pension insurance system solvent, and

(4) improve internal management support operations.

The strategic plan establishes performance measures through which PBGC assesses its progress toward each of its strategic goals. The performance measures track specific results that are significant to PBGC's customers and gauge PBGC's solvency and customer service accomplishments. PBGC will periodically review its performance measures for necessary adjustments as circumstances change and program performance reporting capabilities improve.

1998 PBGC Corporate Performance Measures

Measure and applicable goal	1998 milestone	1998 result	Baseline (1997)
Pension Loss Prevention (total value of loss prevention as compared to total underfunded vested benefits) (goal 1)	[1]	100%	88.5%.
Achieve 90% participant satisfaction regarding responses to inquiries (goal 2)	81%	Available in 3/99	79%.
Provide post-audit estimated benefits to new retirees that are within 5% of final benefits in clear, understandable language (goal 2).	To be established in 1999	93.5%	90%.
Provide final accurate benefit determinations to participants within 3–5 years of plan trusteeship (goal 2):			
(a) age of pretrusteeship inventory	No more than 4 years	98.6% 4 years	Not available.
(b) timeliness of final benefit notifications	7–8 years	5.39 years	5.95 years.
Collect 97% of total pension insurance premiums due (goal 3)	95%	99%	97%.
Approximate comparable 5-year investment indices for PBGC's portfolio investment (goal 3)	[1].		

[1] Not projected—determined annually based on actual results.

[In percent]

	1998 Result—		Baseline (1977)	
	PBGC	Index	PBGC	Index
Equities	18.1	17.6	20.6	20.6
Fixed-income	9.2	9.2	10.9	8.9

PROMOTING DEFINED BENEFIT PENSIONS

Providing retirement income security for the baby boom generation and others nearing retirement is one of the most compelling domestic challenges facing the country. The problem is becoming increasingly urgent because of the huge number of people affected and the short time left to deal with this issue. There are 25 million people between ages 53 and 62 who are now close to the end of their working careers, and right behind them are 78 million "baby boomers," 18 million of whom are already at least 48 years old.

People are not saving enough, early enough in life, to meet their retirement needs. Many low-income workers have no savings at all, and most older workers have not saved very much either. Half of America's households headed by people between ages 55 and 64 have wealth of less than $92,000, the bulk of which is equity in their homes. Nor is the savings situation likely to improve soon. Even those with a 401(k) plan are not saving enough. An Employee Benefit Research Institute study of 6.6 million 401(k) participants shows that the average 401(k) balance is only $37,000 and that nearly half of these participants have less than $10,000 in their accounts. Many low-income workers do not make enough to contribute anything to their 401(k) accounts. President Clinton has taken an important step to address this problem by proposing to establish universal savings accounts to give all Americans the opportunity to save.

Not only are workers not saving enough on their own, but many have no pension plan. Half of the private-sector workforce is not covered by any employer-sponsored retirement plan, and only 20 percent of the workers in small businesses have any retirement plan. Among lowwage workers, only 8 percent have a plan.

Historically, the defined benefit plan has provided adequate benefits for low-income workers who cannot afford to save and for older workers who failed to start saving early enough.

Yet, despite the value of defined benefit plans, the number of plans insured by PBGC has decreased from 114,000 in 1985 to 44,000 today, with most of the decline among smaller plans. The number of active workers in all plans has dropped from 29 million in 1985 to fewer than 25 million in 1994.

To encourage more employers to offer defined benefit plans, the Administration proposed a simplified defined benefit plan called SMART (Secure Money Annuity or Retirement Trust) for small businesses with 100 or fewer employees. SMART combines many of the best features of defined benefit and defined contribution plans. The plan would provide coverage for all eligible workers, and employers would have predictable funding based on conservative assumptions that would keep earned benefits fully funded at all times. SMART would guarantee a minimum annual retirement benefit for participants that employers could increase if the return

on plan investments exceeded specified conservative assumptions, and PBGC would protect their benefits.

SMART is an important step. More could be done for businesses of all sizes. At the request of the Executive Director, a PBGC team is working with employer and employee groups, pension professionals, and consultants who market pension plans to determine the reasons defined benefit plans are less prevalent today.

PBGC's efforts to promote defined benefit plans in 1998 laid the groundwork for future action. In 1999, PBGC will continue to work with stakeholders to develop ideas to strengthen and expand the defined benefit system.

SAFEGUARDING SOLVENCY

PBGC reported further improvement in its financial condition, marking another year of progress toward its strategic goal of strengthening its financial programs and systems to keep the pension insurance system solvent. Fixed-income investments, in particular, recorded dramatic gains. The Early Warning Program produced numerous settlements that protected the insurance program and hundreds of thousands of workers and retirees from pension losses. The agency also continued to meet legal challenges in courts across the country.

FINANCIAL MANAGEMENT

Both PBGC insurance programs again posted significant financial gains due mainly to investment earnings. Investments of the larger single-employer program produced income of more than $2.1 billion. Premium income totaled $966 million, $100 million less than in 1997 and nearly $200 million less than the record level reached in 1996. PBGC collected 99 percent of the premiums due, exceeding the target of 95 percent set under its strategic plan. However, companies' premium payments continued to decline because of reduced risk-based premium obligations. The investment earnings enabled the single-employer program to record net income of more than $1.5 billion, increasing the program's net surplus to more than $5 billion.

The multiemployer program also continued to be financially strong, with net income of $122 million almost exclusively from investment income and an end-of-year net surplus of $341 million. As of September 30, the program had assets of $745 million and liabilities totaling $404 million primarily for nonrecoverable future financial assistance. Both the net income and net surplus represent record levels for the multiemployer program.

YEAR 200 READINESS DISCLOSURE

PBGC instituted a comprehensive review of its information systems, Operations, and third-party relationships to assess its readiness for the Year 2000. Under the leadership of the Chief Financial Officer, PBGC formed a cross-functional team to formulate the agency's Y2K plans.

PBGC expects new automated systems implemented during 1998 to be century-date-change ready and all systems requiring changes to become ready and to complete independent verification in 1999.

PBGC is also working with its business partners to address their readiness for the Year 2000, but PBGC cannot ensure that other entities will be Y2K-compliant.

This information is PBGC's Year 2000 Readiness Disclosure for the purpose of the Year 2000 Information and Readiness Disclosure Act.

PBGC's financial statements have received their sixth straight unqualified opinion from the agency's auditors. The 1998 audit was again performed by PricewaterhouseCoopers LLP under the direction and oversight of PBGC's Inspector General.

After the year ended, the U.S. General Accounting Office issued a report, "Pension Benefit Guaranty Corporation: Financial Condition Improving, But Long-Term Risks Remain," which cited PBGC's "significantly" improved financial condition. However, GAO also noted that long-term risks to the insurance program remain, many of which are beyond PBGC's control. These risks include continued underfunding among some large plans, downturns in the economy, problems in certain sectors of the economy, a significant decline in the stock market, and a substantial drop in interest rates. As the report stated, "An economic downturn and the termination of a few plans with large unfunded liabilities could quickly reduce or eliminate PBGC's surplus." The GAO report provided independent validation that PBGC needs to be vigilant in managing its risks and cautious about changes that could affect liabilities or revenues.

Investment Program—The Corporation's investable assets consist of premium revenues accounted for in the Revolving Funds and assets from terminated plans and their sponsors accounted for in the Trust Funds. By law, PBGC is required to invest the Revolving Funds in fixed-income securities; current policy is to invest these funds only in Treasury securities agency has more discretion in its management of the Trust Funds, which it invests primarily in high-quality equities. The asset allocation is designed to provide sound long-term performance.

PBGC has structured its investment portfolio to improve the agency's financial condition in a prudent manner. The Revolving Fund assets are invested to earn a competitive return and partially offset changes in its benefit liabilities. The agency's investment in equities provides overall portfolio diversification and a higher long-term expected return, within prudent levels of risk. PBGC uses institutional investment management firms to invest its assets subject to PBGC oversight. PBGC continually reviews its investment strategy to ensure that the agency maintains an investment structure that is consistent with its long-term objectives and responsibilities.

As of September 30, 1998, the value of PBGC's total investments, including cash, was approximately $18.1 billion. The Revolving Fund's value was $11.6 billion and the Trust Fund's value was $6.5 billion. PBGC's fund allocation shifted toward fixed income and cash during 1998 due primarily to strong fixed income returns. Cash and fixed-income securities represented 66 percent of the total assets invested at the end of the year, as compared to 61 percent at the end of 1997, while the equity allocation stood at 33 percent of all investments compared to 38 percent one year earlier. A

very small portion of the invested portfolio remains in real estate and other financial instruments.

INVESTMENT PROFILE

	September 30—	
	1998	1997
Fixed-income assets:		
Average quality	AAA	AAA
Average maturity (years)	21.3	21.0
Duration (years)	11.3	10.5
Yield to Maturity (%)	5.1	6.4
Equity assets:		
Average price/earnings ratio	19.7	26.0
Dividend yield (%)	1.6	1.6
Beta	1.04	1.04

Fiscal year 1998 was positive for capital market investments and PBGC's investment program. For the year, PBGC's fixed-income program returned 22.8% while its equity program advanced 2.1 %. PBGC's five-year returns equalled or exceeded their comparable market indices, surpassing the requirements of the agency's strategic plan. For the year, PBGC reported income of more than $2.1 billion from fixed-income investments and $121 million from equity investments.

INVESTMENT PERFORMANCE

(Annual rates of return on percent)

	September 30—		Five years endedSept. 30, 1998
	1998	1997	
Total Invested Funds	14.4	21.9	11.9
Equities	2.1	37.6	18.1
Fixed-income	22.8	13.5	9.2
Trust funds	2.1	35.6	16.2
Revolving funds	22.4	13.3	9.1
Indices:			
Wilshire 5000	3.3	38.0	17.6
S&P 500 Stock Index	9.2	40.4	19.9
Lehman Brothers Long Treasury Index	22.1	13.2	9.2

SINGLE-EMPLOYER PROGRAM EXPOSURE

PBGC's "expected claims" are dependent on two factors: the amount of underfunding in the pension plans that PBGC insures (i.e., exposure), and the likelihood that corporate sponsors of these underfunded plans encounter financial distress that results in bankruptcy and plan termination (i.e., the probability of claims).

Over the near term, expected claims result from underfunding in plans sponsored by financially weak firms. PBGC treats a plan sponsor as financially weak based upon factors such as whether the firm has a below-investment-grade bond rating. PBGC calculates the underfunding for plans of these financially weak companies using the best available data, including the annual confidential filings that companies with large underfunded plans are required to make to PBGC under Section 4010 of ERISA.

For purposes of its financial statements, PBGC classifies the underfunding of financially weak companies as "reasonably pos-

sible" exposure, as required under generally accepted accounting principles. As of December 31, 1997, PBGC's estimated "reasonably possible" exposure ranged from $15 billion to $17 billion.

Over the longer term, exposure and expected claims are more difficult to quantify either in terms of a single number or a limited range. Claims are sensitive to changes in interest rates and stock returns, overall economic conditions, the development of underfunding in some large plans, the performance of some particular industries, and the bankruptcy of a few large companies. Large claims from a small number of terminations and volatility characterize the agency's historical claims experience and are likely to affect PBGC's potential future claims experience as well.

Despite the exceptional economic conditions of recent years, it is not reasonable to assume that future experience will be as favorable to PBGC. PBGC has had a surplus for only three years after running a deficit for more than 20 straight years. Furthermore, with premium changes built into the reforms of the Retirement Protection Act of 1994, PBGC expects its variable-rate premium revenues to decline substantially after the year 2000.

After reviewing PBGCs financial situation, the U.S. General Accounting Office concluded on October 16, 1998, that: "Although PBGC's financial condition has significantly improved over the past few years, risks remain from the possibility of an overall economic downturn or a decline in certain sectors of the economy, substantial drops in interest rates, and actions by sponsors that reduce plan assets. These risks could threaten the long-term viability of the insurance programs. Further, PBGC has only a limited ability to protect itself from risks to the insurance programs."

Methodology for considering long-term claims.—No single underfunding number or range of numbers—even the reasonably possible estimate—is sufficient to evaluate PBGC's exposure and expected claims over the next ten years. There is too much uncertainty about the future, both with respect to the performance of the economy and the performance of the companies that sponsor the insured pension plans.

The proper way to assess future claims is with advanced analytic tools such as stochastic models, which incorporate random events. PBGC has developed a stochastic model to evaluate its exposure, the Pension Insurance Modeling System (PIMS), and, with this report, the agency is adopting this model for its forecasts.

PIMS portrays future underfunding under current funding rules as a function of a variety of economic parameters. The model recognizes that all companies have some chance of bankruptcy and that these probabilities can change significantly over time. The model also recognizes the uncertainty in key economic parameters (particularly interest rates and stock returns). The model simulates the flows of claims that could develop under thousands of combinations of economic parameters and bankruptcy rates.

Under the model, median claims over the next ten years will be about $600 million per year (expressed in today's dollars); that is, half of the scenarios show claims above $600 million per year, and half below. The mean level of claims (that is, the average claim) is much higher, more than $900 million per year. The mean is higher because there is a chance under some scenarios that claims

could reach very high levels. For example, under the model, there is a ten percent chance that claims could exceed $2.1 billion per year. Despite PBGC's recent favorable experience, the financial condition of the agency could seriously deteriorate.

PIMS projects PBGC's potential financial position by combining simulated claims with simulated premiums, expenses, and investment returns. The mean outcome is an $8.8 billion surplus in 2008 (in present value terms). However, the model also shows the potential for significant downside outcomes. In particular, there is nearly a 20 percent chance that the agency could return to a deficit in the next ten years and a ten percent chance that the deficit could exceed $6.3 billion in 2008 (in present value terms). These outcomes are most likely if the economy performs poorly, in which case PBGC may experience large claims amounts and investment losses. PBGC is continuing to analyze the best way to manage and reduce the risk of insolvency.

Comparison to the Previous Forecast Method.—PBGC's past methodology for the tenyear forecasts relied on an extrapolation of the agency's claims experience and the economic conditions of the past two decades. Although PBGC is now using a new method for forecasting its future financial condition, the agency also prepared forecasts using the old methodology for comparison with PIMS.

Forecast A is based on the average annual net claims over PBGC's entire history ($527 million per year) and assumes the lowest level of future losses. Forecast A projects steady improvement in PBGC's financial condition, resulting in a surplus of $11.5 billion at the end of 2008 ($6.6 billion in present value terms for comparison to PIMS).

Forecast B, which assumes the mid-level of future losses, is based upon the average annual net claims over the most recent 11 fiscal years ($611 million per year). Forecast B projects net income levels that, while lower than Forecast A, still lead to a surplus of $10.5 billion at the end of 2008 ($6.0 billion in present value terms).

Forecast C reflects the potential for heavy losses from the largest underfunded plans by assuming that the plans that represent the reasonably possible exposure will terminate uniformly over the next ten years in addition to a modest number of lesser terminations each year. This forecast assumes $1.5 billion of net claims each year and projects a $2.5 billion deficit in ten years ($1.4 billion in present value terms).

Technical Notes.—Forecasts A, B, and C share several assumptions. Average annual net claims and projected claims are in 1998 dollars. PBGC calculated the present value of future benefits using an interest rate of 5.71% and other actuarial assumptions that are consistent with assumptions used to value the present value of future benefits in the financial statements as of September 30, 1998. PBGC's assets are projected to earn 5.71% annually. Benefits for plans terminating in the future are assumed to grow at 3.81% annually until termination. Plan funding ratios are assumed to increase at 1.5% per year from historical averages and recoveries from plan sponsors are assumed to be constant at 10% of plan underfunding. The number of participants in insured single-employer plans is assumed to remain constant. The flat-rate portion

of the singleemployer premium is assumed to remain constant at $19 per participant. Receipts from the variable-rate portion of the premium are projected on the basis of a constant 30-year U.S. Treasury bond rate of 5.2%. Assumed administrative expenses are consistent with PBGC's 1999 President's Budget submission.

LOSS PREVENTION

Under its Early Warning Program, PBGC continued to monitor more than 500 companies with pension plans underfunded by at least $5 million in order to identify transactions that could jeopardize pensions and to arrange suitable protections for those pensions and the pension insurance program. During 1998, PBGC negotiators reached agreements valued at nearly $1.1 billion with 35 companies, including Pepsico, Fruit of the Loom, Sunbeam, Pillowtex, and Inland Steel Company. These agreements provided contributions, security, and other protections for the pensions of about 257,000 workers and retirees. Loss prevention is PBGC's principal performance measure for its strategic goal of protecting existing defined benefit plans and their participants; with regard to these agreements, PBGC is able to report a loss prevention rate of 100 percent for 1998.

LITIGATION

PBGC continues to face challenges in courts across the country, a number of which threaten to impair the agency's ability to recover its losses for underfunded plans from the employers responsible for those plans. At the end of the year, PBGC had 132 active cases in state and federal courts and 830 bankruptcy cases.

Several of the most significant cases concerned the priority and value of PBGC's claims for losses from plan terminations:

Copperweld Steel Company.—PBGC continued to pursue bankruptcy claims to recover amounts due PBGC and Copperweld's three terminated pension plans, which covered about 3,000 workers and retirees. The company's liquidation trustee contests whether PBGC's claims for unpaid minimum funding contributions in excess of $1 million are entitled to tax priority, and whether the assumptions PBGC prescribes in its regulations appropriately measure PBGC's claims for unfunded benefit liabilities. These issues are central to PBGC's ability to recover its losses from employers in bankruptcy. In December 1997, the bankruptcy court ruled for the liquidation trustee's position on both issues. PBGC and the liquidation trustee negotiated an agreement that will expedite PBGC's appeal of these two programmatic issues to the district court.

CF&I Steel Corporation.—PBGC continued to pursue its claims against the reorganized CF&I for a CF&I plan that was underfunded by about $221 million when terminated in March 1992. In August 1998, the Tenth Circuit Court of Appeals adversely decided PBGC's appeal regarding the treatment of its claims in bankruptcy. The court found that PBGC valuation of its claim for unfunded benefit liabilities conflicts with the Bankruptcy Code and affirmed lower court decisions reducing PBGC's claim to about $123 million. The court also found that PBGC's claim for unpaid minimum funding contributions is not entitled to tax priority and that only a small portion of this claim is entitled to administrative priority.

PBGC's subsequent petition for rehearing by the full appeals court was denied in October 1998. PBGC is considering whether to seek further review.

PBGC v. Skeen (In re Bayly Corporation).—Just after yearend, PBGC received an adverse ruling from the Tenth Circuit Court of Appeals in this case of first impression. The court rejected PBGC's argument that a portion of its unfunded liability claim is entitled to tax priority under the Bankruptcy Code. The appeals court therefore affirmed the decisions of the lower courts denying priority to this claim.

Other major cases in 1998 included:

Hughes Aircraft Company v. Jacobson.—On January 25, 1999, the U.S. Supreme Court unanimously ruled that the Hughes pension plan was not terminated merely because it was amended. The Court expressly stated that the provisions of Title TV of ERISA "constitute[ ] the sole avenues for voluntary termination" of a pension plan. Hughes had amended its ongoing plan in 1991 to create a non-contributory benefit structure. Prior to the amendment, the plan, which was reportedly overfunded by $1 billion, had been funded by contributions from both employees and the employer. A group of retirees filed suit for a share of the plan's alleged surplus, claiming that the amendment created a new pension plan and terminated the old one. A district court dismissed the suit but was reversed on appeal. PBGC, along with the Department of Labor and the Internal Revenue Service, filed a "friend-of-the-court" brief urging the Court to reverse the Ninth Circuit decision. On the issue of most concern to PBGC, the government argued that the appeals court seriously misconstrued the plan termination requirements of Title IV in ruling that the plan amendment had "constructively" terminated the plan even though the plan had not been terminated in accordance with Title IV, and the Court agreed.

Pineiro, Brooks, and Beaumont v. PBGC.—In 1991, PBGC became trustee of three Pan Am pension plans underfunded by $914 million. Three former employees of Pan American World Airways later filed suit asking a district court to replace PBGC with an independent trustee. The court dismissed virtually all of the allegations as meritless, leaving open only an allegation concerning the timeliness of PBGC's notice of benefits to the Pan Am participants. The plaintiffs filed an amended complaint in January 1998 realleging PBGC delays in issuing benefit determinations as well as most of the dismissed allegations. PBGC's motion to dismiss the amended complaint was pending action by the district court at yearend. Despite the exceedingly poor condition of company records and the difficulties caused by Pan Am's protracted bankruptcy proceedings, PBGC has been paying benefits to Pan Am retirees continuously since taking over the plans and has completed benefit determinations for more than 44,000 of the 53,000 former Pan Am workers and retirees. The agency expected to complete most of the remaining benefit determinations by the end of calendar year 1998.

White Consolidated Industries, Inc.—The district court's decision was pending at yearend on PBGC's claims for the estimated $120 million underfunding in pension plans that White transferred to Blaw Knox Corporation in 1985. PBGC alleges that a principal purpose of White in entering into the transaction was to evade pension

liabilities. PBGC took over all the Blaw Knox plans either because they ran out of money or because they would have been abandoned after Blaw Knox ceased business in 1994.

PROVIDING HIGH-QUALITY SERVICE

Listening to customers is an essential ingredient to premier customer service, to which PBGC management and staff are committed. PBGC continued its outreach to plan sponsors, plan participants, and pension professionals as it searched for ways to further improve its service.

SINGLE-EMPLOYER PROGRAM RESULTS

Through its single-employer program, PBGC oversees terminations of fully funded plans and guarantees payment of basic pension benefits when underfunded plans must be terminated. The single-employer program covers about 33 million workers and retirees in more than 42,000 plans.

Standard Terminations of Fully Funded Plans.—The number of standard terminations continued to decline from their peak of about 11,800 in 1990, with 2,475 submitted to PBGC in 1998. Most of these plans had 50 or fewer participants.

PBGC audits a statistically significant number of completed terminations to confirm compliance with the law and proper payment of benefits. These audits generally have found few and relatively small errors in benefit payments, which plan administrators are required to correct. The errors arise primarily from use of incorrect interest-rate assumptions in valuing lump-sum distributions to plan participants. Due to PBGC's audits, in 1998 some 5,800 participants (about 4 percent of all participants in audited plans) received about $2.75 million of additional benefits.

Distress and Involuntary Terminations of Underfunded Plans.—During 1998 the agency completed the termination of 160 underfunded plans, the vast majority of which were involuntary terminations by PBGC. In most cases termination was necessary because the sponsoring employer had gone out of business. Many of these plans had been under consideration for termination for a period of time and their actual termination dates occurred in earlier years, when the circumstances leading to their termination first arose.

Trusteed Plans.—PBGC generally becomes trustee of a plan after the plan has been terminated, although not necessarily in the same year the plan was terminated. During 1998, PBGC became trustee of 187 single-employer plans covering 41,000 people. At yearend, the agency was in the process of trusteeing an additional 58 plans terminated in 1998 or earlier. In all, including 10 multiemployer plans previously trusteed, a total of 2,665 terminated plans were trusteed or were being trusteed as of the end of the year. (This total also reflects the elimination of five single-employer plans included in last year's total, which no longer required PBGC to become trustee.)

When PBGC trustees a large plan, the agency organizes informational meetings with plan participants to allay their concerns and to explain about PBGC's insurance. In 1998, the agency held 21

such sessions across the country that reached about 3,000 people. Executive Director David Strauss often attended the sessions to meet the participants and answer their questions.

Benefit Processing.—By the end of the year, PBGC was responsible for the current and future pension benefits of about 472,000 participants from single-employer and multiemployer plans. These include 209,300 retirees who received benefit payments totaling $848 million.

In 1998, PBGC issued more than 61,100 benefit determinations. The agency's improved automation and adjustments to basic benefit payment policies enabled PBGC staff to further reduce the amount of time needed to produce final benefit determinations. On average, PBGC issued final benefit determinations 5.39 years after the date it had trusteed the participant's plan, compared to the 8.75 year average of just two years earlier. In doing so, the agency exceeded the performance goal of 7–8 years set for 1998 under its strategic plan, which directs PBGC to issue final determinations within 3–5 years of plan trusteeship. PBGC routinely pays benefits in estimated amounts until final determinations are completed.

Appeals Processing.—PBGC's Appeals Board reviews appeals of certain PBGC determinations. Most of the appeals are from people disputing their benefit determinations. Typically, about 2 percent of all benefit determinations are appealed. During 1998, the Appeals Board received 3,705 appeals, a greater percentage of benefit determinations than is usual due to a high rate of form-letter appeals relating to one large pension plan. The Appeals Board decided 779 appeals during the year, closing them within 349 days, on average, of the date received. The Board also made substantial progress toward decisions on the high number of appeals filed this year.

Pension Search Program.—During 1998, the third year of operation for the missing participants clearinghouse, 552 companies terminating fully funded plans asked PBGC for assistance in finding 4,855 missing people. Of these, 3,687 were due over $6.6 million in benefits and 1,168 were covered by annuity contracts that will pay their benefits when they are found. By yearend, PBGC had confirmed addresses for 769 of the missing people and paid more than $1.5 million in benefits to 493 of them. PBGC is continuing its search for valid addresses for the remaining missing people.

The agency maintains a listing on the Internet called the Pension Search Directory as an additional means of locating people who have frustrated all previous searches by either their former employers or PBGC. Since its inception in December 1996, the Directory has enabled PBGC to find nearly 1,400 people who were owed more than $4 million in benefits plus interest. By the end of 1998, the total listing included almost 7,200 people who had worked for about 1,000 companies and were owed nearly $13 million in pension benefits. The Directory is found on the Internet at http://search.pbgc.gov.

MULTIEMPLOYER PROGRAM RESULTS

The multiemployer program, which covers about 8.7 million workers and retirees in about 2,000 insured plans, is funded and administered separately from the single-employer program and dif-

fers from the single-employer program in several significant ways. The multiemployer program covers only collectively bargained plans involving two or more unrelated employers. For such plans, the event triggering PBGC's guarantee is the inability of a covered plan to pay benefits when due at the guaranteed level, rather than plan termination as required under the single-employer program. PBGC provides financial assistance through loans to insolvent plans to enable them to pay guaranteed benefits.

As PBGC stated in its June 1996 report on the multiemployer program's financial condition, "The multiemployer program is financially strong. Since enactment of the current financial assistance program in 1980, the program's financial condition has improved from a deficit of $8.5 million to the current surplus . . . The program has had a surplus since 1982 . . . Projections show that the surplus should continue to grow under a wide range of economic scenarios." During 1998, PBGC updated the data used in preparing the report and found that the results remained substantially the same.

Financial Assistance.—The multiemployer program has received relatively few requests for financial assistance. Since 1980, PBGC has provided assistance to only 22 of the 2,000 insured plans, with a total value of approximately $38 million net of repaid amounts. In 1998, 18 of these plans were still receiving assistance of about $6 million annually.

In January, the Anthracite Health and Welfare Fund and Pension Plan, a plan for coal miners, became the first multiemployer plan to repay financial assistance from PBGC. The Fund repaid PBGC $3.2 million for financial assistance provided in the 1980's to enable the Fund to pay benefits during temporary periods of insolvency.

Legislation.—The Administration has recommended that the Congress more than double the current maximum guarantee from $5,850 to $12,870. The multiemployer program's benefit guarantee has been at the same level since 1980, and inflation has cut the real value of the guarantee almost in half. Currently, less than 1 percent of all workers and retirees in insolvent multiemployer plans have all their benefits guaranteed. With the change, at least three-quarters of all plan participants in future insolvencies would receive their full benefits through PBGC's insurance. The guarantee increase would require no change in the multiemployer premium rate. The proposed increase in the guarantee has been pending before the Congress since 1996.

CUSTOMER SERVICE

PBGC's Customer Service Center for participants in trusteed plans continued to meet higher-than-expected demands. When the center began operations three years ago, PBGC projected that it would handle about 8,000 calls per month with answer times averaging about 2 minutes. During the past year, the center handled, on average, more than 21,000 calls each month in slightly more than 2 minutes per call. Another 516,000 calls were answered through automated information.

In 1998, PBGC began implementing President Clinton's plain language initiative. The agency started developing a Plain Lan-

guage Guide for use by PBGC staff that includes, in part, a dictionary that defines technical terms commonly used by PBGC in more easily understandable language. The agency also began training staff in how to write in plain language. In addition, PBGC rewrote selected, frequently sent letters to customers using common everyday words and short sentences. These efforts will continue in 1999.

PBGC also completed its first "practitioner" survey of plan administrators and pension professionals to determine their level of satisfaction with the agency's services. The results, together with those of the agency's third survey of plan participants conducted in 1997, were heartening and instructive. Both practitioners and participants found that PBGC's service was improving, with 79 percent of the surveyed participants and 54 percent of the practitioners rating PBGC's overall customer service as "above average" or "outstanding." Under its five-year strategic plan, one of PBGC's goals is to satisfy 90 percent of participants by the year 2002—the agency intends to set a satisfaction goal for practitioners after it reviews the results of its second practitioner survey, during the second quarter of 1999.

PBGC'S CUSTOMER SERVICE STANDARDS

Our customers deserve our best effort as well as our respect and courtesy.

On the first call from you, we will say:

- what we can do immediately and what will take longer,
- when it will be done, and
- who will handle your request.

We will call you if anything changes from what we first said, give you a status report and explain what will happen next.

We will have staff available from 8:00 a.m.—5:00 p.m. Eastern time to answer your calls. If you leave a message, we will return the call within one workday.

We will acknowledge your letter within one week of receipt.

The practitioner survey suggested that PBGC could raise the overall satisfaction level simply by improving the timeliness, responsiveness, and follow-up to inquiries. Those surveyed made it clear they want their calls returned promptly and their questions resolved within three to five days and with only one or two calls. Many of these issues also surfaced in the participant surveys. As a result, PBGC revised its Customer Service Standards to reflect the type of service requested by its customers.

In response to the surveys, PBGC formed several cross-departmental teams of employees late in the year to develop recommendations for improvements in specific areas of service, including participant communications and billings for underpaid premium payments. The intensive effort, termed Reach for Excellence and Customer Happiness, allowed team members to tap each other's knowledge about different areas of the agency in identifying and addressing barriers to good customer service. The teams had wide discretion to propose solutions. Ultimately, many of the teams' recommendations were accepted, including toll-free telephone numbers for employers, plan administrators, and pension professionals and expansion of PBGC's website to include more information for

plan participants. The agency was beginning to implement the recommendations as the year ended.

PBGC initiated a number of changes in part to address issues raised by the surveys and to improve customer service. Of these, perhaps the most significant involved the extension of the premium filing due date by one month. Plan administrators and pension professionals have frequently expressed concern about the requirement that plans file their final premium payment one month earlier than the final due date for the Form 5500 annual information report they must file with the Internal Revenue Service. Some of the information needed to compute the PBGC premium is reported on the plan's Form 5500. The premium due date also coincided with the last day a company may contribute to its plan for the prior year, leading to problems in the calculation of a plan's funding level. The change in due date, effective for plan years beginning on or after January 1, 1999, will ease a substantial burden on plan administrators.

The agency introduced an electronic version of its reportable events forms on its Internet website. Software on the website now allows employers and plan administrators to complete the form and submit it to PBGC by e-mail. In addition, PBGC issued a new publication, the "Small Business Guide," to help small businesses with PBGC-insured plans understand the operation and requirements of the pension insurance program. The Guide summarizes all employer administrative responsibilities under the insurance program in a single, nontechnical reference publication.

PBGC also began an effort to educate workers about defined benefit plans. Through a special section on its website and the issuance of a new publication called "A Predictable, Secure Pension for Life," PBGC is providing easy-to-understand information about how traditional defined benefit plans operate and the advantages they offer.

For plan participants in PBGC-trusteed plans, PBGC changed its policy on recovery of benefit overpayments to ensure that no one ever repays more than the actual amount of the overpayment. Until 1998, if a participant did not wish to repay an overpayment in a lump sum, PBGC made the recovery through a permanent reduction (generally capped at 10 percent) in the person's future benefit payments. Now, the reduction will cease when the total amount collected matches the amount by which the person had been overpaid. In addition, PBGC increased the maximum value of a benefit it will pay in a single, lump sum from $3,500 to $5,000. A participant still has the option of receiving the benefit as an annuity instead if that person's monthly benefit at normal retirement age is at least $25. PBGC also revised its procedures for valuing its recoveries for plan underfunding and unpaid contributions, which will help reduce the amount of time needed to complete final benefit determinations.

ITEM 27—POSTAL SERVICE

PROGRAMS AFFECTING OLDER AMERICANS

BALLOTS BY MAIL

A growing number of Americans are voting early by sending their ballots through the mail. After election officials make the decision to utilize this opportunity, the Postal Service has an obligation to ensure that officials know how to optimize use of the mail for voter registration and elections. There are numerous examples demonstrating that mail has enabled the achievement of greater voter participation while lowering costs to taxpayers. This phenomenon benefits, among others, the large population of senior citizens who otherwise might not be able to exercise their right to vote due to infirmities or inclement weather which may prevent them from getting to the polls.

During 1998, the Postal Service worked with election officials from around the country to develop and distribute an *Election Officials User Guide* as a special resource manual to assist them in utilizing mail more efficiently and effectively for sending and receiving election ballots. The Postal Service also unveiled a new "Official Election Mail" logo which clearly distinguishes official election mail—voter registration materials, absentee ballots, and referendum information—from partisan political mail, campaign literature, and other mail.

CARRIER ALERT PROGRAM

Carrier Alert is a voluntary community service provided by city and rural delivery letter carriers who watch participant mailboxes for mail accumulation which might signal illness or injury. Accumulations of mail are reported by carriers to their supervisors, who then notify a sponsoring agency, through locally developed procedures, for follow-up action. The program completed its 16th year of operation in 1998 and continues to provide a lifeline to thousands of elderly citizens who live alone.

DELIVERY SERVICE POLICY

The Postal Service has a long-standing policy of granting case-by-case exceptions to delivery regulations based upon hardship or special needs. This policy accommodates the special needs of elderly, handicapped, or infirm customers who are unable to obtain mail from a receptacle located some distance from their home. Information on hardship exceptions to delivery receptacles can be obtained from local postmasters.

SERVICES AVAILABLE FROM YOUR RURAL CARRIER

Rural carriers continue to provide their customers with retail services they have come to expect from the rural "post office on wheels." Retail services provided include registered and certified mail, accepting parcels for mailing, and taking applications for money orders. Rural carriers also provide customers with receipts for such services.

Retail services are available to all customers served by rural carriers but are most beneficial to those individuals who are elderly or have a physical handicap which limits their ability to go to the post office for these important services. Rural carriers provide their customers with almost all retail services available from the post office 302 days per year.

PARCEL DELIVERY POLICIES

For postal customers who are unavailable to receive parcels, but who normally are at home, our letter carriers will automatically redeliver the article the following day. In addition, if the mailer requests, uninsured parcels are left at customer homes or businesses provided there is reasonable protection from weather and theft. Both of these policies make it easier for customers, particularly the elderly, to receive mail and minimize the need for trips to the post office.

ACCESSIBILITY

The Postal Service is subject to the Architectural Barriers Act of 1968. The resulting standards for the design, construction, and alteration of leased and owned facilities, are published in Postal Service Handbook RE–4, *Standards for Facility Accessibility by the Physically Handicapped.*

Significant progress continues to be made to increase the accessibility of the 36,000 Postal Service Facilities. In Fiscal Year 1998, approximately $1.5 billion was invested in new construction projects resulting in the completion of over 800 new facilities. These projects were built fully accessible for elderly and disabled customers. The 1998 Building Design Standards comply with and in some cases exceed all accessibility standards. Our commitment to barrier-free facilities is apparent by our continued effort toward retrofitting historic facilities. The Postal Service values its elderly customers and feels they will benefit from our efforts to make facilities more accessible.

CONSUMER EDUCATION AND FRAUD PREVENTION

The U.S. Postal Inspection Service endeavors to alert consumers and businesses to various types of crimes by attracting media attention to postal crime trends, publicizing positive law enforcement accomplishments, circulating media releases, and hosting crime prevention presentations.

In February 1997, the Inspection Service joined with the American Association of Retired Persons (AARP) and the Attorney General's office for the state of New Mexico in a continuing public education initiative aimed at preventing telemarketing fraud. Volunteers from the Albuquerque area AARP, state and local consumer

protection agencies, the New Mexico Attorney General's office, and the Postal Inspection Service worked together to turn the tables on crooked boiler room operators. Using lists of previous victims of telemarketing fraud and names of seniors gleaned from commercial phone lists, volunteers telephoned 1,500 New Mexico residents to warn them of the dangers of telemarketing fraud.

At a joint press conference in September 1997, the Chief Postal Inspector, and members of the AARP, the Federal Trade Commission (FTC), and the offices of the Attorneys General of Massachusetts and Arizona, via satellite, announced Operation Mailbox. This cooperative effort focused attention on unsolicited mailings received by seniors, including suspicious prize offerings, sweepstakes promotions, and requests for charitable contributions. Senior volunteers collected hundreds of unsolicited mailings which were displayed dramatically at the press conference.

Project Mailbox II is an on-going, multi-pronged public/private initiative focusing on companies that use deceptive mass mailings, e-mails, and unsolicited faxes to entice consumers to send money through the mail, call a telemarketer, or show up at a face-to-face sales meeting. On October 1, 1998, the U.S. Postal Inspection Service joined with the Attorneys General from all 50 states, the FTC, AARP, Better Business Bureaus, Yellow Pages Publishing Association, and National Association of Attorneys General (NAAG) in announcing Project Mailbox II. The project is designed to remind consumers that, while the vast majority of direct mail solicitations are sent by legitimate mail order companies, sometimes crooks use the mail too.

Senior victimization was the topic of a Dateline NBC story which featured the Inspection Service's efforts to stop the flood of illegal foreign lottery mailings entering the United States. The story focused on the success inspectors have achieved in identifying illegal mailings at border entry points, with the assistance of the U.S. Customs Service. These efforts have led to the seizure and destruction of over 4.5 million pieces of foreign lottery mail. This story also explored the sad tales of financial ruin suffered by many elderly victims of these schemes who seem easy prey to the allure of promised multi-million dollar jackpots.

In January 1998, the Inspection Service, the Postal Service General Counsel, and the FTC held a joint news conference in Washington to announce the filing of multiple injunctions and civil complaints against various self-styled employment agencies. Inspectors and General Counsel attorneys sought to focus public awareness on "postal job" promotions, which misrepresent their relationship with the U.S. Postal Service and the benefits they can provide prospective job hunters. These promoters seek to take advantage of individuals who may be out of work or seeking to better themselves, and who consider Postal Service employment extremely desirable.

The Inspection Service, FBI, AARP, and Retired Service Volunteer Program (RSVP) participants assembled in Los Angeles in February 1998 to conduct a friendly boiler room initiative. Volunteers used call lists seized in raids by law enforcement officers to telephone individuals who were treated to several telemarketing fraud prevention messages. A number of entertainment celebrities attended the affair to help attract media attention.

A similar friendly boiler room was conducted in Washington, D.C., during November 1998. The AARP, FTC, and Department of Justice (DOJ), with the assistance of the Inspection Service and the FBI, made friendly fraud prevention calls from a downtown hotel to consumers nationwide. Several thousand calls were made during a 12-hour period and over two thousand individuals were contacted, several whom dishonest telemarketers may have victimized. These potential victims were provided Mail Fraud Complaint forms and instructed as to proper completion.

In New Jersey and Massachusetts, inspectors and local AARP volunteers formed partnerships to educate senior citizens about some of the fraudulent promotions which target the elderly through direct mail and telemarketing schemes. Senior volunteers were recruited to participate by collecting all questionable or suspicious unsolicited promotional mailings received during a specific period of time. Volunteers also kept a log of all unsolicited telemarketing calls received. Everything collected by the volunteers was turned over to inspectors for examination and follow-up attention. The results of the seniors' collection effort and the inspectors' preliminary investigations were publicized with media cooperation. This served to dramatically highlight the quantity of fraudulent solicitations targeting senior citizens.

On September 1, 1998, Chief Postal Inspector Ken Hunter testified before the Senate Subcommittee on International Security, Proliferation, and Federal Services regarding sweepstakes and prize award mailings representing fraud against the consumer. Chief Hunter discussed numerous cases, which illustrated prize award schemes, and the actions postal inspectors took to prevent consumer losses.

One of the most significant investigations involved a Canadian citizen who operated numerous companies that solicited money from consumers through direct mail and telemarketing ventures. The individual was indicted based on his involvement in a telemarketing scheme involving foreign lotteries, which had swindled hundreds of American consumers out of millions of dollars. During the investigation, a questionnaire sent to 880 victims revealed the average age of the victim was 74. This individual was sentenced to 180 days in custody and ordered to forfeit approximately $8 million in funds seized by postal inspectors to be paid to victims of his scheme. An article regarding this case was published in the AARP Bulletin.

In October 1998, the U.S. Postal Inspection Service joined with AARP, the Attorney General's office for the state of Arizona, and Arizona State University Gerontology Program, in a telemarketing and mail fraud conference. Over 135 people attended the one-day seminar in Tempe, Arizona, whose theme was *New Directions: Seniors, Sweepstakes and Scams.* The conference was held to educate and protect seniors from telemarketing and mail fraud schemes.

Postal Inspectors have taken a new tact in efforts to combat international mail fraud schemes. From March through November 1998, about 30 postal employees at John F. Kennedy Airport/Air Mail Center in Queens, NY, using guidelines set by postal inspectors, intercepted approximately 3 million letters from Nigeria that promoted an illegal scam. The letters, often referred to as "419" let-

ters after the Nigerian statute that makes them illegal, were found to have counterfeit Nigerian postage and they promoted fraudulent business proposals. Most of the intercepted letters were destroyed unopened at a Westbury, Long Island, landfill. Nigerian postal authorities are cooperating with the Postal Inspection Service in the crackdown.

INJUNCTIONS AND OTHER CIVIL POWERS

In addition to the investigation of individuals or corporations for possible criminal violations, the Inspection Service can protect consumers from material misrepresentations through the use of several statutes. In less severe cases, operators of questionable promotions agree to a Voluntary Discontinuance. This is an informal promise to discontinue the operation of the promotion. Should the agreement be violated, formal action against the promoter could be initiated. In certain cases where a more formal action is better suited, a Consent Agreement is obtained. Generally, a promoter signs a Consent Agreement to discontinue the false representations or lottery charged in a complaint. If this agreement is violated, the Postal Service may withhold the promoter's mail pending additional administrative proceedings.

The Postal Service (Judicial Officer) is empowered under 39 U.S.C. (b)(2) to issue a Cease and Desist (C&D) Order which requires any person conducting a scheme in violation of Section 3005 to immediately discontinue. C&D orders are issued as part of a False Representation order and, as a matter of course, are agreed to as a part of a Consent Agreement. Violators of C&D orders may be subject to civil penalties under 39 U.S.C. 3012. When more immediate relief to protect the consumer is warranted, the Postal Service has a number of effective enforcement options available. Title 39 U.S.C. 3003 and 3004 enables the Postal Service, upon determining that an individual is using a fictitious, false, or assumed name, title, or address in conducting or assisting activity in violation of 18 U.S.C. Sections 1302 (Lottery), 1341 or 1342 (Mail Fraud), to withhold mail until proper identification is provided and the person's right to receive mail is established.

In those instances where a more permanent action is necessary, 39 U.S.C. 3007 allows the Postal Service to seek a Temporary Restraining Order detaining mail. By withholding service to the suspected violator, the extent of victimization is limited while an impartial judge reviews the facts and makes a final determination. If the judge decides that all mail pertaining to the promotion should be returned, then a False Representation Order, authorized under 39 U.S.C. 3005 is issued. In addition, U.S. District Judges may hold a hearing on alleged fraudulent activity and issue a permanent injunction regarding the operation pursuant to 18 U.S.C. 1345.

By requesting the court to withhold mail while a case is argued, Postal Inspectors have been successful in many cases in limiting the extent of victimization. Action under these statutes does not preclude criminal charges against the same target.

CUSTOMER ADVISORY COUNCILS

The Postal Service established its first Customer Advisory Council (CAC) in October, 1998. The council concept was adopted to foster a sense of partnership between local postal officials and the communities they serve. Since that time, customer participation in, and the total number of councils, have continued to grow.

CACs provide a forum for the exchange of ideas and suggestions and improve the quality of service provided through an understanding of customer expectations. Membership usually includes individuals who are representative of their community; small business owners, local government officials, university/college students, homemakers, and retired persons. The valuable feedback received from councils is often used by local postal officials to improve service and customer relationships.

NATIONAL CONSUMER PROTECTION WEEK

The Postal Service has sponsored an annual Consumer Protection Week since 1977. Beginning in 1980, the Postal Service scheduled its observance to coincide with the National Consumers Week sponsored by the U.S. Office of Consumer Affairs. Postmasters and facility managers are urged to sponsor special activities to educate customers about postal products and services as well as Postal Inspection Service efforts to protect consumers from perpetrators of fraudulent schemes and other postal crimes. In conjunction with open houses and special gatherings scheduled during National Consumers Week, brochures are distributed to warn consumers about mail fraud and misrepresentations of products and services sold by mail. Helpful information about proper addressing of mail, packaging parcels correctly, temporary address changes, sending valuables through the mail, and how to report service problems are made widely available through planned events. As medical fraud and work-at-home schemes have traditionally ranked at the top of the fraudulent promotions, the focus of material distributed is frequently directed toward alerting senior citizens of these other schemes.

Traditionally, National Consumers Week has been held in October. In 1998 a decision was made to postpone it until the first week of February 1999. The U.S. Postal Inspection Service will join the U.S. Postal Service, the Federal Trade Commission (FTC), and the American Association of Retired Persons (AARP) to promote National Consumer Protection Week.

The Inspection Service will issue three Video News Releases (VNRs) entitled, Conning Older Americans; How They Scam Older Americans; and Fraud Fighters which will be sent to local television stations via satellite for release during Consumer Protection Week. The VNRs correspond with the purpose of National Consumer Protection Week, which is to highlight consumer protection and education efforts around the country.

STAMPS BY AUTOMATED TELLER MACHINE (ATM)

Stamps by ATM is a convenient way to purchase stamps at a bank's automated teller machine. A specially designed sheetlet of 18 First-Class stamps is dispensed at the touch of a button. The

cost is debited from your checking or savings account and treated like a cash withdrawal. Because many ATMs are accessible 24 hours a day, our customers are able to do banking and buy postage stamps at their convenience.

STAMPS BY MAIL

Stamps by Mail is a service that allows customers to purchase stamps in booklets, sheets and coils along with other products such as postal cards, and stamped envelopes by ordering through the mail.

The Stamps by Mail program benefits a wide variety of people and is particularly beneficial to elderly or shut-in customers who cannot travel to the post office. Stamps by Mail provides order forms incorporated in self-addressed postage-paid envelopes to customers for their convenience in obtaining products and services without having to visit a Postal Service retail unit. The form is available in lobbies or from the customer's letter carrier. Once the form is completed it can be returned to the carrier or dropped in a collection box. Orders are normally returned to the customer within 2 or 3 business days.

STAMPS BY PHONE

Stamps by Phone is a convenient program that is intended to target business, professional, and household customers who are willing to pay a service charge for the convenience of ordering by phone and paying by credit card (VISA or Master Card) to avoid trips to the post office. Customers utilizing this service can call a toll-free number (1–800–STAMPS–24), 24 hours a day, 7 days a week, and order from a menu of postal products. There is no minimum purchase amount, and customers receive their orders within 3 to 5 business days.

ALTERNATE POSTAL RETAIL SITES

Alternate postal retail sites include, grocery stores and other retail stores that offer stamps for sale through a consignment agreement, and contract Postal Units that offer a wider variety of services. Stamps offered through consignment agreements are sold at no more than face value at retailer checkstands. Contract postal units provide more convenient locations for our customers to mail packages, purchase stamps and postal money orders, send registered mail, and obtain postal services.

In 1998 the Postal Service began testing a partnership with Mail Boxes Etc. (MBE) to sell stamps and postal services at 250 MBE locations throughout the United States. By providing services at numerous alternate locations, the Postal Service provides greater access and flexibility for all customers to obtain stamps and other postal services, which generally means less wait time for them to obtain these retail services. This enables customers to combine their mailing needs and other errands into a single trip to the neighborhood shopping center or grocery store. This is especially convenient for our elderly customers who may have limited access to transportation.

ITEM 28—RAILROAD RETIREMENT BOARD

ANNUAL REPORT ON PROGRAM ACTIVITIES FOR THE ELDERLY FOR THE U.S SENATE SPECIAL COMMITTEE ON AGING 1997 AND 1998

The U.S. Railroad Retirement Board is an independent agency in the executive branch of the Federal Government, administering comprehensive retirement-survivor and unemployment-sickness benefit programs for the nation's railroad workers and their families under the Railroad Retirement and Railroad Unemployment Insurance Acts. The Board also has administrative responsibilities under the Social Security Act for certain benefit payments and railroad workers' Medicare coverage.

Under the Railroad Retirement Act, the Board pays retirement and disability annuities to railroad workers with at least 10 years of service. Annuities based on age are payable at age 62, or at age 60 for employees with 30 years of service. Disability annuities are payable before retirement age on the basis of total or occupational disability. Annuities are also payable to spouses and divorced spouses of retired workers and to widow(er)s, divorced or remarried widow(er)s, children, and parents of deceased railroad workers. Qualified railroad retirement beneficiaries are covered by Medicare in the same way as social security beneficiaries.

Under the Railroad Unemployment Insurance Act, the Board pays unemployment benefits to railroad workers who are unemployed but ready, willing and able to work and pays sickness benefits to railroad workers who are unable to work because of illness or injury.

BENEFITS AND BENEFICIARIES

During fiscal year 1998, retirement and survivor benefit payments under the Railroad Retirement Act amounted to some $8.2 billion, $41 million more than the prior year. The number of beneficiaries on the retirement-survivor rolls on September 30, 1998, totaled 718,000. The majority (86 percent) were age 65 or older.

At the end of the fiscal year, 325,000 retired employees were being paid regular annuities averaging $1,284 a month. Of these retirees, 149,000 were also being paid supplemental railroad retirement annuities averaging $43 a month. In addition, some 174,000 spouses and divorced spouses of retired employees were receiving monthly spouse benefits averaging $502 and, of the 227,000 survivors on the rolls, 190,000 were aged widow(er)s receiving monthly survivor benefits averaging $768. About 9,000 retired employees were also receiving spouse or survivor benefits based on their spouse's railroad service.

Some 659,000 individuals who were receiving or were eligible to receive monthly benefits under the Railroad Retirement Act were covered by hospital insurance under the Medicare program at the end of fiscal year 1998. Of these, 645,000 (98 percent) were also enrolled for supplementary medical insurance.

Gross unemployment and sickness benefits paid under the Railroad Unemployment Insurance Act totaled $92.4 million during fiscal year 1998, while net benefits totaled $59.3 million after adjustments for recoveries of benefit payments, some of which were made in prior years. Total gross and net payments decreased by approximately $12.0 million and $13.6 million, respectively, from fiscal year 1997. Unemployment and sickness benefits were paid to 31,000 railroad employees during the fiscal year. However, only about $0.2 million (less than 1 percent) of the benefits went to individuals age 65 or older.

FINANCING

At the end of fiscal year 1998, the balance in the Railroad Retirement Board's accounts was $16.5 billion, registering an increase of over $1.1 billion over the previous year, and earnings on investments totaled $1.2 billion for the year.

The Board's 1998 railroad retirement financial report to Congress, which addressed railroad retirement financing during the next 25 years, was generally favorable. It concluded that, barring a sudden, unanticipated, large decrease in railroad employment, no cash-flow problems arise during the next 20 years. Cash-flow problems arise only under the Railroad Retirement Board's most pessimistic employment assumption and then not until 2022. This is one year later than in the previous year's report. Like previous reports over the last decade, the 1998 report also indicated that the long-term stability of the system, under its current financing structure, is still dependent on future railroad employment levels.

The Board's 1998 railroad unemployment insurance financial report was also favorable, indicating that even as maximum benefit rates increase 40 percent from $43 to $60 from 1997 to 2008, experience-based contribution rates are expected to keep the unemployment insurance system solvent, even under the Board's most pessimistic employment assumption. The average employer contribution rate remains well below the maximum throughout the projection period.

The Board's reports consequently did not recommend financing changes for the railroad retirement or unemployment insurance systems.

LEGISLATIVE DEVELOPMENTS

Public Law 105–277, enacted October 21, 1998, provided for the restoration of annuities to certain divorced spouses of workers whose widows previously elected to receive lump-sum payments. Public Law 105–33, enacted August 5, 1997, clarified that non-resident aliens are eligible for benefits under the Railroad Retirement and Railroad Unemployment Insurance Acts.

House Concurrent Resolution 52 was a non-binding resolution which urged all parties of the railroad community, including rail labor, rail management and railroad retiree organizations to begin

open discussions for the purpose of adequately funding an amendment to the Railroad Retirement Act to increase benefits for widows and widowers. A hearing on this resolution was held on September 17, 1998, before the Subcommittee on Railroads of the House Committee on Transportation and Infrastructure, but no further action was taken by the House on this resolution.

OFFICIALS

On April 27, 1998, the Senate confirmed President Clinton's appointment of Cherryl T. Thomas as Chair of the Railroad Retirement Board for a term expiring in August 2002. Prior to her appointment, Ms. Thomas served as Commissioner of the Department of Buildings for the City of Chicago and in numerous other posts including Deputy Chief of Staff to Mayor Richard M. Daley during a 30-year career with the city.

V. M. Speakman, Jr. continues to serve as Labor Member of the Board; prior to his appointment Mr. Speakman had been President of the Brotherhood of Railroad Signalmen and had also served as Vice Chairman of the Railway Labor Executives' Association.

Jerome F. Kever continues to serve as Management Member of the Board; before his appointment Mr. Kever had been Vice President and Controller of the Santa Fe Pacific Corporation.

SERVICE AND ADMINISTRATIVE IMPROVEMENTS

The Railroad Retirement Board implemented various initiatives during 1997 and 1998 to improve agency operations and provide the best possible service to its customers.

Plans.—In its Strategic Plan prepared in accordance with the Government Performance and Results Act of 1993, the Board outlined its four main goals: (1) provide excellent customer service; (2) safeguard the trust funds through prudent stewardship; (3) align resources to effectively and efficiently meet the agency's mission; and (4) expand the use of technology and automation to achieve the agency's mission. The overall mission statement in the Strategic Plan provides, in part, that the Board "will pay benefits to the right people, in the right amounts, in a timely manner, and safeguard our customers' trust funds." The Board will also "treat every person who comes into contact with the agency with courtesy and concern, and respond to all inquiries promptly, accurately and clearly."

The Board submitted its initial annual performance plan with its fiscal year 1999 budget submission. The performance plan links the goals in the Strategic Plan to day-today work, defines the processes and resources necessary to meet the goals and shows how the agency will measure progress toward achieving its goals. The Board also finalized a Strategic Information Resources Management Plan which incorporates the agency's Information Technology Capital Plan and outlines the critical role of information technology and automation in achieving the goals and objectives contained in the Strategic Plan. Consistent with those plans, the agency made technological improvements that will improve performance and efficiency.

Y2K Compliance.—At the beginning of 1999, all of the Board's mission-critical computer systems were Year 2000 (Y2K)-compliant.

The Board's computer systems process benefit payments, issue informational notices, enroll beneficiaries in Medicare, withhold Federal income tax and perform other functions essential to the Board's ongoing operations and service to the railroad public. Having met the Y2K goal, the Board began a series of comprehensive tests of its mission-critical systems to ensure that all interfaces, connections, and links between the various systems remain in sync and are fully functional. The Board also plans to complete work on those systems that are not mission-critical by September 30, 1999.

The agency's most important information exchange systems are with the Department of the Treasury and the Social Security Administration. The Board exchanges data with the Department of the Treasury in order to issue benefit payments, and the Board's staff expects a smooth transition in that area. The Board also coordinates benefit payments with the Social Security Administration, and these systems have already been tested to ensure that the data exchanges will function correctly in the year 2000.

Help Line.—In November 1997, new service options were added to the Board's Help Line, a toll-free interactive voice response system. Employees can now use the Help Line to obtain statements of creditable service and compensation, and beneficiaries on the rolls can use it to verify their current monthly benefit rate or secure a replacement Medicare card. Callers are also able to find the address and telephone number of their local field office by entering their zip code, and information on unemployment-sickness benefits continues to be available on the Help Line, which is available 24 hours a day, 7 days a week.

Customized Notices.—In cooperation with the Department of the Treasury's Chicago Financial Management Center which provided printing services, the Board mailed customized notices to over 750,000 annuitants which expanded the general information notices issued annually following cost-of-living adjustments. The revised notices gave annuitants a detailed breakdown of their monthly rates by tier, and can be used as proof of income, to verify the amount of the cost-of-living adjustment and to calculate Federal income tax withholding amounts.

Field Service.—As of October 30, 1997, the restructuring of the Board's field service achieved its target configuration of 53 service locations and 3 regional offices, as the number of its field offices declined from 86 service locations and 5 regional offices in 1995. Most of the closed offices had been base points or branch offices that functioned as satellites of larger district offices. Automatic call forwarding was established in those areas where offices were closed so that customers could contact their new servicing office at no additional expense. Board staff members have been able to maintain service standards in these areas through greater use of the telephone, mail and itinerant service as planned. Voice mail and Internet e-mail are also now available in all field offices. The restructuring reflected the ongoing demographic changes in the rail industry and the budget limitations on the Board's resources.

Occupational Disability Standards.—The Board unanimously approved new standards for the evaluation of claims for occupational disability benefits payable under the Railroad Retirement Act. The standards, based on joint recommendations negotiated by rep-

resentatives of rail labor organizations and the Association of American Railroads, call for a system based on up-to-date medical standards to replace guidelines that had been in effect for five decades. Effective February 13, 1998, the new standards apply to applications filed on or after January 1, 1998.

OFFICE OF INSPECTOR GENERAL

During fiscal year 1998, the Office of Inspector General continued its efforts to assist management in increasing the efficiency of agency programs. Twenty-three audits and evaluations issued during the year contained findings for improvement in both administrative and program operations. Two audit reports will have an estimated financial impact of $2.4 million when Board management completes necessary corrective actions. Reviews were conducted of significant activities which included the status of the conversion of information systems to ensure compliance with the Year 2000, the investment of agency trust funds, and agency progress in meeting the requirements of the Government Performance and Results Act. Investigative activities resulted in 100 criminal convictions, 43 indictments/informations, 73 civil judgments and almost $2 million in court-ordered restitutions, fines, recoveries and prevention of overpayments.

PUBLIC INFORMATION ACTIVITIES

The Board maintains direct contact with railroad retirement beneficiaries through its field offices located across the country. Field personnel explain benefit rights and responsibilities on an individual basis, assist railroad employees in applying for benefits and answer any questions related to the benefit programs. The Board also relies on railroad labor groups and employers for assistance in keeping railroad personnel informed about its benefit programs.

At informational conferences sponsored by the Labor Member's Office of the Board for railroad labor union officials, Board representatives describe and discuss the benefits available under the railroad retirement-survivor, unemployment-sickness and Medicare programs, and the attendees are provided with comprehensive informational materials. During 1998, 2,210 railroad labor union officials attended 46 informational conferences held in cities throughout the United States. In addition, railroad labor unions frequently request that a Board representative speak before their meetings, seminars and conventions.

At seminars for railroad executives and managers, Board representatives review programs, financing, and administration, with special emphasis on those areas which require cooperation between railroads and Board offices. The Board also conducts informational seminars on benefit programs for employees at the request of railroad management. During 1998, the Management Member's Office of the Board conducted 11 seminars for railroad officials. It also conducted pre-retirement counseling seminars attended by railroad employees and their spouses, and benefit update presentations.

The Board's headquarters is located at 844 North Rush Street, Chicago, Illinois 60611–2092, phone (312) 751–4500; the agency's Web site is www.rrb.gov. In addition, the Board maintains an Of-

fice of Legislative Affairs in Washington, DC as a liaison for dealing with Members of Congress on matters involving the Railroad Retirement and Unemployment Insurance Acts and legislative issues that affect the Board. The Office of Legislative Affairs is located at 1310 G Street, NW, Suite 500, Washington, DC 20005–3004, phone (202) 272–7742.

ITEM 29—SMALL BUSINESS ADMINISTRATION

The SBA continues to create, implement and deliver technical and financial assistance programs for the benefit of the Nation's small business community. We currently do not have a program that gives specific focus to older Americans.

However, the SBA is the sponsoring Federal agency for the Service Corp of Retired Executives (SCORE) program. SCORE is an organization of nearly 12,000 business men and women who volunteer their time and expertise to provide management counseling and training to small business owners and people just starting a new business. They have extensive business experience, either as entrepreneurs and business owners or as former corporate executives. SCORE counseling is confidential and free of charge and is provided at more than 700 locations in the United States and its territories.

ITEM 30—SOCIAL SECURITY ADMINISTRATION

PROGRAMS ADMINISTERED BY THE SOCIAL SECURITY ADMINISTRATION, CALENDAR YEAR 1998

The Social Security Administration (SSA) administers the Federal Old-Age, Survivors, and Disability Insurance (OASDI) program (title II of the Social Security Act). OASDI is the basic program in the United States that provides income to individuals and families when workers retire, become disabled, or die. The basic idea of the cash benefits program is that, while they are working, employees and their employers pay Social Security taxes; the self-employed also are taxed on their net earnings. Then, when earnings stop or are reduced because of retirement in old-age, death, or disability, cash benefits are paid to partially replace the earnings that were lost. Social Security taxes are deposited to the Social Security trust funds and are used only to pay Social Security benefits and administrative expenses of the program. Amounts not currently needed for these purposes are invested in interest bearing obligations of the United States. Thus, current workers help to pay current benefits and, at the same time, establish rights to future benefits.

SSA also administers the Supplemental Security Income (SSI) program for needy aged, blind, and disabled people (title XVI of the Social Security Act). SSI provides a federally financed floor of income for eligible individuals with limited income and resources. SSI benefits are financed from general revenues. In about 46 percent of the cases, SSI is reduced due to individuals' having countable income from other sources, including Social Security benefits.

SSA shares responsibility for the black lung program with the Department of Labor. SSA is responsible, under the Federal Coal Mine Health and Safety Act, for payment of black lung benefits to coal miners and their families who applied for those benefits prior to July 1973 and for payment of black lung benefits to certain survivors of miners.

Local Social Security offices process applications for entitlement to the Medicare program and assist individuals with questions concerning Medicare benefits. Overall Federal administrative responsibility for the Medicare program rests with the Health Care Financing Administration, HHS.

Following is a summary of beneficiary data and selected administrative activities for calendar year 1998.

I. OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE BENEFITS AND BENEFICIARIES

At the beginning of 1998, about 96 percent of all jobs were covered under the Social Security program. The major groups of work-

ers not covered under Social Security are Federal workers hired before January 1, 1984 and State and local government employees covered under a retirement system for whom the State has not elected Social Security coverage.

At the end of December 1998, 44.2 million people were receiving monthly Social Security cash benefits. Of these beneficiaries, 27.5 million were retired workers, 3.3 million were dependents of retired workers, 6.3 million were disabled workers and their dependents, 7.1 million were survivors of deceased workers.

The monthly amount of benefits being paid at the end of December 1998 was $31.3 billion. Of this amount, $22.7 billion was payable to retired workers and their dependents, $3.8 billion was payable to disabled workers and their dependents, and $4.8 billion was payable to survivors.

Retired workers were receiving an average benefit at the end of December 1998 of $780, and disabled workers received an average benefit of $733.

During the 12 months ending December 1998, $375 billion in Social Security cash benefits were paid. Of that total, retired workers and their dependents received $252.7 billion, disabled workers and their dependents received $48.2 billion, and survivors received $73.9 billion.

Monthly Social Security benefits were increased by 2.1 percent for December 1997 (payable beginning January 1998) to reflect a corresponding increase in the Consumer Price Index (CPI).

II. SUPPLEMENTAL SECURITY INCOME BENEFITS AND BENEFICIARIES

In January 1998, SSI payment levels (like Social Security benefit amounts) were automatically adjusted to reflect a 2.1 percent increase in the CPI. From January through December 1998, the maximum monthly Federal SSI payment level for an individual was $494. The maximum monthly benefit for a married couple, both of whom were eligible for SSI, was $741.

As of December 1998, 6.6 million aged, blind, or disabled people received Federal SSI or federally administered State supplementary payments. Of the 6.6 million recipients on the rolls during December 1998, about 2.0 million were aged 65 or older. Of the recipients aged 65 or older, about 701,000 were eligible to receive benefits based on blindness or disability. About 4.6 million recipients were blind or disabled and under age 65. During December 1998, Federal SSI benefits and federally administered State supplementary payments totaling slightly over $2.5 billion were paid.

For calendar year 1998, $29.4 billion in benefits (consisting of $26.4 billion in Federal funds and $3.0 billion in federally administered State supplementary payments) were paid.

III. BLACK LUNG BENEFITS AND BENEFICIARIES

Although responsibility for new black lung miner claims shifted to the Department of Labor (DOL) in July 1973, SSA continues to pay black lung benefits to a significant, but gradually declining, number of miners and survivors. (While DOL administers new claims taken by SSA under part C of the Federal Coal Mine Health and Safety Act, SSA is still responsible for administering part B of the Act.)

As of the end of March 1998, about 116,000 individuals (106,000 age 65 or older) were receiving $47 million in black lung benefits which were administered by the Social Security Administration. These benefits are financed from general revenues. Of these individuals, 18,000 miners were receiving $10 million, 78,000 widows were receiving $35 million, and 20,000 dependents and survivors other than widows were receiving $2 million. During fiscal year 1998 SSA paid out black lung payments in the amount of $588 million.

Black lung benefits increased by 3.1 percent effective January 1999. The monthly payment to a coal miner disabled by black lung disease increased from $455.40 to $469.60. The monthly benefit for a miner or widow with one dependent increased from $683.10 to $704.40 and with two dependents from $797.00 to $821.80. The maximum monthly benefit payable when there are three or more dependents increased from $910.80 to $939.20.

IV. COMMUNICATION AND SERVICES

SSA's public information initiatives are aimed at more than 44 million Social Security beneficiaries, more than six million SSI recipients and about 150 million workers currently paying into the system. SSA seeks to ensure that current and future beneficiaries are aware of programs, services, and their rights and responsibilities.

In 1998, SSA planned public information outreach activities to help educate the public about Social Security. Two public service campaigns were conducted during 1998. The campaigns used television, radio and print media to encourage the public to learn more about Social Security. To date, the media has donated more than $2.5 million in advertising space.

The Agency designed, pilot tested, and produced a kit of information materials for employers to use in helping educate employees about the value of Social Security. It updated its Social Security Teachers Kit and developed a special "kids page" on the Internet. It continued working with external groups and organizations to help them better understand Social Security and spread the word about Social Security to their constituencies.

Additional subjects covered through public information messages included changes in the law affecting noncitizens and direct deposit of benefits. Messages were placed in the form of news releases, radio and television public service announcements and publications such as Social Security Today, a newsletter distributed to national organizations.

SSA produces a wide range of publications on all Social Security programs. More than 100 consumer booklets and fact sheets keep the public informed about programs and policies affecting them. Many publications also are available in Spanish. Many are available through the agency's FAX Catalog, as well as on the Internet at SSA's web site, http://www.ssa.gov. Also, SSA's Public Information Distribution Center provides materials directly to external groups and organizations.

P.L. 105–18 (H.R. 1871), emergency supplemental appropriations bill including extension of benefits for noncitizens, signed on June 12, 1997

- Provided a one-month extension of SSI eligibility for noncitizens who were receiving benefits on August 22, 1996, and who would not continue to be eligible under the noncitizen restrictions in the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, by changing the date that noncitizen redeterminations have to be completed from August 22, 1997 to September 30, 1997.

P.L. 105–33 (H.R. 2015), Balanced Budget Act of 1997, signed on August 5, 1997

Noncitizens

SSI Eligibility for Aliens Receiving SSI on August 22, 1996 and Disabled Legal Aliens in the United States on August 22, 1996

- Provides that "qualified alien" noncitizens lawfully residing in the United States who received SSI on August 22, 1996, would remain eligible for SSI—i.e., eligibility "grandfathered. "
- Also provides that "qualified aliens" lawfully residing in the United States on August 22, 1996 would be eligible for SSI if they meet the SSI definition of disability or blindness.
- Extends from September 30, 1997 to September 30, 1998 the period during which redeterminations of eligibility can be conducted for noncitizens who were receiving SSI on August 22, 1996. Thus, noncitizens who are not "qualified aliens" who received SSI on August 22, 1996 could remain eligible until September 30, 1998.
- Effective as if enacted in the "Personal Responsibility and Work Opportunity Reconciliation Act of 1996" (PRWORA), pertinent sections of which were effective upon its enactment—i.e., August 22, 1996.

Extension of Eligibility Period for Refugees and Certain Other Qualified Aliens from 5 to 7 years for SSI and Medicaid; Status of Cuban/Haitian Entrants

- Extends the current 5-year eligibility period for refugees, asylees, and noncitizens who have had their deportations withheld to 7 years.
- Also adds Cuban and Haitian entrants to the categories of noncitizens who are considered to be "qualified aliens," to the categories of noncitizens who are eligible for SSI for 7 years after they are granted status, and to the categories of noncitizens who are exempt from the 5-year eligibility ban on noncitizens who enter the United States after August 22, 1996.
- Effective as if enacted in PRWORA.

Treatment of Certain Amerasian Immigrants as Refugees

- Adds Amerasian immigrants to the categories of noncitizens who are eligible for SSI and for the first 7 years after they

are admitted to the United States and exempts them from the 5-year eligibility ban on noncitizens who enter the United States after August 22, 1996.

- Effective as if enacted in PRWORA.

Exceptions for Certain Indians from Limitation on Eligibility for Supplemental Security Income and Medicaid Benefits

- Exempts noncitizen members of federally recognized Indian tribes or noncitizen native Americans who come under section 289 of the Immigration and Nationality Act from the SSI and Medicaid restrictions in PRWORA, including the restriction on benefits only to "qualified aliens" and the 5-year ban.
- Effective as if enacted in PRWORA.

Exemption from Restriction on SSI Program Participation by Certain Recipients Eligible on the Basis of Very Old Applications

- Exempts individuals who have been on SSI rolls since before January 1, 1979 from the noncitizen restrictions in PRWORA if the Commissioner lacks clear and convincing evidence that such an individual is a noncitizen ineligible for benefits under the restrictions in PRWORA.
- Effective as if enacted in PRWORA.

Derivative Eligibility for Medicaid and Food Stamp Benefits

- Provides that noncitizens who are otherwise ineligible for Medicaid under PRWORA, may be eligible for Medicaid if they receive SSI benefits and if the State's Medicaid plan provides Medicaid eligibility for SSI recipients.
- Also provides that noncitizens who are otherwise ineligible under PRWORA for food stamps are not made eligible for food stamps because they receive SSI.
- Effective as if enacted in PRWORA.

State supplementary payment program

Fees for Federal Administration of State Supplementary Payments

- Increases fees for SSA's administering supplementary payments (currently $5 per check) under the following schedule: FY 98–$6.20; FY 99–$7.60, FY 00–$7.80; FY 01–$8.10; FY 02–$8.50. Each succeeding year, fees are indexed to increases in the Consumer Price Index or set at a different rate as determined by the Commissioner of Social Security.
- Amounts of fees collected in excess of $5 per check are to be credited to a special Treasury fund available for SSA administrative purposes. Such amounts are credited as a discretionary offset to discretionary spending to the extent that they are made available for expenditures in appropriations acts.
- Effective upon enactment.

Timing of Delivery of October 1, 2000, SSI Benefit Payments

• Provides that the October 2000 SSI check be paid on October 2, which is a Monday, rather than on the last Friday in September.

Technical amendments to PRWORA

Disclosures Involving Fugitive Felons and Probation and Parole Violators

• Authorizes SSA to charge fees as a condition for processing requests by law enforcement authorities for SSN and address information regarding SSI beneficiaries who are fugitive felons or probation or parole violators.

Definition of Qualified Alien: Inclusion of Noncitizen Child of Battered Parent as Qualified Alien

• Provides that the benefit-paying agencies rather than the Attorney General make certain determinations. Such determinations are made under guidance promulgated by the Attorney General. Also provides "qualified alien" status to noncitizen children whose parents are abused and makes conforming amendments reflecting changes in the Immigration and Nationality Act.

Treatment of Prisoners

• Authorizes prisoner reporting incentive payments to a penal institution with respect to an inmate who receives an SSI benefit for the month preceding the first month throughout which he is an inmate of the institution, and who is determined to be ineligible for an SSI benefit based on the information provided by the institution.

Children with disabilities

Eligibility Redeterminations for SSI Children Who Are Under Age 18

• Extends current 12-month period (ending 8/22/97) to 18 months (ending 2/22/98) for redetermining the disability of children under age 18 under the new standards. However, if a redetermination is not made within this time period, requires that it be conducted as soon thereafter as practical. Also, requires that the individual be notified of the redetermination provision before the redetermination process is started.

Eligibility Redeterminations for SSI Recipients Who Attain Age 18

• Provides SSA with the authority to make redeterminations of disabled childhood SSI recipients who attain age 18, using the adult disability eligibility criteria, more than one year after the date such recipient attains age 18.

Continuing Disability Review Required for Low Birth Weight Babies

• Permits SSA to schedule a continuing disability review for a child whose eligibility for SSI benefits is based on low birth weight at a date after such individual's first birthday if the Commissioner determines that such individual's impairment is not expected to improve within 12 months of the child's birth.

Additional Accountability Requirements (Dedicated Accounts)

• Clarifies that monies from a dedicated account which are misapplied by an individual who is his or her own payee shall reduce future SSI payments to that individual and also clarifies the type of benefits a representative payee may deposit in a previously established account.

Reduction in Cash Benefits Payable to Institutionalized Individuals Whose Medical Costs Are Covered by Private Insurance

• Replaces the terms "hospital, extended care facility, nursing home, or intermediate care facility" in section 1611(e) with "medical treatment facility" and makes other conforming changes.

Clarification of the Effective Date of the Denial of SSI Benefits to Drug Addicts and Alcoholics

• Clarifies the meaning of the term "final adjudication" and clarifies SSA's authority to make SSI medical redeterminations after January 1, 1997.

• Expands the applicability of the provisions in P.L. 104–121 which require treatment referrals and authorization of a $50 fee for organizations serving as representative payees for SSI beneficiaries who are incapable and have a DA&A condition. Under prior law, the provisions were limited to SSI applications and reapplications filed after July 1, 1996. This amendment extends these provisions to SSI beneficiaries whose applications are adjudicated after enactment of P.L. 104–121—March 29, 1996—(regardless of when filed) and to individuals allowed SSI benefits before March 29, 1996 and who filed a request for a new medical determination before July 1, 1996.

Repeal of Obsolete Reporting Requirement

• Repeals an obsolete reporting requirements in subsections (b)(3)(B)(ii) of section 201 of P.L. 103–296, the Social Security Independence and Program Improvements Act of 1994. Reports were to have been made to the House Committee on Ways and Means and the Senate Committee on Finance on SSA's experience with SSI beneficiaries whose disabling condition is primarily caused by alcohol or drug addiction.

Exceptions to Benefit Limitations: Corrections to Reference Concerning Noncitizens Whose Deportation Is Withheld

• Reflects the redesignation of Immigration and Naturalization Act (INA) section 243(h) to 241(b)(3) in order to assure

that noncitizens whose deportations are withheld under either section are treated the same way effective April 1, 1997. Such noncitizens may be eligible for SSI during the 7-year period beginning the date their deportations are withheld.

Veteran Exception: Application of Minimum Active Duty Service Requirement; Extension to Unremarried Surviving Spouse; Expanded Definition of Veteran

- Requires a minimum of military service—generally 24 months—in order to qualify for SSI and Medicaid.
- Makes the following clarifications:
  —Provides SSI eligibility to an unremarried surviving spouse of a noncitizen veteran or active duty military personnel generally if they were married for at least one year.
  —Provides that the term "veteran" includes military personnel who die during active duty service.
  —Provides that certain Filipinos who fought for the United States military during World War 11 are considered veterans for benefit eligibility purposes.

Notification Concerning Noncitizens Not Lawfully Present; Correction of Terminology

- Provides for replacing in section 1631(e)(9) of the Social Security Act "unlawfully in the United States" with "not lawfully present in the United States."

Correction To Assure That Crediting Applies to All Quarters of Coverage Earned by Parents Before a Child is 18

- Clarifies that all quarters of coverage earned by a parent before a child is age 18, including those earned before the child was born, may be credited to the noncitizen child for purposes of the child's eligibility for SSI.

Other provisions of interest

Medicaid—Continued Coverage for Disabled Children Who Lose SSI

- Provides States must continue Medicaid coverage for disabled children who were receiving SSI benefits as of 8/22/96 and would have continued to be eligible for such benefits except that their eligibility terminated because they did not meet the new, more strict SSI childhood disability criteria.

Medicaid—State Option To Permit Workers With Disabilities To Buy Into Medicaid

- Permits individuals with disabilities whose family income is less than 250% of poverty to buy into Medicaid. States determine the amount of the premium, which will be based on a sliding scale based on income.

Disclosure of Quarters of Coverage Information

• Authorizes SSA to disclose quarters of coverage information about a noncitizen or the spouse or parent of an alien for purposes of determining the noncitizen's eligibility under certain Federally funded benefit programs.
• Effective as if enacted in PRWORA.

Medicare Part B Premium Assistance for Low-Income Seniors

• Expands the current level of premium assistance by establishing a $1.5 billion capped entitlement block grant to States to use to assist Medicaid enrollees whose family incomes range from 120 percent to 135 percent of the poverty level.

Under current law, States are required to pay the Medicare Part B premium for Medicaid beneficiaries whose family income is between 100 percent and 120 percent of the poverty level.

This new program does not, however, provide any individual entitlement to any low-income senior citizens. The amount of assistance a person gets is decided by the States. In addition, the block grant is authorized for five years, but the increase in premium is permanent.

Sense of the Congress Concerning the Treatment of Hmong Veterans

• Expresses the sense of Congress that, based on their service on behalf of the United States during the Vietnam War, Hmong veterans should be treated like other noncitizen veterans for purposes of continued eligibility for assistance benefits.

Advisory Board Personnel

• Eliminates the statutory restrictions on the number and type of staff that the Advisory Board is authorized to hire.
• Effective as if enacted in the Contract With America Advancement Act of 1996 (P.L. 104–121).

P.L. 105–34 (H.R. 2014), Taxpayer Relief Act of 1997, signed on August 5, 1997

Expanded SSA Records for Tax Collection

• Provides that, for an application for an SSN for a person under age 18, SSA must collect the SSNs of each parent in addition to currently required evidence of age, identity, and citizenship. SSA must share this information with IRS for administration of tax benefits based on support or residency of a child.
• Provides that States must make available to SSA each parent's name and SSN collected in the birth certification process. SSA must share this information with IRS.
• SSA collection of parents' SSNs is effective for SSN applications made more than 180 days after the date of enactment. States' sharing of birth certificate information with SSA and SSA sharing of such information with IRS applies to information obtained on, before, or after the date of enactment.

Work Opportunity Tax Credit

• Adds qualified SSI recipients to the "targeted group" list, thus making their employers eligible for the tax credit. Also, increases the percentage of the existing tax credit to 40 percent of a "targeted group" individual's wages for qualified individuals working more that 400 hours a year, 25 percent for qualified individuals working between 120–140 hours a year, and deny the credit for qualified individuals working less than 120 hours. In addition, extends the expiration date of the tax credit from September 30, 1997 to July 1. 1998, and makes conforming amendments to welfare-to-work provisions in PRWORA.

Exclusion of Termination Payments Made to Insurance Salesmen

• Excludes for Social Security purposes payments made to a self-employed insurance salesman after his agreement to work for the insurance company has terminated if: he performed no additional work for the company in that taxable year; he entered into a covenant not to compete with the company; and the amount of the payment was based entirely on the policies he sold or was credited with selling during the last year of the agreement which remain in force rather than on his length of service or overall earnings from the company.

Status of Representatives of Security Broker-Dealers

• Provides that, in determining whether a registered representative of a securities broker-dealer is an employee or independent contractor, no weight is to be given to instructions from a service recipient which are imposed in order to comply with government-imposed investor protection standards.

Employer-Provided Educational Assistance

• Reinstates a provision that expired in June 1997, under which certain employer provided educational assistance was excluded for Social Security and income tax purposes.

Magnetic Media

• Requires partnerships with more than 100 partners to report on magnetic media.

Fringe Benefits

• Broadens the exclusion of employer-provided fringe benefits for Social Security and income tax purposes to apply to qualified parking provided in lieu of compensation.

P.L. 105–277 (H.R. 4328), Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1999, signed on October 21, 1998

Supplemental security income-related provisions

Redeterminations

The President's request for $50 million to conduct additional non-medical SSI redeterminations was not specifically funded. However, SSA's regular "Limitation on Administrative Expenses" (LAE) account was increased by $47 million over the President's budget request. SSA intends to use the additional LAE funds to conduct SSI redeterminations. Effective on enactment.

Qualified Medicare Beneficiary Demonstration Project

- Requires the Commissioner of Social Security to evaluate methods to promote Medicare buy-in programs targeted to elderly and disabled individuals whose incomes are below specified percentages of the poverty line and whose resources generally are less than twice the SSI resource limits. Effective on enactment.

Work Opportunity Tax Credit

- Extends the work opportunity tax credit available to employers of SSI beneficiaries and other targeted groups until June 30, 1999. The tax credit expired on June 30, 1998.

Other provisions

Social Security Coverage Agreements With the States

- Permits States to modify their Social Security coverage agreements with the Commissioner of Social Security between January 1, 1999 and March 31, 1999 to exclude from Social Security coverage services performed by students employed by a public school, university, or college in that State. The exclusion applies to student services performed after June 30, 2000.

Perfecting Amendments Related to Withholding From Social Security Benefits

- Amends section 207 of the Social Security Act to allow voluntary withholding from Social Security benefits for income tax purposes. Effective for benefits paid on or after December 1, 1998.

Paperwork Elimination/Electronic Signature

- Requires that, not later than 18 months after enactment, the Director of the Office of Management and Budget (OMB), in consultation with the National Telecommunications and Information Administration (NTIA) develop procedures for use and acceptance of electronic signatures by Executive Agencies.
- Provides that, not later than 5 years after enactment, the Director of OMB will ensure that Executive Agencies allow the

option of electronic maintenance, submission, or disclosure of information, when practicable; and allow the use of electronic signatures, when practicable.

• Provides for the development by OMB of procedures to allow private employers to electronically file employee records with Executive agencies.

• Provides that electronic records or signatures developed in compliance with the procedures in the law are not denied legal effect, validity, or enforceability because they are in electronic form.

No DOT Funding for Changes in Drivers Licenses

• Provides that no funds appropriated for the Department of Transportation (DOT) may be used to issue the final regulations required by section 656(b) of the Illegal Immigration Reform and Responsibility Act of 1996. Section 656(b) prohibits Federal agencies from accepting as proof of identification a drivers license that does not meet standards promulgated by the DOT. The standards include a document that contains a Social Security number that can be read electronically or visually and is in a form that includes security features to limit tampering and counterfeiting.

P.L. 105–285 (S. 2206), Human Services Reauthorization Act of 1998, signed on October 27, 1998

• Establishes the Individual Development Account (IDA) demonstration under which low-income individuals, including recipients of SSI, may establish dedicated savings accounts that can be used for purchasing a first home, meeting the costs of post-secondary education, capitalizing a business, or addressing certain defined hardship cases. An individual's deposits into the IDA are matched by a sponsoring non-profit organization, State or local government participating in the demonstration.

• For purposes of determining eligibility and benefit amounts under Federal or federally assisted programs based on need, including SSI, only the deposits made by the individual and interest accrued on those funds may be considered to be the income, assets, or resources of the individual. The matching funds are excluded.

P.L. 105–306 (H.R. 4558), Noncitizen Benefit Clarification and Other Technical Amendment Act of 1998, signed on October 28, 1998

Supplemental security income provisions

Continuing Eligibility for Certain Aliens Receiving Benefits in August 1996

• Permanently extends the eligibility of all "nonqualified" noncitizens who were receiving SSI benefits when the welfare reform law was passed in August 1996 (P.L. 104–193). Their benefits had been previously extended through September 30, 1998, by the Balanced Budget Act of 1997 (P.L. 105–33).

Disregard of Awards Made to Children on SSI Because of Life-Threatening Conditions

- Excludes from SSI eligibility and benefit determinations in-kind gifts not converted to cash and the first $2,000 annually of cash gifts made by tax-exempt organizations, such as the Make-A-Wish Foundation, to individuals under age 18 with life-threatening conditions.
- Applies to gifts made on or after the date that is 2 years before the date of enactment.

Enhanced Recovery of SSI Overpayments From Social Security Benefits

- Authorizes SSA to collect SSI overpayments by offsetting Social Security benefits, with a maximum monthly offset of no more than 10 percent of the Social Security benefit. (Currently, such recovery of SSI overpayments from Social Security benefits may be made only with the agreement of the overpaid individual.)
- Effective upon enactment.

P.L. 105–318 (H.R. 4151), Identity Theft and Assumption Deterrence Act of 1998, signed on October 30, 1998

- Provides criminal penalties (to be determined by the U.S. Sentencing Commission) for any person who knowingly transfers or uses, without lawful authority the means of identification of another person with the intent to commit, or to aid or abet, any unlawful activity that constitutes a violation of Federal law or that constitutes a felony under any applicable State or local law;
- Defines "means of identification" to include name, social security number, date of birth, official State or government issued driver's license or identification number, alien registration number, government passport number, and employer or taxpayer identification number; and
- Directs the Federal Trade Commission, no later than 1 year after enactment, to establish procedures to receive complaints, provide informational materials to victims, and refer complaints to appropriate entities, which may include credit bureaus or law enforcement agencies.

P.L. 105–369 (H.R. 1023), Ricky Ray Hemophilia Relief Fund Act of 1998, signed on November 12, 1998

- Prohibits payments made under the Ricky Ray Hemophilia Relief Fund Act of 1998 from being considered income or resources in determining eligibility for, or the amount of, benefits under the Supplemental Security Income (SSI) program or medical assistance under the Medicaid program.

P.L. 105–379 (S. 1733), Requirement that State agencies ensure that food stamp coupons are not issued to deceased individuals, signed on November 12, 1998

- Requires each State agency that administers a food stamp program to enter into a cooperative arrangement with the

Commissioner of Social Security to verify whether food stamp recipients are deceased to ensure that benefits are not issued to deceased individuals; and

- Provides that the Secretary of Agriculture is to report to Congress and to the Secretary of the Treasury on the progress and effectiveness of the cooperative arrangements established.

ITEM 31—VETERANS AFFAIR

I. INTRODUCTION

The Department of Veterans Affairs has the potential responsibility for a beneficiary population of more than 25 million veterans. The median age of veterans is approximately 58 years old compared to a median age of approximately 34 years old for the general U.S. population. Over 36% (or more than 9 million) of the veteran population is age 65 and older. By the year 2005, over four-and-a-half million veterans will be 75 years or older.

This demographic trend will require VA to redistribute its resources to meet the different needs of this older population. Historically, older persons are greater users of healthcare services. The number of physician visits, short-term hospital stays and number of days in the hospital, as well as need for long-term care services, all increase as the patient moves from the fifth to seventh decade of life.

VA has developed a wide range of services to provide care in a variety of institutional, non-institutional, and community settings to ensure that the physical, psychiatric and socioeconomic needs of the patient are met. Special projects, a variety of innovative, medically-proven programs and individual VA facility initiatives have been developed and tested that can be used for veteran patients and adapted for use by the general population.

VA operates the largest health care system in the Nation, encompassing 172 hospitals, 132 nursing home care units, 40 domiciliaries, and over 500 outpatient clinics. VA also contracts for care in non-VA hospitals and in community nursing homes, provides fee-for-service visits by non-VA physicians and dentists for outpatient treatment, and supports care in 93 State Veterans Homes in 43 States. As part of a broader VA and non-VA network, affiliation agreements exist between virtually all VA healthcare facilities and nearly 1,000 medical, dental, and associated health schools. This affiliation program with academic health centers results in almost 107,000 health profession students receiving education and training in VAMCs each year.

In addition to VA hospital, nursing home and domiciliary care programs, VA is increasing the number and diversity of non-institutional extended care programs. The dual purpose is to facilitate independent living and to keep the patient in a community setting by making available the appropriate supportive medical services. These programs include Home-Based Primary Care, Community Residential Care, Adult Day Health Care, Psychiatric Day Treatment and Mental Hygiene Clinics, and Homemaker/Home Health Aide Services.

The need for both acute and chronic hospitalization will continue to rise as older patients experience a greater frequency and severity of illness, as well as a different mix of diseases, than younger patients. Cardiovascular diseases, chronic lung diseases, cancers, psychiatric and mental disorders, bone and joint diseases, hearing and vision disorders, and a variety of other illnesses and disabilities are all more prevalent in those persons age 65 and older. VA continues efforts to improve the outcomes of care for elderly patients with complex problems by supporting Geriatric Research, Education and Clinical Centers and specialized clinical services such as Geriatric Evaluation and Management Programs.

II. VETERANS HEALTH ADMINISTRATION

A. Office of Patient Care Services

The Office of Patient Care Services comprises thirteen strategic healthcare groups. Each of these functional groups has contributed significantly to VA's efforts on behalf of older veterans.

PRIMARY AND AMBULATORY CARE STRATEGIC HEALTHCARE GROUP (SHG)

The Office of Primary and Ambulatory Care and the Office of Geriatrics and Extended Care continue to maximize collaboration in transforming the veterans healthcare system from a bed-based, hospital inpatient system to one rooted in ambulatory care.

In 1998, the Employee Education System, Northport Center, sponsored a national conference for the purpose of providing an integrated Geriatric Primary Care Education Program that would allow each VHA Network to develop and implement a Geriatric Primary Care model. The emphasis was on continuity of care, care management, and assessment/triage, based on an interdisciplinary approach. The conference also provided a forum for discussion of a variety of successful VA and non VA Geriatric Primary Care models of care, and attempted to link the models to FY 98 Performance Measures.

Conference participants included a multidisciplinary team composed of a geriatrician and various primary care providers (physician, physician assistant, nurse practitioner, clinical nurse specialist and social worker) from each Network. In addition, the Northport Center purchased in 1998 Geriatric Primary Care pocket guides and pocket pals for all conference participants and for each VA facility.

The Employee Education System, Northport Center, will continue to coordinate the activities of VHA's National Primary and Ambulatory Care Education. The Northport Center, in collaboration with Primary and Ambulatory Care, Geriatric Care and Mental Health is planning to present a Strategic Integration Conference in fiscal year 1999.

Dentistry

Oral/dental care for the geriatric patient involves the restoration of the dentition and the elimination of pain and suffering attributable to oral disease. Microorganisms originating in the mouth

have been identified as the causative agents for life-threatening infections of the heart, brain, lung, kidney, spine, and joints. There is growing evidence, much of it deriving from longitudinal studies at several VA facilities, that chronic periodontal (gum) disease plays a role in causing heart attacks and stroke.

Oral cancer is a disabling and disfiguring disease that primarily affects middle-aged and older adults. Ninety-five percent of cases occur in those over age 40. Tobacco, alcohol, and advanced age are important risk factors in the development of this disease. Through a long-standing program of oral screening examinations, VA dentists have been able to expeditiously detect incipient oral cancers in veterans. Such interventions minimize mortality rates and the need for ablative surgery, which often results in severe disfigurement and functional difficulties in eating, speaking, and swallowing.

It is important for older veterans to be able to masticate a variety of foods so that daily maintenance of caloric and nutritive intake, as well as convalescence after surgery, chemotherapy, or other significant radical interventions, is expedited. Elimination of the causes of oral pain and replacement of missing oral structures both work to enhance the amount and number of choices of foods that can be eaten. Interpersonal skills, which are highly dependent upon physical appearance, and effective communication are enhanced by improving the patient's appearance and by properly aligning and restoring anterior teeth to maintain clarity of speech.

Destruction of tissues due to dental decay and the periodontal diseases is chronic and, in the elderly, usually asymptomatic. For this reason, public and private healthcare payers may perceive oral healthcare directed at dental and periodontal diseases as a low priority or even a luxury. In older patients, dental and periodontal diseases are often aggravated by coexistent medical problems; the oral disease in turn contributes to systemic illness, and in this way drives up healthcare costs. The relatively minor expense associated with preventive dentistry thus represents a net saving in overall health costs. Preventive modalities can include the use of home-applied fluoride solutions, anti-microbial mouth rinses, specially fabricated toothbrushes, instruction to family or caregivers on oral hygiene techniques, and more frequent dental examinations.

Most VA facilities have a Geriatric Evaluation and Management (GEM) Program. The goals for all disciplines involved in geriatrics—to maximize function and to foster independence—are reflected in dentistry's goals for elderly veterans.

Patients are rehabilitated more rapidly with properly staged and coordinated care. To that end, Dental Services contribute to the interdisciplinary team effort by conducting admission oral assessments, collaborating on treatment planning, providing specialty consultations and needed care, and preparing summaries of oral care protocols to be maintained after discharge. The VA Program Guide, "Oral Health Guidelines for Long-Term Care Patients" developed by the Offices of Patient Care Services, the Office of Dentistry, and the Office of Geriatrics and Extended Care, continues to serve as the primary handbook for management of the geriatric oral health efforts. It describes the goals, implementation and mon-

itoring of oral care provision for patients in VA long-term care programs.

VA dentistry is an undisputed leader in geriatric oral healthcare training. GEMs and nursing homes serve as training sites for all of the existing advanced formal training programs in geriatric dentistry in the United States. VA-trained geriatric dentists have appointments on a majority of the dental school faculties in the United States. More than one fourth of all hospital-based general dentistry post-graduate education takes place in VA medical centers, where the residents devote much of their educational efforts to the clinical management of older veterans.

The impact of VA programs in geriatric dentistry is not limited to its own healthcare system, but extends to a broader level. VA dentistry is represented on National Institute of Dental Research reviews, a U.S. Surgeon General's workshop on oral health promotion and disease prevention, the development of the first Surgeon General's Report on Oral Health, and on review panels for programs in medical and dental geriatric education funded by the Health Services and Resources Administration.

VA dentists are and have been long involved at the highest levels of leadership in the professional organizations (American Society for Geriatric Dentistry, American Association of Hospital Dentists, Federation of Special Care Organizations in Dentistry, American College of Prosthodontists, American Association for Dental Research, Gerontological Society of America) most heavily concerned with oral care issues for older adults. The American Association of Dental Schools (AADS) has an ongoing Geriatric Education Project that has developed guidelines for teaching concepts in gerontology and geriatrics to dental and dental hygiene students, and VA dentists have been noteworthy contributors to these efforts to define geriatric educational objectives and identify source materials for dental faculty members.

VA dentists have been leaders and active part ants in recent projects involving health services and basic research relevant to the older adult. One investigator has developed measures to assess the relationship between or-I health and overall quality of life in older patients. Longitudinal studies of older veterans in Massachusetts and Michigan have yielded a wealth of knowledge on the relationships between age, systemic disease, oral diseases, and diet. VA researchers have surveyed VA dental services to determine the effectiveness of smoking cessation interventions; others have investigated the education of both dental and non-dental health providers with respect to oral cancer risk factors and screening.

Multicenter longitudinal clinical studies through the VA have examined the efficacy of metal, ceramic, and ceramo-metal crowns. Another VA cooperative study has amassed the largest database in the world on the emerging alternative to toothlessness, osseointegrated implants, and the factors that predict their successful implementation. VA clinical studies on preventive strategies and materials in oral cancer patients have set the standards for management of such patients internationally. Finally, research, in collaboration with NIH, is ongoing to discover biological markers for the detection of oral cancer.

In summary, VA dentistry and the Office of Dentistry continues to support efforts that will benefit older veterans in the three general areas that define the mission of the Department. First, the provision to elderly veterans of quality oral healthcare, of both preventive and restorative character, is recognized by and practiced within VA as an important and cost-effective component of total health maintenance.

Second, education in geriatric oral health is critical on many levels, and will continue to be a VA focus directed at veterans; VA dental staff and residents; the dental profession and dental education communities; and nondental providers such as nurses, physicians, and family members. Third, VA dental research has enhanced and will continue to broaden our understanding of oral disease, its relationship to general health, and its treatment in older adults.

Acute Care Stratecgic Health Care Group (SHG)

The Acute Care Strategic Health Care Group serves as the primary source of physicians trained in the medical specialties for the care of all veterans, including elderly patients. Due to the growing proportion of older veterans, Hospital-Based Acute Care is increasingly involved in all aspects of the delivery of healthcare to this patient population. Acute and intermediate medical wards, coronary and intensive care units, and outpatient clinics are all seeing an increased proportion of elderly patients with acute and chronic illnesses who require treatment by specialists. While some care is provided specifically by geriatricians, as the population ages, all internists and surgeons are seeing an older veteran population. In FY 1998, 61.1 percent of veterans operated on by the surgical specialists were over the age of 60 years.

Some specialty areas are particularly affected, including cardiology, endocrinology (diabetes), rheumatology, oncology, orthopedic surgery, urology, cardiothoracic surgery and vascular surgery. Acute care specialists provide necessary specialty care in inpatient and outpatient settings and participate in the care of patients in other medical center programs, including Geriatric Evaluation and Management (GEM) Programs, Hospice, Respite, Nursing Home, Adult Day Health Care and Home-Based Primary Care. The specialized care required by elderly patients with complex problems has been recognized by Hospital-Based Acute Care at a number of VA facilities by their establishment of Geriatric Medicine Sections which emphasize clinical care, as well as coordinate research and education efforts related to geriatrics.

Geriatrics and Extended Care Strategic Healthcare Group (SHG)

Geriatrics and Extended Care has developed an extensive continuum of clinical services including specialized and primary geriatric care, residential rehabilitation, community-based long-term care, and nursing home care. The shared purpose of an geriatrics and extended care programs is to prevent or lessen the burden of disability on older, frail, chronically ill patients and their families/caregivers, and to maximize each patient's functional independence.

The following is a description of VA's geriatrics and extended care programs and activities within each.

VA NURSING HOME CARE

VA nursing home care units (NHCUs), which are based at VA facilities, provide skilled nursing care and related medical services. Patients in NHCUs may require shorter or longer periods of care and rehabilitation services to attain and/or maintain optimal functioning. An interdisciplinary approach to care is utilized in order to meet the multiple physical, social, psychological and spiritual needs of patients.

In Fiscal Year 1998, more than 46,000 veterans were treated in VA's 132 NHCUs. The average daily census of patients provided care on these units was 13,391.

Plans are underway for systemwide implementation of the Resident Assessment Instrument/Minimum Data Set (RAI/MDS) in VA NHCUs. Implementation of the RAI/MDS will enhance care provided nursing home patients. VA is providing interdisciplinary NHCU staff educational programs in the use of the RAI/MDS and automation required to support this initiative.

Community Nursing Home Care

This is a community-based contract program for veterans who require skilled nursing care when making a transition from a hospital setting to the community. Veterans who have been hospitalized in a VA facility for treatment, primarily for a service-connected condition, may be placed at VA expense in community facilities for as long as they need nursing home care. Other veterans may be eligible for community placement at VA expense for a period not to exceed six months. Selection of nursing homes for VA contracts requires the prior assessment of participating facilities to ensure quality services are offered. Follow-up visits are made to veterans by staff from VA medical centers to monitor patient programs and quality of care. In Fiscal Year 1998, 28,895 veterans were treated and the average daily census of veterans in these homes was 5,605.

VA Domiciliary Care

Domiciliary care in VA facilities provides necessary medical and other professional care for eligible ambulatory veterans who are disabled by disease, injury, or age and are in need of care but do not require hospitalization or the skilled nursing services of a nursing home.

The domiciliary offers specialized interdisciplinary treatment programs that are designed to facilitate the rehabilitation of patients who suffer from head trauma, stroke, mental illness, chronic alcoholism, heart disease and a wide range of other disabling conditions. With increasing frequency, the domiciliary is viewed as the treatment setting of choice for many older veterans.

Implementation of rehabilitation-oriented programs has provided a better quality of care and life for veterans who require prolonged domiciliary care and has prepared an increasing number of veterans for return to independent or semi-independent community living.

Special attention is being given to older veterans in domiciliaries with a goal of keeping them active and productive as well as inte-

grated into the community. The older veterans are encouraged to utilize senior centers and other resources in the community where the domiciliary is located. Patients at several domiciliaries are involved in senior center activities as part of VA's community integration program.

Other specialized programs in which older veterans are involved include Foster Grandparents, Handyman Assistance to senior citizens in the community, and Adopt-A-Vet.

In fiscal year 1998, 23,889 veterans were treated in 40 VA domiciliaries resulting in an average daily census of 5,583. Of these numbers, nearly 5,000 veterans and an average daily census of more than 1,500 were admitted to the domiciliaries for specialized care for homelessness. The average age of this latter group was 43.7 years, while the overall average age of domiciliary patients was 59 years.

State Homes

The State Home Program has grown from 10 homes in 10 states in 1888 to 93 state homes in 43 states. Currently, a total of 24,154 state home beds are authorized by VA to provide hospital, nursing home, and domiciliary care. VA's relationship to state veterans homes is based upon two grant programs. The per them grant program enables VA to assist the states in providing care to eligible veterans who require domiciliary, nursing home or hospital care. The other VA grant program provides up to 65 percent federal funding to states to assist in the cost of construction or acquisition of new domiciliary and nursing home care facilities, or the expansion, remodeling, or alteration of existing facilities.

In fiscal year 1998, state veterans homes provided care to 6,413 veterans in domiciliaries and 22,421 veterans in nursing homes. The average daily census of veteran patients was 3,626 for domiciliary care and 14,674 for nursing home care.

Hospice Care

VA has developed programs that provide pain management, symptom control, and other medical services to terminally ill veterans, as well as bereavement counseling and respite care to their families. The hospice concept of care is incorporated into VA facility approaches to the care of the terminally ill. All VA facilities have appointed a hospice consultation team, which is responsible for planning, developing, andimplementing the hospice program.

Home-Based Primary Care

This program provides in-home primary medical care to veterans with chronic illnesses. The family provides the necessary personal care under the coordinated supervision of a home-based interdisciplinary treatment team. The team prescribes the needed medical, nursing, social, rehabilitation, and dietetic regimens, and provides training to family members and the patient in supportive care.

Seventy-one VA medical centers are providing home-based primary care (HBPC) services. In fiscal year 1998, home care was pro-

vided by VA health professionals to an average daily census of 6,348 patients.

Adult Day Health Care

Adult Day Health Care (ADHC) is a therapeutically-oriented, ambulatory program that provides health maintenance and rehabilitation services to veterans in a congregate setting during the daytime hours. ADHC in VA is a medical model of services, which in some circumstances may be a substitute for nursing home care. VA operated 14 ADHC centers in Fiscal Year 1998 with an average daily attendance of 442 patients. VA also continued a program of contracting for ADHC services in 83 medical centers. The average daily attendance in contract programs was 615 in Fiscal Year 1998.

Community Residential Care/Assisted Living

The Community Residential Care/Assisted Living program provides residential care, including room, board, personal care, and general healthcare supervision to veterans who do not require hospital or nursing home care but who, because of health conditions, are not able to resume independent living and have no suitable support system (e.g., family or friends) to provide the needed care. All homes are inspected by a multidisciplinary team prior to incorporation of the home into the VA program and annually thereafter. Care is provided in private homes that have been selected by VA, and is at the veteran's own expense. Veterans receive monthly follow-up visits from VA health care professionals. In fiscal year 1998, an average daily census of 8,104 veterans was maintained in this program, utilizing approximately 2,100 homes.

Homemaker/Home Health Aide (H/HHA)

VA provided homemaker/home health aide services for veterans needing nursing home care. These services are provided in the community by public and private agencies under a system of case management provided directly by VA staff. One hundred eighteen VAMCs purchased H/HHA services in Fiscal Year 1998 with an average daily census of 2,385.

Geriatric Evaluation and Management

The Geriatric Evaluation and Management (GEM) Program includes inpatient units, outpatient clinics, and consultation services. A GEM Unit is usually a functionally different group of beds (ranging typically in number from 10 to 25 beds) on a medical service or an intermediate care unit of the hospital where an interdisciplinary healthcare team performs comprehensive, multidimensional evaluations on a targeted group of elderly patients who will most likely benefit from these services. The GEM unit serves to improve the diagnosis, treatment, rehabilitation, and discharge planning of older patients who have functional impairments, multiple acute and chronic diseases, and/or psychosocial problems. GEM clinics provide similar comprehensive care for geriatric patients not in need of hospitalization as well as follow-up care for older patients to prevent their unnecessary institutionalization. A GEM program

also provides geriatric training and research opportunities for physicians and other health care professionals in VA facilities. Currently, there are 110 GEM Programs.

Respite Care

Respite care is a program designed to relieve the spouse or other caregiver from the burden of caring for a chronically disabled veteran at home. This is done by admitting the veteran to a VA hospital or nursing home for planned, brief periods of care. The long range benefit of this program is that it enables the veteran to live at home with a higher quality of life than would be possible in an institutional setting. It may also provide the veteran with needed treatment during the period of care in a VA facility, thus maintaining or improving functional status and prolonging the veteran's capacity to remain at home in the community. Nearly all VA facilities have a respite care program.

An earlier formal evaluation of the program found a high level of satisfaction with the Respite Care Program by family caregivers. The evaluation also found a high level of enthusiasm for the program by medical center staff delivering the care.

Alzheimer's Disease and Other Dementias

VA's program for veterans with Alzheimer's disease and other dementias is decentralized throughout the medical care system, with coordination and direction provided by the Geriatrics and Extended Care Strategic Group in VA Headquarters. Veterans with these diagnoses participate in all aspects of the healthcare system, including outpatient, acute care, and extended care programs.

In order to advance knowledge about the care for veterans with dementia, VA investigators conduct basic biomedical, applied clinical, health services, and rehabilitation research, much of which occurs at VA's Geriatric Research, Education and Clinical Centers (GRECCs), and which is supported through the VA Office of Research and Development as well as extramural sources. In Fiscal Year 1998, VA investigators were involved in 227 funded research projects on Alzheimer's disease and other dementias.

Continuing education for staff is provided through training classes sponsored by GRECCs and VA's continuing education field units. In addition, VHA has disseminated a variety of dementia patient care educational materials in the form of publications and videotapes to all VA medical centers, some of which are available to the general public through inter-library loan.

In Fiscal Year 1998, the VA Educational Center in Minneapolis completed and distributed to all VA medical centers a multimedia computer program (CD-ROM) for education and training of family caregivers for patients with dementia. This interactive program provides basic information on Alzheimer's disease; guidelines with examples for assessing the functional capacity, or stage, of dementia; and strategies for dementia care appropriate at each stage. A modified version for professional caregivers is now under development. Also in 1998, a field-based work group continued development of a VA clinical guideline for pharmacological management of cognitive symptoms of Alzheimer's disease.

Another major activity in Fiscal Year 1998 was VA's continued participation, through its Upstate New York Healthcare Network, in a national demonstration project on Alzheimer's disease and managed care. This project, "Chronic Care Networks for Alzheimer's Disease," is co-sponsored by the Alzheimer's Association and the National Chronic Care Consortium. Implementation of the project is scheduled for 1998 to 2000.

In addition, the comprehensive Center for Alzheimer's Disease and Other Neurodegenerative Disorders at the Oklahoma City VA Medical Center completed its fourth year of development during Fiscal Year 1998. The Center is progressing toward a goal to develop and evaluate a rural healthcare model for the coordinated care of patients with Alzheimer's disease or other degenerative neurological disorders in the state of Oklahoma, using an interdisciplinary, case-management approach.

A new project examining ways to improve home- and community-based end of life care for persons with advanced dementia began in FY 1998. This one-year Dementia End of Life Care project is funded by the national Alzheimer's Association, with principal investigators at the GRECC in Bedford, Massachusetts.

Geriatric Research, Education, and Clinical Centers

Geriatric Research, Education and Clinical Centers (GRECCs) are designed to enhance VA's capability to develop state-of-the-art care for the elderly through research, training and education, and evaluation of alternative models of geriatric care. First established by VA in 1975, the current 16 GRECCs continue to serve an important role in further developing the capability of the VA healthcare system to provide cost-effective and appropriate care to older veterans.

GRECCs have established many interrelationships with other programs to avoid fragmentation and duplication of efforts. Important examples include the GRECC's coordination with VA's Health Services Research and Development Field Programs and other research programs within VA and at affiliated health science centers; coordination with VA Employee Education Centers and Cooperative Health Manpower Education Programs, as well as with Geriatric Education Centers at affiliated universities; and coordination with clinical programs and quality improvement efforts at each host VA facility and throughout the VA network in which each GRECC is located.

In Fiscal Year 1998, GRECCs continued to make a number of contributions to the field of aging and care of the elderly. Examples include further research on the Alzheimer's gene discovered by researchers at the GRECC in Seattle, Washington; the dissemination of a CD-ROM for family caregivers of Alzheimer's patients (developed at the Minneapolis GRECC); and an evaluation by the Sepulveda, California, GRECC of an interdisciplinary model of geriatric primary care for elderly patients.

During fiscal year 1998, VHA solicited proposals from VA facilities and networks for establishing new GRECCs. VHA plans to expand the GRECC program by up to three new sites in 1999.

Mental Health Strategic Healthcare Group (SHG)

Although the reported prevalence of mental illness among the elderly varies, conservative estimates for those age 65 years or older include a minimum of 5 percent with Alzheimer's disease or other dementias and an additional 15 to 30 percent with other disabling psychiatric illnesses. If we use the 30 percent estimate, 2.3 to 2.7 million veterans can be expected to need psychogeriatric care at any given time during the first two decades of the next century. Mental Health Services throughout VA have continued to provide care to older veterans through both clinic and other community-based programs and a growing continuum of residential care, acute, subacute, and long-term hospital programs in each of the 22 Veterans Integrated Services Networks (VISNs). Close collaboration with Geriatric and Extended Care Services at the medical centers is strongly recommended. Some of the specific activities in Fiscal Year 1998 are noted below:

New Mental Health Program Guidelines

The VHA Program Guide (1103.22) called Integrated Psychogeriatric Patient Care published March 26, 1996, was updated and condensed as a chapter in a new publication, Mental Health Program Guidelines for the New Veterans Health Administration (1103.3). Both program guides are recommended as a resource for clinicians serving elderly veterans and non-veterans alike.

UPBEAT (Unified Psychogeriatric Biopsychosocial Evaluation and Treatment)

UPBEAT, a controlled, demonstration project at 9 VA facilities costing $2 million annually, is exploring clinical and economic outcomes as a result of screening elderly patients in acute VA medical and surgical hospital settings for depression, anxiety, and substance abuse. Following an interdisciplinary psychogeriatric team evaluation and treatment plan, case managers follow-up patients with positive symptoms for a two year period. Preliminary findings midway through the project suggest that the UPBEAT care patients were hospitalized an average of 5.4 days less than patients in the usual care group during the year following initial randomization, amounting to over $5200 savings per patient per year for inpatient care. This data will need to be confirmed during the completion of the project.

Treatment Guidelines for Major Depressive Disorders

Version 11 of these algorithm-based treatment guidelines for both primary care practitioners and mental health specialists was published in 1998 and distributed to all VA facilities. It also appears on the IntraNet at http//vaww.mentalhealth.med.va.gov and as a help file that can be downloaded for clinicians. The guidelines were created by a multidisciplinary group of VA and non-VA professionals to enhance the uniformity and quality of VHA's clinical interventions. A special depression screening exam for veterans over 60 years of age and updated annotations regarding pharma-

cological treatment of elders are major features of the new guidelines. In addition, treatment of veterans with substance abuse and post-traumatic stress disorder (PTSD) is included.

Clinical Research

MEDLINE searches of medical research publications since 1990 on geriatric psychiatry in VA settings revealed 66 articles which dealt exclusively with elderly veterans. Of these, 27 addressed post-traumatic stress disorder (PTSD) including studies of ex-prisoners of war; 14 primarily alcohol abuse and its detection; 10 Alzheimer's and related diseases; and the rest, other aspects of illness in elder veterans.

Physical Medicine and Rehabilitation Strategic Healthcare Group (SHG)

Physical Medicine and Rehabilitation Therapy strives to provide all referred older veterans with comprehensive assessment, treatment and follow-up care for psychosocial and/or physical disability affecting functional independence and quality of life. The older veteran's abilities in the areas of self-care, mobility, endurance, cognition and safety are evaluated. Therapists utilize physical agents, therapeutic modalities, exercise and the prescription of adaptive equipment to facilitate the veteran's ability to remain in the most independent life setting. Rehabilitation personnel provide education to the veteran and family members about adjustment to a disability or physical limitations and instruct them in techniques to maintain independence despite disability.

There are approximately 65 comprehensive inpatient medical rehabilitation programs (both acute and subacute) within the Veterans Health Administration (VHA). There has been some shifting of acute rehabilitation beds to less resource intensive subacute beds. The subacute rehabilitation setting affords VHA the ability to provide less intense rehabilitation services for the older veteran, aimed at promoting an individual's integration back into the community. On both acute and subacute rehabilitation units, physicians, usually board certified physiatrists, lead interdisciplinary teams of professionals to focus on outcomes of functional restoration, clinical stabilization, or avoidance of acute hospitalization and medical complications.

A uniform assessment tool, the Functional Independence Measure (FIM) is being implemented throughout the VA rehabilitation system. Patients are evaluated on 18 elements of function at the time of admission, regularly during treatment and at discharge. Application of FIM results to quality management activity will assist local and national rehabilitation clinicians and managers to maximize effective and efficient rehabilitation care delivery. An administrative data base called the Uniform Data System for Medical Rehabilitation (UDS/mr) monitors outcomes of care and increases the accuracy of developing predictors and ideal methods of treatment for the older veteran with various diagnoses. Through a national contract with UDS/mr, facilities with inpatient rehabilitation programs provide data and receive outcome reports as part of a national and international UDS/mr data bank. Use of the FIM as a functional assessment tool is available to all VA medical centers

through connectivity to the Functional Status and Outcomes Database (FSOD) for Rehabilitation housed at the VA Austin Automation Center, Austin, TX The FSOD allows tracking of rehabilitation outcomes across the full continuum of care based upon a severity of illness index, the Function Related Groups.

Rehabilitation therapists are leading and participating in innovative treatment, clinical education, staff development and research. Rehabilitation professionals work within Home-based Primary Care Programs, Independent Living Centers, Geriatric Evaluation and Management Units, Adult Day Health Care, Day Treatment Centers, Domiciliaries, Interdisciplinary Team Training Programs, Geriatric Research, Education, and Clinical Centers (GRECCs), and Hospice Care Programs. Applying principles of health education and fitness, rehabilitation staff develop and provide programs aimed at promoting health and wellness for the aging veteran.

Driver training centers are staffed at 40 VA medical centers to meet the needs of aging and disabled veterans. With the growing numbers of older drivers, VA has put emphasis on the training of the mature driver. Classroom education, updates in laws and defensive driving techniques are supported with behind-the-wheel evaluation by trained specialists. 1

RECREATION THERAPY

Provided that adequate preventive and support services are made available, older individuals can enjoy full and satisfying lives. Studies have shown that isolation leads to depression, and depression is the most common mental disorder affecting 20% of persons aged 65 and older. Also, the highest suicide rate in America is among persons aged 50 and over. Recreation therapy interventions address restoration of functioning; health maintenance and reduction of health risk factors; and psychosocial health concerns. Interventions include fitness and movement activities; reality orientation and sensory stimulation; activities promoting socialization, choice, and self-expression; various daily living activities; and health and lifestyle education.

Since 1972, the University of Maryland's "Adult Health and Development Program" has provided a valuable interchange and opportunity for elderly veterans receiving healthcare at the VA Capitol Network (Washington, DC), to participate in a variety of physical recreation, exercise, social, expressive, and artistic activities.

Since 1985, VA's Recreation Therapy Service has held the National Veterans Golden Age Games (NVGAGs) for the benefit of veterans age 55 and older. Sports and recreation are vital components of rehabilitative medicine within VA medical facilities, where recreation therapy plays an important role in the lives of older patients.

The NVGAGs serve as a showcase for the preventive and therapeutic medical value that sports and recreation provide in the lives of all older Americans. Participants compete in a variety of events that include but are not limited to, swimming, tennis, shuffleboard, horseshoes, croquet, bowling, and bicycle races. The NVGAGs are co-sponsored by VA and the Veterans of Foreign Wars of the United States. Numerous corporate sponsors provide financial sup-

port, and hundreds of local volunteers provide on-site assistance each year.

Nursing Strategic Healthcare Group (SHG)

Nursing Service, in support of VHA's reorganization and "Journey of Change," continues to rank care of the elderly veteran as a major priority. Nurses at every level of the organization are committed to leadership in the clinical, administrative, research, and educational components of gerontological nursing. Powerful societal forces in both the federal government and the private sector require even a greater collaborative teamwork as nursing strives to integrate advances in technology and information management, and participates in the transition from inpatient to outpatient healthcare within the managed care model.

Nurses continue to participate in preventive care and health promotion initiatives, to preserve both the veterans' and their significant others' independence. Team approaches to improving the health status of aging veterans have fostered optimum levels of self-care, improved productivity, and enhanced quality of life. Health screening, education, primary care and referral of elderly veterans are critical functions necessary to evaluate healthcare needs and properly place the veteran in the most appropriate level of care. This may range from the environment of personal care in the home as the least restrictive setting to nursing home care as the most restrictive environment. Nurses have facilitated interdisciplinary leadership to create and strengthen programs to help keep patients in their homes as long as possible. These include Adult Day Care Programs, Home-Based Primary Care, and Case Management to coordinate multiple health services. Nurses in wellness clinics, mobile units and other ambulatory care settings provide supervision, screening and health educational programs to assist veterans and their significant others in fostering and maintaining healthy lifestyles.

Effective utilization of Advanced Practice Nurses (APN) in the provision of health care services is a critical component of VHA's mission to provide primary care in a seamless system across a continuum of care. This continuum of care for aging veterans includes primary care, acute care, long-term care, rehabilitative care and mental healthcare. Nurses are a vital part of interdisciplinary teams that coordinate and provide care in settings such as Geriatric Evaluation and Management Programs (GEMs), ambulatory care, acute care, long-term care, mobile care units, and community agencies. Gerontological advanced practice nurses provide primary care and continuity of care as clinical care managers, coordinators of care, and case managers. Through sustained patient partnerships, APNs provide healthcare for aging patients in diverse settings, minimizing illness and disabilities and focusing on health promotion, disease prevention and health maintenance.

Primary care may be provided to aging veterans by a physician or a nurse practitioner primary care provider and followed by a care team including psychiatry, psychology, social work, rehabilitative medicine and others. Primary care services are based on the long-term care needs of aging patients including those with multiple and chronic medical problems, functional disabilities, cog-

nitive impairments and weakened social support systems. Services are provided across the continuum from health promotion and disease prevention to screening for community services including hospice care evaluation.

Nurses facilitate the restoration of functional abilities of veterans with chronic illnesses and disabilities. Programs for the physically disabled and cognitively impaired are administered by nurses and advanced practice nurses in settings representing ambulatory care, inpatient care and home care. Treatment programs and rehabilitation teams are goal-directed with physical and psychosocial reconditioning or retraining of patients. Patient and family teaching is a major part of each program. Family/significant others have a key role in providing support to veterans. Both are assisted in learning and in maintaining appropriate patient/caregiver rights and responsibilities. VA nurses contribute to planning, implementing and evaluating services for veterans in the community-at-large.

Committed to leadership in education, VA nurses provide creative learning experiences for both undergraduate and graduate nursing students. Nursing education initiatives including "distance learning" are being developed to provide skills and competencies necessary to function in primary and managed care settings. Students are able to work and study with VA nurses who have clinical and administrative expertise in aging and long-term care. These include nurses in various organizational and leadership roles. Nurses have responded to the growing emphasis upon end-of-life issues by providing training and local programs for palliative care, including hospice programs. Pain management in the elderly has been identified as a major problem and will be part of the National Pain Management Strategy. These collaborative experiences promote a culture and image of an agency that is committed to quality care and quality of life for aging veterans.

To assist facilities in meeting performance measures, nurses have been involved in developing creative alternatives to acute inpatient care. This includes chronic ventilator programs, which extend into nursing home and even home settings. There is also increased emphasis upon defining VA Nursing Home Care Unit (NHCU) programs as transitional and rehabilitative, providing a realistic discharge option for patients continuing to require nursing intervention previously confined to acute wards. Several VA NHCUs have demonstrated a significant decrease in restraint usage. Decreased restraint usage is attributed to interdisciplinary reassessment of the patient's treatment. Each patient/resident has a comprehensive interdisciplinary plan of care, which facilitates reduced restraint usage. Resident outcomes include a decrease in the number of falls and Injuries with an increase in residents' alertness, happiness, muscle strength, independence and pride. Nurses and other members of the interdisciplinary team are proud of these clinical outcomes and VA NHCUs success in reducing the use of restraints in care of the elderly. Such an environment enhances resident behaviors in independence, decision making and socialization.

Multi-arts programs have been developed including Tai Chi, Dance, Art Appreciation, Hands on Art, Sign Language and Creative Writing. Patient outcomes include increase in mobility and

functions and increase in spontaneity and happiness as measured by standardized instruments.

Committed to research, VA nurses continue to change and reshape clinical nursing practices. Nursing research is improving care delivery and health promotion in the following areas:

Alternatives to Institutional Care;
Wound Care and Effectiveness of Treatment Regimens;
Risk Assessment for Falls;
Restraint Minimalization and Interdisciplinary Assessment Tool Effectiveness;
Patient Education, Health Promotion and Maintenance; and,
Clinical Pathways.

Timely application of research findings to clinical care in all practice settings will improve the quality of care and quality of life to aging veterans. Quality of life is an essential component for evaluating the effects of nursing care in both research and clinical practice. Research by nurses as a discipline and in collaboration with other members of the healthcare team continues to focus on specific patient care outcomes including quality of life, effectiveness of care interventions, cost effectiveness and patient satisfaction.

Pharmacy and Benefits Management Strategic Healthcare Group (SHG)

The Under Secretary for Health established the Pharmacy Benefits Management (PBM) Service line in FY 1996 to provide a focus within the Veterans Health Administration (VHA) concerning the appropriate use of pharmaceuticals in the healthcare of veterans. A secondary goal was to decrease the overall cost of healthcare through achievement of the PBM's primary goal. As the VHA transitions from an emphasis on inpatient care to ambulatory/primary care, pharmaceutical utilization will increase dramatically.

One of the key organizational elements of VHA's PBM is its group of field-based physicians called the Medical Advisory Panel (MAP). The MAP provides leadership and guidance to the PBM in addressing the four functions of the PBM. These functions are: (1) to enhance the efficiency and effectiveness of the drug use process; (2) to enhance the distribution systems for pharmaceuticals used in both the inpatient and outpatient settings; (3) to bring consistently best pharmaceutical practices into the VA health care system; and (4) to maintain and enhance VA's drug pricing capabilities.

The PBM serves a qualitative and quantitative role in addressing the needs of older veterans. In a patient population that frequently has co-morbidities and multiple drug therapies, the actions of pharmacists to improve the drug use process are essential in realizing the goal of the appropriate use of pharmaceuticals. To date, eleven pharmacologic, drug treatment guidelines have been developed and promulgated for use in the VA healthcare system. Three areas of interest and merit in addressing the health conditions of elderly patients are included in the published drug treatment guidelines; they are depression, congestive heart failure, and benign prostatic hyperplasia. In addition, to improve the use of drugs in elderly patients the PBM plans to include a screening tool in VISTA (formerly known as the Decentralized Hospital Computer Program) to identify patients receiving one of 20 medications known to require

close monitoring in elderly patients. Facilities can use this tool to individually tailor the patient's drug therapy.

During 1998 dramatic increases in the utilization of pharmaceuticals and the dollars expended on pharmaceuticals occurred across VHA. Through the use of effective contracting strategies tied to the development of drug treatment guidelines, the ability of VHA to provide quality medical care at an affordable price was achieved. Members of Congress, members of veterans service organizations and individual patients generated considerable interest in VA's National Formulary and related processes. Initiatives in applied research regarding formulary decisions and in medication data management were begun in 1998. These efforts are crucial to the continued evolution and future value of the PBM to VHA's mission.

Allied Clinical Services Strategic Healthcare Group (SHG)

NUTRITION AND FOOD SERVICE

Medical nutrition care saves money, improves patient outcomes and enhances the quality of life for our older veterans. To better serve the veteran and identify nutritional needs, many VA healthcare professionals are now using *Determine Your Nutritional Health Checklist and Level 1 and 11 Nutrition Screen* developed by the America Dietetic Association, American Academy of Family Physicians and National Council on Aging National Screening Initiative. The *Checklist or Level I Screen* identifies those at high risk for poor nutritional status, while the *Level 11 Screen* provides specific diagnostic nutritional information. The National Screening Initiative emphasizes educating the physician in nutritional care. The booklet, *Incorporating Nutrition Screening and Interventions into Medical Practice,* has been disseminated nationally to doctors.

Many medical centers have Geriatric Nutrition Specialist positions. Dietitians in these positions actively participate in nutrition-related projects at GEMs and GRECCs to ensure that nutrition is an integral component of care for geriatric patients. Several medical centers are providing outreach services for the elderly in their communities. For example, the Bronx VA provides outreach to local senior centers, and the Dallas VA health screening team makes bimonthly visits to facilities in their area. Feeding dependency is highly associated with malnutrition among nursing home residents. The "Silver Spoons" program continues to be one of the most successful programs at many VAMC nursing homes and is aimed at intervention before severe nutritional problems develop in feeding dependent residents. The program uses volunteers to feed residents and to ensure adequate nutrition. This is an interdisciplinary program including dietary, nursing, voluntary, medical, recreation and dental services. Several medical centers have focused on upgrading their menus for nursing home residents. Some examples including the VAMCs at Brockton/West Roxbury, MA; Dayton, OH; and Denver, CO have developed a pureed food product line to enhance the appearance, taste, quality and acceptability of foods for geriatric patients with dysphasia. The Pittsburgh Healthcare System (Aspinwall Division) conducts a Patient Family Dining Program. Geriatric patients and their families are provided table service, res-

taurant style meals to celebrate patient birthdays, anniversaries and other special events. This past year, two medical centers, Asheville, NC and Columbia, MO, established meals-on-wheels contracts with local county/state elderly institutions. The San Francisco VAMC, has developed an electronic system for monitoring significant weight loss for long-term care patients. Since weight loss is one of the primary indicators for screening patients at nutritional risk, thisalerts dietitians to provide timely, appropriate nutrition intervention.

SOCIAL WORK SERVICE

Meeting the biopsychosocial healthcare needs of an aging population of veterans and caregivers continues to be a major priority of Social Work Service and the Veterans Health Administration. The need to be competitive in a challenging an changing healthcare environment, as well as cost-effective and efficient in addressing the social components of healthcare, has led to a re-examination of social work priorities and their relevance to VA's healthcare mission, with special reference to the needs of chronically ill, frail elderly veterans. Without a support network of family, friends, and community health and social services, healthcare gains would be lost and VHA acute care resources would be over-burdened. Frequently, it is not the degree of illness that determines the need for hospital care, but rather the presence or absence of family and community resources.

The expansion of homemaker/home health aide services is evidence of the importance of non-institutionalized support networks in maintaining the veteran in the community. Social workers continue to coordinate discharge planning and to serve as the focal point of contact between the VA medical center and the veteran patient, family members, and the larger community health and social services network. The veteran and family members have, in many respects, become the "unit of care" for social work intervention. It is this "customer" focus which will undergird social work programming for vulnerable populations, including older veterans who are demanding that VHA be more responsive and sensitive to their psychosocial needs and those of their caregivers.

The role of the caregiver as a member of the VA healthcare team and as a key player in the provision of healthcare services continues to be a major area of social work practice and will continue to be in the immediate future. This is consistent with the recognition that 80 percent of care for the elderly is provided in the home by family, neighbors and others. The family, ordinarily the veteran's spouse, is the key decision-maker concerning health insurance issues, access to health resources and community support services.

As VHA transitions from an acute care to a primary care/community interactive healthcare delivery system, Social Work Service has placed increased emphasis on its pivotal role in community services coordination, development, and integration. The development of a "seamless garment of care," with case management services as its centerpiece, is being given increased emphasis by Social Work Service and its National Committee. The National Committee published *Social Work Practice Guidelines, Number 2: Social Work Case Management in September 13, 1995, and Case Management*

Outcomes and Measures: a Social Work Source Book, in August 1997. These standards are used as a starting point and part of the educational process that takes place at each VA facility as we move into interdisciplinary clinical paths and practice guidelines. The National Committee functions in an advisory capacity concerning social work and systems issues, priorities, and practice concerns. While case management services have been a central component of social work practice in VHA, this service modality is being "re-discovered" by the VA healthcare system as an essential component of services provided to "at-risk" veterans and their caregivers. Case management, also known as care coordination, was identified in veterans' discussion groups as a very important ingredient in meeting veterans' healthcare needs and those of their caregivers. During 1998, and beyond, VHA, and particularly Social Work Service, will be challenged to expand case management services in concert with other community providers and to provide a perspective that addresses this critical ingredient in healthcare in terms of its absolute relevance to successful healthcare outcomes. In a revitalized and reconfigured VA healthcare system, issues of coordination, access, cost, and appropriateness of VA and community services will be determined not only by the needs of the customers, but also by the experience and expertise of the providers.

Diagnostic Services Strategic Healthcare Group (SHG)

The clinical services of Pathology and Laboratory Medicine, Radiology, and Nuclear Medicine constitute the Diagnostic Services Group. Each of these clinical services provides direct services to veteran patients and to clinician-led teams in ambulatory/primary care, acute care, mental health, geriatrics and long-term care, and rehabilitation medicine.

Diagnostic Services staff are educated on special care of the elderly. Pathology and Laboratory staff, for example, receive special training on phlebotomy with the elderly. In addition, normal values of various laboratory tests may be different in the elderly. These differences are incorporated into each VA facility's reference on normal ranges for tests.

Prosthetic and Sensory Aids Strategic Healthcare Group (SHG)

The mission of the Prosthetic and Sensory Aids Service (PSAS) Strategic Healthcare Group is to provide specialized, quality patient care by furnishing properly prescribed prosthetic equipment, sensory aids and devices in the most economical and timely manner in accordance with authorizing laws, regulations and policies. PSAS serves as the pharmacy for assistive aids and PSAS prosthetic representatives serves as case managers for the prosthetic equipment needs of the disabled veteran.

Currently, the majority of amputations performed in VA medical centers are a result of peripheral vascular disease and diabetes as opposed to traumatic amputations related to war injuries. Elderly veterans make up roughly 90 percent of this patient population. For some of these elderly veterans, the transition to learning the mobility requirements of an artificial limb can be difficult. For others, the adjustment to a different type artificial limb or an amputation of another extremity can be just as traumatic. Prosthetic rep-

resentatives exercise professional judgment in filling prosthetic prescriptions for both groups of veterans, taking into account a veteran's present quality of life, mobility, and dependence. PSAS is an integral member of healthcare teams providing prevention, treatment and follow-up care to our aging veteran population.

Telemedicine Strategic Healthcare Group (SHG)

The Telemedicine Strategic Healthcare Group has the mission of furthering the innovative use of information and communications technologies to provide and support healthcare for veterans across distance and time barriers. VHA has played a leadership role in telemedicine which involves the use of different communications technologies to transmit diagnostic and therapeutic information across significant distances. Telemedicine is expected to play an increasingly important role in improving healthcare for veterans by providing greater access to care, continuity and timeliness of care, reduction in travel time, and connectivity between providers and patients at remote locations.

Clinicians throughout VHA in many clinical specialties have used different telemedicine technologies to improve access, coordination and continuity f care for veterans. The Telemedicine Strategic Healthcare Group will continue to evaluate and recommend strategies to improve the capabilities for new information technologies to assist clinicians in bringing down the barriers of distance and time, and thereby, enhance the support of healthcare delivery to the older veteran.

Spinal Cord Injury/Disorders Strategic Healthcare Group (SHG)

The Spinal Cord Injury and Disorders (SCI&D) Strategic Healthcare Group (SHG) provides primary, specialty, and rehabilitation care for veterans with spinal cord injuries and disorders. Due to healthcare interventions and improved methods of long-term management, veterans with SCI&D are living longer. The average current age of veterans with SCI has been estimated to be twelve years older than the average current age in the general SCI population (55 years vs. 43 years). Over 20% of the general SCI population is over the age of 61, and since the veteran geriatric population is proportionately larger than the general population, this percentage is anticipated to be significantly larger. Major clinical issues related to aging with a spinal cord disability that are being addressed in VHA include degenerative processes in the shoulders secondary to long-term wheelchair use, recurrent pressure ulcers, over use syndromes, recurrent urinary tract infections, and the psychological and social impact of losing caregiver support.

With about 36 percent of the total veteran population 65-years-old or older (compared with 13 percent of the general population), long-term care is a critical issue for America's veterans. VA is intensifying its strategy development for providing long-term care for elderly veterans. Veterans Integrated Strategic Network 8, which includes all the VA facilities in Florida and Puerto Rico, has established a Task Force on Long-Term Care Issues and SCI&D in collaboration with a veteran's service organization. The SCI&D SHG is also working collaboratively with a veteran's service organization

on policies regarding follow-up care for veterans with spinal cord injuries and disorders who use community nursing homes.

Research on aging and SCI&D is a high priority in VA. The five-year SCI Quality Enhancement Research Initiative has several concept papers and research initiatives that will pertain to issues of aging with a disability. Over the next four years, solicitations will be developed in several other areas including long term-care, aging, and clinical areas for which additional research are needed. Both the Rehabilitation Research Center at the Houston VAMC and the Geriatric Research, Education, and Clinical Center (GRECC) at the Brockton/West Roxbury VA is focusing research aging with a spinal cord disability.

Forensic Medicine Strategic Healthcare Group (SHG)

Forensic Medicine SHG addresses the interface between law and medicine. Within this context, Forensic Medicine is involved in VHA support to Veterans Benefits Administration (VBA) claims processing activities. This primarily involves Headquarters coordination for compensation and pension examinations of veterans. These examinations are required by VBA to enable the adjudication of most disability claims. The SHG also devotes considerable effort to tort claim reviews and risk management. Although not specifically focused on aging veterans, the work of this SHG, particularly in the compensation and pension examination process, directly affects benefits to elderly veterans and surviving spouses and dependents.

B. Office of Research and Development

Because of the often unique and difficult health problems of the elderly, VA is engaged in a vigorous research effort that approaches aging from a number of directions reflecting the multi-faceted nature of aging.

The commitment to research on aging veterans is demonstrated by the fact that the Office of Research and Development has established aging as one of nine Designated Research Areas (DRA) under which virtually all VA Research and Development programs and projects fall. For clarity, a DRA is defined as an area of research in which VA has a particularly strong strategic interest because of the prevalence of conditions within the VA patient population, the uniqueness of a specific patient population and its disease burden to the VA system or the importance of the question to healthcare delivery within VA. Clearly, veteran aging and its associated problems fall within this definition. VA research that is considered to fall primarily within the Aging DRA includes:

Normal age-related changes in the body's structure and function;

Aging syndromes, such as frailty, immobility, falls, cognitive impairment;

Compound problems and co-morbidities, such as dementia and hip fractures;

Care of elderly veterans; and,

End-of-life issues - hospice care, "quality of dying", and similar areas.

Below are highlights of recent advances in research on aging veterans from each of the Office of Research and Development's programs: Medical Research, Health Services Research and Development, Co-operative Studies, and Rehabilitation Research and Development.

MEDICAL RESEARCH SERVICE

Medical Research Service (MRS) strives to administer high quality biomedical research relevant to veterans' healthcare needs and to foster the productivity of research scientists at VA healthcare facilities. The overall goal of research is to support and enhance patient care at VA health facilities by seeking improvements in the etiology, pathogenesis, diagnosis, and treatment of diseases and disorders prevalent among veterans. In order to focus efforts on scientific advances that may impact the elderly, aging has been established as a research priority area within MRS. Aging research focuses on changes that occur during normal aging to syndromes associated with aging to geriatric care, and includes research with a primary focus on aging issues and also research that may indirectly enhance our understanding of age-related changes.

In MRS the primary mechanism for funding peer-reviewed investigator-initiated research occurs through the Merit Review Program, where there is a scientific board dedicated to reviewing research on aging and age-related issues. Additionally, experts in the aging scientific community comprise a Medical Research Advisory Group that meets biannually to review the MRS aging research portfolio and make recommendations regarding aging priorities. The following three program areas reflect ongoing MRS aging research:

(1) Cellular and Physiologic Senescence

Funded studies encompass those examining changes that occur within and between cells during the aging process. Because there are age-related changes in body chemistry that affects cellular functioning, research is directed to understanding how certain chemicals may be influential within organs and systems. Several studies are investigating hormonal changes and their effects on liver function, impotence, and the immune response. One project is looking at the chronic effects of ultraviolet ray exposure on skin cells. Much research is also directed toward understanding the cellular changes that might underlie processes such as metabolic bone disease and arthritis. Other research is directed toward examining changes that may be occurring in chemical transmitters (e.g., nitric oxide, catecholamines) in the brain to better understand their role specifically as it relates to aging. Examples of ongoing research includes:

Work to identify differential changes in neurotransmitter (dopamine) receptors in an area of the brain considered important for motor functioning and Parkinson's disease. Injection of another chemical, GDNF, into this brain area showed increased motor function in rats, suggesting that this program may lead to advances in understanding cellular processes and developing potential treatments.

"Free radicals" are thought to cause cellular damage related to aging and cancer. Different mouse strains will be developed to understand mechanisms that may protect cells from free radical damage and to determine if longevity is affected.

(2) Dementias and Behavioral Disorders

While dementia is clearly associated with the aged, there are many other disorders common in the elderly that affect everyday mood and behavior. The distribution of MRS research appears to be fairly even across these two categories, with approximately 50% of the projects in this area devoted to dementia research. Intense research efforts have been directed toward understanding the pathology and etiology of dementia (Alzheimer's disease, Parkinson's disease, and others). These studies cover the entire spectrum of issues including underlying causes, mechanisms of neuronal degeneration, cognitive changes, and physical changes that may be identified with state-of-the-art brain imaging techniques. The remaining projects in this area are devoted to understanding a wide range of behavioral disturbances including depression, post traumatic stress disorder, and sleep disorders. The adverse effects of substance abuse and nicotine related to aging are being examined. Examples of ongoing research include:

Determining the effectiveness of antidepressant drug therapy in a group of long-term nursing home residents. If treatment is effective, the research will examine the sustainability of benefits over time.

Examining the role of estrogen therapy in women with Alzheimer's disease, and relating findings to cognitive function and genetic risk factors.

(3) Geriatric Syndromes and Pharmacology

Over half of all MRS aging research is dedicated to medical diseases and disorders that tend to affect the aging population. The three major areas of research are bone disease, arthritis/joint disorders and prostate disease. The projects emphasize an understanding of the basic mechanisms underlying the disease processes in order to develop potential treatments. Diabetes, coronary disease, impotence, and infection are also addressed, with multiple ongoing projects in each area. Additionally, there are research studies being conducted in oral health (dentures and denture implants), sensory disorders (retinal degeneration and hearing loss), and lung disease. Several studies are investigating the outcomes of exercise and obesity in the elderly. Examples of ongoing research include:

A study to identify risk factors shared by older veterans who fall or incur motor vehicle accidents, and to determine if those risk factors are related to veterans who require assistance with activities of daily living.

A new computer-assisted drug delivery system being evaluated to determine how concentrations and responses of multiple drugs may be modeled.

In addition to the MRS goal to fund high-quality biomedical research, we are also interested in training and developing scientific researchers who will continue to devote their efforts within VA to

understand the problems related to older veterans. MRS has several mechanisms in place to attract, train, and retain investigators. These programs are designed to train and mentor new, young investigators, as well as to reward the most accomplished, independent VA scientists. All programs currently support investigators working on aging research and services utilized by hospice patients.

HEALTH SERVICES RESEARCH AND DEVELOPMENT

Research supported by the Health Services Research and Development Service (HSR&D) is designed to enhance veterans' health and functional status by informing clinical and management decisions about VA healthcare. HSR&D researchers focus on identifying effective and cost effective strategies for the organization and delivery of health services and for optimizing patient-and system-level outcomes. They employ the methods and approaches of clinicians, social scientists, and providers to advance the field of health services research and answer practical questions that are important both inside and outside VA. The predominance of elderly veterans and their special healthcare needs have long been a major focus of HSR&D research. Pertinent research supported during FY 1998 is described in the following pages.

(1) HSR&D's Investigator-Initiated Research (IIR)

This program encourages and supports projects proposed and carried out by researchers from VA medical centers throughout the Nation. This includes projects proposed in response to special solicitations initiated in Headquarters. All proposed projects undergo rigorous peer review to determine scientific/technical merit and importance to VA.

Forty-nine percent of the 75 HSR&D IIRs active in FY 1998, including fifteen new projects, addressed questions relevant to aging veterans. The topics addressed include:

cost-effectiveness of lung volume reduction surgery, variation in length of stay, pre-and post-hospital care and survival;

exercise training in patients with chronic obstructive pulmonary disease (COPD);

effectiveness and cost impact of a telecommunications system on COPD;

non-melanoma skin cancer outcomes;

risk of mortality in prostate cancer; and,

two studies related to diabetes: case management of diabetes and patient preferences for diabetes care.

Seven of the new aging projects respond to HSR&D's solicitations for research in ethnic and cultural issues in VA healthcare, access to care and implementation of clinical practice guidelines. Specifically, these address:

ethnic/cultural variations in care of veterans with osteoarthritis;

prostate cancer outcome measures associated with age and race;

the impact of outsourcing VA cardiac surgery on the cost and quality of care;

post-stroke rehabilitation care;
an evaluation of the organization of subspecialty cardiac care within VA;
guidelines for hypertension drug therapy; and,
the effect of clinical guidelines on pressure ulcer care in nursing homes.

Among fifteen continuing projects related to aging are:
an evaluation study of the effectiveness of screening for prostatic cancer;
a controlled trial of a physical restoration intervention (SAFE-GRIP) to reduce the likelihood of falls in the elderly after hospitalization;
a study of the differences in coronary angioplasty outcomes between veterans and non-veterans;
primary care for high risk older veterans;
the effect of patient- and system-level factors on the use of VA health services among elderly veterans;
automated calls with nurse follow-up for improving glucose control and preventing costly illness among diabetic patients;
decline in functional status as a quality indicator for long-term care;
an intervention to help patients formulate and communicate treatment preferences; and
a new instrument to measure the quality and effectiveness of interventions to improve end-of-life care.

Eight IIR projects related to aging were completed during FY 1998. These included:
a study of the impact of oral health conditions and quality of life in older veterans;
appropriateness and necessity of cardiac procedures after acute myocardial infarction;
strategies to improve the quality of nutritional care to elderly hospitalized patients;
a stud to improve the management of patients with COPD;
quality of life outcomes after coronary artery bypass graft (CABG) surgery;
an assessment of respiratory function in chronic spinal cord injury;
preventing chronic back pain;
the impact of Geriatric Evaluation and Management and usual primary care on the survival,
healthcare utilization, and costs of elderly outpatients; and,
cultural factors that influence veterans' experiences with and responses to chronic illness.

(2) HSR&D Centers of Excellence

In 1998, VA funded two new HSR&D Centers of Excellence bringing the total to eleven Centers of Excellence in selected subject areas. One of the new Centers is the Center for Chronic Disease Outcomes Research at Minneapolis, MN. The Center's research portfolio is broad-based, with programs in prevention, disease, quality of care, and gender issues. Among the projects underway at Minneapolis are an evaluation of the effects of community-based outpatient clinics on access and quality of care for veterans

and a study of gender differences in compensation and pension claims approval for veterans with PTSD.

(3) Other Centers Emphasizing Aging are as Follows:

The Northwest Center for Outcomes Research in Older Adults is the base for a very large and varied research program, funded by a combination of VA and nonVA sources. This center is a collaboration of VA Puget Sound Health Care System and the Portland VA Medical Center, with support from the University of Washington School of Public Health and Community Medicine and the Kaiser Permanente Center for Health Research in Portland. The Center's goals are to perform state-of-the-art research, to generate new knowledge and research methods, and to assist VA policy makers in a rapidly changing healthcare environment.

Research focuses in three areas: (1) primary care management of chronic disease; (2) preservation of independence in older adults; and (3) development of methods to evaluate healthcare quality and efficiency. In FY 1998, VA researchers at the Seattle Center were involved in 95 individual projects. Examples of major projects related specifically to aging address:

the role of physical activity and growth hormone in maintaining functional status in older adults;

prevention of older adult pedestrian injuries;

identifying predictors of better outcomes of community residential care; and,

facilitating the use of advance care directives by older adults.

Other projects pertinent to improving the care of elderly veterans focus on management of chronic diseases that are very common among the elderly. These include diabetes, heart disease, depression, and low back pain.

The Midwest Center for Health Services and Policy Research at Hines, IL, is a joint program of the four Chicago-area VAMCs, with academic support from Northwestern University, Loyola University of Chicago, the University of Illinois School of Public Health, the University of Chicago, Rush University and St. Xavier University. Funded since 1983, the Center has an established program of research in long-term care and geriatrics, as well as other aspects of health services research.

Ongoing work related to aging includes development of a VA database on long-term care with associated resource guides. To support this work, a new VA Information Resource Center (VIREC) at Hines became operational in FY 1998. The primary goal of the Resource Center is to assist VA HSR&D in making information available to the research community for studies which ultimately will improve VA healthcare and add value to current HSR&D activities. Other examples of research at Hine's include projects focused on reducing the urden on family caregivers of persons with Alzheimer's disease, a major study of homebased primary care, and research addressing veteran patients' transition from hospital to home.

The Center for Health Services Research in Primary Care at the Durham VAMC has been active since 1982. Through an array of research and proactive teaching programs, the Durham Center of Excellence emphasizes projects that enhance the delivery, quality

and efficiency of primary care provided to veterans. Academic affiliations with Duke University and the University of North Carolina at Chapel Hill support a variety of research collaborations. Of the 28 research projects underway in FY 1998, many specifically address age-related conditions seen in primary care and other aspects of healthcare for aging veterans.

Aging research at the Durham Center includes projects focused on patient-physician interactions at the end of life delineating best practices for patients with chronic medical illnesses such as stroke and diabetes; women's health; understanding the influence of race on access to care; and quality of care in the prevention, treatment, and rehabilitation of patients with stroke.

The Center for Health Quality, , Outcomes and Economic Research is based in Bedford, Massachusetts. This Center has, since its initial funding in 1990, emphasized important issues related to improving the quality of health services for aging veterans. Recent program growth extends the focus to the following major program areas: health outcomes measurement, quality assessment, and health economics.

A number of ongoing research projects by researchers at the Bedford Center focuses on problems with special importance for aging veterans. For example, projects address methods for assessing the quality of long-term care, veterans hospice care, and other issues in end-of-life care. Other studies focus on care for particular conditions that are very common in elderly veterans, including hypertension, diabetes, chronic lung disease, osteoporosis, prostate disease, alcoholism, and oral health.

The HSR&D Center for Practice Management and Outcomes Research in Ann Arbor, Michigan, shares a set of common goals with the other HSR&D Centers of Excellence, including conducting veteran-relevant health services research and providing consultative assistance to VA clinicians and administrators. Established in 1995, it is a Center of Excellence in research related to managing clinical practice and outcomes research. The Center is affiliated with the University of Michigan Hospitals, Medical School and School of Public Health. Additionally, it is fully integrated with VA's Serious Mental Illness Treatment Research and Evaluation Center (SMITREC). SMITREC was established in 1992 as the Center for Long-Term Mental Health Evaluation (CLTMHE) and continues as an ongoing special evaluation and research field program of the Mental Health and Behavioral Sciences Strategic Healthcare Group (at VA Headquarters).

The Ann Arbor Center focuses on aging research related to quality improvement; costs and quality of diabetes care; prevention of common hospital complications; and mental health issues relevant to primary care practices.

The Sepulveda, California, HSR&D Center for the Study of Healthcare Provider Behavior, seeks to build a knowledge base that will help researchers, policy makers, and healthcare managers design, implement and evaluate policies and programs that will improve health outcomes. Established in 1993, the Sepulveda-based Center has affiliates at the West Los Angeles Campuses of the VA Greater Los Angeles Healthcare and the San Diego VA Healthcare Systems and collaborates with two non-VA institutions--the Uni-

versity of California (campuses at Los Angeles and San Diego) and the RAND Health Program.

During FY 1998, the Sepulveda Center core investigators conducted over 60 research projects at VHA and non-VHA locations. Center researchers are involved in studying Medicare HMO enrollees' use of VHA services; evaluating a case finding and referral system for older veterans in primary care; and studying generalist and specialist physician practices regarding patients with neurologic conditions as well as VHA and non-VHA patients with new-onset rheumatoid arthritis. They also are studying depression guideline implementation and have recently completed a comprehensive chart abstraction instrument for measuring adherence to pressure ulcer guidelines in VA nursing homes. Additionally, they developed a comprehensive dissemination and implementation plan for the newly-developed California Guidelines for Alzheimer's Disease Management, currently under review for dissemination within VA and a broad range of non-VA care settings nationwide.

(4) Special Projects

The Special Projects Program encompasses the HSR&D Service Directed Research (SDR) Program, Management Decision Research Center (MDRC) and special activities such as conferences and seminars. Special projects may include evaluation research, information syntheses, feasibility studies, special initiatives and other research projects responsive to specific needs identified by Congress, other federal agencies, or Department of Veterans Affairs executive and management staff. This is a centrally-directed program of health services research conducted by VA field staff, VHA Headquarters staff, and/or contractors engaged to analyze specific problems.

Ongoing HSR&D Service-Directed Research (SDR) projects focus on issues relevant to the aging veteran population. These projects include a study of health related quality of life; patient preferences in advanced metastatic prostate cancer; costs, quality of life and functional outcomes of veterans treated for multiple sclerosis; and a study to improve the quality of ambulatory care.

Researchers completed five SDRs related to aging veterans. Two studies related to prostate cancer. One investigated familial patterns in prostate cancer and another assessed how patients obtain and synthesize information used in decision-making about prostate cancer treatment. Other completed studies focused on the effectiveness of telecare in the management of diabetes; clinical management of veterans with stroke, and development of a long-term care database.

Eight continuing HSR&D projects related to women's health are expected to benefit aging female veterans. These projects address issues of access to Am care; cancers of the reproductive system relating to military experience and Post Traumatic Stress Disorder (PTSD); quality of life; rehabilitation concerns of women with spinal cord injuries; depression, surgical risks and outcomes; alcohol prevalence, screening and self-help; and gender differences in compensation and pension claims for PTSD.

The Under Secretary for Health proposed the nursing research initiative (NRI) to encourage new research on nursing topics and

to expand the pool of nurse investigators within the Department of Veterans Affairs. The Research and Development Office, in collaboration with the Nursing Strategic Healthcare Group staff, implemented a research program that targets nursing investigators. This effort invites research proposals for health services research, medical research and rehabilitation research. In 1995, Health Services Research Service issued on behalf of the Office of Research and Development a formal Request for Applications inviting nurses at VA medical centers to submit research proposals. The first nursing research project, funded in 1996, was related to the psychophysiology of Post Traumatic Stress Disorder in female nurse Vietnam veterans. The NRI program was reauthorized in 1996 and 1997. To date, eighteen projects have been funded under this initiative, including studies of behavioral management on quality of life in patients with heart failure; protocols to manage resistance to care in veterans with Alzheimer's disease; and pain resource nurses to improve cancer patient pain outcomes.

HSR&D is leading the new Quality Enhancement Research Initiative (QUERI) launched in FY 1998 by the Office of Research and Development to create and implement a national system to translate research discoveries, innovations and known effective and efficient diagnostic and treatment strategies into patient care, QUERI is a comprehensive, data driven, outcomes-based quality improvement program promoting excellence in outpatient, in-patient, and long-term care. This initiative focuses on specific clinical conditions: mental health, substance abuse, diabetes, chronic heart failure, ischemic heart disease, prostate disease, stroke, spinal cord injury, HIV/AIDS, and cancer (prostate, colon). Solicitations were published regarding QUERI and approximately 150 proposals have been received for review. This initiative is fostering research that is directly impacting the care of aging veterans.

HSR&D's Management Decision and Research Center (MDRC) works to translate research into practice by bringing technology assessment, management consultation, and research findings to managers, policymakers and clinicians within and outside of VA.

For example, MDRC's Information Dissemination Program (IDP) has created a wide variety of products utilizing both print and electronic mechanisms to disseminate important research information. Communication mediums include televideo broadcasts, the web page and fax on demand system, and various print publications such as the primer series, Management Briefs, and the newsletter FORUM. Another IDP publication is VA Practice Matters, which summarizes the results of important research within VA and promotes its application by describing the potential impact and possible implementation strategies and resources. In FY 1998, two issues of Practice Matters focused on issues of concern to elderly veterans: "Acute Stroke Treatment" and "Benign Prostatic Hyperplasia."

Also in 1998, MDRC's Technology Assessment Program produced two evaluations on topics relevant to elderly patients: shared decision making programs for patients with prostate cancer, and the use of stereotactic pallidotomy for treatment of Parkinson's disease. Other relevant assessments currently underway include evaluations of brachytherapy (a radiation therapy) for prostate cancer;

systematic reviews of impotence therapies; minimally invasive treatment options for abdominal aortic aneurysms; and an update on the assessment of the use of positron emission tomography as a diagnostic test for cancer and Alzheimer's disease.

In addition, MDRC's Management Consultation Program completed two studies undertaken at the request of the Office of Geriatrics and Extended Care. One investigation evaluated the national multi-state nursing home contract initiative by assessing costs, access, quality of care, and administrative burden of the new contracts. The second study was a Congressional ly-mandated analysis of VA hospice care, in which HSR&D examined the models and organizational structures through which VA provides hospice care, and analyzed the characteristics and services utilized by hospice patients.

COOPERATIVE STUDIES PROGRAM

Cooperative Studies Program (CSP) is a new component of the Office of Research and Development established to support multicenter clinical studies previously under Medical Research Service and HSR&D and potentially in the future, Rehabilitation R&D as well. In cooperative studies, two or more VA medical centers agree to study collectively a selected medical problem in a uniform manner under a common human research protocol with central management. Large-scale studies are often necessary for the statistically reliable evaluation of potential medical, psychological, and surgical treatments as well as diagnostic strategies. The CSP exists to provide credible, consistent, and effective answers to the major scientific questions that determine evidence-based medical practice in VA and in the country.

In 1997, the VA funded the creation of three Epidemiology Research and Information Centers RIC located at VA Medical Centers in Seattle, Washington; Boston, Massachusetts; and Durham, North Carolina. These centers have as their general objectives:

the generation and dissemination of new knowledge about the frequency, distribution, and causes of disease in veterans; promotion of education in epidemiologic methods and principles throughout VA;

provision of technical assistance to VA-based investigators in support of epidemiologic research; and,

facilitation of interaction between VA and non-VA investigators in epidemiology.

The ERICs work jointly to achieve systemwide objectives, and separately to achieve local aims or regional objectives. The national nature of the ERIC program should facilitate the coordination and conduct of multi-center VA epidemiologic studies.

Epilepsy in the elderly is much more common than previously thought. Older veterans suffer from many diseases, such as stroke, heart disease, hypertension and Alzheimer's disease, which are frequently complicated by epileptic seizures. A new multi-center cooperative study on the treatment of seizures in elderly veterans was initiated in 1997 to study three different epileptic drugs and their interactions with other medications commonly prescribed to elderly patients. It is anticipated that 720 patients will be enrolled from 18 VA medical centers for a five-year, $8 million study. There were

two other on-going multi-center cooperative studies in the health services area for elderly veterans. One study to compare the cost and effectiveness of team-managed home-based primary care to customary care for severely disabled and terminally ill patients is being carried out in nine VA medical centers. Another study is underway to determine whether the combination of inpatient care provided by Geriatric Evaluation and Management (GEM) Units and outpatient care provided by GEM Clinics, as compared with usual care provided to hospitalized elderly veterans, will reduce mortality and enhance health related quality of life.

This study is being carried out in 10 VA medical centers. A study to compare two different surgical procedures in lens implant after cataract extraction for elderly veterans was recently completed in 1997. A total of 1,098 patients in 15 VA medical centers were enrolled in this $3 million study. The results are being analyzed and will be reported to the scientific community.

A recently completed VA cooperative study (published in The New England Journal of Medicine) challenged the benefits of early angioplasty and heart bypass for survivors of a certain type of heart attack (non-Q-wave) and indicated that they may actually be harmed by these procedures. About half of the 1.5 million heart attacks in the U.S. each year are non-Q-wave myocardial infarctions (MI). The standard treatment approach involves routine catheterization followed by myocardial revascularization, which is done either through heart bypass or angioplasty. VA researchers observed that management of non-Q-wave Mls has become more aggressive during the past decade, based on the unproven assumption that invasive treatment is superior to a conservative strategy that relies on clinical management to guide intervention. Clinical outcomes of MI or death were assessed among 920 patients randomized across 15 hospitals with an average follow-up of 2.5 years. Researchers found that early aggressive treatment for these patients was associated with a 34 percent higher death rate than conservative treatment.

In the area of prostate disease, VA Cooperative Studies completed a study evaluating medications for benign prostate disease (enlarged prostate) and found that one drug (terazosin) effectively relieved symptoms, while another drug (finasteride) did not. This landmark study, published in the New England Journal of Medicine, defined the optimal medical treatment for prostate disease, providing older men with an effective alternative to surgery.

Another ongoing VA Cooperative Study (PIVOT Trial) on prostate cancer, in collaboration with the National Cancer Institute, is comparing the two most widely used treatment methods: radical prostatectomy, in which the prostate is surgically removed, and expected management or "watchful waiting," in which only disease symptoms are treated. PIVOT is a 15-year, randomized study involving 2,000 men from approximately 80 VA and NCI medical centers. All patients will be followed for at least 12 years. When completed, the study will provide more definitive answers on the best treatment for early prostate cancer. If expected management is as effective as surgery, millions of dollars could be saved every year by avoiding unnecessary surgery.

More than 90% of hemodialysis patients experience severe anemia. A new drug, recombinant human erythropoietin, is very effective in combating anemia, but costs $5,000 to $10,000 per patient a year. A few studies have suggested that the dosage of erythropoietin may be reduced by 30-50% if given subcutaneously rather than intravenously, without sacrificing beneficial effects. A randomized, multi-center clinical trial by VA Cooperative Studies (published in the New England Journal of Medicine) involving 208 patients found that erythropoietin can be administered just as effectively subcutaneously as intravenously, with a dosage reduction of 32 percent and no substantial increase in patient pain or discomfort. An estimated $450 million could be saved annually in the United States if this drug were administered subcutaneously to all hemodialysis patients.

VA Cooperative Studies is launching a major new study to test a vaccine against herpes zoster (shingles). Shingles in older people can be extremely painful and debilitating and there is no effective treatment for shingles that lasts over one month. This randomized controlled trial of 35,000 older veterans will test a promising new vaccine for its ability to prevent shingles or reduce their severity and complications. Another Cooperative Study nearing completion will determine whether specialized inpatient and outpatient units are the best way for VA to care for the elderly. The impact of this study will extend far beyond VA, as millions of older Americans come under managed care. No other study is likely to provide the conclusive and incontrovertible evidence needed to guide policy in this critical area.

Rehabilitation Research and Development

The mission of the Rehabilitation Research and Development (Rehab R&D) service is to investigate and develop concepts, products and processes that promote greater functional independence and improve the quality of life for impaired and disabled veterans. Aging, particularly the aging of persons with disabilities, is a high priority of the service.

Efforts in this area include:

A national VA program of merit-reviewed, investigator-initiated research, development and evaluation projects targeted to meet the needs of aging veterans with disabilities.

Support of a Rehabilitation Research and Development Center on Aging at Decatur, Georgia, VA Medical Center.

Establishment of a new Rehabilitation Research and Development Center focused on healthy aging with a disability.

Transfer into the VA healthcare delivery system of developed rehabilitation technology and dissemination of information to assist the population of aging veterans and those who care for them.

In addition to specific projects on aging, many of the investigations supported through the Service's nationwide network of research at VAMCs and at four Rehabilitation Research and Development Centers have relevance for impairments commonly associated with aging.

Some examples of investigator-initiated studies currently being carried out are:

A Low-Vision Enhancement System (LVES);
Liquid Crystal Dark-Adapting Eyeglasses;
Upper Body Motion Analysis for Amelioration of Falls in the Elderly;
Non-Auditory Factors Affecting Hearing Aid Use in Elderly Veterans;
The Influence of Strength Training on Balance and Function in the Aged;
Epidemiologic Study of Aging in Spinal Cord-Injured Veterans.

In addition, the Rehab R&D Service's newly initiated Career Development program is sponsoring an aspiring investigator whose research focus pursues better understandings of the receptive communication problems concomitant with normal and abnormal aging processes.

The Rehab R&D Center on Aging is structured around five interdisciplinary research sections to address the multi-dimensional nature inherent in problems of aging and disability: Environmental Research; Vision Rehabilitation; NeuroPhysiology; Engineering and Computer Science; and Social, Behavioral, and Health Research. Areas of study include the following:

Design-related problems that affect the quality of life of older people, including least restrictive environments, falls, independence and safety.
Orientation and mobility for the blind, low vision, and rehabilitation outcomes measurement for older persons with visual impairment.
The neurologic and physiologic changes that accompany aging and behavioral coping problems.
Development and application of new technologies to a variety of prototypes for the design of assistive devices and assistive software.

A new Rehab R&D Center located at the Houston VAMC was established in October 1997 with a focus on aging with a disability. Research will be directed to the elimination of preventable secondary problems and the reduction of risks for all secondary conditions related to patients' disabilities. Researchers will seek to promote early initiation of treatment, to develop more holistic intervention programs, to educate patients and family caregivers, and to develop better assistive devices, including mobility aids. Bringing together an interdisciplinary team of physicians, nurses, therapists, engineers, and educators, the Center will design, implement, and evaluate programs for the prevention of complications from common secondary conditions such as pressure ulcers, malnutrition, and mobility limitations.

C. Office of Academic Affiliations

All short and long-range plans for the Veterans Health Administration (VHA) that address healthcare needs of the Nation's growing population of elderly veterans include health professional training activities supported by the Office of Academic Affiliations (OAA). Clinical experiences with geriatric patients are an integral part of healthcare education for approximately 107,000 VHA health trainees, including 33,000 resident physicians and fellows, 20,000 medical students, and 54,000 nursing and associated health stu-

dents. Each year these residents and students train in VA medical centers as part of affiliation agreements between VA and nearly 1,000 health professional schools, colleges, and university health science centers. Recognizing the challenges presented by the increasing size of the aging veteran population, VHA continues to promote, coordinate, and support geriatric education and training activities for physicians, dentists, nurses and other associated health professional trainees.

GERIATRIC MEDICINE

The demand for physicians with special training in geriatrics and gerontology continues because of the rapidly growing numbers of elderly veterans and aging Americans. The VA healthcare system offers clinical, rehabilitation, and follow-up patient care services as well as education, research, and interdisciplinary programs that constitute the support elements required for the training of physicians in geriatric medicine. This special training has been accomplished through the Physician Fellowship Program in Geriatrics from Fiscal Years (FY) 1978 to 1989 and through specialty residency training since FY 1990. In FY 1998, VA supported 159.6 physicians receiving advanced education in geriatric medicine and 26 physicians receiving advanced education in geriatric psychiatry. VA also supported 11 physicians pursuing post-residency fellowship education in geriatric neurology.

The Accreditation Council for Graduate Medical Education (ACGME) approved geriatric medicine as an area of special competence in September 1987. Effective January 1988, the American Board of Internal Medicine and the American Board of Family Practice specified procedures for the certification of added qualifications in geriatric medicine. VA played a critical role in the development and recognition of geriatric medicine in the United States, and since 1989, any VAMC may conduct training in geriatrics provided that an ACGME accredited program is in place.

Over the past five years, VHA has restructured its medical residency portfolio and as a result, geriatric medicine positions have increased. In the fall of 1995, the Under Secretary for Health appointed an expert committee, the Residency Realignment Review Committee (RRRC), to advise him about recommended changes needed to ensure that VHA's graduate medical education programs meet present and future healthcare needs of both VA and the Nation. The RRRC recommended that VHA restructure its 8,900 medical resident positions and increase the percentage in primary care from 38 percent to 48 percent. This realignment of VHA's graduate medical education portfolio will continue VHA's progress in training a greater proportion of generalist physicians while protecting specialties particularly germane to special VHA programs. Geriatric medicine is one of the primary care disciplines that has experienced growth as a result of residency realignment. Geriatric medicine resident positions increased from 104 positions in Academic Year (AY) 1995-1996 to 159.6 in AY 1998-1999. That is a 53.5 percent increase.

GERIATRIC DENTISTRY

In July 1982, a two-year Postdoctoral Fellowship in Geriatric Dentistry began at five medical centers affiliated with schools of dentistry. The goals of this program were similar to those described for the physician fellowship program in geriatrics. In FY 1993, the number of training sites increased to six for a final three-year cycle. As of June 1994, 52 geriatric dentistry fellows had completed their special training. The Postdoctoral Fellowship in Geriatric Dentistry changed in 1994 to the VA Dental Research Fellowship to expand research training for dentists.

The Postdoctoral Fellowship in Geriatric Dentistry proved to be an excellent recruitment source for dentists uniquely trained in the care of the elderly. Graduates have assumed leadership positions in geriatric dentistry at academic institutions, enhanced patient care and other geriatric initiatives in VA facilities, and contributed to geriatric efforts in affiliated health centers and the community. Nationally, former fellows have made significant contributions to the professional literature and are actively involved in geriatric dental research.

Since the change in the Postdoctoral Fellowship in Geriatric Dentistry to the VA Dental Research Fellowships, OAA has initiated individual awards in dental research. Candidates from any VAMC with the appropriate resources may now compete for postdoctoral dental research fellowships.

NURSING AND ASSOCIATED HEALTH PROFESSIONS

Based on its large number of elderly patients, VA offers all affiliated students clinical opportunities in the care of the elderly. VA also has special programs that focus on geriatrics.

INTERDISCIPLINARY TEAM TRAINING AND DEVELOPMENT PROGRAM

The Interdisciplinary Team Training and Development Program (ITT&D) is a nationwide, systematic educational program that is designed to include didactic and clinical instruction for VA facility practitioners and affiliated students from three or more health professions such as medicine, nursing, psychology, social work, pharmacy, and occupational and physical therapy. The goal of ITT&D is to develop a cadre of health practitioners with the knowledge and competencies required to provideinterdisciplinary team care to meet the wide spectrum of healthcare and service needs for veterans, to provide leadership in interdisciplinary team delivery and training to other VAMCs, and to provide role models for affiliated students in medical and associated health disciplines. The ITT&D provides a structured approach to the delivery of health services by emphasizing the knowledge and skills needed to work in an interactive group. In addition, the program promotes an understanding of the roles and functions of other members of the team and the influence of their collaborative contributions on patient care. Training includes the teaching of staff and students in selected priority areas of VA healthcare needs, e.g., geriatrics, ambulatory care, management, and nutrition; instruction in team teaching and group process skills forclinical core staff; and clinical experiences in

team care for affiliated education students with the core team serving as role models.

The ITT&D, which began in 1978, is based at 12 VAMCs: Birmingham, AL; Buffalo, NY; Coatesville, PA; Little Rock, AR; Madison, WI; Memphis, TN; Palo Alto, CA; Portland, OR; Salt Lake City, UT; Sepulveda, CA; Tampa, FL; and Tucson, AZ. During FY 1998, 177 students from a variety of healthcare disciplines received funding support at the 12 ITT&D sites.

ADVANCED PRACTICE NURSING

Advanced Practice Nursing, i.e., master's level clinical nurse specialist and n practitioner training, is another facet of VA education programming in geriatrics. The need for specialty trained graduate nurses is evidenced by the sophisticated level of care needed by VA patient populations, specifically in the area of geriatrics. Advanced nurse training is a high priority within VA because of the shortage of such nursing specialists who are capable of assuming positions in specialized care and leadership.

The master's level Advanced Practice Nursing Program was established in 1981 to attract specialized graduate nursing students to VA and to help meet needs in the VA priority areas of geriatrics, rehabilitation, psychiatric/mental health, primary care, medical-surgical and critical care, all of which impact on the care of the elderly veteran. Direct funding support is provided to master's level nurse specialist students for their clinical practicum at VAMCs affiliated with the academic institutions at which the students are enrolled. During FY 1998, VA supported 379 master's level advanced practice nursestudent positions.

VA PREDOCTORAL NURSE FELLOWSHIP PROGRAM

Gerontological nursing has been a nursing specialty since the mid-1960s. As society has changed, particularly in terms of the demographic trends in aging, more attention has been focused on both the area of gerontological nursing and the education of nurses in this specialty. Doctoral level nurse gerontolgists are prepared for advanced clinical practice, teaching, research, administration, and policy formulation in adult development and aging.

In FY 1985, VA initiated a two-year nurse fellowship program for registered nurses who were doctoral candidates and who had dissertations focused on clinical research in geriatrics/gerontology. The first competitive review for fellows was conducted in 1986. One nurse fellow was selected for the FY 1986 funding cycle. Since that time, two nurse fellowship positions have been available for selection at approved VAMC sites each fiscal year. In FY 1994, the program was changed to the VA Predoctoral Nurse Fellowship Program to include all clinical areas relevant to the care of veterans.

GERIATRIC EXPANSION PROGRAM AND THE GERIATRIC RESEARCH, EDUCATION AND CLINICAL CENTERS (GRECC)

A special priority for geriatric education and training is recognized in the allocation of associated health training positions and funding support to VAMCs hosting GRECCs and to VAMCs (non-ITT&D sites) offering specific educational and clinical programs for

the care of older veterans. In FY 1998, a total of 177 associated health students received funding support in the following disciplines: Social Work, Psychology, Audiology/Speech Pathology, Clinical Pharmacy, Advanced Practice Nursing, Dietetics, and Occupational Therapy.

GEROPSYCHOLOGY POSTDOCTORAL FELLOWSHIP

In FY 1993, OAA began a one-year Geropsychology Postdoctoral Fellowship Program. The purpose of the program is to develop a cadre of highly trained geropsychologists who will contribute to the care of the elderly both within and outside VA. This pool of individuals should provide an excellent source of recruitment for future VA psychologists.

One fellow is selected annually at each of the following ten VAMCs: Brockton, MA; Cleveland, OH; Gainesville, FL; Houston, TX; Knoxville, IA; Little Rock, AR; Milwaukee, WI; Palo Alto, CA; Portland, OR; and San Antonio, TX. These VAMCs have strong, geriatric-focused programs and accredited psychology internship programs.

In summary, VA continues to make outstanding contributions to the Nation's health professions workforce and to foster excellence and leadership in the care of elderly veterans through its fellowship, residency, and associated health training.

D. Office of Employee Education

In support of VA's mission to provide health care to the aging veteran population education and training opportunities are offered to enhance the skills of medical center employees in the area of geriatrics. The Office of Employee Education through the Employee Education System (EES) works with medical centers, Veterans Integrated Service Networks (VISNs), and Headquarters' program officials to develop educationalactivities that respond to the needs of healthcare personnel throughout VHA. Funding is provided to the VISNs to support employee education at the local level, to the GRECCs for educational programming, and to program offices for national or systemwide activities.

With assistance from the EES, 29 single medical center programs were conducted during fiscal year 1998. Twenty-two multi-facility and ten VISN-wide programs were also presented during this time. Topics included Alzheimer's disease, Aging in Women—Aging in Men, Emerging Topics in Dementia, New Management Strategies for Parkinson's Disease, Care of the Frail Elderly, Essentials of Geriatric Nursing, Resident Assessment Instrument, Psychosocial Needs of the Elderly, Behavioral Changes in the Elderly, and Depression in the Elderly. National or systemwide activities included Geriatrics for the Primary Care Provider, Improving Care at the End of Life, and Domiciliary Clinical Care. More than 4,500 VA staff attended these offerings. Also, a satellite broadcast on Management of Alzheimer's Disease was viewed by 1600 participants from all medical centers.

The reference *Geriatric Pocket Pal* was updated and reprinted for the third time. This book is distributed to VA physicians, medical students, residents, and private sector health care facilities. Other

products developed by the EES during fiscal year 1998 were two videotapes on the Resident Assessment Instrument and Long-Term Care and, a CD-ROM on Alzheimer's Caregiving Strategies.

GRECCs utilized their funding to present training programs on subjects such as Clinical Advances in Cognitive Longevity, Dysphagia Treatment, the Continuum of Care, Aging With Chronic Disease, Enhancing Geriatric Care for American Indian Elders, Advances in Geriatrics, Gerontology Forum Series, Ethnogeriatrics and Cultural Competence in Managed Care, Pain Management in the Elderly Cancer Patient, and the Aging Brain in Health and Disease. All 16 GRECCs presented educational activities that were attended by VA staff as well as providers from universities and the private sector.

E. Chief Information Office

HEALTH INFORMATION RESOURCES SERVICE

The widespread education and training activities in geriatrics have generated systemwide requirements for information throughout VA. Local library services continue to perform hundreds of online searches on databases such as MEDLINE and other bibliographic databases, and continue to add books, journals, and audiovisuals on topics related to geriatrics and aging.

The VHA satellite television network carried three live broadcasts targeted to providers who work with aged patients. The topics included Meaningful Communication in Patients with Alzheimer's (offered through our partnership with the University of Arizona), Osteoporosis in the Geriatric Patient, and Alzheimer's Disease: Diagnosis and Treatment.

Additionally, one book and two videos were purchased and distributed systemwide.

III. VETERANS BENEFITS ADMINISTRATION

A. Compensation and Pension

Disability and survivor benefits such as pension, compensation, and dependency and indemnity compensation administered by the Veterans Benefits Administration (VBA) provide all, or part, of the income for 1,607,511 persons age 65 or older. This total includes 1,186,010 veterans; 409,133 spouses; 11,067 mothers; and 1,301 fathers.

The Veterans' and Survivors' Pension Improvement Act of 1911, effective January 1, 1979, provided for a restructured pension program. Under this program, eligible veterans receive a level of support meeting a national standard of need. Pensioners generally receive benefits equal to the difference between their annual income from other sources and the appropriate income standard. Yearly cost-of-living adjustments (COLAs) have kept the program current with economic needs.

This Act provides for a higher income standard for veterans of World War I or the Mexican Border Period. This provision was in acknowledgment of the need for economic security of the Nation's oldest veterans. The current amount added to the basic pension rate is $1,989 as of December 1, 1998.

B. OUTREACH

VBA Regional Office personnel maintain an active liaison with local nursing homes, senior citizen homes, and senior citizen centers in an effort to ensure that older veterans and their dependents understand andhave access to VA benefits and services.

Generally, regional office staff visit these facilities as needed or when requested by the service providers. VA pamphlets and application forms are provided to the facility management and social work staff during visits and through frequent use of regular mailings. State and Area Agencies on the Aging have been identified and are provided pamphlets and other materials about VA benefits and services through visits, workshops and pre-arranged training sessions. Senior citizen seminars are conducted for nursing home operations staff and other service providers that assist and provide service to elderly patients. Regional office staff regularly participate in senior citizens fairs and information events, thereby visiting and participating in events where the audience is primarily elderly citizens. VBA staff also visit places where senior citizens congregate such as malls, churches, and special luncheons or breakfasts to advise veterans of their benefit entitlements. Regional office outreach coordinators continue to serve on local and state task forces and represent VA as members of special groups that deal extensively with the problems of the elderly.

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