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HEARINGS

BEFORE A

SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-FIRST CONGRESS

FIRST SESSION

SUBCOMMITTEE ON DEPARTMENTS OF LABOR, AND HEALTH EDUCATION, AND WELFARE AND RELATED AGENCIES

DANIEL J. FLOOD, Pennsylvania, *Chairman*

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NEAL SMITH, Iowa
W. R. HULL, Jr., Missouri
BOB CASEY, Texas

ROBERT H. MICHEL, Illinois
GARNER E. SHRIVER, Kansas
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ROBERT M. MOYER, *Staff Assistant to the Subcommittee*

PART 3

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
STATEMENT OF THE SURGEON GENERAL

Printed for the use of the Committee on Appropriations

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28-454 O WASHINGTON : 1969

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DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE APPROPRIATIONS FOR 1970

FRIDAY, MARCH 14, 1969.

HEALTH AND SCIENTIFIC AFFAIRS

WITNESSES

DR. WILLIAM H. STEWART, ACTING ASSISTANT SECRETARY FOR HEALTH AND SCIENTIFIC AFFAIRS, AND SURGEON GENERAL, PUBLIC HEALTH SERVICE
DR. JOSEPH T. ENGLISH, ADMINISTRATOR, HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION
CHARLES C. JOHNSON, JR., ADMINISTRATOR, CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE
DR. ROBERT Q. MARSTON, DIRECTOR, NATIONAL INSTITUTES OF HEALTH
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET
DR. JAMES H. CAVANAUGH, DIRECTOR, OFFICE OF PLANNING AND PROGRAM COORDINATION

BIOGRAPHICAL SKETCHES OF PRINCIPAL WITNESSES

WILLIAM H. STEWART, M.D.

Date and place of birth: Minneapolis, Minn., May 19, 1921.
Marital status: Married, two children.
Education: 1939–41: University of Minnesota; 1941–42: Louisiana State University; 1942–45: M.D. Louisiana State University School of Medicine.
Professional positions held: 1945–46, Rotating Intern, Philadelphia General Hospital; 1946–48, U.S. Army Medical Corps; 1948—, Physician, Veterans' Administration Outpatient Clinic, St. Paul, Minn.; 1948–50, Resident, Pediatrics, Charity Hospital, New Orleans, La.; 1950–51, Private practice, Alexandria, La.; 1951—, Commissioned officer, U.S. Public Health Service; present rank, Surgeon General.

Assignments in Public Health Service

1951–53, Head, Epidemiology Unit, Thomasville Field Station, Communicable Disease Center, Thomasville, Ga.; 1953–54, National Institutes of Health, National Heart Institute—Grants and Training Branch; 1954–56, Bureau of State Services, Division of Special Health Services; Chief, Heart Disease Control program; 1956–57, Assistant Director, National Heart Institute, National Institutes of Health; 1957–58, Assistant to the Surgeon General, Public Health Service; 1958–61, Chief, Division of Public Health Methods, Office of the Surgeon General, Public Health Service; 1961–63, Chief, Division of Community Health Services, Office of Surgeon General, Public Health Service; 1963–65, Assistant to Special Assistant to the Secretary (Health and Medical Affairs); August 1, 1965–September 31, 1965: Director, National Heart Institute, National Institutes of Health.
Present assignment: Surgeon General, U.S. Public Health Service.
Specialty: 1953 certified, American Board of Pediatrics.
Societies: American Medical Association; American Public Health Association; American Academy of Pediatrics; American Heart Association.

JOSEPH T. ENGLISH, M.D.

Current:

1. Administrator, Health Services and Mental Health Administration PHS, Department of Health, Education, and Welfare, Bethesda, Md.
2. Senior Psychiatric Consultant to the Peace Corps, Washington, D.C.
3. Assistant Clinical Professor of Psychiatry, George Washington University School of Medicine, Washington, D.C.
4. Visiting Lecturer in Medical Care, Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, Conn.
5. Visiting Lecturer in Psychiatry, Department of Psychiatry, Harvard Medical School, Cambridge, Mass.

Home address: 2921 O Street NW., Washington, D.C. 20007.

Birth: May 21, 1933, Philadelphia, Pa.

Service: Captain, U.S. Air Force Reserve (inactive) July 1958–July 1963. Senior Surgeon, U.S. Public Health Service (Regular Corps) July 1963–July 1966.

Professional experience:

1. Founder and Director, St. Joseph's College Student Mental Health Center, Philadelphia, Pa., July 1960–July 1961.
2. Clinical Associate, Laboratory of Clinical Science National Institute of Mental Health, Bethesda, Md., July 1961–July 1962.
3. Psychiatrist, Professional Services Branch National Institute of Mental Health, Bethesda, Md., on detail to Peace Corps July 1962–January 1964.
4. Psychiatrist, Office of the Director, National Institute of Mental Health, Bethesda, Md., on detail to Peace Corps, January 1964–September 1965.
5. Assistant chief, policy and program coordination, Office of the Director, National Institute of Mental Health, on detail to Peace Corps, September 1965–February 1966.
6. Chief psychiatrist, Medical Program Division Peace Corps, Washington, D.C., July 1962–July 1966.
7. Deputy Chief, Office of Interagency Liaison, Office of the Director, National Institute of Mental Health, Bethesda, Md. February 1966–September 1966.
8. Deputy Assistant Director of the Office of Economic Opportunity for Health Affairs, May 1966–July 1966.
9. Acting Assistant Director of the Office of Economic Opportunity for Health Affairs, July 1966–March 1968.
10. Assistant Director of Office of Economic Opportunity for Health Affairs, Executive Office of the President, Washington, D.C., March 1968 to January 1969.

Professional advisory board, Academy of Religion and Mental Health, May 1966 to present.

Member, senior seminar, associated faculties program in community psychiatry, Washington School of Psychiatry, Washington, D.C.

Honorary:

1. Arthur S. Flemming Award as "one of the 10 outstanding young men in the Federal service" with personal commendation from the President of the United States, 1968.
2. Meritorious Award for Exemplary Achievement in Public Administration, from the William A. Jump Memorial Foundation, May 1966.
3. John XXIII Medal, awarded by College of New Rochelle, N.Y., June 1966, for "scholarship creating a synthesis between scientific, technical, and professional elements on the one hand, and spiritual values on the other."
4. U.S. Junior Chamber of Commerce Citation as "one of the outstanding young men of 1964".
5. Letter of commendation from Secretary of Health, Education, and Welfare John Gardner for achievement in implementation of health manpower development goals for 1967.
6. Alpha Omega Alpha, National Medical Honor Society.
7. Alpha Sigma Nu, National Jesuit Honor Society.
8. Arnold Air Honor Society.
9. Commandant's Medal, U.S. Air Force ROTC, 1954.
10. Jefferson Medical College Gold Medal for Psychiatry, 1958.
11. Richard Bennis McCloskey Loyalty Medal, 1950, 1954.

Memberships:
American Psychiatric Association (fellow).
American Medical Association.
American College Health Association.
American Public Health Association (fellow).
American Orthopsychiatric Association.
Group for the Advancement of Psychiatry.
The Academy of Religion and Mental Health.
Pennsylvania State Medical Society.
Philadelphia County Medical Society.
District of Columbia Medical Society.
Washington Psychiatric Society.
The Society of the Jefferson for Research, charter member.

Professional activity:
Member, President's Committee on Population Planning, July 1968 to present.
Consulting scholar, President's National Commission on the Causes and Prevention of Violence, July 1968 to present.
Chairman of Interagency Task Force of OEO, HEW, and the Department of Agriculture on Emergency Food and Medical Programs for the U.S.A., February 1968 to present.
Chairman of Subcommittee on Federal Health Programs for the State of Alaska of the President's Review Commission for Alaska; January 1968 to present.
Member, U.S. National Committee of the American Psychiatric Association on Mental Health Programs of the Americans, February 1968 to present.
Council of the American Psychiatric Association for National and International Affairs, July 1967 to present.
Ad hoc committee of American Psychiatric Association on the U.S. poverty program, July 1966 to present.
Committee on Mental Health Services to the Poor, American Medical Association, November 1965 to January 1966.

Education:
St. Joseph's Preparatory School, Philadelphia, Pa., 1946–50.
St. Joseph's College, A.B., Philadelphia, Pa., 1950–54.
Jefferson Medical College, M.D., Philadelphia, Pa., 1954–58.
Internship: Jefferson Medical College Hospital, Philadelphia, Pa., July 1958–July 1959.
Residency in psychiatry:
Institute of the Pennsylvania Hospital, Philadelphia, Pa., July 1959—July 1961.
National Institute of Mental Health, Bethesda, Md., (clinical associate and senior resident), July 1961–July 1962.

Licensure: Medicine and surgery: Pennsylvania and Washington, D.C., board eligible in psychiatry).

Foreign travel: Latin America, African, Near East, Asia and Europe.

CHARLES C. JOHNSON, JR.

Date of birth: September 6, 1921.

Marital status: Married. Wife, Betty Jean Tanner Johnson; children, Charles C. III, and Teresa Ilene.

Education:
High school: North Des Moines High School, Des Moines, Iowa; graduated January 1939.
College: Dowling Junior College, Des Moines, Iowa, September 1941–June 1942; no degree; Purdue University, West Lafayette, Ind., November 1944–February 1947; BSCE.
Graduate work: Purdue University, West Lafayette, Ind., February–August 1947, and September 1956 to March 1957; MSCE.

Military service: U.S. Marine Corps, December 1942–June 1946. Honorable discharge. Commissioned as second lieutenant.

WORK EXPERIENCE

July 1968 to present: Administrator, Consumer Protection and Environmental Health Service of the U.S. Department of Health, Education, and Welfare, with the rank of Assistant Surgeon General, Public Health Service. The Consumer Protection and Environmental Health Service was established July 1, 1968, as part of major regrouping of the health programs of DHEW, to implement and upgrade Department activities in the area of environmental health, including the safety of foods, drugs, cosmetics, and other consumer products. Encompassed within CPEHS are the Food and Drug Administration, National Air Pollution Control Administration, and the Environmental Control Administration.

March 1967 to July 1968: Assistant commissioner of health for environmental health, New York City Health Department. Responsible for planning, developing, implementing, and evaluating all environmental health programs and activities for a city of 8 million people. New York City Health Department representative on Air Pollution Control Board, Air Pollution Control Medical Advisory Committee, Mayor's Emergency Control Board, Mayor's Consumer Council; Interdepartmental Sewerage Council; and New York City Water Advisory Committee.

November 1947 to March 1967: Professional career as a commissioned officer with the Public Health Service, Department of Health, Education, and Welfare. Major assignments are cited below:

January 1966–March 1967 (director grade officer) Chief, Office of Environmental Health, Division of Indian Health: Responsible for planning, developing, coordinating, and appraising environmental health activities which include consultative, educational, and motivational programs and services; construction of sanitary facilities; and research and training activities. Also designated chief engineer officer for the Bureau of Health Services. In this capacity served as principal adviser and consultant to the Bureau Director and to the Bureau offices, divisions, and programs in the achievement of the Bureau's mission in general and the engineering aspects specifically.

Other duties (director grade officer) member, Surgeon General's task force on Health in Housing and Urban Development: Member, Surgeon General's task force on organization of National Center for Urban and Industrial Health. Member, Surgeon General's task force to India to advise on management and administration of national water supply program. Member PHS Engineer Career Development Committee.

January 1960–January 1966 (director grade officer) Chief, Sanitation Facilities Construction Branch, Division of Indian Health. Major responsibility for development of administrative guides and direction of field activities for the first direct construction activity undertaken by the Public Health Service. Duties also included budget preparation and justification, and technical review of project scope, plans, specifications, and reports. Received PHS commendation medal for sustained high quality work performance (1963).

April 1957–January 1960 (senior grade officer) Institutional Sanitation Consultant in Division of Indian Health. Coordination of field activity, establishment of uniform technical guidelines, provisions of training as necessary for the Environmental Sanitation Branch's insitutional sanitation program. This has also involved review of technical reports, review of engineering plans, consultations with BIA offices, and other Branch officials in the Division of Indian Health on sanitary engineering problems.

February 1951–April 1957 (middle grade officer) Staff Officer, general engineering program, Division of Sanitary Engineering Services. Conducted surveys and reviewed survey reports on PHS hospitals, including radiological health phases of such surveys. Also participated in development of service publications on sewage disposal, water supply, refuse disposal, school sanitation, trailer park sanitation. Participated on subcommittee of President's Committee on Migratory Labor, ASA Committee for revision of the ASA National Plumbing Code, work of the APHA subcommittee on circus and carnival sanitation, and AEC off-site radiological health monitoring activities.

November 1947–February 1951 (Junior Grade Officer) sanitary engineering consultant with the USPHS Mission to Liberia, West Africa. The program provided for malaria control, construction of drainage ditches and culverts, water supplies and sewage disposal facilities, and sanitary engineering surveys of hospitals and schools.

OTHER PROFESSIONAL ACTIVITIES

Appointed adjunct associate professor, School of Environmental Medicine, New York University, June 1, 1967.
Appointed member of District of Columbia Ad Hoc Advisory Work Group of Environmental Protection, November 1967.
Served under contract as environmental health consultant to management firm of Booz, Allen, and Hamilton, October–December 1967.

PROFESSIONAL REGISTRATION

Registered professional engineer, District of Columbia: Certificate No. PE3212.
Diplomate, American Academy of Environmental Engineers.

ROBERT QUARLES MARSTON, M.D.

Date and place of birth: February 12, 1923; Toano, Va.
Education:
B.S. Virginia Military Institute, 1943.
M.D. Medical College of Virginia, 1947.
B.Sc. Oxford University, 1949.
Professional positions held:
1949–1950: Intern, Johns Hopkins University, Baltimore, Md.
1950–1951: Assistant resident, Vanderbilt University Hospital, Nashville, Tenn.
1953–1954: Assistant resident, Medical College of Virginia, Richmond, Va.
1954–1957: Assistant professor of medicine, Medical College of Virginia, Richmond, Va.
1958–1959: Assistant professor of bacteriology and immunology, University of Minnesota, Minneapolis, Minn.
1959–1961: Associate professor of medicine and assistant dean in charge of student affairs, Medical College of Virginia, Richmond, Va.
1961–1965: Director of the University of Mississippi Medical Center and dean, School of Medicine, Jackson, Miss.
1965–1966: Vice chancellor, the University of Mississippi, and dean, School of Medicine, Jackson, Miss.
1966–1968: Associate Director, National Institutes of Health and Director, Division of Regional Medical Programs, Bethesda, Md.
April–Sept. 1968: Administrator, Health Services and Mental Health Administration, Bethesda, Md.
September 1968—: Director, National Institutes of Health, Bethesda, Md.
Military Service: U.S. Army, Armed Forces Special Weapons project, National Institutes of Health, 1951–1953, terminal rank, first lieutenant.
Scientific societies:
Alpha Omega Alpha.
Association of American Medical Colleges (executive council, 1964–67).
American Federation for Clinical Research.
Society for Experimental Biology and Medicine.
Tissue Culture Association.
American Society for Cell Biology.
American Association for the Advancement of Science.
Association of American Rhodes Scholars.
American Medical Association.
American Public Health Association Fellow.
Professional activities:
1961–66: Chairman, International Fellowships Review Panel, National Institutes of Health.
1962–66: Editorial Board, *Journal of Medical Education.*
1964–66: Consultant, Review Committee, Division of Hospital and Medical Facilities, Department of Health, Education, and Welfare.
1965: Conference planning committee, Atlanta regional forum, National Commission on Community Health Services.
Special honors:
1947–49: Rhodes Scholar.
1954–59: Markle Scholar.

Mr. FLOOD. Now we have Dr. William H. Stewart, the Surgeon General.

INTRODUCTION OF SUPPORTING WITNESSES

Doctor, you have some new people here that I presume you want to present to the subcommittee.

Dr. STEWART. Yes, sir. This is Dr. Joe English, who is the Administrator of the Health Services and Mental Health Administration.

Mr. FLOOD. Where were you born?

Dr. ENGLISH. Philadelphia.

Mr. FLOOD. Where?

Dr. ENGLISH. Philadelphia, Pa.

Mr. FLOOD. Oh, yes, yes.

Mr. NATCHER. That is in the United States.

Mr. FLOOD. Big city boy.

Dr. ENGLISH. Yes, sir.

Mr. FLOOD. Where did you go to school?

Dr. ENGLISH. To St. Joseph's College.

Mr. FLOOD. A Catholic.

Dr. ENGLISH. Yes.

Mr. FLOOD. Where else?

Dr. ENGLISH. Jefferson Medical School, and then to the Pennsylvania Hospital for my residency.

Dr. STEWART. We also have Mr. C. C. Johnson, Jr., who is Administrator of the Consumer Protection and Environmental Health Service.

Mr. FLOOD. Not a doctor?

Mr. JOHNSON. No, sir.

Mr. FLOOD. Mister Johnson?

Mr. JOHNSON. Yes, sir.

Mr. FLOOD. You are on odd breed.

Mr. JOHNSON. In this group, yes, sir.

Mr. FLOOD. Where were you born?

Mr. JOHNSON. In Des Moines, Iowa.

Mr. FLOOD. How tall are you?

Mr. JOHNSON. Six foot two inches.

Mr. FLOOD. What do you weigh?

Mr. JOHNSON. About 185.

Mr. FLOOD. You are in good shape.

Mr. JOHNSON. I try to stay that way.

Mr. FLOOD. How old are you?

Mr. JOHNSON. 47.

Mr. FLOOD. Where did you go to school?

Mr. JOHNSON. Purdue University.

Mr. FLOOD. What is your degree?

Mr. JOHNSON. In civil engineering.

Mr. FLOOD. What are you doing here?

Mr. JOHNSON. I have a bachelor's and a master's. I actually majored in sanitary engineering and I have been in public health work for about 25 years how.

Mr. FLOOD. We are lucky.
Mr. JOHNSON. Thank you.
Dr. STEWART. We are going to get him an honorary M.D. next year.
Mr. FLOOD. Well, he will live that down.
Dr. STEWART. Then we have Dr. Bob Marston, Director of the National Institutes of Health.
Mr. FLOOD. Where were you born?
Dr. MARSTON. Virginia.
Mr. FLOOD. What is your degree?
Dr. MARSTON. M.D.
Mr. FLOOD. What school did you attend?
Dr. MARSTON. The Medical College of Virginia in Richmond.

GENERAL STATEMENT

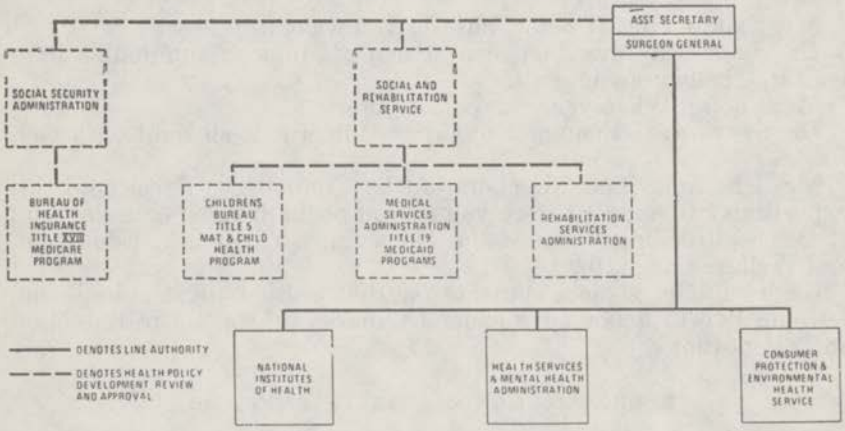
Mr. FLOOD. Now, Doctor, how do you want to proceed?
Dr. STEWART. Mr. Chairman, I can attempt to summarize it or read it, whichever you wish.
Mr. FLOOD. Whatever you wish, Doctor.
Dr. STEWART. I thought I might read it, if it is all right with you, sir.
Mr. Chairman and Members of the Committee, I welcome this opportunity to appear before you as you begin detailed consideration of the health components of the Department of Health, Education, and Welfare budget for 1970.
Before I offer some comments on the health budget submission, I would like to make some general remarks by way of introduction and orientation.

REORGANIZATION OF HEALTH PROGRAMS

In April of 1968 we undertook the most extensive reorganization in the history of the Public Health Service. May I call the committee's attention to the organizational chart (attached) which shows the new basic structure of the Department's health programs. Among the significant effects of the reorganization are these major changes: The Food and Drug Administration was made a part of the Public Health Service, thus bringing together two agencies of the Department primarily concerned with the health of the American people.
The Assistant Secretary for Health and Scientific Affairs, who prior to the reorganization had served chiefly as a staff adviser to the Secretary, was given direct control of the expended Public Health Service. The Surgeon General was named principal deputy to the Assistant Secretary. In addition to his authority over the operation of the Public Health Service, the Assistant Secretary was made responsible for policy guidance of other departmental health activities, such as medicare, medicaid, and the maternal and child health programs administered by the Children's Bureau.
The newly constituted Public Health Service was totally reorganized into three operating agencies: the Health Services and Mental Health Administration; the Consumer Protection and Environmental Health

Service; and the National Institutes of Health. I have already introduced to you the three gentlemen who are the heads of these three organizations. Accompanying me today are the individuals who direct these agencies: Dr. Joseph T. English, Administrator of the Health Services and Mental Health Administration; Mr. Charles C. Johnson, Jr., Administrator of the Consumer Protection and Environmental Health Service; and Dr. Robert Q. Marston, Director of the National Institutes of Health. Each of these gentlemen will discuss in detail the functions and responsibilities of the agency he heads. Let me first tell you something of the reasons for the reorganization and how it came about.

Office of Health & Scientific Affairs



Dr. STEWART. Now, if I may draw your attention to the chart, the solid line is the direct responsibility, operational responsibility, of the Assistant Secretary for Health and Scientific Affairs, with the Surgeon General as his deputy, and the three administrations are so illustrated.

Mr. FLOOD. We will place that chart in the record at an appropriate point.

Dr. STEWART. The solid line is the line of authority of the Assistant Secretary to the National Institutes of Health, Health Services and Mental Health Administration, and Consumer Protection and Environmental Health Service, the three major elements.

The dotted line is health policy development review and approval to the Bureau of Health Insurance, the medicare program of the Social Security Administration; Children's Bureau title V programs, title XIX of the Medical Services Administration medicaid program, and the Rehabilitation Services Administration.

Mr. FLOOD. Are there any questions concerning this?

Mr. Michel.

Mr. MICHEL. Where do we find the Public Health Service?

Dr. STEWART. The solid line area is the Public Health Service.

Mr. MICHEL. But we just do away with the name altogether?

Dr. STEWART. No. In the issuance it says the reconstituted Public Health Service shall consist of.

Mr. FLOOD. Shall?

Dr. STEWART. Does consist of.

Mr. SHRIVER. Where is the Food and Drug Administration?

Dr. STEWART. The Food and Drug Administration is in the Consumer Protection and Environmental Health Service. It is one of the three major components of that administration. Now, each of the administrators when they appear before you later in your hearing can go into detail as to what they have under their administration.

Mr. FLOOD. Will you be here?

Dr. STEWART. No, sir; I will not.

Mr. FLOOD. Of course, Mr. Cardwell will be here.

Mr. CARDWELL. Yes, sir.

Dr. STEWART. I would like to be here, but without an Assistant Secretary, I have to go back to the office.

Mr. FLOOD. Further questions?

Proceed.

REASONS FOR REORGANIZATION OF HEALTH PROGRAMS

Dr. STEWART. These fundamental changes were not made lightly, nor in haste. They were the product of a thorough assessment of the Federal responsibility in meeting the health needs of the American people, and not only in meeting those needs but also in measuring and trying to understand them. This process of analysis is a continuing one, and it contributes to many different kinds of judgments and conclusions. The budget before you is one of them. The reorganization clearly is another.

The vast and rapid proliferation of Federal health activities, more than 70 percent of which are the responsibility of the Department of Health, Education, and Welfare, has added immensely to this Nation's ability to set and reach ever higher health goals. As you know, virtually all the health and health-related programs that the Congress has authorized in the past 8 years have been lodged, as they should have been, in the Department of Health, Education, and Welfare.

From medicare and medicaid to regional medical programs to air pollution control, the Department has taken on tremendous new responsibilities in addition to those that it has long had in such areas as biomedical research and support of State and local public health efforts.

These responsibilities embrace essentially seven kinds of endeavor:

1. The conduct and support of health research;
2. The training of health manpower;
3. The improvement of health facilities;
4. The provision of hospital and medical services;
5. The prevention and control of disease and disability;
6. Safeguarding the quality of the environment; and
7. Protection of the consumer.

It has been increasingly evident over the past several years that this expansion of the Department's role in the health field demands the most efficient and responsible alinement of departmental health functions at both the policy and program levels. Such well-established functions as aid for hospital construction and the development of health manpower clearly need to be coordinated with many of our newer responsibilities, such as those in comprehensive health planning

and the development of regional medical programs. Our growing array of activities relating to environmental control and consumer protection call for a central focus to replace the fragmentation that existed prior to the reorganization.

Programs whose primary focus was on the prevention and control of disease through the identification and control of health hazards were consolidated in the Consumer Protection and Environmental Health Service. The Food and Drug Administration, the National Air Pollution Control Administration, and the Environmental Control Administration were placed together in the CPEHS to forge a coordinated attack on hazards to health that reach the American people through their environment and through the foods, drugs, and other consumer goods they use.

The Health Services and Mental Health Administration was created as the focus for programs concerned chiefly with developing health resources and improving the provision of health services for the American people. As this committee is aware, defects in our public-private system of health care delivery are a serious and urgent national health problem. Solving this problem will require innovations in research and development, in planning, and in the administration of programs of health care. The Health Services and Mental Health Administration provides the departmental framework for these activities by bringing together programs new and old that had been widely scattered throughout the Public Health Service.

The mission of the National Institutes of Health was greatly enlarged by the addition of two major new responsibilities: health manpower programs and biomedical communications. The PHS Bureau of Health Manpower, with its broad responsibilities in the areas of manpower development and utilization, was made a part of the National Institutes of Health in order to consolidate and streamline manpower programs that had been located both within and outside NIH, and also to achieve greater efficiency and balance in our expanding health manpower activities. In addition, the National Library of Medicine and other related scientific communications activities were shifted to within the NIH framework because of the obvious close relationship between biomedical research and the communication of knowledge gained through that research.

I have not tried to give you a detailed picture of the makeup of these new health agencies; Drs. Marston and English and Mr. Johnson will provide considerably more information about the agencies for which they are responsible. I have, however, tried to give you some indication of the significance of the reorganization and the reasons for it.

I would like to make just one additional comment on this subject.

Secretary Finch has said and I fully agree that the organizational changes now in effect are sound, beneficial, and necessary. But as the Secretary has indicated, the test of organization is performance. We have planned and carried out this reorganization in the firm belief that it will enable the Department to be a more effective partner in the national effort to achieve improved health for all the American people. If we find that changing conditions, new problems, or new opportunities create a need for further changes in the structure of our

health activities, we will make them. An organizational chart, no matter how carefully and skillfully developed, is not a sacred cow to be worshiped and left alone. It is more like a chameleon, able to adapt to change, to meet new conditions and respond to them, not simply for survival, but for service.

I believe we have taken a major and important step toward better management of our tremendous responsibilities in the health field. We are prepared to take more steps when our own judgment, the wise counsel of the Congress, or other insights dictate the need for further change.

Mr. Chairman, I would now like to turn to the budget requests for the three health agencies in the proposal before you. These requests total about $2.9 billion, which represents roughly an 8-percent increase over the fiscal year 1969 figure of $2.69 billion. Later the three agency heads and their associates will testify in detail on individual proposals. I will limit my formal remarks to a few of the highlights of the overall request.

ORGANIZATION AND DELIVERY OF HEALTH SERVICES

To begin, I think we all agree that good health care available to everyone at acceptable cost is a national goal. At the same time we know that Federal dollars alone will not guarantee this goal.

It is in fact painfully clear that our capacity to meet growing need and greater demand for better health services is lagging badly.

One of the economic axioms is that short supply and great demand bring higher prices. In health services as in any commodity market, this means competition and in such competition the poor—the disadvantaged—the very people in greatest need—stand little chance.

The answers we in public health must find are ways to increase capacity, to remove scarcity, to better use limited money, manpower, and facilities to close the gap between supply and demand.

Bureaucratically, we speak of this as the need to improve organization and delivery of health services. No effort within the Public Health Service today rates higher priority.

One evidence of this priority is creation of the National Center for Health Services Research and Development within the Health Services and Mental Health Administration. The Center supports and conducts research to produce new knowledge—new ways and means to improve both quality and availability of health services. For fiscal year 1970 we are requesting a total budget of $45 million for the Center, approximately a $3 million increase over 1969.

One of the major channels into which we must feed the results of the Center's research is the partnership for health program. The machinery for this comparatively new program is now well established. By 1970 comprehensive State health planning agencies will have been established in 54 political jurisdictions. The 1970 budget will provide for the continuation of 93 areawide health planning groups and for the organization of 20 new agencies. Support of State public health service programs and development projects will also be enlarged. In all, the 1970 request to enhance the partnership for health amounts to $190 million, an increase of $18.9 million.

Planning is not all this program does. As a counterpart to the concept of comprehensive planning and priority-setting at State and local levels, the States are not able to provide aid tailored to the needs of their people and without the former categorical restrictions. These project grants also can be directed to meet health problems of special national significance. German measles (rubella) is a good example. As you know rubella produces severe congenital defects in about one-fourth of children whose mothers contract the disease during pregnancy. We are today on the verge of developing a vaccine against the disease. We have every hope that the vaccine can be licensed in the next few months.

Rubella epidemics are known to run in cycles of 6 to 10 years and the last such epidemic occurred in 1964–65. With all this in mind, we are giving rubella immunization programs high priority in the overall competition for the $98 million requested for project grants under the partnership for health program.

For health services for migratory workers and their families whose health status lags well behind the remainder of the population, the 1970 budget contains $12.9 million. This is $4.8 million or 59 percent more than the previous year. These funds will finance 130 projects serving approximately 375,000 people. Activities to be supported include family health service clinics, short-term hospitalization in community facilities, health education, and sanitation inspection.

Improving the quality of care and the health services delivery system is also the principal focus of the regional medical programs service, which administers the programs authorized by the Heart Disease, Cancer, and Stroke Amendments of 1965. Medical centers, community hospitals, private physicians, and other individuals and organizations in 55 regions across the country are working together under the stimulus of these programs to assure that discoveries in the laboratories are quickly translated into better medical care.

In 23 regions, programs have already moved from the planning phase into operations, and it is expected that by the end of the current fiscal year, 22 more regions will have been awarded operational grants. The $39.8 million increase in budget authority is proposed to support this shift from planning to operations. It would allow the already operational programs to be continued in 1970 and another three to five regions to enter the operational phase.

To further accelerate and strengthen this process, the programs which formerly made up the National Center for Chronic Disease were also made a part of the regional medical programs service. These activities provide a source of effective technical support by identifying advances in prevention, diagnosis, and treatment that are ready for widespread application and by encouraging use of these advances throughout the Nation's medical system.

Among the chronic disease activities now operating within the regional medical programs service are the national clearinghouse for smoking and health, which is directed toward understanding the widespread recognition of the dangers of smoking to good health and a nutrition program designed to identify and help reduce nutritional problems existing across the Nation.

The 1970 budget would also continue the growth of the community mental health centers program. Appropriations for grants to construct centers, or to meet a portion of the initial cost of professional and

technical personnel required to expand services, would rise by $17.1 million, to a level of $81.8 million. At the end of the current fiscal year, it is anticipated that there will be 428 community mental health centers serving 66.3 million people. One year later, this would be increased to 515 centers serving an estimated 79.8 million people.

Steps are also being taken to bring the experience of the community mental health center to bear on narcotic addiction and alcoholism. In both cases, there is a grievous lack of community services to provide care and treatment. To help meet this need, the 1970 budget contains $4 million in new money to initiate an alcoholism program and $8 million—the same as in 1969—to continue the narcotic addiction program. Both respond to provisions of the Alcoholic and Narcotic Addict Rehabilitation Amendments of 1968.

INCREASING THE HEALTH MANPOWER POOL

A major obstacle in all our efforts to assure the delivery of health services is the critical shortage of trained manpower, particularly physicians, dentists, and nurses. In 1968 the Nation was short an estimated 52,000 physicians, 9,000 dentists, and 141,000 nurses. Moreover, in some health occupations, the gap between supply and need is widening. The 1970 budget, therefore, proposes to expand programs for institutional support and construction assistance for teaching facilities.

The Health Manpower Act of 1968 made substantial changes in the program of assistance for medical, dental, and related professional schools, broadening both the scope of the program and the number of eligible institutions. These changes, which are effective in 1970, are reflected in the budget by a proposed increase of $30.4 million. Grant resources for the program would thus total $96.4 million in fiscal year 1970.

Recipient schools, representing a combined enrollment of 80,000 students may use these funds for faculty salaries, equipment purchases, and in other ways to improve the quality of their educational programs. In addition, the $96.4 million will be used to improve curriculum, conduct research into ways of expediting training without impairing quality, train new kinds of intermediate health personnel and help schools with serious financial weaknesses.

Construction grants in 1970 will be limited to facilities which can increase the supply of medical and dental manpower. When combined with funds carried over from prior years, the proposed 1970 increase of $43.1 million in construction funds will provide a total of $141 million to build new facilities or replace or remodel existing faciliti s. These funds will provide approximately 1,016 new first-year places, increasing by more than 4 percent the nationally available first-year places in health professions schools. The impact of this support will also be reflected in higher quality training through modernization of teaching equipment and, under new provisions in the Health Manpower Act of 1968, provision of research and medical library space essential for teaching purposes.

BIOMEDICAL RESEARCH

In 1970 the National Institutes of Health will support more than 10,500 research projects of which about 3,000 will be either new awards or renewals of grants whose prior period of support has expired. New investigations to be undertaken range from prevention of

dental caries and a better understanding of cardiovascular disease, to expanded research on human reproduction and family planning and visual disorders. An increase of $7.6 million will be used to expand support for clinical research centers, and to enlarge research and training centers in such areas as mental retardation and environmental health.

Funding for targeted research, conducted largely through contracts, would grow by about $6.1 million. A high priority in this effort will be in population studies and family planning. None of the existing contraceptives meet all the ideal criteria: effectiveness, safety, low cost, and acceptability. Research will focus on new and improved methods and devices best suited to the diverse medical, social, and psychological needs of various population groups.

An increase of $1.3 million is also proposed to move beyond the design phase to engineering development and test application for the biomedical communications network now being designed by the Lister Hill National Center for Biomedical Communications. When completed, the network will use the latest technology for faster transmission of information to improve health education, medical research, and the delivery of health services.

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH

Funds allocated to air pollution research, development, and demonstrations would grow by about 17 percent or $7.7 million. With these resources, research in three fields will be emphasized—automotive vehicle emissions, the largest single source of air pollution——

Mr. FLOOD. Automotive what?

Dr. STEWART. Automotive vehicle emissions, or exhaust from your car.

Mr. FLOOD. Yes. You didn't write that.

Dr. STEWART. No, sir.

Mr. FLOOD. Of course not.

Dr. STEWART. I can hardly say it—sulfur oxide pollution; and the development of air quality criteria describing the adverse effects of air pollution.

In 1970 some $15 million will be awarded to support the activities of State, regional, and local air pollution control agencies within air quality control regions rapidly being established across the Nation.

Under the Radiation Control Act of 1968, the control of hazardous radiation from electronic products such as TV sets and microwave ovens will be undertaken for the first full year in 1970. An increase of $1 million is needed for this important program of consumer protection.

Within the Food and Drug Administration, additional emphasis will be given to protecting the public from illness and injury threatened by hazardous drugs. Special attention will be focused on manufacturing practices and review will be intensified to insure the effectiveness as well as the safety of drugs on the market.

Mr. Chairman, the health budget for 1970 represents, as I have said, an 8-percent increase over funding for the present fiscal year. It reflects our efforts to shape a total budget which hits hardest at such critical goals as delivery of health services, strengthening the supply of health manpower, and protecting the American people from both environmental and consumer hazards. At the same time, we have tried to make certain that we will maintain necessary momentum in other vitally important health areas, such as biomedical research.

In conclusion, I would only add that both the budget we propose and the organizational changes we have made will, I believe, provide an adequate vehicle for moving us forward toward better health for the American people.

I will be glad to answer any questions you may have.

Thank you.

FEDERAL SUPPORT FOR MEDICAL RESEARCH

Mr. FLOOD. Now, Doctor, the members here have been getting an awful lot of mail from medical schools and universities about, and I quote, "the cutback in Federal support for medical research."

What are they talking about? A cutback; what cutback? As far as we know, the budget for NIH has just about leveled off but it hasn't been cut back. They have not been reduced. Why all this mail? Do you know?

Dr. STEWART. In the research grant area——

Mr. FLOOD. There has been no cutback.

Dr. STEWART. There has not been a cutback in the budget.

Mr. FLOOD. Then why the mail?

Dr. STEWART. The appropriation increase for continuation costs of grants awarded in prior years is about 1 percent increase over last year, in the 1970 budget; but one must recognize that the cost of research is going up more rapidly than the budget of NIH. The new men coming into the field have been in training for 5, 6, 8, 10 years; the complexity of the research, the instrumentation equipment one needs, all get more expensive by the day.

So, it is not a cut in appropriations but it is in fact a cut because of these other factors that are occurring.

Mr. FLOOD. Have you seen Mrs. Reid's mail on this?

Dr. STEWART. I am not sure I have seen Mrs. Reid's mail. I would like to explain further, Mr. Chairman, that in adjusting to this situation as well as the Expenditure Act of 1968, we adopted the following policy in the research grant area: That we should honor all continuation grants, since we had made a moral commitment on this, and that we then should cut back on the money available for new grants. But we also felt that in the continuation grants there were areas where one could cut back—for example on travel—and still not interfere with the continuation of the research.

In a way, we were saying to the research scientists: "We would like to have you share in this belt tightening that is going on." We have negotiated with each of the continuation grant institutions, and the last I heard the average negotiation downward was running around 14 or 15 percent. Therefore, we have been asking the universities and the scientists "Can you tighten up on that grant continuation without really wrecking your research effort? Can you find some places to save so that we can then pass that saving on into the new pool of competing grants or to meeting the expenditure restrictions of 1968?"

Mr. FLOOD. Why the volume of mail?

Dr. STEWART. Well, I think the universities are in a difficult situation. They have been training people who are now emerging into these fields to take on research grants and the money is not there.

They have increasing costs for research but a steady budget. There are few other sources of funds. They have great competition over the nonresearch dollars available from the State government, or from endowment or wherever else, for increased education costs. So they are in a bind. It is difficult.

FINANCIAL PLIGHT OF MEDICAL AND DENTAL SCHOOLS

Mr. FLOOD. Now, we hear, despite the great shortage of doctors and dentists—and, of course, we have talked about this before, you and I—that medical and dental schools are in danger of closing. The Secretary made a point of this. Have any actually closed?

Dr. STEWART. I recall last year we talked about two dental schools that were quite imminent in closing, the St. Louis and the Loyola School.

Mr. FLOOD. Did any actually close?

Dr. STEWART. The Loyola in New Orleans closed. The St. Louis Dental School was shored up and is in a kind of a back-off from closing, but they want to reexamine it in a year or two.

Mr. FLOOD. Do you think they will make it?

Dr. STEWART. I think they will make it, yes.

Mr. FLOOD. Is this the Federal Government's responsibility to solve the school's financial problems in a situation like that? Is it Mr. Natcher's problem, Mr. Michel's, is this our problem?

Dr. STEWART. There are other medical and dental schools that are in serious financial shape.

Mr. FLOOD. I know, but is it our problem?

Dr. STEWART. I think it is our problem. We are charged by the Congress to increase the manpower supply in the country, and this is sort of a negative approach, if you allow schools to close at the same time that you are trying to create new ones to increase the manpower.

Mr. FLOOD. We are creating new ones?

Dr. STEWART. Yes, sir.

Mr. FLOOD. About nine?

Dr. STEWART. About nine, yes.

Mr. FLOOD. What are we going to do about it, this committee, what are we going to do? Is it just money, mere dollars?

Dr. STEWART. I think with respect to the schools that are in very precarious shape, the change made in the Health Professions Education Assistance Act last year can be helpful. This allows us to make grants to aid such schools and the change appears in the increase we are suggesting.

Mr. FLOOD. What should we do about it?

Dr. STEWART. I think what you should do is appropriate the increase we have suggested for 1970.

HEALTH MANPOWER SHORTAGE

Mr. FLOOD. On page 11 of your statement, you indicate there is a shortage of 52,000 physicians, 9,000 dentists, and 141,000 nurses.

Then, on page 12, you say that if we spend $141 million on bricks and mortar we will create space for 1,016 new students.

Dr. STEWART. That is correct.

Mr. FLOOD. That is not going to help very much, or is it? Not very much.

Dr. STEWART. It will reduce the shortage some.

Mr. FLOOD. Not very much.

Dr. STEWART. Not very much. That 1,000 means 1,000 per year, and each has a working life of 25 years, so you are comparing two different sets of figures here.

Mr. FLOOD. Apples and oranges again.

Dr. STEWART; No; totals and annuals. I think you are quite right that this is not going to solve all the problems.

Mr. FLOOD. Then we must find some other solution to the shortage of health manpower.

Dr. STEWART. That is correct.

Mr FLOOD. Other than trying to find doctors and dentists and nurses, what should we do—something else?

Dr. STEWART. Yes, we have some grants to schools that are trying to locate a physician assistant.

Mr. FLOOD. Do you have a solution?

Dr. STEWART. I do not know that we have a solution.

Mr. FLOOD. Not doctors, not dentists, not nurses. What is your solution?

Dr. STEWART. One looks toward extending the doctor's hands by having an assistant who is well trained to take over some functions the doctor is now doing. There is difficulty knowing how extensive this help could be because we have not defined it yet.

In the dental field we have done a lot better job. We have been working on the dental assistant for 10 or 15 years and it is now accepted by the dentist and we know it extends him by one and a half to two times.The work we have done at the University of Louisville is a good example.

POSSIBLE ROLE OF RETURNING CORSPMEN

There is also a lot of talk about using returning corpsmen from the military.

Mr FLOOD. Great talk.

Dr. STEWART. Yes.

Mr. FLOOD. Just talk? What is wrong with using the corpsmen who are coming back?

Dr. STEWART. The corpsmen training program has been developed at Duke with the idea that they were assistants to the physicians. In fact, they have run into great difficulty.

Mr. FLOOD. Not male nurses?

Dr. STEWART. No, not as male nurses, although this is also discussed. In fact they have had to use them as well skilled technicians within the institutional setting. The difficulty is how can they fit in with the doctor in his office and other settings, what are the laws?

Mr. FLOOD. You tell me.

Dr. STEWART. I am telling you the questions we have to answer before I can tell you that we have a program design that will do this. The University of Washington is about to embark on the same thing. This to me looks like the best design so far.

Mr. FLOOD. I agree.

Dr. STEWART. They are going to train and put them out as preceptors to work with the doctor. They have had the Medical Society

in from the beginning, so if there is a problem with laws, they can address themselves to the State efforts. The University of Colorado has one which is more specialized but going farther than any of them. This is under Dr. Henry Silver with pediatrics. He is using nurses who have had further training as pediatricians. He has described their job and their limits where they need to stop and get the pediatrician. This is very exciting.

POSSIBILITY OF SHORTENING M.D. TRAINING PERIOD

Other answers are also possible for shortening the training period.

Mr. FLOOD. For whom?

Dr. STEWART. For the physician.

Mr. FLOOD. How?

Dr. STEWART. At the present time you have a block of time which is on the average 12 years after high school.

Mr. FLOOD. What do you want to do?

Dr. STEWART. Let us make it maybe 10 or 11.

Mr. FLOOD. Knock off 1 year in the AB and MS?

Dr. STEWART. Yes.

Mr. FLOOD. This used to be done in law.

Dr. STEWART. It is actually still one in medicine to a certain degree.

Mr. FLOOD. That is only 1 year.

Dr. STEWART. One year is 8,000 more physicians. That means a lot. It also cuts the cost down, which is quite expensive.

If you can combine the later clinical years of the medical school and the clinical years of the internship into a block of time that is one year less, you may save a year on that side.

Mr. FLOOD. You could save two that way.

Dr. STEWART. It is possible.

AREAS OF GREATEST NEED IN MEDICAL EDUCATION

Mr. FLOOD. You make me ask this next question.

Doctor, this is your final act. You are an old pro. We know you, we respect you and admire you. What do you see as the area of greatest need in medical education? Facilities, bricks and mortar, hardware, scholarships and loans for the students, do you want to improve the curriculum, do you want aid for the basic opearting costs of the schools? Which is most important?

Dr. STEWART. Mr. Chairman, the first thing I would want is that every young person who is qualified to go to medical school can get in. The educational opportunity is there. Therefore, I cannot pick any specific problem because some require construction, some require meeting the cost of medical education of the student. If I were going to put a priority on what you said, I would say that student aid is probably No. 1, and operational money is second.

Mr. FLOOD. What do you mean—grants or loans?

Dr. STEWART. I speak of grants but I will take loans—either way.

The other priority is operating funds for the school. When I say student aid, I am also thinking of student aid as being a source of income to the schools through tuition for operation of the school.

I am talking personally now.

Mr. FLOOD. I know that. This is your last act before this committee as Surgeon General—talk.

Dr. STEWART. I think the schools have gotten distorted in their efforts.

Mr. FLOOD. What schools?

Dr. STEWART. All the medical schools; not because the research they were doing was bad research, but because this was the sole flow of money. It was so massive compared to the other.

Mr. FLOOD. Too much research funds.

Dr. STEWART. No, sir. I do not want to imply too much. What I am saying is that there was a hole to be filled up.

Mr. FLOOD. You can get sick eating too much fudge.

Dr. STEWART. Yes, you can. Some get sick with one bite and some get sick with 20 bites.

Mr. FLOOD. Not bad.

Dr. STEWART. I believe that student aid and a source of operating money in many of the schools would increase their capacity to educate the students. Some are stopped; they cannot go unless they construct. The construction block is in your first couple of years of medical school. You have to have laboratory space. In the clinical years, there are plenty of hospitals.

Mr. FLOOD. Can you train dentists and doctors and veterinarians in the same facilities?

Dr. STEWART. Michigan State Univeristy is trying this. They have the biological sciences and they combine this together. At LSU, the medical students and dental students are taught the basic sciences together. At Western Reserve it is the same way.

Mr. FLOOD. Why not?

Dr. STEWART. I do not see any reason why not. I think we are moving to a different structure of the medical school.

Mr. FLOOD. One floor.

Dr. STEWART. Not one floor, but that depends on the geography you are in. We are moving to a kind of basic biological science, which will serve as the educational center for the health professions. Then we are moving to a clinical area which involves the clinical training of doctors, dentists, nurses, technicians and others. We call this a medical center in our lingo instead of a medical school. One cannot define medical education anymore and what goes on in the medical school. You have to look at the whole ball of wax. We also find the increased competence and quality of the training of the scientists in the undergraduate colleges, in mathematics——

Mr. FLOOD. Mathematics?

Dr. STEWART. Yes.

Mr. FLOOD. Greek?

Dr. STEWART. No longer in Greek. One cannot do modern medicine however without having a fairly good understanding of mathematics.

Mr. FLOOD. What about English, history?

Dr. STEWART. We think a person should have an education as well as his medical training and some broadening is important. The demands on time are finite, though. What I am getting across is that 30 years ago the science effort in many of the undergraduate schools had to be in a sense supplemented or substituted for in the medical school. The medical school had to have its own basic science operation

because the students had not learned it well enough before they got there. Now many of the schools are finding that students know biochemistry before they get to medical school. They know the sciences. There are only some that have to be taught there. So I think you begin to see a basic science structure developing on which all of these professional schools can build.

We have movements in that way in several of the universities in the country.

Mr. FLOOD. Doctor, we have acquired a new phrase—realinement of priorities. Facilities, scholarships and/or loans, basic support—what is most important?

Dr. STEWART. I think we are going to need all of them.

If you get down to individual schools, it could very well be facilities at one and operational aid at another, and so forth.

NEED FOR CURRICULUM REVISION

Mr. FLOOD. What about the curriculum?

Dr. STEWART. This is beyond my competence.

All I can say about that, Mr. Flood, is that there has been extensive modification of all the medical school curriculum. They have gone through more change and modification of this than any other school in the university.

Mr. FLOOD. How?

Dr. STEWART. Through self-study of their own groups.

Mr. FLOOD. Over 25 years?

Dr. STEWART. Maybe it has been going on almost 20 years now. Dr. Marston? It started with Western Reserve.

Dr. MARSTON. Western Reserve began approximately 20 years ago. Since then most of the schools have gone through some type of serious reexamination of how they were doing business in terms of education.

Mr. FLOOD. Did you ever teach?

Dr. MARSTON. Yes, sir.

Mr. FLOOD. What?

Dr. MARSTON. It was my job. I went into it because I liked teaching.

Mr. FLOOD. What did you teach?

Dr. MARSTON. I taught medicine and then microbiology.

Mr. FLOOD. Medicine?

Dr. MARSTON. In a department of medicine.

Mr. FLOOD. How do you teach medicine?

Dr. MARSTON. This is the responsibility for introducing students to the care of patients and then within the department of medicine, internal medicine, of those activities there. Then I taught in microbiology, bacteriology, and immunology.

Mr. FLOOD. Doctor?

Dr. STEWART. Therefore, I do not think I can give you a generalization on this priority. It really depends on which school you are looking at as to which one would have priority. We tried to get a balance.

STUDENT ASSISTANCE

Mr. FLOOD. Where do you think the greatest need is—and this concerns this committee very much—in medical education? Is it loans or grants?

Dr. STEWART. For the students?

Mr. FLOOD. Yes.

Dr. STEWART. The bulk of the students, I think, can receive the assistance they need from loans, but there are students who cannot take on loans, or they fear taking on loans because they have come from a lower economic group and they are not used to loans. Secondly, there are women students, and they are difficult. They have an attitude of not taking on loans, which I can understand.

Mr. FLOOD. Why? How do you understand that? I don't.

Dr. STEWART. Women usually have in mind marriage at some time, and they are afraid that you and I won't marry them if they come with a big debt.

Mr. FLOOD. What about that, Mrs. Reid?

Mrs. REID. I have never given that a thought.

Dr. STEWART. We have run into this in nursing particularly, where the nurses were reluctant to take on loans because their target in life was marriage at that time and they did not want to enter a marriage carrying a debt.

Mrs. REID. That is commendable, I think.

Dr. STEWART. Therefore, what I am saying is that I think the bulk of the student assistance in medical schools can be loans, as it is now. But I do think there needs to be a grant program for students who are qualified but come from quite disadvantaged areas.

Mr. FLOOD. What do you mean by grant?

Dr. STEWART. Scholarship.

Mr. FLOOD. How long?

Dr. STEWART. All the 4 years.

Mr. FLOOD. In medical school?

Dr. STEWART. Assuming he keeps up his grades.

Mr. FLOOD. Outright grant?

Dr. STEWART. Yes. We already have this.

Mr. FLOOD. What about dentists?

Dr. STEWART. Yes; the same thing.

Mr. FLOOD. Nurses?

Dr. STEWART. Yes; which we already have. It is in the program now.

Mr. FLOOD. What about this budget for 1970? Have you put the money where it is most needed?

Dr. STEWART. Yes; we think we did.

Mr. FLOOD. Do you?

Dr. STEWART. Given the constraints we are working under, Mr. Flood.

QUALITY OF MEDICAL STUDENTS

Mr. FLOOD. Are the medical schools having trouble recruiting good students?

Dr. STEWART. No.

Mr. FLOOD. Are not most of the best students going into other fields? When I was in college most of the best went into medicine. Are they still doing that?

Dr. STEWART. We would like to argue that the best men are going into medicine, Mr. Flood.

Mr. FLOOD. Many of them?

Dr. STEWART. Yes. I think the answer to your question is that we have qualified students who do not get in. There are more qualified students applying than we have places.

Mr. FLOOD. But your class A boys are not going into medicine. Why?

Dr. STEWART. No; the measurements you use to measure this show, if anything, that it is going up.

Mr. FLOOD. Are you losing topflight A boys?

Dr. STEWART. No; I don't think so.

Mr. FLOOD. You don't?

Dr. STEWART. No. I think the number of topflight people has increased tremendously in the years. And I think the medical schools are competing very well within that pool. At the present time we are turning away people who are qualified to go to medical school—that is across the Nation.

Mr. FLOOD. Are you sure?

Dr. STEWART. I am talking about all the schools. There may be some individual schools, I think, who are not attracting top level people.

Mr. FLOOD. Why? Money?

Dr. STEWART. From the disadvantaged groups. Money is part of it, yes, plus the length of training.

Mr. FLOOD. In this country today in dollars and cents, is any professional group better paid than doctors?

Dr. STEWART. No; they are very well paid.

Mr. FLOOD. Then why are the boys going into something else?

Dr. STEWART. If you just graduate from high school and 12 years from then you are going to be a senior pediatrician making $5,000 a year, that is the problem. It is the length of time. When he gets out in practice he will be able to pay this back, but it takes this long time, and usually by the time they enter medical school they have family responsibilities, too.

WOMEN IN MEDICAL PROFESSIONS

Mr. FLOOD. I talked to you about my trip to Moscow a few years ago.

Dr. STEWART. Yes, sir.

Mr. FLOOD. Their doctors are 85-percent female. What is the matter with us?

Dr. STEWART. Nothing is the matter with us. We have about 7 percent in the medical schools.

Mr. FLOOD. I said 85 percent.

Dr. STEWART. And this figure has stayed fairly steady throughout the years.

Mr. FLOOD. Why? What is the matter with us?

Dr. STEWART. I think the real problem is that women do not choose to go into medicine.

Mr. FLOOD. Why here? They do in Russia.

Dr. STEWART. They did.

Mr. FLOOD. They do. And very high in Germany, almost 50 percent in West Germany. What is the matter?

Dr. STEWART. In the Soviet Union, as you recall, when the present medical system was structured there after the revolution, there was a scarcity of male workers.

Mr. FLOOD. The war.

Dr. STEWART. The war and the great starvation and everything else that occurred. So they went to women deliberately. Also, part of the revolution was the equal status of women and they were using this as a device.

Mr. FLOOD. They took 6 years to get a degree.

Dr. STEWART. They use 6 years but they do not have the clinical experience in 6 years, that we have in a comparable situation of 8 years.

Mr. FLOOD. What about the Germans? They are very good.

Dr. STEWART. Yes. The Germans have a system—in fact, most of the European systems are 6-year systems—but that does not include the clinical experience that we have in the last 2 years of medical school or internship. They still have that to obtain.

ADMISSION OF WOMEN TO MEDICAL SCHOOLS

Mr. FLOOD. Do you fellows have a conspiracy to keep the females out?

Dr. STEWART. No, I do not think so. I am not aware of any attempt to keep females out of medical school.

Mr. FLOOD. I am.

Dr. STEWART. There was in the past, but not now.

Mr. FLOOD. Of course there is. Quotas.

Dr. STEWART. I don't think so.

Mr. FLOOD. You don't?

Dr. STEWART. No, not now.

Mr. FLOOD. Any opinion, Dr. Marston?

Dr. MARSTON. Yes. As chairman of an admissions committee——

Mr. FLOOD. Where?

Dr. MARSTON. The Medical College of Virginia, in terms of applicants, there——

Mr. FLOOD. No quota?

Dr. MARSTON. No quota on females there. Hopkins, Minn., places I have been. In fact, in terms of proportion of applicants——

Mr. FLOOD. Doctor, I certainly have been badly advised.

Dr. MARSTON. I think one would find as one looks over the statistics there is a higher proportion of females admitted to medical school than of males on the basis of the number applying. I think there are two things that occur here. One is that the ladies who decide to go into medicine often do have stronger credentials because it requires in this country a more serious consideration.

Mr. FLOOD. They must have better than the male.

Dr. MARSTON. It is not that they must have better, but in making their choice that they are going into medicine, I think they feel they should have stronger qualifications. The applicant pool in general tends to be stronger. This is reflected in a larger proportion of females from the applicant pool actually being accepted.

Mr. FLOOD. Would you lower the standards?

Dr. MARSTON. No, sir, I do not think it is necessary. I think the problem is application, that is, of students applying. When they apply then I think they are admitted.

Dr. STEWART. I think there was perhaps 20 years ago, Mr. Chairman, a feeling that the attrition rate with women might be greater than with men in the medical school and when one has invested 6 years of possible higher school education and then leaves the medical education for whatever purpose, marriage or anything else, it is a tremendous waste of that person's time as well as the medical education. I think this has been shown to be false in the medical education field. But you still hear some of this, that there are quotas and other things. Women physicians after they become physicians are very active as professionals, part time or full time. There is no evidence to show that the role of the woman as a homemaker negates their carrying out a professional life after they graduate from medical school.

ENCOURAGING DOCTORS TO PRACTICE IN RURAL AREAS

Mr. FLOOD. Do you have any ideas as to how we can place doctors where we need them; in the places not attractive financially—small towns?

Dr. STEWART. We have no system at all.

Mr. FLOOD. Rural areas, ghettoes?

Dr. STEWART. We have no system at all. We have incentives.

Mr. FLOOD. Do you have any suggestions?

Dr. STEWART. No, I do not.

Mr. FLOOD. Why not?

Dr. STEWART. Because it is a very difficult area that I do not have the answer to.

Mr. FLOOD. In Pennsylvania, in my district—you know where I am from, 500,000 people in the entire northeast part of the State—I have one psychiatrist. In the State there are a great many. They are all in Pittsburgh and Philadelphia.

Dr. STEWART. Yes.

First let me say you have your finger on one of the things other than the numbers we have been talking about that is terribly important to solve. This maldistribution is obviously very aggravating of the whole shortage problem. We have tried various incentives, sir. We do have forgiveness of loan if a person goes to a rural area as determined by the State health commissioner.

Mr. FLOOD. Forgiveness of the loans?

Dr. STEWART. Forgiveness of the student loans. We have not had enough experience to report on that but some States have run programs like that, such as Mississippi. Didn't Kentucky run one?

Mr. NATCHER. Yes.

Dr. STEWART. I don't know the Kentucky experience. In the Mississippi one it was finally decided it would not solve their problem. The students would come back and work a year for the loan and pay it off totally and then go to the city to practice or for further training. We think we are doing something about distribution by building facilities. There is no evidence on hospitals. The American Medical Association and the Sears-Roebuck Foundation have tried for years to build clinics in rural areas to attract doctors, with average success. Other countries have obligations.

Mr. FLOOD. I have never examined you like this before.

Dr. STEWART. No, sir.

Mr. FLOOD. We respect your opinion. That is why.

Dr. STEWART. This is one of the most serious problems we have. What everybody is looking for is something that accomplishes this without any coercion or obligation or demand or anything else. Other countries have faced this same problem. The Norwegians, for example, have the remote northern area of their country and they have a federal service—a government service—where one is hired by the government to serve in the northern areas and they pay very well for serving. They have difficulty recruiting.

The Mexicans, the Soviets, other countries have obligations of 2 to 5 years in remote areas, rural areas, or undesirable areas as a return for the medical education they receive. In Mexico this works reasonably well. You have the problem of a turnover every 2 years of the physicians, and the problem of supervision of beginning physicians in the area. But it is better than what they had before, which was nothing.

Since their education is more or less paid for in Mexico, this is considered to be a return to society for having had it paid.

Mr. FLOOD. In Mexico it is entirely paid for?

Dr. STEWART. That is correct. Other than the attempts to make incentives for paying off loans and attempts to build decent facilities so a physician would have something to work with, we have not solved this problem at all.

REORGANIZATION OF THE PUBLIC HEALTH SERVICE

Mr. FLOOD. There are some people who have said, and say now that the U.S. Public Health Service has been reorganized to death.

Dr. STEWART. No, it is sort of difficult to define it these days.

Mr. FLOOD. You have heard that.

Dr. STEWART. The Public Health Service, which was the operating agency and well identified——

Mr. FLOOD. What plans do you have?

Dr. STEWART. My term expires October 1 and I am going to leave.

Mr. FLOOD. What would you like to do regarding this organization?

Dr. STEWART. I think the reorganization that we have carried out so far has been in the right direction.

Mr. FLOOD. This one?

Dr. STEWART. Yes. We preserved the name Public Health Service.

Mr. FLOOD. This one (pointing to chart).

Dr. STEWART. Yes. I do not think it is completed by any means. I think there will be further steps.

Mr. FLOOD. So do we.

Dr. STEWART. Whether the steps we have taken are the only way you could have gone, we won't know until we look back. It was obvious that with all the increased health responsibilities that were coming to the Department, we could not maintain the same structure we had before.

Mr. FLOOD. Why?

Dr. STEWART. The major health efforts that were coming to the Department were outside the Public Health Service. The stresses and strains of trying to relate these together were not good when you had that kind of structure. The new setting provides a setting for further changes.

NATIONAL LUNG INSTITUTE

Mr. FLOOD. A number of our colleagues have introduced bills for a National Lung Institute. I come from the hard coal fields. What about that? Would you like a National Lung Institute?

Dr. STEWART. I would like to support all the research and effort in lung disease that is possible. I do not think it is necessary to create a new Institute to carry out this function.

CONSOLIDATION OF NIH APPROPRIATIONS

Mr. FLOOD. What about this? There are people who say that it would be more effective, more economical to have all the Institutes consolidated into one NIH, one appropriation. What do you think? That is my last question.

Dr. STEWART. Sir, I can visualize where one could have one NIH, and you talk about biomedical research and the various categories within the activities of the NIH. In fact, we kind of operate that way anyway. However, there is great interest on the part of many people in a specific part of this big problem. They are concerned about heart disease, cancer, lung disease, or anything else. They have an input through the advisory councils and through their voluntary agencies that give a focus to a large activity. I can see this as a real benefit The limitations, however, are that there are now maybe 40 or 50 interest groups and I cannot see 40 or 50 different institutes. There would be too many. It would be cumbersome.

Mr. FLOOD. Every special interest group would like an institute for their special interest.

Dr. STEWART. Yes.

I think the management is more a function of the number of units you have. If you get out to 30 institutes instead of the number we have now it would be very difficult to handle. I think I can see how the NIH could be one institute. I think there would be very vocal opposition to it from those who are terribly concerned about various disease areas. I do not see any real reason to raise that concern at this time.

DR. DILL'S PROPOSAL FOR MEDICAL EXAMINATIONS OF VISA APPLICANTS

Mr. FLOOD. Of course, you remember our friend, Mr. Laird.

Dr. STEWART. Yes, sir.

Mr. FLOOD. Are you acquainted with a proposal of Dr. Dill that was presented to Mr. Laird when he was the minority ranking Member?

Dr. STEWART. Yes, sir.

Mr. FLOOD. This plan was of some interest to Mr. Laird. Of course, he is pretty busy as Secretary of Defense, to grossly understate it.

Dr. STEWART. Yes.

Mr. FLOOD. Congressman Michel sits here. He has taken his place on the subcommittee. He is acquainted with the proposal, and he is most likely to have some questions, I gather, of Dr. English and Dr. Sencer.

I know Dr. English has analyzed Dr. Dill's proposal. I know it has been called to your personal attention.

Dr. STEWART. Yes, sir.

Mr. FLOOD. I would like your general comments now on this proposal? What do you think?

Dr. STEWART. Dr. Dill is very well known to us. He is a very competent physician. He is one of the panel of physicians that now examine immigrants. His proposal is to go to a contract arrangement. I think it is worthy of exploring, sir. What I do not know at the present time is what is the cost effect.

Mr. FLOOD. You mean dollars?

Dr. STEWART. Yes. What appropriation will we have to seek and this sort of thing. The other thing I do not know which I would want to check out—and I do not mean to imply anything here—I would want to know how the Philippine physicians that we now use as panel physicians feel about this. We have a relationship problem there. Other than that I think it is worthy of really pursuing. Dr. Sencer may have more information than I have since he is running this thing.

Mr. FLOOD. Mr. Michel.

HEALTH REORGANIZATION

Mr. MICHEL. Thank you, Mr. Chairman. Dr. Stewart, first on your reorganization. Correct me if I have the wrong impression, but heretofore the Public Service has been a kind of umbrella for most of the health activities. Within recent years particularly we have done so much in so many, many fields that the burden of all that activity really has swallowed up the Public Health Service. In this reorganization will it still be an entity at all?

Dr. STEWART. In 1960, let us say, the Public Health Service was the health element of the Department. There were a few activities around, but it was the center of activity. Other than a few internal structural problems, it was well constituted. Then came medicaid, medicare, the tremendous growth of the child health programs, and all the other things that were occurring outside the PHS. So, by 1965 there was more money in the Department being expended for health outside the PHS than in the PHS. We worked out relationships. The one with medicare has worked very well. Others have had difficulties. There were jealousies, there were competitions, and this sort of thing. Secondly, when Secretary Gardner came in, he had been advised that it was impossible to run the Department of HEW and it should be broken into some component parts. He felt, and stated publicly after he had studied it, that the whole Department was aimed at people; that health, education, and welfare were interwoven and, therefore, should not be split up.

What we should do is try to make it a department instead of the Public Health Service, the Children's Bureau, the welfare section, and the Office of Education all having separate authority and power. That is what Secretary Gardner set out to do. It was his feeling—I think I am quoting him correctly—that, in order to create change, and he was talking about quite a massive change, the Secretary must have the power and authority to set policy and direction. In order to carry out change like this, you had to break up the elements of tradition that acted as deterrents to change. There was carried out a massive reorganization of the Office of Education at that time, after

the Elementary and Secondary Act and others passed, converting it from an organization made up of education specialists to one made up of managers of large grant programs. The PHS was felt to be resisting change.

The need was to combine all the various agencies into elements of a department with the authority vested in the Secretary rather than the Surgeon General, the Commissioner of Education, or the Commissioner of Welfare. The Secretary didn't even have the authority for the Public Health. It rested in the Surgeon General.

So, the first reorganization we undertook had two purposes and the most important one was to take the authority from the Surgeon General and place it in the Secretary.

This was carrying out the Hoover Commission recommendations and we were the 14th agency to do this, to get authority into the Secretary's office. It was under the assumption that the Secretary ought to have the authority to run his Department.

The other purpose was to restructure as much as we could at that time to make the organization a little more effective and what we have now isn't too far away from what we had before. Then we called the PHS operating units bureaus and now we call them administrations.

The Assistant Secretary is considered to be the agency head, but he doesn't have the usual management staff such as an office of personnel or a budget office. We use the management staff of the Secretary. The idea is that the Assistant Secretary is in fact the Secretary when he is acting in the health field. So our staff in the Assistant Secretary's office is composed of specialists to help us in certain areas such as medical care or environmental health.

We use the budget staff with Mr. Kelly and the legislative staff with Mr. Black and they have a health section and we work right with them. It works very well in certain areas. In others it hasn't worked well at all. I think we can straighten these out.

PLANNING

Mr. MICHEL. Where, particularly, hasn't it worked well?

Dr. STEWART. It hasn't worked well in planning. I am not sure this is a problem of organizational structure but a problem of not knowing how to plan. We have gone through extensive efforts in the last 3 years trying to reorganize our priorities, Mr. Chairman, and to understand——

Mr. FLOOD. Realine.

Dr. STEWART. Excuse me. Realine our priorities, and to evaluate what we are doing. The Secretary then has a data base to change his operation rather than the feel, the intuition, the experience of people.

One of the problems is that we didn't have the data operation. We didn't have the data to look at. We still had to use opinions of experts. The other problem is a difficulty of defining goals. Our goals are goals of the Nation, but the Department only plays a role in achieving these goals. But we have learned a lot and we are still fumbling along. I personally feel also that we tie too much of a theoretical economist approach to planning. We should have used a little broader base. We argue over this. But we are trying. We have three strong administrations which can be changed as needed. Hopefully, we will move the child health services over into this operation if this

is where the President decides the health centers should go. Hopefully, we can get medicaid into it some day.

We are beginning to get a structure of health in the Department instead of having it scattered through HEW.

EDUCATION ORGANIZATION

Mr. SHRIVER. Does the Office of Education also use the staff; the budget officer, for instance, from the Assistant Secretary for Education?

Dr. STEWART. No, I don't think so.

Mr. FLOOD. What was that question?

Mr. SHRIVER. I say, does the Office of Education use the staff of the Assistant Secretary, the budget officer, and so forth? If they don't, why not?

Dr. STEWART. Because Secretary Gardner hadn't taken that step before he left.

Mr. CARDWELL. As things stand now, there are two distinct entities involved in education. There is the Office of Education, which is an autonomous organization. The Commissioner of Education reports to the Secretary, but there is also the Office of the Assistant Secretary for Education which has been, up until now, distinct and separate. The Office of the Assistant Secretary for Education has relied on staff assistance in the management area, from the Secretary's own management staff.

I think it was planned to organize education much as health was organized.

Secretary Finch has announced Dr. Allen will serve in the dual capacity as Assistant Secretary for Education and Commissioner of Education, so this would seem to be a step in the direction of bringing those two things together, somewhat in the same way but not exactly, as has been done in the health area.

RUBELLA IMMUNIZATION PROGRAM

Mr. MICHEL. Dr. Stewart, let me go through several items in your statement first.

On page 8 you make mention of the fact that high priority will be given to rubella immunization in the $98 million requested for project grants under the partnership for health program. Roughly how much of that $98 million would go for that?

Dr. STEWART. There is $18 million in that for the rubella program.

Mr. MICHEL. When we talk about project grants on this immunization, what are we really talking about? Is this spread out all throughout the 54 agencies, in the States and territories?

Dr. STEWART. Yes, sir. The eligibility can be a city, State, or any nonprofit organization. They apply for a project to carry out a program. It is reviewed technically at our regional office and we control the funding in Washington.

Mr. MICHEL. We have been given to understand, either rightly or wrongly, that we were going to take on this project similar to what we did several years ago with the advent of the Salk vaccine and tackling the polio problem. Now, are we really going to be doing that in the same fashion?

Dr. STEWART. That is right.

Mr. MICHEL. What gives it the national impetus? This is a national program. How does it get across that way if we are still thinking in terms of all these areas and communities coming in for grants for their own proposals and it might be attacked in a variety of ways. Are we sure we are going to get the job done by that divergence of means of getting it done? Is that good? Is that bad?

Dr. STEWART. Mr. Michel, I think the debate that has gone on on this relates to the old Vaccination Assistance Act that we used to have. The Vaccination Assistance Act allowed us to do three things: We could buy vaccine or we could provide a person to help run a campaign or we could pay for and develop the educational publicity and things that would go with it.

When we were putting together the Partnership for Health Act, in which we were trying to get away from a whole series of categories, the Vaccination Assistance Act was allowed to expire with the idea that this program could pick up that area.

Now, we had several reasons for that. When you get a new vaccine—this is true with, say, measles vaccine—not German but the regular measles. The first couple of years you need money to purchase vaccine and put on the campaigns and to monitor because it is new, and you need to get the vaccine that we buy out to the disadvantaged or the public health clinic area.

In a couple of years, though, the community has picked it up through the medical society, the maternal and child health programs, and so forth, and you no longer need it as a special program. If we were going to have a new vaccine every 2 or 3 years, we would need a special appropriation. But there is nothing in the partnership for health that doesn't allow us to do just exactly what we did under the Vaccine Assistance Act. We can buy vaccine and supply it to the people for public health clinics. We can put people out in the area. We can develop the publicity, either under the grant or some other arrangements.

The only thing that is different is it doesn't say, "Of this $98 million, $18 million will be used for this specific area."

We have tried to avoid that kind of earmarking because in a couple of years we expect rubella vaccination problems or programs to be part of the normal fabric of medical care in the country, and you would no longer need to use the $18 million for that.

Well, then, maybe there is something else we can shift to in the project area, some higher priority area. We are looking for flexibility.

The National Center for Communicable Disease Control has already been meeting with volunteer agencies, with the States, the local health officers, and there is a meeting of some 300 or 400 going on next week, I think it is, to develop a national plan. We will work out a national publicity plan. We do have a person now in every State who works on the intelligence of disease that is occurring as well as developing vaccination campaigns, and we think within this context it is possible to do all that needs doing without having to create a new category that we may not need 3 or 4 years from now.

I have told those who are terribly concerned, and some think maybe it should be earmarked now. We can operate it that way, too. From our standpoint, however, the partnership program is a vehicle which we think fits the need better.

Mr. CARDWELL. Both Dr. Sencer, as I recall, and the Secretary emphasized they would expect a high degree of voluntary participation by local citizens in the actual execution of the vaccine program, similar to the participation that occurred with Sabine and Salk vaccines.

I think that was the point of your question, and that is true, is it not?

Dr. STEWART. Very much so. The rubella vaccine is a little more complicated to use on a mass basis than the oral polio vaccine was, for example, or the measles vaccine. It looks like it must not be given to adult women at the present stage of development. The idea, then, is to immunize children around the age of 10 to prevent a pool of infection which would threaten the mother at home who is pregnant. The children themselves will grow up and be immunized.

You have to be very careful when you give the child this vaccination, that they don't have a mother at home who is 2 months pregnant or 1 month pregnant. We haven't had any transfer of the virus from an immunized child to the mother in the field trials. They do shed virus and there is a possible danger.

You have to have a little more control than you would if you could just line everybody up and go to it.

Mr. FLOOD. Can you "shed" a virus?

Dr. STEWART. Yes. That is part of our lingo, Mr. Chairman.

HEALTH OF MIGRATORY WORKERS

Mr. MICHEL. On the migratory workers, I see the funds will be for 130 projects serving approximately 375,000 people. How many migratory workers do we have in the country?

Dr. STEWART. There are about a million people who move in the migratory streams. There are three streams; the east coast, the Texas stream, and the west coast. About 1 million people.

Mr. MICHEL. Are we likely to, on the strength of that, get some flak from those who say, "You are only taking care of 375,000 and you have over a million"?

Dr. STEWART. Yes, that is possible.

Mr. MICHEL. This is 59 percent more than the year before.

Dr. STEWART. Yes, and this is very good. Even with the amount that we have asked for in 1970, this is a stopgap kind of program for the migratory labor. It is the best we can do within the program that we have. We haven't a general way of getting medical care to them in the way most people get medical care in the country. They have problems with residency requirements when they get sick. Sometimes when they are working they may be making an income that exceeds the welfare level of that area, but when they aren't working for 3 or 4 weeks, then they are somewhere else.

This program fills in gaps. We have tried to have clinics that are established for the time they are in an area. We try to concentrate on their home base areas. Usually they are there a little longer. We have also tried to use this money to increase the sanitation in camps they stay in.

I think the last time the act was extended we were permitted to pay for short-term hospitalization if there were no other sources of funds like medicaid available in an area for them, but it is not the

answer to the total health problem of migratory laborers, by any means.

Mr. MICHEL. In the nature of the work they perform, should we assume there would be a much higher incidence of sickness?

Dr. STEWART. There is. In infectious disease particularly, and particularly among the children who are riding with them; running nose, running ears, pneumonia.

Mr. MICHEL. And the communicable disease problem is compounded by the very fact that they are mobile?

Dr. STEWART. Yes. Injury is higher. Diarrheal diseases in the summertime. I assume those with chronic disease have been kind of screened out because they don't seek this kind of physical labor, but it is a real acute disease problem. They do get appendicitis and other things.

Mr. CARDWELL. The task force that Secretary Finch appointed to review the health budget did recommend a larger budget in 1970 for this activity. This item is under review now as a part of the overall review of the budget by the Bureau of the Budget. It may or may not result in a proposal to change the budget, but the task force at least felt that more of the $15 million authorization should be used this year. We will have to see how it works out.

COMMUNITY MENTAL HEALTH CENTERS

Mr. MICHEL. On page 10 in the mental health centers program you say "Appropriations for grants to construct centers to meet a proportion of the cost for professional and technical personnel required to expand service would rise some $17 million," up to nearly $82 million, and you anticipate there will be 428 community mental health centers serving 66 million people. How do you arrive at that figure? Is that just a population figure that surrounds these given centers? Certainly there are not that many people in need.

Dr. STEWART. That doesn't mean the need. That means the population base.

When the Community Mental Health Centers Act was passed, there was required a State plan. A considerable amount of time was spent developing plans with the States. They developed the idea of a service area for which there would be a community mental health center. These areas vary but in general they are around 50,000 to 60,000 people. They generate enough mental illness and need for care to warrant a community mental health center. It is those figures that are multiplied by the number of centers. It doesn't mean that is the only place they get their care and it doesn't mean they will in fact need the center. It is a population base that requires this kind of thing.

HEALTH PROFESSIONS EDUCATION

Mr. MICHEL. I was most interested in your exchange with the chairman relative to this ever-growing problem of trying to meet the demands in medical education. I note here in your comments on the recipient schools you say they represent a combined enrollment of 80,000 students.

Now, this figure isn't the figure of those actually involved in medical training of some sort?

Dr. STEWART. No. That is the health profession schools.

Mr. MICHAEL. In response to one of the chairman's questions you said, "Yes, we are doing that," meaning grants to students; for student doctors, for student nurses, and several other categories.

What percentage of our medical students would be the recipients of grants, currently?

Dr. STEWART. I can't give you that.

Mr. MICHEL. Is it significant or is it just a dribble?

Dr. STEWART. Not in grants; no. It is the percent that are on loans. Somewhere around a third of the medical students have student loans.

Mr. MICHEL. A third of our U.S. medical students are getting assistance by way of loans?

Dr. STEWART. Yes; in fact it is slightly over one third.

Then we do have the Opportunity Act for nurses and there is an increase of several million dollars in the budget for student nurses and dental students the same way. They can give you the breakdown on how many have what.

Mr. MICHEL. With this growing need for more, and better doctors, I think the Secretary himself alluded to this in his testimony and made mention of the fact that he thought it was much easier to speed up the number of doctors into the stream by simply enlarging upon the already ongoing medical schools that we have.

Taking that one step further, and assuming that is what we ought to do in the interests of economy and priority and getting the most for our money in the quickest time, 50 years from now wouldn't it seem to be a bit impractical if we would be cemented into that position of just having the same number of medical schools in the country?

Dr. STEWART. There has been a considerable increase in the number of medical schools and students. It has kept up with population if you use a population position.

Mr. FLOOD. It has?

Dr. STEWART. Yes. Positions have kept up as far as physician/population ratio goes.

The question is, what is a physician?

Mr. FLOOD. What?

Dr. STEWART. Let me explain.

Mr. FLOOD. Well, you'd better.

Dr. STEWART. Before World War II most physicians were general practitioners and one physician was like another physician. Now, when some 60 percent are specialists of some type or another, this ratio has much less meaning than it has when all physicians were alike. You were comparing likes, and now you are comparing unlikes. You have to determine how many pediatricians you need and how many surgeons, and general practitioners, which is the crucial question.

INCREASING SPECIALIZATION IN MEDICAL PROFESSION

Mr. MICHEL. In the old days you could take the number of doctors and divide it into the number of population and say, "This is what the proportion is," but today, as you say, they specialize to such a degree that when you are talking about the relationship, there is one psychiatrist, one M.D., one neurosurgeon, etc., to so many people.

That is just one of the points I hoped to develop. It seems to me we have gone so far in this area of specialization that our real need is perhaps even greater in the paramedical field.

Since we are so limited in the number of people we can accept in medical schools—and I am not so sure it is altogether proper we turn down everybody unless he has perfect A grades, why not utilize some B level students or some a shade below who may have an inclination to go into medicine—not to the degree of being specialists, but simply to do some of these every day things in the paramedical field. We don't all need the attention of someone who has spent 10 years getting some advanced degree in some specialized field.

What do you have to say about that?

Dr. STEWART. I think you are on to a very important area. I think it is absolutely necessary that we specialize. The technology of medicine has expanded so broadly that you need specialists. It is a thing that happens in any field when science moves on and technology develops.

What we haven't done though is this: With all these specialists, the individual patient needs somebody who manages him as a person. First, what he can manage without calling on the specialist and, second, managing that person through this array of specialties and services that may be needed for his care. We have no one who looks at the person as a person and manages him as a person.

We have had a considerable amount of work on this. They are now talking about a new generalist who is a manager and who may have to be a wiser man than the specialist. We now have a new specialty board established for family medicine. There are curricular changes in some of the schools by now which give it a sort of a craft arrangement. If you are going into research, you go one way and if you are going to be a family physician, you go another way. There is considerable effort in this area. We have a long ways to go. We have had a great deal of resistance to it because many people thought you were talking about creating the old general practitioner of 30 years ago. We obviously can't go back to 30 years ago. You create something that fits into the present time.

So I think this is an area where we may very well have some solution to our shortage problems, our ability to meet demands, and whether you call him a family physician or a primary physician or "the new general practitioner," regardless of the title, it now seems to be fixed in family medicine.

Mr. MICHEL. In one way it is something similar to our need for not so many additional beds in the intensive care wards of hospitals as it is in some level of extended care.

Dr. STEWART. This is part of it. You need a manager who decides what is the best way to do it and calls on the specialist to help him. But he is taking care of the person as a person.

An analogy might be, if you are going to repair your house or add on to your house, you could be the contractor yourself, or the electrician, carpenter, and so forth and so on, or you could get a manager of contractors. If you know as little about building houses as I do, you would seek out a reliable person to do that.

We have the specialists but we don't have the contractor. This is what we are looking for.

EMPHASIS ON RESEARCH IN MEDICAL SCHOOLS

Mr. MICHEL. I know your feelings, I am sure, with respect to the volume of research and particularly with the large research grants we have awarded over the past years through NIH. I have been rather distressed and gotten the general feeling that because we have been so free with those grants, particularly to the medical schools, that perhaps we have contributed to this problem of more and more medical students going into the field of research rather than into the field of teaching or meeting the demands for more doctors to treat patients.

I read a speech not so long ago given before the Medical School Faculty at the University of Illinois. It was a very provocative kind of a thing. It was given by a doctor who had been graduated from there 35 or 40 years ago and raised Ned with them because as far as he was concerned there was only a little dribble of additional doctors being prduced out of the same big university medical school as there was when he was going to school, but in the meantime our research grant program has been building and pyramiding, and he wanted to know how come we hadn't met the need for those to give services to people.

Dr. STEWART. There is no question there has been uneven development. I don't think it was the free, easy use of research dollars at all. I think the dollars were very well used, but we created a development of the biomedical research area in the country. It was exciting; it had money; it was doing a good job; it was providing us with things we hadn't had before and we overlooked the fact that this is one piece of the total that we have to build up. Now we are beginning to look at this other area.

What I am worried about is that people say, "Well, we should decrease this biomedical science area in order to offset this," and I think that would be a big mistake.

Mr. MICHEL. How many doctors are we producing a year?

Dr. STEWART. About 8,000.

Mr. MICHEL. And 10 years ago we produced how many?

Dr. STEWART. Seven thousand or 6,500.

You must recognize, gentlemen, that one of the reasons our physician/population ratio has kept up with population is that about 18 percent of all licensed physicians are graduates of schools outside the United States.

INFLUX OF FOREIGN DOCTORS AND NURSES

Mr. MICHEL. You anticipated my next question, which was going to be, what is the percentage of doctors coming into the stream in more recent years from foreign schools?

Dr. STEWART. About 1,500 to 1,800 a year come to the United States. About 18 percent are now graduates of foreign schools. In that figure, there is a small number who are American citizens who went to a foreign school and then returned, but that is a small amount.

Mr. MICHEL. I read somewhere too that aliens compose 17 percent of our newly licensed doctors. Would that be possible?

Dr. STEWART. That is correct.

Mr. MICHEL. And 28 percent of our interns and residents?

Dr. STEWART. That's right. So we have been filling the gap and meeting some of this demand by the use of the graduates of foreign schools. Also, of course, there is a draw for these people too because these jobs, in terms of what they can make in their own country, are fabulous.

Mr. MICHEL. This brings us right down to the doorstep of a real problem because as a matter of policy, we have a student exchange program with foreign countries. I have a number of these students in my district from foreign countries—India, you name it—countries that have expected these students were going to come here to get the kind of education they needed and go back then to help their own country.

Now, I am finding—and the chairman touched on the subject—where one of these exchange students is the only doctor we have available in the small community of Metamora, Ill. The community is desperate. He wants to stay there. He likes it. The people love him, but to fulfill this agreement he should be going back to India. I am torn between whether or not I should introduce a private bill to say, "Look, notwithstanding that agreement, we need him here and we love him and we want to keep him."

The people are on me every day saying, "Why can't you let him stay here?"

Dr. STEWART. I used to be the chairman of the committee in the Department who decided on waivers and I know exactly what you are talking about. It is a very difficult situation.

But the foreign graduate area is a difficult area and a growing problem. We now have an interagency committee of the American Medical Association, the AAMC, the Departments of Justice, State, and HEW, who are trying to look into this. The proportion of the number who emigrate to the country who are in the health field as immigrants is very high. It is a job market in a sense, kind of pool.

It is very difficult to run a hospital of any size at all without some kind of full-time staff in the hospital. Since it is practically impossible to hire physicians as your full-time staff—or because of the medical society's resistance to full-time staff—they seek internships and residencies then. Then when they look at the number of interships in the country, it is twice the number that we have graduating.

Mr. MICHEL. From what I have been able to determine, we have 150 towns in the State of Illinois which are in desperate need of a doctor. We have one community in the northern part of the State with 22,000 population and only one physician in that town. I think you will have to agree it doesn't meet the need.

Dr. STEWART. I don't think numbers are going to solve that problem entirely.

Mr. MICHEL. Here is an article in our local paper: "St. Francis Hospital may import nurses from Britain."

Dr. STEWART. Nursing is another area where we have a number of people trained overseas coming to this country.

Mr. FLOOD. I didn't know that.

Dr. STEWART. Hospitals run recruiting programs. The Philippines, England. Of course, most of the English nurses are Irish, I believe.

TRANSFER OF PERSONNEL FROM CINCINNATI

Mr. MICHEL. Dr. Stewart, you know we have had an exchange of correspondence with respect to the concern I had on the basis of a chance trip to Cincinnati and then visiting with some of the people there about the transferring of some of the personnel from the environmental health operations there in Cincinnati back here in the Washington, D.C., area.

I think you clarified it to a pretty good degree in our exchange of correspondence. I am not certain whether or not, when we get more into this thing and that whole environmental health area, my questions would be more appropriately put at that time.

Dr. STEWART. Mr. Johnson will be prepared to answer that.

Mr. MICHEL. Then we will leave it rather than burdening you with it. We do have a concern about it and I think the committee pretty well expressed itself as to where we thought this ought to be done and where we didn't want it done. As a matter of fact this committee has some pretty strong feelings about the matter.

CIGARETTE SMOKING AND USE OF DRUGS

I have just one other area where I would like to get your view, Doctor, I don't smoke. As a matter of fact, the majority of the members of this committee don't smoke. My wife does smoke. We have four children. Three of them are boys and they are all athletically inclined and up to this point there has been no inclination on their part to take up smoking. I think one of the biggest factors there has been the fact that they have been as athletically inclined as they are and the coaches have decreed that "You don't play if you smoke." We talk about it at home with the kids. One of the things I am concerned about is at the same time I see that attitude reflected in the kids, I also see evidence at the college level and at the high school level of a greater use of drugs and narcotics. The question is raised in my mind, with all the advertising that has been going on with respect to the harmful effects of smoking, have we turned some of these people away from the cigarette to a substitute? Is there any evidence to show that at all, Dr. Stewart?

Dr. STEWART. I am not aware of any studies.

Mr. MICHEL. As a matter of fact, in 1964 the Surgeon General's advisory committee had the question, "What would satisfy the psychological needs of 70 million Americans who smoke if they were suddenly deprived of tobacco?"

That question was kicked around.

Dr. STEWART. The kind of psychological action one gets from LSD and marihuana is quite a different kind of psychological reaction or physiological reaction than that one gets from cigarette smoking.

Whether anyone has studied it as you are presenting the question, I don't know. I would have to ask some of our people working on drug abuse as to whether there have been any studies along these lines. We do know there is obviously a great increase in use of drugs. We don't know to what extent. We do not have any solid information on the long-range effects of marihuana.

Mr. MICHEL. I read an article somewhere recently that said "New study finds drop in smoking," but at the same time there were alarming figures showing that the incidence of drug addiction was shocking in the college and even on down to the high school level.

Dr. STEWART. Our feeling is that it is two different physiological things.

Mr. MICHEL. Do you think it is possible that we could overstate the case to such an extent against cigarettes that we then find ourselves a party to the problems of increasing drug use?

Dr. STEWART. I don't know.

Mr. MICHEL. I gather from your response that we really haven't had any study to investigate the reasons why people do take up smoking?

Dr. STEWART. No; we have had considerable studies on that.

Mr. MICHEL. What do the studies show?

Dr. STEWART. There are social reasons, social pressures, acceptance. There are psychological reasons; satisfaction, ease of tension and these types of things. These are the two major motivations for taking up smoking and the difficulty is stopping smoking.

Mr. MICHEL. On that point, the Surgeon General's report back in 1964 did not refer to smoking as an addiction. Didn't that report make a marked distinction?

Dr. STEWART. The dependency on cigarettes is a factor. The question is whether one is talking about addiction in the sense of physiological dependence on it or one is talking about psychological or social dependence. Dr. Horn has been supporting studies, doing studies, trying to piece this information together.

Mr. MICHEL. Who is Dr. Horne?

Dr. STEWART. Head of the Clearing House on Smoking and Health.

Mr. FLOOD. Where?

Dr. STEWART. In the regional medical programs in the Health Services and Mental Health Administration. I don't know where he is physically located. He is here in the Washington area somewhere.

Mr. MICHEL. I know when we talk about drugs we usually talk in terms of addiction to the drugs.

Dr. STEWART. We are using addiction in a very, very narrow sense then. Where one gets ill if he does not have it, that means he is physiologically dependent upon it. When one gets into the drug abuse area where you can get a dependence on but not be addicted to, you can have a stopping of it without withdrawal symptoms. Dr. Horn's studies have been related to trying to understand this from the sense of: How do you get methods to help people stop smoking if they so desire?

Mr. MICHEL. Let me ask maybe one or two more here in that same area but having to do very directly with something we may or may not have to be confronted with on the legislative side around here. We get some mail about it in varying degrees from time to time. That has to do with the advertising of smoking. Have there been any studies to show what effect advertising has had on inducing people to smoke? I guess that means for the first time, or those who may take up smoking. Have any studies at all been made to show what effect advertising has in that area?

Dr. STEWART. From our standpoint the studies are that when you have good advertising and a lot of advertising the sales go up, consumption goes up. When you have statements on television, under the equal time provision, that speak about the hazards of smoking, you begin to get it going down.

So there is no question in my mind that advertising as a means of selling and getting people to do things is very effective. I am sure the industry has great studies of the effects of advertising on selling and consumption.

Mr. MICHEL. I think that is probably all, Mr. Chairman.

Mr. FLOOD. Don't hurry.

Mr. MICHEL. I think that is all.

Mr. FLOOD. Very well. Monday at 10 o'clock, gentlemen.

Thank you.

MONDAY, MARCH 17, 1969.

TOBACCO RESEARCH

Mr. NATCHER. The subcommittee will come to order.

Dr. Stewart, as you have heard me say on one or more occasions, the people in Kentucky are very much concerned about tobacco at this particular time. My people are definitely of the opinion that if tobacco is harmful to the health of our people that something should be done about it.

Starting in 1958 on the Agricultural Appropriation Subcommittee, we began discussing with the research section of the Department of Agriculture the question involving additional research in tobacco. You recall that when the report on smoking and health was released in 1964 by Dr. Terry, the Surgeon General, hearings were held before the Committee on Agriculture in the House pertaining to this particular matter. Prior to this time we had stepped up appropriations for research in tobacco and in 1960 I talked with the Governor of the State of Kentucky concerning the erection of a facility to be used for research at the University of Kentucky. I felt, Dr. Stewart, that the State of Kentucky should build the building and, if possible, appropriate a small amount to begin research at this particular facility.

The Legislature of the Commonwealth of Kentucky appropriated $1.5 million for building, and $50,000 which, of course, is a small amount, but they at least started a small research program at that time. The building as it was constructed and underway was expanded and when completed cost about $4.5 million.

Here at the University of Kentucky on the campus we have this building and we have a research facility underway there at this time known as the National Tobacco Research Facility.

My people feel the same way that they felt at the time we started adding additional small amounts for research and at the time the facility was constructed, that is, if tobacco is harmful to the health of our people we must do something about it.

Now, Dr. Stewart, I have a summary report which was just released by the University of Kentucky Tobacco and Health Research Facility. This is only a part of our research underway and pertains to nicotine level in certain types of tobacco. It is short and, without objection,

I will place this summary report, entitled "Factors That Influence Nicotine Level in Tobacco," in the hearings at this point.

(The report follows:)

FACTORS THAT INFLUENCE NICOTINE LEVEL IN TOBACCO

A SUMMARY REPORT

(University of Kentucky, Tobacco and Health Research Program, March 1968)

PREFACE

This summary report on "Factors That Influence Nicotine Level in Tobacco" was prepared to inform interested parties of the major factors that contribute to nicotine content in the tobacco leaf. Research information related to nicotine level has accumulated over many years. This report contains statements and graphs that were derived from cumulative data and represents our analysis on contributing factors.

The report was prepared by the research staff in the University of Kentucky College of Agriculture.

G. W. STOKES.

FACTORS THAT INFLUENCE NICOTINE LEVEL IN TOBACCO

A SUMMARY REPORT

Tobacco smoke is composed of two phases, identified as the total particulate matter (TPM) phase and the gas phase. The TPM is commonly referred to as tobacco tar and contains the nicotine component. In a general way, nicotine content in tobacco smoke may be used as an indicator of total particulate matter yield per cigarette. That is to say, as nicotine content in the smoke increases the total particulate matter increases. Throughout this report, we are concerned with nicotine level on the assumption that levels of nicotine and total particulate matter rise and fall together.

The response of burley tobacco to available soil nitrogen is often dependent upon the duration and degree of water stress. High soil moisture during the growing season generally results in cured tobacco with relatively low amounts of nicotine. Published reports of the Kentucky Agricultural Experiment Station relating to burley tobacco produced at several locations in Kentucky in 1966 and 1967, indicate such a relationship between soil moisture and nicotine level in the tobacco leaf. Very little irrigation is done by Kentucky farmers (estimated at 15 to 20 percent of total acreage); thus, the distribution and total amount of rainfall would be a very important factor in regulating the nicotine content in tobacco leaf for any specific year.

Nitrogen fertilizer is considered to be a dominant factor in influencing the level of strength in tobacco smoke. The level of nicotine in a tobacco plant is regulated more by the nitrogen supply than any other plant nutrient. Increased use of nitrogen fertilizer by burley tobacco producers in recent years, in efforts to increase yield and dollar return, is also an actuality.

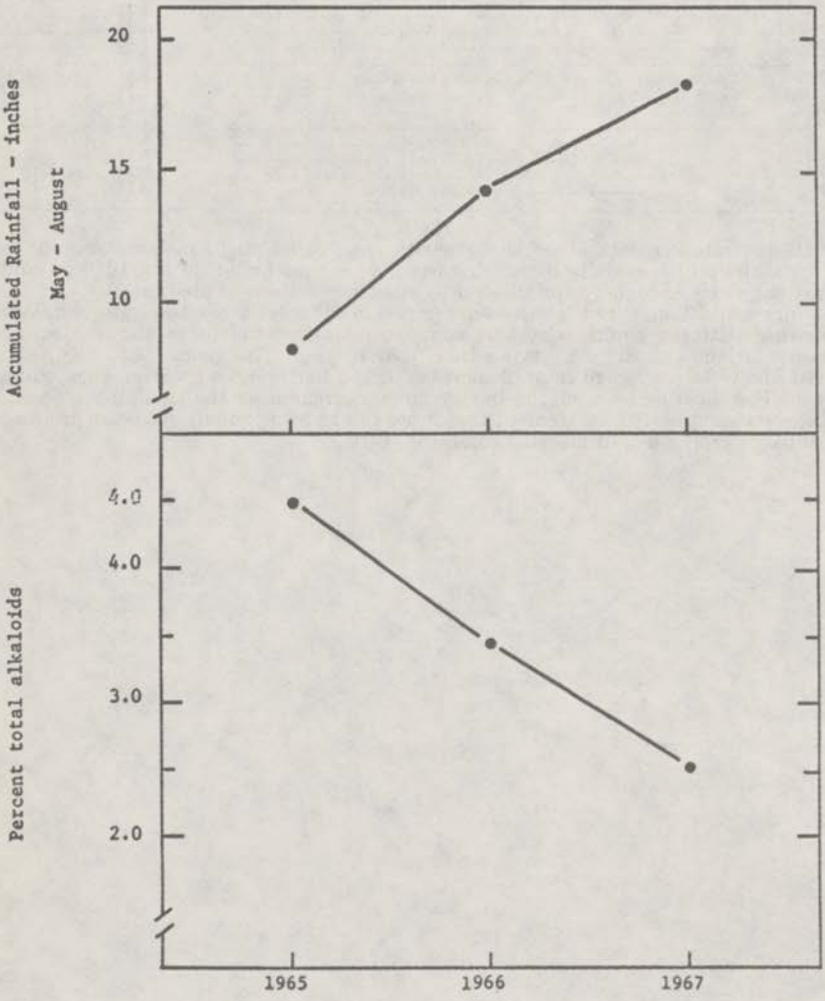
Data from a Kentucky agricultural experiment station study for the years 1954–57 indicated a year-to-year variation in nicotine content of burley tobacco and that such variation was related to rainfall, fertilization, and variety. Comparable data for recent years are not available but data from Brown & Williamson Tobacco Co., market surveys for the years 1960–67 were used as a means for determining if the year-to-year variation in nicotine content has continued in recent years. The 1960–67 data were analyzed for the bottom, middle, and top stalk positions, while the earlier data were for grade groups of tobacco. The 1954–57 data were recomputed to make them as nearly as possible comparable to the later

study. The average values for nicotine content and rainfall by years are shown below:

Year	Average nicotine content (percent)	Average rainfall
1954	3.77	----------
1955	3.25	----------
1956	2.95	----------
1957	3.21	----------
1960	3.57	14.45
1961	3.74	15.76
1962	4.37	12.50
1963	4.19	12.47
1964	4.25	10.99
1965	4.15	10.80
1966	3.87	11.70
1967	3.27	14.29

In general, the data show that year-to-year variation in nicotine content is substantial and is equally as much currently as that found during 1950–54 and that the years of higher rainfall tend to yield crops of lower nicotine.

Burley and Flue-cured tobaccos are grown in different areas and quite different weather patterns could exist and contribute quite different levels of nicotine trends for the two different types from year to year. The years 1965, 1966, and 1967 showed an average rainfall increase in the burley area for each succeeding year. The nicotine level of the burley crops decreased as the rainfall increased. These data support the statement that other things being equal, wet years produce a tobacco crop lower in nicotine than dry years.


Accumulated Rainfall - inches
May - August
20
15
10
Percent total alkaloids
4.0
4.0
3.0
2.0
1965
1966
1967

Mr. NATCHER. Dr. Stewart, during the time we had the hearing before the Committee on Agriculture in 1964, which was 2 or 3 weeks after the report on smoking and health was released, as you remember, Dr. Terry appeared before the committee and emphatically stated that he was of the opinion that we should have additional research in tobacco. We developed in the hearings that when you burn spinach and tobacco, you receive identically the same results. That was admitted and not denied.

Since that time we have attempted, Dr. Stewart, to bring this research program along, working in conjunction with the health-related features and factors to such an extent that we can accomplish something if possible.

Now you recall last year I directed certain questions to you concerning the matter pertaining to tobacco and research generally, and the program that is now underway in your Department of HEW.

SMOKING AND LUNG CANCER

Dr. Stewart, during the appropriations hearings last year I discussed with you certain matters pertaining to cigarette smoking and various diseases. You informed the committee that cigarette smoking was causally related to lung cancer. Is that still your position?

Dr. STEWART. Yes, sir, Mr. Natcher, I think that the conclusions of the expert group in 1964 hold and have been further substantiated by further research.

I might read you their first conclusion, which relates to lung cancer: "Cigarette smoking is causally related to lung cancer in men."

Mr. NATCHER. That report was released when?

Dr. STEWART. January of 1964.

Mr. NATCHER. Has there been any change, any additional research, anything to add to or to prove that statement, Dr. Stewart?

Dr. STEWART. There has been a great deal of research in this area, Mr. Natcher. In 1967, as required by law, we brought the scientific data up to date and transmitted a further report to the Congress. The epidemiological data which forms some of the basis of this conclusion of the committee obviously had extended for 2 or 3 more years, giving us a much greater population base to study.

There were further studies in the United Kingdom related to what happens if a group of people stop smoking to the incidence of lung cancer, and they report there is a drop in incidence. There were considerable attempts to understand what are the carcinogenic factors in cigarette smoking. There was further exploration of the phenomenon of cocarcinogens and synergistic action of various substances in it.

There was further exploration of the carcinogens of the epithelium of the bronchi of the lungs. There was considerable research, all of which continued to converge on the conclusion that was made by the expert group in 1964 as far as it relates to lung cancer.

Mr. NATCHER. Now, Dr. Stewart, are we to understand that this has been ultimately and finally proved?

Dr. STEWART. I do not think there is any question in anyone's mind of the scientific groups that have looked at this or the professional groups that have reviewed the scientific information that cigarette smoking is causally related to lung cancer.

Mr. NATCHER. We are still using that descriptive statement, "causally related to lung cancer." At this point in the record, Dr. Stewart, if you will, place a brief, concise statement to prove the matter we have under discussion up to this time.

Dr. STEWART. I think that is impossible, Mr. Natcher, to put a brief statement. This in itself is a summary of 4,000 pieces of scientific literature.

Mr. NATCHER. You say this and touch a book.

Dr. STEWART. The smoking and health report issued in 1964.

Mr. NATCHER. Now, Dr. Stewart, since 1964, do you have anything at all that we can use, look at, think about, discuss that proves anything?

Dr. STEWART. I think, Mr. Natcher, you are asking me to prove something that we have all accepted as already proved, and that the further data that has come about since 1964 further substantiate the basis on which that judgment was made, and does a great deal of exploring as to the mechanism, what is the pathogenesis of this mechanism?

I think it is important, Mr. Natcher, to understand how the word "cause" is used in this report.

We all recognize that in dealing with many of the chronological illnesses we now deal with we are not looking for a single cause, we are looking for multiple causes and the term "causality" is used in the sense of multiple causality in this whole report, and the committee in their judgment, after reviewing all of the scientific literature was using certain words to indicate what it thinks is a major factor or a minor factor in this array of causalities.

We know lung cancer occurs in people who do not smoke and we know there are many heavy smokers who never get lung cancer. It is a very interesting scientific observation which requires a lot of exploration.

I think, Mr. Chairman, it might help on this causality explanation if I read the last two points in the section on the smoking and health report related to causality.

Mr. NATCHER. Go ahead.

Dr. STEWART. This is point 4 of a five-point effort.

It should be said at once, however, that no member of this committee used the word "cause" in an absolute sense in the area of this study. Although various disciplines and fields of scientific knowledge were represented among the membership, all members shared a common conception of the multiple etiology of biological processes. No member was so naive as to insist upon monoetiology in pathological processes or in vital phenomena. All were thoroughly aware of the fact that there are a series of events and occurrences of developments in these fields and that the end results are the net effects of many actions and counteractions.

Point 5:

Granted that these complexities were recognized, it is to be noted clearly that the committee's considered decision to use the words "a cause" or "a major cause" or "a significant cause" or "a causal association" in certain smoking and health affirms their conviction.

Mr. NATCHER. Now, Dr. Stewart, you have just completed reading a statement from the report on smoking and health, which was released in 1964. Is that correct?

Dr. STEWART. That is correct.

Mr. NATCHER. Dr. Stewart, I would like to read to you two recent statements by two doctors who served on the Surgeon General's committee and had something to do with the report that you have just read from.

The first is a statement by Dr. Maurice Seevers, quoted in a January 20, 1969, article:

> Dr. Seevers commented that, "While the conclusions of the Surgeon General's report have been strengthened by further research in the last 5 years; we still do not know the cause of cancer and we still do not know why tobacco and some other substances are implicated in lung cancer. Nothing has substantially changed in that area."

He was on the Surgeon General's committee and that is his statement. And I assume, Dr. Stewart, that he knew something about this report. Do you agree with his statement?

Dr. STEWART. If I understand the way he is using "cause" in that statment and the context, I think what he is saying is that we do not know the mechanism which causes the cancer to occur. We do not know the mechanism which triggers a cell to become cancerous in any type of cancer at the present time. We are exploring various avenues. But we do know there are many substances that are carcinogenic. This we know. These substances are not only in cigarette smoke, they are all around us. We do know that there are some interesting relationships between viruses and the carcinogenic action of a cell. We do know that lung cancer is highly prevalent in people who smoke cigarettes, we do know that this is related to the dose of cigarette smoke they get, we do know that if one stops smoking cigarettes the incidence of lung cancer drops.

We know that there are epithelia changes in the bronchi of cigarette smokers. We know there are changes in the cilia action of the bronchi to cigarette smoke which are contrary to the normal defense mechanisms of the body.

I could go on and on, Mr. Chairman, with what we know with all of this material which this expert committee looked at, and they came to the conclusion that I have read into the record, using the word, "causality" as they have defined it.

If you ask me what specific substance in the cigarette smoke causes a cell to be carcinogenic, to change it into a cancer cell, I cannot tell you that.

(Off the record.)

Mr. NATCHER. On the record.

Dr. Stewart, another gentleman by the name of Dr. Leonard Schuman also served as a member of the 1964 committee and had something to do with the report that you have been reading from this morning, also served as one of the committee chairmen on a national forum on office management of smoking problems, which was held I believe last year. In a discussion of how a physician should advise a patient who smokes, the question arose concerning the proof available.

Dr. Schuman made this observation, and I quote:

> The engineer patient who asked what is the truth about smoking and diseases must be answered scientifically; he must be briefed in the semantics of causality which has become an increasingly more difficult philosophic problem in the light of multiple factor causation. He will have to be told that we have no ultimate proof in the old sense of a lung cancer-smoking relation any more than the pathologist has the ultimate proof of seeing cells turning cancerous under the flow of smoke being applied.

Now as I stated, Dr. Stewart, he also served on the committee with Dr. Terry at the time this report was released in 1964. Do you agree with his two statements?

Dr. STEWART. I think so, Mr. Chairman. I think he is saying exactly what I just finished saying, that we cannot talk about this in the terms of monoetiology, the old sense that he used, and that we do not at the present time have knowledge of which specific substance alters a cell and makes it cancerous. However, Mr. Chairman, I saw Dr. Schuman, at a meeting this week, and we did discuss the smoking and health issue. And I assure you that he has not changed his mind at all from the conclusion this group made, in fact his views are further enforced.

Mr. NATCHER. Dr. Stewart, do you have any information which this committee can rely upon concerning tobacco and lung cancer other than the Surgeon General's Report of 1964 that you have used this morning and have quoted from on one or two occasions? Can you cite to the committee any research project, can you cite to the committee anything that proves anything, Dr. Stewart, in addition to what you say was definitely proven or at least stated emphatically in the Surgeon General's Report of 1964? Anything since that time, Dr. Stewart?

BIBLIOGRAPHY ON SMOKING AND HEALTH

Dr. STEWART. I can cite you the bibliography of the world literature that was accumulated after this report's bibliography was accumulated of all of the various scientific attacks on understanding this area.

Mr. NATCHER. What is the title of it?

Dr. STEWART. I am sorry, that is the wrong one. "Bibliography on Smoking and Health," issued in 1968, which is an accumulation of all the literature in the world we can get out of the medlars apparatus of the National Library of Medicine.

Mr. NATCHER. You have carefully examined that publication?

Dr. STEWART. No; I have not.

Mr. NATCHER. How long have you had it?

Dr. STEWART. I do not think that is the right approach, Mr. Chairman.

Mr. NATCHER. You are the Surgeon General. In all fairness to the committee, how long have you had that report?

Dr. STEWART. I think it came out in the middle part of the year.

Mr. NATCHER. Middle of 1968?

Dr. STEWART. Yes.

Mr. NATCHER. And you say you have not examined it?

Dr. STEWART. No; it would not be useful for me to examine it, Mr. Chairman.

Mr. NATCHER. You do not find any need to examine it at all, but you will cite it to the committee as proving a lot of things; is that correct?

Dr. STEWART. No. You asked me whether I could cite studies that have been done. I can give you citations. These are by titles. But I would have to call on the experts as to what that scientific evidence is.

Mr. NATCHER. Dr. Stewart, other than this publication that you have so proudly produced to the committee this morning, what else can you produce to the committee that proves anything?

Dr. STEWART. I would have to get the experts before you, Mr. Natcher, and let them explain about cocarcinogenesis synergistic action, the further evidence in the epidemiological studies, and so forth.

Mr. NATCHER. Do you have any results from any research projects, any projects funded by the Public Health Service or by the Department of HEW that proves anything along this line that you could cite to the committee?

Dr. STEWART. Let me say, Mr. Chairman——

Mr. NATCHER. We are not talking about the experts. We are going to talk to Dr. Endicott and Dr. Kotin. They are two fine gentlemen. They are going to give us the same answers, and you know it, that they gave last year. Am I correct in that?

Will they have anything new to present to this committee?

Dr. STEWART. I think Dr. Kotin will have some new information to present to the committee, Mr. Chairman.

Mr. NATCHER. Good.

Dr. STEWART. I think, Mr. Chairman, you must understand that the conclusion was made in 1964 of what I read as the relationship of cigarette smoking to lung cancer.

In our report to Congress in 1967 we cite further studies which accumulated since this review of 1964, which confirmed and further strengthened that conclusion. They range from biological studies, pathological studies to epidemiological studies, and lead to the same conclusion. We think that the conclusion is so strong as a causal factor, not a monoideological factor but a causal factor, that we are negligent if we do not take public health measures to correct this health hazard.

EXPENDITURES RELATING TO SMOKING

Mr. NATCHER. What measures have you taken, Doctor? You are spending quite a bit of money with cancer groups and Dr. Horn's task force and everything. What are you doing, Doctor?

Dr. STEWART. Mr. Chairman, we spend a very modest amount of money in this area as the Public Health Service.

Mr. NATCHER. Right at this point for the record, and you can insert this, I want you to place in the record all of the money that is being spent at this time on any matter pertaining to tobacco whether it is research, whether it is television, radio, for every purpose. We would like for you to place that in the record.

Dr. STEWART. Including the promotion of cigarettes and advertising?

Mr. NATCHER. Yes.

Dr. STEWART. We will provide as much as we have available, Mr. Chairman, which is extensive.

(The information follows:)

The cost of smoking and health projects supported by the Public Health Service in fiscal year 1968 is approximately $4,405,000. This represents $1,956,000 from the National Institutes of Health; $374,000 from the Office of Comprehensive Health Planning; and $2,075,000 from the National Clearinghouse for Smoking and Health.

The National Institutes of Health has conducted an evaluation of their research grants and contracts relating to smoking and health. They have identified some $1,956,000 as that part of those grants and contracts that relate directly to smoking and health. This includes research supported by the National Cancer Institute

on smoking and tobacco, lung cancer causes other than smoking, and projects designed to evaluate the carcinogenic potential of cigarette smoke and cigarette smoke condensate, skin painting, and intratracheal techniques, plus epidemiologic studies of filter versus nonfilter cigarettes. The research supported by the National Heart Institute is concerned with the relationship of smoking to coronary heart disease, stroke, and obstructive pulmonary disease. Also data are being obtained on independent and contributory effects of smoking to myocardial infarction, sudden death, stroke, and emphysema from several population studies. Research supported by the National Institute of Environmental Health Sciences has as its major objective the determination of a dose response relationship between smoking and the abnormal morbidity and mortality of smokers.

Project grants funded by the Office of Comprehensive Health Planning have supported such activities as interagency groups interested in establishing programs in smoking and health, research into the immediate effects of smoking, and an antismoking program developed and carried out by teenagers.

The program of the National Clearinghouse for Smoking and Health is aimed at reducing the number of cigarette smokers by stimulating and supporting National, State, and local activities to help smokers stop, by encouraging youths not to start, and by helping to develop less hazardous smoking practices for those unable to stop.

The money spent on smoking programs by the leading voluntary health agencies is estimated at about $2 million a year.

The AMA Education and Research Foundation is supporting research on health problems related to tobacco at the level of $2 million a year. This program is financed by the tobacco industry for a total of $18 million over a 10-year period. I have not included the various programs of the Department of Agriculture which are not within my purview.

The tobacco industry spent $313 million in 1967 for cigarette advertising and promotion for all media, according to the Federal Trade Commissions' report to Congress, June 30, 1968.

Mr. NATCHER. Anything else, Dr. Stewart?

Dr. STEWART. No.

Mr. NATCHER. Now, Dr. Stewart, you will recall when you appeared before our committee last year you were requested to submit for the record a list of every smoking and health program being supported in any way by the Government. I believe that one or more conferences have been held since you appeared before our committee, and in fact in September of last year, which was after you appeared, a grant which is numbered PHS–86–68–117 was approved. I will appreciate it if you will place in the record information on the cost of the conference which was held in September of 1968.

This I believe was Dr. Horn's conference. That you know about?

Dr. STEWART. Yes.

Mr. NATCHER. If you would, Dr. Stewart.

Dr. STEWART. We certainly will.

(The information follows:)

Contract number PHS–86–68–117 refers to a Public Health Service award of $9,800 to the American College of Chest Physicians to cosponsor the National Forum on Office Management of Smoking Problems. The funding was shared in approximately equal amounts by four programs of the Division of Chronic Diseases. The proceedings of the form were fully reported in the September 1968 issue of Diseases of the Chest.

CAUSE-AND-EFFECT RELATIONSHIP

Mr. NATCHER. I am particularly interested in Dr. Schuman's comment, we have no ultimate proof in the old sense of a lung cancer-smoking relationship. Does this mean that the terms "cause and effect" and "causal relationship" do not mean what they have traditionally meant?

Dr. STEWART. That is correct. That is what I have been trying to state to you this morning, Mr. Chairman, that we now recognize, and this has been recognized for about 15 years, that the old sense of one cause-one effect, which grew out of bacteriology and microbiology. We now understand in the diseases that we are presently faced with, which go far beyond the lung cancer which we are discussing, there are multiple causes over long periods of time before the events, lung cancer or heart disease or whatever it may be, are manifested.

And we are developing better techniques for the study of these multiple factors. We are also now beginning to recognize that the one cause-one effect grew out of an older epidemiological understanding mainly related to bacterial or parasitic diseases of man where you have one point of intervention, if you remove that one substance nothing would happen, that event would not occur.

We now recognize that even in those instances there are multiple factors relating to whether the event occurs, but there is one that you can intervene with. The multiple causation seems to be a variety of things which one can do some control on by removing that event from the study itself, studying lung cancer, for example, among people who have never smoked, and get a sense of the importance of that factor as a causally related input which leads to the event.

That is a rather long winded explanation, but I think what Dr. Schuman says is quite correct and I think much of the debate around the cigarette smoking health hazard has been around this problem of understanding what causality means.

Mr. NATCHER. Dr. Stewart, along this same line I believe you have told us during past appearances before this committee that no ingredient or substance in cigarette smoking can be pointed to as a cause of lung cancer. Is that still the case?

Dr. STEWART. That is true.

Mr. NATCHER. Doctor, it is a fact, is it not, that inhalation experiments on animals using cigarette smoke have not resulted in human-type lung cancer?

Dr. STEWART. That is correct.

Mr. NATCHER. It is still correct, is it not, Doctor, that nonsmokers get lung cancer and most smokers do not get lung cancer.

Dr. STEWART. This is true.

CAUSES OF EMPHYSEMA

Mr. NATCHER. Dr. Stewart, with respect to emphysema, you told us last year that you had not been able to establish an absolute cause-and-effect relationship between cigarette smoking and emphysema. Is that still the case?

Dr. STEWART. That is correct.

Mr. NATCHER. A recent HEW publication entitled "A Special Report on Emphysema" says straightforwardly, "The cause or causes of emphysema are not now known."

Dr. Stewart. I believe you agree with that statement.

Dr. STEWART. That is true.

Mr. NATCHER. Dr. Stewart, I refer you now to a statement contained in a pamphlet recently published by the National Clearing House, which says:

Lung cancers, emphysema, chronic bronchitis, and coronary heart disease are the principal causes of death attributable to cigarette smoking, but they are by no means the only ones.

Now, Dr. Stewart, is that statement supported by sound scientific proof, and if it is, cite it to the committee at this time.

Dr. STEWART. Mr. Chairman, we know in many of those diseases that you listed there the risk of dying from those diseases is much higher among cigarette smokers than among nonsmokers. And this data is based on a study done by the National Center for Health Statistics, using the National Health Survey as the deivce.

If people died from these diseases at the rate that nonsmokers died from them, if they did not have the increased risk, there would be lives saved.

CONTROLS ON PUBLICATIONS OF THE CLEARINGHOUSE

Mr. NATCHER. What control is exercised, Dr. Stewart, over material produced by the clearinghouse to determine if it is consistent with the scientific state of knowledge? Can you tell the committee?

Dr. STEWART. Yes, sir. Up until April of 1968 when the reorganization occurred, every publication that they were going to make was reviewed in the Office of the Surgeon General for consistency with our statements.

I might say we work so closely with them there were very few times where we had to argue over a judgment as to whether this fits with the scientific data or not. Since April of 1968 when I became Deputy Assistant Secretary, I have had less ability to review what the clearinghouse puts out, although I have tried to maintain it as much as possible.

Also, I think that now we are settled down into our new structure, we have a review mechanism in the Administrator's Office of the Health Services and Mental Health Administration. This is not peculiar to the smoking problem. We try to review most publications that are put out for consistency with facts, with data, with policy, whatever it may be.

Mr. NATCHER. Off the record.

(Discussion off the record.)

Mr. NATCHER. On the record.

Dr. Stewart, do you still agree with your earlier statement that the role of government is to support research and see that people are informed of the facts?

Dr. STEWART. Correct.

COOPERATIVE RESEARCH EFFORTS WITH TOBACCO INDUSTRY

Mr. NATCHER. Dr. Stewart, I understand that the tobacco industry has been pursuing rather vigorously the possibility of engaging in cooperative research efforts with HEW. What do you know about this, Doctor?

Dr. STEWART. This is true, Mr. Chairman, and I have met with the tobacco industry representatives with the Secretary on two or three occasions. We have set up a lung cancer task force within the National Cancer Institute, which is looking at all aspects. One aspect is the possible pursuit of a less hazardous cigarette, and we now have representatives from the research part of the cigarette industry

serving with us on this particular committee which is trying to lay out a way of approaching this problem.

There have also been joint meetings between Dr. Endicott at the request of the Secretary, representatives of the tobacco industry, and the American Medical Association, in exploring the possibilities for the development of a joint research effort.

My last contact was just before the first of the year, I believe, Mr. Chairman, and at that time they were planning to have another meeting in January or February. I do not know what has happened since then.

Mr. NATCHER. Dr. Stewart, I want to thank you for answering the questions that I have directed to you, and again I would like to say to you that I am concerned about tobacco and the industry generally.

Here we have a $10 billion industry where some 700,000 farm families are involved in 22 States that produce tobacco. This is, as you know, a commodity that pays into the Federal, State, and local taxing communities, $4 billion a year. And certainly, Dr. Stewart, we do not intend to stand by and see tobacco destroyed by innuendo. You would be in the same position that we are in, and again I want to say to you that my people are definitely of the opinion if tobacco is harmful to the health of our people, something must be done about it in HEW, in the research facility at the University of Kentucky, and in North Carolina and every other place in the United States where we have research underway. That is the position of my people, Dr. Stewart, and I do not think you can call that wrong, feeling that way.

Dr. STEWART. I agree with you, Mr. Chairman, I think it would be absolutely irresponsible to destroy any industry, including the tobacco industry, by innuendo.

But, on the other hand, Mr. Chairman, I think it would be wrong to look at a disease which kills, which has risen from 32 per 100,000 men in 1958 to 46 per 100,000 in 1967, with all the evidence that we have, and dismiss that evidence on innuendo too.

Mr. NATCHER. Dr. Stewart, any evidence that you have, in addition to that you just stated to the committee, that you want in the record, feel free to place it at this point, and anything that proves that tobacco is causing lung cancer subsequent to the issuance of the report on smoking and health that you have read to the committee, I would appreciate it if you would place it in the record at this point

Dr. STEWART. Thank you, Mr. Chairman.

(The information follows:)

Since the 1968 report to Congress on "The Health Consequences of Smoking," a number of scientific studies have been made which contribute to our knowledge of the causal relationship of cigarette smoking to lung cancer. A scientific panel was convened recently to review these studies. The panel's views will be reported in the report on "The Health Consequences of Smoking" to be submitted to Congress on July 1, 1969.

Our position at the present time is summed up on page 99 of the 1968 report on "The Health Consequences of Smoking" as follows:

"The preponderance of evidence (1964 Report 91, 1967 Report 92, and this report) continues to indicate that most lung cancers occur in cigarette smokers and that cigarette smoking is the major cause of lung cancer. A majority of lung cancer cases are of the squamous cell variety and most investigators are in agreement that squamous cell carcinoma is rare in the male nonsmoker (3, 15, 103). The elimination of cigarette smoking would in time eliminate most lung cancer. That this is a real goal is supported by the study of British physicians (18, 19) reviewed in the 1967 report."

In their survey of British physicians (reported on pages 138–140 of the 1967 report on "The Health Consequences of Smoking,") Doll and Hill found that

while overall lung cancer mortality of men over age 25 in England and Wales had increased 22 percent over a 10-year period (1951–61), that for the physician group decreased 7 percent. Since the total physician group was involved in these figures, this population group can be compared to the entire population of England and Wales where there was no general decrease in the amount of smoking. "This," says the 1967 report, "can be thought of as a controlled cessation experiment and the beneficial effects of stopping or decreasing the amount of smoking become quite evident."

PREVENTION OF CHRONIC ILLNESS

Mr. NATCHER. Dr. Stewart, has the medical profession really been as concerned about the prevention of chronic diseases as it obviously is with providing cures after a patient comes in for treatment?

Dr. STEWART. I would think with certain exceptions, Mr. Chairman, that the medical profession has been more concerned with diagnosis and therapy of illnesses rather than with the whole area of prevention. We have characterized this era of medicine as the therapeutic era. I think this is mainly a result of remarkable developments that have occurred in the therapeutic area in the last 20 years, the whole antibiotic field, the advances in surgery.

We have so much more therapy we can offer. But there is a growing sentiment now we should begin to address ourselves to the preventive aspects.

Mr. NATCHER. What kind of motivation and medical help is needed for people who refuse to change their daily habits and personal indulgences, an attitude which so often damages their health or shortens their lifespan?

Dr STEWART. This is a very difficult area, Mr Chairman. It deals with human motivation and the factors that shade one's attitudes within this motivation sphere—social factors, cultural factors, their own awareness of themselves, their psychological attitudes. We are supporting a great deal of research in the whole field of human behavior, what are the factors that cause human motivation, for example, and I think that we are understanding it a little better, but I think we have a long way to go.

I do feel that we have not done as good a job in health education in this country as we could have done.

Mr. NATCHER. Dr. Stewart, have we failed as a Nation to utilize all of the medical knowledge that is now available to us and needs only to be applied?

Dr. STEWART. If one will limit this to certain population groups, I think this is quite true. The disadvantaged people do not have available to them what we know how to do, even the advantaged do not have it when they have a chronic illness or catastrophic kind of illness.

If you and I were injured in an automobile accident, Mr. Chairman, and had a severed spinal cord, we would have difficulty getting the kind of treatment that we know how to provide in certain centers. This is an example of what I mean. So it depends on who you are and what kind of condition you have. But the bulk of the population for acute general illnesses has excellent care.

Mr. NATCHER. Thank you Dr. Stewart.

Mr. Shriver?

Mr. SHRIVER. Thank you.

HEALTH SERVCIES FOR MIGRATORY WORKERS

Dr. Stewart, on page 9 of your statement you discuss the health services for migratory workers and their families and make note of the fact that 59-percent increase has been asked for in this connection for next year. Let me ask, what is now being provided for the migratory workers in the way of health care and services?

Dr. STEWART. There are four general areas, Mr. Shriver. One is, we provide an ambulatory care when they are in vocation——

Mr. SHRIVER. You mean the U.S. Federal Government?

Dr. STEWART. The money in this appropriation provides it. It is usually done through a contract with the local medical society or the county health department or some other local device which can be used. This can range from operating a clinic in a farmhouse adjacent to the area at night so the migrant can have medical care, to a mobile clinic.

Secondly, we do pay for short-term hospitalization for acute care if migrants cannot find other sources for paying for the care, if they are denied the usual resources for people in the rural areas.

Mr. SHRIVER. You mean whatever the local public health service is, supported by the local taxes or State sources, they are doing very little?

Dr. STEWART. They have very little to work with in many instances.

Mr. SHIVER. You mean the States and the cities and localities do not have health departments where these people can go?

Dr. STEWART. This is true.

Mr. SHRIVER. They do not have them?

Dr. STEWART. That is right.

In many areas where the migrant work is, there are no physicians and no nurses and the money has allowed us to bring in physicians and nurses in mobile clinics when the migrants are in that area.

Mr. SHRIVER. What part of the country are we talking about, California?

Dr. STEWART. We are talking about some parts of California, talking about Texas, really in the three streams we have talked about in which the migrants work.

Mr. SHRIVER. And those States are not doing anything about it, they are not taking care of the health needs of the people that are working there and helping the local people?

Dr. STEWART. The States are doing some things.

The State of California has a large effort aimed at the migrants which has been supplemented by the Federal money they get. But in many areas there was nothing there to start with and there had to be a change developed.

Our contractees are health departments where they exist.

Mr. SHRIVER. So it is a Federal responsibility?

Dr. STEWART. It is a Federal responsibility to fill in these gaps of lack of resources and mechanisms to take care of the migrants.

Mr. SHRIVER. You think so?

Dr. STEWART. Well, we are implementing a law that was enacted by the Congress and it is a policy of the Congress to do this, and the Government I should say.

Mr. SHRIVER. I see. But when we are increasing 59 percent, are the States and localities increasing their proportion being used for

people who are benefiting those areas by their very presence? Are they increasing 59 percent?

Dr. STEWART. I cannot answer that question, Mr. Shriver. I would have to look into it.

Mr. SHRIVER. Or any, I wonder. Or are they leaving it up to the Federal Government?

Dr. STEWART. For a million people in this migrant pool, $12 million is not a great deal for the total effort being asked for.

Mr. SHRIVER. I am not arguing this point. I am just wondering if there is not a greater State responsibility or local responsibility in this connection?

Dr. STEWART. There is no question about it.

Mr. SHRIVER. Because after all, that is where the benefit is being received.

Dr. STEWART. The State effort and local effort have been mainly along the lines of various States and local ordinances or laws which are improving the living conditions, the requirement of providing some drinking water for the workers, improving the sanitation.

There has been a great deal of movement along these areas in States and localities, the police functions of these governments. Also, in some States the usual medicaid program will provide some services for the migrants when they are in that particular State. In others this is not so.

REGIONAL MEDICAL PROGRAMS

Mr. SHRIVER. On the same page in referring to the regional medical centers and the $39.8 million increase, how many regions will enter the operational phase in the coming year under this budget request?

Dr. STEWART. This budget request will do two things, Mr. Shriver it will continue the operations of these 45 or 46 that we anticipate will be fully operational by the end of this fiscal year, and they have a continuation cost, and will add the three to five more regions that we anticipate will be ready to become operational at that time.

Mr. SHRIVER. How many does that leave nonoperational?

Dr. STEWART. That will be close to 50 fully operational and there are about 55 regions in the planning stage.

Mr. SHRIVER. So that leaves to become operational how many?

Dr. STEWART. About five.

We do not think at this time these five will be ready to become operational anyway. So this money is addressed to the continuation of the ones that have become operational and the three or five we anticipated will be ready.

NEW HEALTH ORGANIZATION

Mr. SHRIVER. In your reorganization, and I appreciate your explanation of it, who has the authority to make a decision under this operational reorganization, for instance, in the Food and Drug area?

Dr. STEWART. The authority is in the Assistant Secretary for Health and Scientific Affairs.

Of course, much of that authority has been delegated to the three administrators. But the ultimate authority for the operations of the Public Health Service now rests in the Assistant Secretary for Health and Scientific Affairs.

Mr. SHRIVER. You told me that the food and drug control would be in the consumer protection and environmental health services.

Dr. STEWART. That is correct.

Mr. SHRIVER. And a decision in the food and drug area would be made by whom then, by the Assistant Secretary?

Dr. STEWART. In many instances it will be made by the Commissioner of Food and Drug through the delegation process and reviewed by the Consumer Protection and Environmental Health Administrator.

In some instances, the Administrator of the Consumer Protection and Environmental Health will retain the authority without delegation and it will be reviewed by the Assistant Secretary for Health and Scientific Affairs. It depends on what kind of decisions you are talking about.

Mr. SHRIVER. This is what makes it difficult and complicated.

We ought to know who is responsible for decisions.

Dr. STEWART. The ultimate responsibility obviously rests with the Secretary of HEW. He then delegates all the health authority with some exceptions to the Assistant Secretary for Health and Scientific Affairs. There is a further delegation down, some retention.

Mr. SHRIVER. If I had requests to find out something, I would direct it to the Assistant Secretary?

Dr. STEWART. Correct.

Mr. SHRIVER. In that particular category?

Dr. STEWART. Yes.

SAVINGS FROM THE REORGANIZATION

Mr. SHRIVER. I was trying to understand the original chart you used.

Concerning the reorganization, how do the administrative and staffing costs of the new setup compare with the present costs? Can you tell me that? Are you saving any money by this?

I see several of you smiling.

Dr. STEWART. I do not know that I can answer that question.

Mr. Cardwell, can you?

Mr. CARDWELL. I cannot give you a positive answer off the top of my head. We would be glad to supply for the record the comparative costs.

My offhand impression is that we did not save the taxpayer any money, but I do not think we added any costs either. As I say, I will be glad to provide it for the record.

(The information follows:)

COST OF PHS REORGANIZATION

The purpose of the most recent Public Health Service reorganization was to strengthen and improve the coordination of the Department's scattered health programs by establishing a single organizational focus of health authroity and responsibility. Due to a lack of comparability in personnel and accounting data, it is impossible to develop an analysis comparing the cost of the present organizational structure with the former Office of the Surgeon General. In summary, a series of actions have been taken to achieve greater program effectiveness and flexibility, actions which may not necessarily have resulted in a less expensive managerial operation.

RUBELLA VACCINE

Mr. SHRIVER. On page 8 you say that you have hope rubella vaccine can be licensed in the next few months and you are asking for a supplemental appropriation for 1969 to initiate this program. There are only 3 months left in our 1969 fiscal year and if this is not going to be licensed for several months, why is it necessary to have a supplemental?

I say this because we do not want people to be expecting something when it cannot be made available, and whoever is going to be producing it be put in an awkward position.

Dr. STEWART. The supplemental request is for three major purposes Mr. Shriver, one of them being the purchase of the vaccine, which, then would be related to the specific month that the vaccine is licensed. But there are two other purposes which are really preliminary to a vaccination program. First, it provides for people in States and localities who act as kind of organizers and the developers of any vaccination program that is going to occur, and, second, it provides for the informational programs one has to develop in order to have a community campaign. This has to precede the actual vaccination campaign itself.

The vaccine licensing depends on Dr. Murray (NIH Division of Biologics Standards) finally deciding that he has the safety information that he requires to license a vaccine. He assures me from what he can tell at this moment it will be licensed in the next month or two.

Since it looks like this vaccination campaign will have to be limited to children because of complications in adult women, it looks like the best time to start a vaccination campaign is in the fall when school starts. It is very difficult to do a children's vaccination program in the summertime.

But there is a great deal of tooling up one has to do and this is the reason for the supplemental request.

FAMILY PLANNING

Mr. SHRIVER. Concerning family planning, I note on page 13 of your statement you say that no one of the existing contraceptives meet all of the ideal criteria. I am on another subcommittee of the Appropriations Committee where we last year appropriated I think it was $20 million for family planning as part of the AID program, Aid for International Development.

In view of your statement there, should we continue financial assistance abroad for these services, as you say that none of the methods are ideal? What do you mean by that?

Dr. STEWART. There is no question in my mind you should continue the financing of this overseas.

The word "ideal" here is used in the sense that each of the contraceptive methods has limitations in them. When one is talking about applying contraception to countries where the population is increasing at 3½ or 4 percent per year and the GNP is going up 2 percent, you have to do with less than ideal. It may be, after all our research, we end up with less than ideal.

For example, Mr. Shriver, the loop that is used for contraception, this is effective and will have effect in women, but there is a rejection

rate, there is a nonacceptance rate over time which then scales down your effectiveness as far as contraception goes.

If we can find better methods that are more acceptable both physiologically and psychologically in which over time there is not the necessity to constantly have a contact between a physician and a woman, we will have a more ideal method. In the meantime, the methods we have are effective and can have an impact.

Mr. SHRIVER. Mr. Chairman, that is all.

Mr. NATCHER. Mr. Hull?

TAR AND NICOTINE IN CIGARETTES

Mr. HULL. Dr. Stewart, according to an article in the Journal of the American Medical Association, dated January 20, 1969, you made the following statement:

> I do not think there is any such thing as a safe cigarette, but a less hazardous cigarette is possible, and experts say that the tar and nicotine content seem to serve as a crude index of the hazard.

Now, Dr. Stewart, I would like to ask you how "crude" that index is.

Dr. STEWART. How crude?

Mr. HULL. Yes.

Dr. STEWART. It is very crude, Mr. Hull.

The supposition here is that with the relationship of dose to response (in other words, lung cancer is much higher in heavy smokers than in light smokers) and in relationship to carcinogenic responses in animal to tar and nicotine where you have also a dose-response relationship, then one can say that there is a crude relationship between tar and nicotine levels and response.

The difference between a factor of 1 on the tar content probably may mean nothing, but if one has the choice of the highest to the lowest, it may mean something.

Mr. HULL. Dr. Stewart, are you prepared to state that a lower tar and nicotine cigarette is safer?

Dr. STEWART. If we are using "lower" in the sense that I am talking about, considerably lower, I think it is highly likely it is a safer cigarette.

Mr. HULL. Is it correct that the lung cancer task force has a subcommittee working on the question of "less hazardous cigarettes"?

Dr. STEWART. This is correct.

Mr. HULL. Do you know how the so-called less hazardous cigarettes statistics can be measured?

Dr. STEWART. No this is the first thing they as a technical group are addressing themselves to—that is development of a bioassay system that will allow one to compare the hazard of different kinds of cigarettes. They are searching for a proper bioassay system.

Mr. HULL. Dr. Stewart would you like to see cigarettes above a certain level of tar and nicotine banned from the marketplace?

Dr. STEWART. No. I would rather have the fact that when people choose a cigarette they can choose a lower tar and nicotine or a higher tar and nicotine assuming that they have had all the information related to cigarette smoking and the hazards to health.

Mr. HULL. Where is the breakoff point?

What precise level of tar and nicotine is the demarcation line between what you call hazardous and less hazardous?

Dr. STEWART. We do not know that.

Mr. HULL. In connection with that I am sure you will recall the Senate Commerce Committee hearings in 1967 with respect to less-hazardous cigarettes. There was a Public Health Service technical report on tar and nicotine placed in the record at pages 7 and 8. It has numbers reflecting annotation, but no bibliography is attached and I would appreciate you furnishing me with a copy of that.

Dr. STEWART. Certainly.

(The information follows:)

The references to the "Technical Report on 'Tar' and Nicotine," to which you refer follow:

1. "Smoking and Health," report of the Advisory Committee to the Surgeon General of the Public Health Service, January 1964 (p. 111).
2. Hammond, E. C., "Smoking in Relation to Physical Complaints," Arch. Environ. Health, 3:146–64, 1961.
3. Graham, S., et al, "Variations and Amounts of Tobacco 'Tar' Retrieved From Selected Models of Smoking Behavior Simulated by Smoking." Cancer Research, 23:1025–30, 1963.
4. Wynder, E. L., Hoffmann, D., "Reduction of Tumorigenicity of Cigarette Smoke; An Experimental Approach." Journal of the American Medical Association, 192:88–94, Apr. 12, 1965.
5. Bock, F. G., et al, "Carcinogenic Activity of Cigarette Smoke Condensate." Journal of National Cancer Institute, 34:48–93, April 1965.
6. Horn, D., Hammond, E. C., special report to the Advisory Committee on Smoking and Health of the Surgeon General of the U.S. Public Health Service (unpublished).
7. Hammond, E. C., Garfinkle, L., "The Influence of Health on Smoking Habits," National Cancer Institute Monograph 19, Bethesda, Md., p. 269–85, 1966.

Mr. HULL. More recently, I believe last year in connection with this committee's hearings, a study entitled "Cancer of Lung Related to Smoking Behavior" was said to indicate that low-tar-content cigarettes might be safer to smoke. The article said with respect to its findings that further study was obviously necessary.

Would that not be a reasonable conclusion to reach with respect to the whole discussion now going on concerning the significance of tar and nicotine?

Dr. STEWART. I think the significance of tar and nicotine is a different kind of question than whether people have the ability to choose a cigarette of higher or lower tar and nicotine.

We are offering a crude index of dose-response to a person where they can choose a lower dose if they want. They can do the same thing by cutting their smoking in half or not smoking quite as much, too.

ORGANIZATIONAL RESPONSIBILITIES FOR PROGRAMS RELATING TO SMOKING

Mr. HULL. I must admit from what little I know about the responsibilities and functions of Mr. Johnson's new operations, I have learned from this year's justification material and the little 12 page institutional pamphlet that the Service got out in November. In the pamphlet Mr. Johnson says the Service has been charged with assuring that human environmental needs are defined and enunciated as clearly as possible.

Do you suppose that means his group is getting involved in smoking and health too, Dr. Stewart?

Dr. STEWART. I think Mr. Johnson was speaking in broad terms of the charge of the Consumer Protection and Environmental Health Service. At the moment I am not aware of any involvement of the Consumer Protection and Environmental Health Service in the smoking and health area.

Mr. HULL. What I mean, how does this fit in with environmental health research being done by NIH, Dr. Kotin's and Dr. English's regional medical program services?

Dr. STEWART. Let me give you an example, Mr. Hull, which might help you.

In Dr. English's Health Services and Mental Health Administration, there is the clearinghouse on smoking, and I think you are familiar with their activities.

Mr. HULL. Yes.

Dr. STEWART. In the National Institutes of Health, the National Cancer Institute has had long-term support of research and conduct of research in the whole field of carcinogenesis and now in the last 2 years the Lung Cancer Task Force.

The Consumer Protection and Environmental Health Sevrice cross-relates in that we have lung cancer, lung diseases I should say, in one area, lung disease among the coal miners, pneumoconiosis, which is an X-ray diagnosis, but eventually manifests itself in emphysema and bronchities and other things.

In order to study, for example, the effect of coal mine dust, we have to be able to control for cigarette smoking in our epidemiological work. There is a great deal of interchange of methodology between Dr. Kotin's operation and the operation of Mr. Johnson. The same thing is true in uranium miners when we study lung cancer—we have in control for cigarette smoking in this area, too.

And also, Dr. Kotin is doing much of the basic research on cellular molecular responses to environmental substances which may be a wide range of things, which is sort of a basic program on which Mr. Johnson will be basing some of his efforts in environmental control.

Mr. HULL. As you know, Dr Stewart, I am disturbed about what happens to be considerable overlapping and duplication among the myriad health programs run by the Department of Health, Education, and Welfare, so I also question the phase in Mr. Johnson's justification material that the Service provides a single agency with the responsibility for identifying consumer environmental hazards to health, developing and promulgating criteria and standards for control of such hazards and for mounting programs that will produce compliance there.

That sounds like a partial overlap with the National Clearing House for Smoking and Health to me, Doctor And it also sounds like an overlap of the Lung Cancer Task Force activities.

Will you explain this to me?

Dr. STEWART. I do not think there is any overlap as far as compliance with standards go. The Smoking and Health Clearing House is related to the collection of information that has been generated in the scientific world and the conduct of studies related to smoking. It has nothing to do with possible standards of occupational health such as berrillium asbestosis or uranium or any of these other areas.

I might say, Mr. Hull, that I would be the first to admit it is very difficult to say there is absolutely no overlap or duplication among an

organization that spends close to $3 billion. But I think I can show you in the reorganization that in this environmental area we cut down on overlaps and duplication that were occurring by bringing the efforts that we have had in certain areas in the Public Health Service—in pesticides, for example—into the Food and Drug Administration, who also have activities in pesticides.

We have been able to put those together and relate them, and I think I have a better effort now than we had before.

Mr. HULL. One thing I do not understand, Doctor. In Mr. Johnson's appointment of nine regional assistant administrators 2 months ago to be the Service's primary contact with State officials, he mentioned they would review requests from State and local governments for funds under the partnership for health program. I thought that program was administered by Dr. English's Health Services Research and Development group under the Comprehensive Health Planning and Public Services Act of 1967.

When Dr. Cavanaugh appeared here last Friday, he said among the new kinds of programs planned by the States were a number on smoking and health. What can you tell us about this?

Dr. STEWART. In the Partnership for Health Act it was quite clear that the project grants under section 314(e) are for a variety of purposes which would involve both the responsibilities of the Consumer Protection and Environmental Health service and the Health Services and Mental Health Administration.

The way we are organized to operate this program, it is the administrative responsibility of Dr. English. We do all the review and development of these grants through the regional office structure and use our special competencies there in the engineering, environmental area, and health services area to cover the whole area of health projects. The central review function is of those projects which are technically acceptable to the regional office groups. There has to be some priority arrangement on funding and we do this centrally in Dr. English's operation.

I might point out the Partnership for Health Act grants are only part of the total. The smoking and health project grants under 314(e) would be reviewed by the counterpart individual that the Health Services and Mental Health Administration has in the regional office structure.

Mr. HULL. Thank you.

That is all, Mr. Chairman.

Mr. NATCHER. Mr. Michel?

DRUG ADDICTION

Mr. MICHEL. Thank you, Mr. Chairman.

You remember, Dr. Stewart, that during part of the course of my interrogation I got on this subject of my concern for what is happening to our youth so far as their increased use of drugs and narcotics is concerned.

This past weekend again newspapers locally at home and I think here were filled with distressing and disturbing stories about this.

In answer to a question by the chairman you responded something like this: "In 1968, deaths in men due to cancer were 32 per 100,000, as against 47 per 100,000 in 1967."

Dr. STEWART. Yes, sir.

Mr. MICHEL. Do we have any figures at all that would show the death rate in this country as a result of taking drugs or smoking marihuana?

Dr. STEWART. They would be less specific than what we have for lung cancer because the diagnosis of death may be related to an automobile accident.

Mr. MICHEL. I guess it would be a calloused way of saying it, but I suspect it is more expensive to rehabilitate one who would go so far down the road to drug addiction that it just took heaven and earth to get them back to normal again.

Dr. STEWART. I would venture a guess, Mr. Michel, without any facts, that mortality is not a great factor in drug abuse if one excludes suicide and homicide. The problem is more a morbidity problem in illness and ineffectual operations as a citizen in this type of thing.

We do have outbreaks of infectious hepatitis among mainliners because they spread it on dirty needles. If they die from this they would be listed as infectious hepatitis.

Morbidity is much more difficult and harder to measure. The Drug Abuse Center, National Institute of Mental Health, has been trying to get information on how extensive drug abuse is among young people. They have some data. The picture changes with time.

When we started this 2 years ago, LSD was a much greater factor than at the present time.

Mr. MICHEL. At the same time, if the Department is going ahead with studies in these areas, I would personally be very interested in whether or not there is any discussion of drug addiction or inclination to go to drugs or marihuana as a substitute for a cigarette. I would certainly consider drugs more dangerous than cigarettes at this point if one feels he has to turn to something to settle his nerves, or whatever we are talking about.

I don't smoke and I never will, but nevertheless it is something that our young people are confronted with more and more each day.

Dr. STEWART. I asked the scientists in the Drug Abuse Center last Friday as to whether they were aware, off the top of their heads, of any studies done in relation to shifting from cigarette smoking to marihuana or drugs, and they said they were not aware of any studies that have been done in this line. There are some studies——

Mr. MICHEL. If they have not, it would seem to me there is enough smoke there to find a little fire, if you will pardon the expression, and we ought to at least explore this.

I do not know how frank these people would be in their responses, but there are means of protecting one's identity if that is necessary to get some answers.

Dr. STEWART. You could imagine one study area such as this where knowledge may bring in law enforcement or social sanction or something else. It is difficult to get the information—that is, solid information.

SPINAL CORD INJURIES

Mr. MICHEL. One final question, Dr. Stewart.

I realize that the specifics ought to more properly be asked of those in vocational rehabilitation, but I made reference after the hearing

was concluded last Friday that I had received a letter from Dr. Paul Busey, professor of surgery at Northwestern University Medical School, in which he points out that during the 90th Congress our Appropriations Committee recognized the great need for the development of adequate facilities for the acute care of those paralyzed by injury to their spinal cord. However, we just didn't have the money to get into this kind of a program.

He goes on to say that he hopes to have an opportunity to come testify before the committee and suggesting that, quite frankly, there is a need today for some 2,000 beds in this country.

While of 20 to 30 centers for the specific purpose of treating these cases would be out of the question immediately, possibly we ought to embark upon a pilot program of a couple centers with only a 10- or 20-bed capacity rather than 50 or more envisioned ultimately for a given center.

Would you please state what the Surgeon General's Office thinks about this?

Dr. STEWART. I think that your description of what Dr. Busey is stating in his letter is quite compatible with what the Social Rehabilitation Service of the Department is doing. They have established one center in California. They did have a national conference on this whole area of spinal cord injury. It is my understanding that they intend to establish two or three more centers over the next year or two in this whole area.

I think that you can get further details, Mr. Michel, when Miss Switzer or Dr. Gary appear before this committee.

Mr. MICHEL. I appreciate that.

Thank you.

Mr. NATCHER. Mr. Casey.

NEIGHBORHOOD HEALTH CENTERS

Mr. CASEY. Thank you, Mr. Chairman.

Doctor, I am interested in the new realinement of the Health Services and Mental Health Administration, and particularly with what you stated is your goal on page 7; that is, the creation of the National Center for Health Services Research and Development within the Health Service and Mental Health Administration.

The objective is, as I understand it, to try to get better health services to all people, primarily to the poor who are in the greatest need.

You, of course, know that the OEO does finance some clinics. In fact, they helped get one started in Houston which has since been taken over by the hospital district. Will that be part of the work of this Center?

Dr. STEWART. No, sir, Mr. Casey.

The neighborhood health centers the OEO established are to provide services under certain conditions for a group of people The National Center for Health Services for Research and Development will be experimenting with a whole variety of ways of trying to make our delivery system better This goes all the way to basic research on how effective, for example, is a screeening device before one goes into a hospital, to automation of clinical laboratories, to arrangements of the administration of a hospital, nursing homes, and ambulatory facili-

ties. In a sense, the Center's work is ahead of us trying to develop what we will be doing 5, 10 years from now.

Mr. CASEY. How about the partnership for health program; will that be in that field?

Dr. STEWART. The partnership for health program is somewhat different When the partnership bill was originally enacted by the Congress there was a part of the project grants section, that section 314(e), which was transferred to the National Center for Health Services for Research and Development when it was formed.

It was transferred by enactment of section 304 and repeal of part of section 314(e).

At the present time we don't see any conflict. The project grants under 314(e) of the Partnership for Health Act, as it is now, is mainly for the development of a service, demonstration of an effort, trying out something which is ready to be applied to find out whether it works or not. It is sort of implemention of the kind of information that might be generated by the National Center of Research and Development. It has a time scale to it. You try it for 2 years and abandon it if it is not any good; or if it is good you try to mold it into the prepayment systems for the whole country.

Whereas the Health Services Research and Development Center has less of a time scale because you are dealing with research and don't know quite how far it is going to go at any one given point of time.

Mr. CASEY. In view of the fact there has been some discussion of cutting down on OEO community action programs and things of that nature, are we faced with maybe programs like the neighborhood clinics being out in the cold, not under any agency?

Dr. STEWART. No. I do not know what the administration's ultimate decision will be, but I feel personally that the neighborhood health center should be part of the Health Services Administration. We are fortunate in having Dr. English, who is head of that, because his job in OEO before he came with us was development and running of the neighborhood health centers program.

Mr. CASEY. What I am concerned about is that it will be dropped by OEO and not picked up by you people. The one the hospital district has absorbed, and that is as it should be, local interest taking it over. They had to have help to get started and it has worked out real well. It has worked out so well they think they need three more of these primarily outpatient clinics.

They give the neighborhoods the care of the various clinics that you have and then we have our medical center there with the charity hospitals so that if they need more care then they are brought into it. When you have these poor people catching three different buses to get over to the medical center for a clinic, they just sometimes get lost or sometimes they just don't go.

Dr. STEWART. We couldn't agree with you more, Mr. Casey. We feel that this is a development that has demonstrated that there are ways of delivering good, modern, comprehensive care to families in the disadvantaged group. We look on the project grants under the neighborhood health centers as the beginning, get them started, get them going, and hopefully the ongoing financing will be picked up by title 19 or whatever device.

Mr. CASEY. The neighborhood health centers at the present time are under OEO.

Dr. STEWART. At the present time they are still under OEO. The program has our interest because we see such a relationship between the development of the neighborhood health centers and the charge to improve the delivery of medical care for disadvantaged groups. It is intermixed in certain areas now, and hopefully will be in other areas with title V of the Children's Bureau and title 19 of the Social Security Act. So we are terribly interested in it. I am sure that I am keeping Dr. English from blowing up. He is very enthusiastic about that.

Mr. CASEY. He is going to get into this in more detail later?

Dr. STEWART. Yes, sir.

Mr. CASEY. Give me some assistance in understanding what is going to happen and what could possibly be or might be done about this. This is so fragmented now that, like at home, they say, where do we go now?

Dr. STEWART. I couldn't agree with you more.

Mr. CASEY. We have gotten off the ground and have one operating and we would like to get three more out in the edges of the city where they are needed and get them started. We do not know where to go because if the OEO indicated they are not going to have any more and this is going to be phased out, or something of that nature——

Dr. STEWART. There is a difficulty in this transition period about OEO and I assume decisions will be made resonably soon. I am sure that Dr. English would be happy to give whatever assistance he could right now to the development in your home area.

Mr. CASEY. The hospital district, as you know, screamed about taking that first one over but now they want to take the initiative in putting in some additional ones where needed. I may refer them to Dr. English and let him try to give them some good advice. Thank you.

ASSISTANCE FOR MEDICAL STUDENTS

You state that we are producing about 8,000 doctors a year.

Dr. STEWART. That is correct.

Mr. CASEY. Under the justification for health manpower on page 212, you list a number of recipients, including student loan revolving fund recipients. You have scholarships, and the medical 1970 estimate is 8,556. Student loans, medical, estimated, 10,659.

How many students do we have in medical schools at one time?

Dr. STEWART. It is a multiple of four plus some because there is an attrition rate. You are talking about perhaps 35,000, 36,000 students in all.

Mr. CASEY. And how many received this aid?

Dr. MARSTON. I think I may help. In 1969 I can give you the figures. An estimated 23,000 students in schools of medicine, dentistry, osteopathy, optometry, podiatry received loans. An estimated 14,000 received scholarships. These tend to be grouped in your budget that cover all of those areas.

Dr. STEWART. I think it might be helpful if we broke that down for you in the various classifications of people, medical, dental, podiatry, and give you the numbers which I don't have with me at this time.

Mr. CASEY. You are talking about the numbers that are in schools or receiving assistance?

Dr. STEWART. I think both.

Mr. CASEY. You have that broken down on page 212?
Dr. MARSTON. The number of assistants.
Mr. CASEY. Health related?
Dr. STEWART. Yes, sir.
Mr. CASEY. As I see it, about 50 percent. Do some receive both scholarships and loan?
Dr. STEWART. Either scholarship or loan.
Mr. CASEY. You have about 50 percent of those in medical school if you have about 35,000, and you have about 50 percent of them that are receiving aid in some form, either loan or scholarship?
Dr. STEWART. That is correct.

AID TO STUDENTS VERSUS AID TO SCHOOLS

Mr. CASEY. Do you think that there should be more aid to the students or more to the schools?
Dr. STEWART. Mr. Casey, this is a very difficult question to answer because I can visualize a school where it might be better to put the aid to the school than more to the students. I can see the other way around, too. They really go hand in hand. The school must be functional to receive the students, and some of the schools have difficulty financially at the present time. We are also trying to broaden the opportunity for students to go to medical school, particularly the more disadvantaged students, and then the availability of loan or scholarship funds is one of the things that determines that opportunity. I do not think it is possible to put a priority on one or the other if you are speaking as a generalization to all schools.
Mr. CASEY. I have received communications, and I am sure it would apply to medical schools as well as the undergraduate schools in the regular universities, stating that this budget is a little tilted more toward assisting the students and there has been a reduction in assistance to the schools. Of course, the position taken by Secretary Finch and others is that that is not true and they are going to give me a breakdown on that. It remains about the same as far as the assistance to the schools in construction and pay of this nature, but they make a pretty good point if you start putting emphasis on assistance to students and ignore the schools, the cost of the education is going to continue to rise and you are going to have to increase tuition and you are not going to accomplish anything for the students.
I agree with you that that balance has to be watched.
Dr. STEWART. We are trying to find the balance there. There are some schools and until they can get their financial difficulties straightened out, probably should not take any more students. There are others that can expand substantially. It might require some institutional support or construction support. We are trying to find the right mix within the budget constraints we have that will get the most.
Mr. CASEY. The medical schools and dental schools that seem to be in trouble are non-State institutions, are they not?
Dr. STEWART. Not entirely; but, for the most part, that is true.
Mr. CASEY. They are the ones primarily in difficulty?
Dr. STEWART. That is correct.

EXPANSION OF MEDICAL SCHOOLS

Mr. CASEY. Did I understand you to say that you favored more increasing the size of the existing schools or capacity of existing schools than the creation of new ones?

Dr. STEWART. I would, assuming that the schools feel that they can increase capacity without wrecking quality; I believe that we get more out of our dollar if we can build on existing schools. Mr. Casey, when I first started working on health manpower in 1959, there was great resistance among the medical schools to any expansion. The feeling was that this would just interfere with the quality. There was great resistance among the deans and faculty. We have seen a remarkable change in attitude but it has only been a very recent change, just within the last year or two.

At the meeting of the Association of American Medical Colleges in Houston this last year, there was a joint statement issued by the American Medical Association and the Association of American Medical Colleges which, in a sense, said every qualified student should be able to get into medical school and they are dedicated to seeking that goal. This is quite a change. We now feel that the door is opened for considerable expansion of the existing schools. We must do this in the sense that we don't force expansion of the schools that really ought to raise their quality or get over their financial crisis first. Many of them have indicated to us that they can do more expansion than they have in the past. We have been trying to capitalize on this interest, this feeling that now has emerged.

I think we can deliver more that way. We will have to also build new schools because the population is increasing and eventually you have to have them, and we will go on building new schools. I think we can expand our capacity that we have now further than we have.

Mr. CASEY. Doctor, I appreciate your helping us out again. It is a pleasure to see you and we will probably see you before October and wish you well now, anyway, on your future endeavors.

Dr. STEWART. Thank you, sir.

Mr. NATCHER. Mrs. Reid.

RESPIRATORY DISEASES

Mrs. REID. Thank you, Mr. Chairman.

There is a great deal of concern these days about the growing menace of emphysema and related respiratory diseases. I am told that emphysema is now the second cause of disability among workers retired prior to age 65 and costs the Federal Government some $90 million annually in social security disability benefits. Would you say this is an accurate estimate?

Despite this prevalence, however, surveys have shown that many medical schools have no undergraduate teaching program of any kind in pulmonary diseases—and there is a shortage of trained paramedical personnel as well in this field.

Are you taking any steps to encourage the teaching of this specialty in medical schools or to increase the number of paramedical personnel to treat respiratory ailments?

Dr. STEWART. The importance of emphysema and related respiratory diseases as causes of disability cannot be overstated.

The Social Security Administration records do show emphysema as the second cause of disability among workers retired prior to age 65 and the $90 million annually as an accurate estimate of related disability benefits.

Medical schools offer instruction in the major divisions of medicine, including internal medicine, pediatrics, obstetrics and gcynecology, surgery; psychiatry and preventive and community medicine. Instruction in pulmonary diseases is provided particularly in pediatrics and internal medicine.

Increasing attention is being given to the training of allied health personnel in chest diseases in schools of allied health professions and in junior colleges. Training is also being developed in hospitals in the form of respiratory care units, departments of inhalation therapy, etc. The American Association of Inhalation Therapists is attempting to establish formal and recognized programs in schools of the health and allied health professions and in medical installations throughout the country. Although the primary thrust in the training of allied health personnel in chest diseases has come from the hospitals where the necessity to deal with the practical problems is of primary importance, it is reasonable to expect that formal training of such individuals in medical schools and schools of allied health will expand.

NURSING

Mrs. Reid. Last year the American Nurses' Association representatives recommended that greater efforts be made to interest the disadvantaged in the field of nursing. Is there anything in your budget for this? You say we need 141,000 more nurses?

Dr. Stewart. The Division of Nursing will continue to emphasize recruitment of minority and disadvantaged youth into schools of nursing. Through contracts, effective relationships have been developed to encourage this target group—Mexican-American, Black, inner-city youth—to complete secondary school and to enter a school of nursing. A school population of over 10,000 will be reached in four geographic areas. These are Los Angeles, Calif., Boston, Mass., Cleveland, Ohio, Washington, D.C. Approximately 500 who who might otherwise be lost to nursing will have an opportunity to matriculate in a nursing educational program. It is projected that these early contracts will serve as models for similar programs with other groups and in other geographic areas. There is $229,000 in the 1970 budget for this program.

In answer to your second question, yes, 141,000 more nurses are needed in 1968, there were 659,000 nurses in practice. Professional judgment indicated a need for 800,000 registered nurses to provide "safe, therapeutically effective, and efficient care."

SMOKING AND HEALTH

Mrs. Reid. With reference to the National Clearinghouse for Smoking and Health you mention on page 10, have you found evidence of any appreciable decline in the number of youngsters who are taking up smoking?

I know that the National Congress of Parents and Teachers has a wide program in disseminating information on this subject. Does the clearinghouse participate in this in any way?

Dr. STEWART. Yes, through contract support. The program is proving to be one of the most effective educational programs supported by the Clearinghouse. It was begun in September 1966 in 21 States with the objective of enlisting parents of seventh and eighth graders in combating cigarette smoking. Today the program is active in all 50 States.

The decline of smoking among young people is based on a nationwide survey done for the Public Health Service from late December 1967 through early February 1968, by the Chilton Research Services of Philadelphia. The results of the study were reported by Dr. Daniel Horn, director of the National Clearinghouse for Smoking and Health, at the American Cancer Society's Science Writers Seminar, San Diego, Calif., March 25, 1968. The report, was reprinted in the Public Health Reports in June 1968.

Mrs. REID. Could you place that in the record?

Dr. STEWART. Certainly.

(The report follows:)

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CURRENT SMOKING AMONG TEENAGERS

(By Daniel Horn, Ph. D.)

Dr. Horn is director, National Clearinghouse for Smoking and Health, National Center for Chronic Disease Control, Public Health Service. This paper was presented at the American Cancer Society's Science Writers' Seminar, San Diego, Calif., March 25, 1968.

The survey on which I am reporting was done for the Public Health Service from late December 1967 through early February 1968 by the Chilton Research Services of Philadelphia. The figures are based on telephone interviews conducted as a representative sample of the 85 percent of the U.S. households which have telephone service. These figures are being augmented by personal interviews in households without telephones. Households without telephones tend to be either in rural areas or impoverished sections of the central city.

I believe levels of smoking are lower than average in the country and higher than average in the central city. It is, therefore, unlikely that adding the personal interview sample, which is now being carried out, will alter the figures by more an 1 or 2 percentage points.

The telephone sample consisted of 4,414 interviews conducted among approximately 315 boys and 315 girls at each single year of age from 12 through 18 (see table). A random selection of teenagers was made from a computer that was fed information on area codes, exchanges, and banks of numbers in use in households throughout the United States. Since any possible number could be selected, even unlisted numbers fall into the sample with their appropriate frequency.

OBSERVATIONS

The proportion of smokers among teenagers appears to have declined appreciably from levels which have been reported in numerous studies over the past 10 years. Defining "regular" smoking among teenagers as smoking regularly either daily or weekly, one boy in seven and one girl in 12 is so characterized for the entire group between the ages of 12 and 18. This frequency varies from only 1.3 percent of the 12-year-old boys and 0.3 percent of the 12-year-old girls to 35.5 percent of the 18-year-old boys and 21.3 percent of the 18-year-old girls. In 1957, 34.7 percent of the 17-year-old boys studied in Portland, Oreg. (*1*) were smoking at this level compared with 25.6 percent in our present sample; 25.5 percent of the 17-year-old girls compared with 15.7 percent in the present sample—a drop of about 9 or 10 percentage points in each group.

In the national sample studied by Eugene Gilbert & Co. and described in an unpublished report for the American Cancer Society in 1959, all teenage groups had a consistently higher proportion of smokers than their counterparts in the Oregon study. Variations in definitions of what constitutes a smoker make it

difficult to compare different studies, but even the study conducted during 1967 in San Diego and another 3-year study completed a year and a half ago by the University of Illinois show significantly higher smoking than has been found in this more recent study.

Expectations about smoking in the future are remarkably low. Salber's studies have shown that statements by children in junior and senior high school as to whether they expect to become smokers are accurate predictors of whether they actually do so (*2*). Only 2.6 percent of the entire sample say they definitely expect to be smokers 5 years from now, but 45.1 percent say they definitely do not expect to be cigarette smokers in 5 years. Another 12.3 percent say they probably will be smokers then, and 34.2 percent say they will probably not become smokers. Even including the 5.9 percent who do not know what they expect with those who say they defnitely or probably will be smokers in 5 years, the expectation is 20.8 percent will be smokers (23.1 percent for boys, 18.4 percent for girls) when this group is aged 17–23, in contraxt to rates about twice as high for comparable age groups in recent years. If these expectations are indeed accurate predictors of the future, we have every right to be optimistic about the eventual downturn of lung cancer death rates.

There is an overwhelming awareness among youth at each year of age from 12 through 18 that cigarette smoking is a health hazard. For this group as a whole, 91 percent answered "yes" to the question "Would you say smoking is harmful to health?" Four percent said smoking was not harmful, and 5 percent did not know one way or the other. There was no significant difference between boys and girls on this question. There was a slight tendency for more of the younger children to accept this fact and for slightly fewer of them to express uncertainty than among the 17 and 18 year olds.

The same factors which distinguished teenagers who took up smoking by the time they were of high school age from those who did not in our study of Portland school children in 1957 also characterize the smoking children of 1968.

1. Smoking is more common among children who come from families in which there is smoking. Parental smoking is still an important factor although smoking among older brothers and sisters may be even more predictive.

PERCENTAGE OF 4,414 ADOLESCENTS INTERVIEWED BY TELEPHONE WHO SMOKED REGULARLY, BY AGE, 1968

Age	Boys			Girls		
	Weekly	Daily	Combined	Weekly	Daily	Combined
12	1.0	0.3	1.3	0.3	0	0.3
13	.6	1.0	1.6	0	.6	.6
14	1.2	4.4	5.6	.3	.6	.9
15	2.9	10.7	13.6	1.8	5.6	7.4
16	2.9	17.4	20.3	3.6	8.3	11.9
17	6.0	19.6	25.6	3.9	11.8	15.7
18	4.1	31.4	35.5	3.9	17.4	21.3
Average	2.7	12.0	14.7	2.0	6.4	8.4

2. A group of characteristics identify the outgroup in the school setting. Children who have slipped behind their agemates in school and those who do not expect to go on to college are more likely to smoke than the other children in the population.

Because of the continued importance of parental smoking as a factor in smoking by youth, it is interesting to note that at the time of our Portland study 55 percent of the parents of high school children were reported as cigarette smokers. In our present sample slightly less than 50 percent of the parents of the high school children are reported as cigarette smokers. This finding supports one of the basic premises of recent educational efforts to control smoking, that one must work to reduce both adult and teenage smoking simultaneously and with equally vigorous efforts, since they strongly influence each other.

RELATED FINDINGS

The findings in this survey are supported by the recent reports from the Internal Revenue Service which show an absolute decrease both in manufacturing of cigarettes and the removal of cigarettes from warehouses for distribution to the consumer markets. The 3 consecutive months from November 1967 to January 1968 each shows an absolute reduction over the corresponding months 1 year earlier. This is the first time since shortly after the Surgeon General's report of

1964 that such a continuing reduction has taken place. The size of the reduction is such as to suggest that there may be about 1½ million fewer cigarette smokers now than there were a year ago, although there are about 3 million more people in the U.S. population. Of course, it is possible that this has only been a temporary phenomenon and that the months to come will show a return to previous levels. Yet, in the absence of any spectacular single event to account for this downturn, we may very well be on the way to success in bringing cigarette smoking under some kind of control.

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MICE EXPERIMENTS IN CANCER RESEARCH

Mr. NATCHER. I have just had called to my attention a question that our chairman, Mr. Flood, would have asked if he were here today. Mr. Flood, as you know, is attending to important matters in his district today.

Dr. Stewart, huge amounts of Government funds are spent on mice tests in the form of grants or acutal work done by the Government. These mice experiments are used to determine positive conclusions especially in cancer research.

Has the significance of these biological tests on mice as they relate to humans been significantly established to justify the importance placed upon them?

Dr. STEWART. Yes, sir, Mr. Natcher. Although the results obtained in animal studies cannot always be directly transferred to man, long experience now in biomedical research has shown that in many respects man's biological functions are similar to those of lower animals; and general conclusions about man can be obtained from animal work, especially when more than one species of animal are studied. The mouse is especially useful in seeking to understand the nature of cancer and improve the treatment of the disease in man because large amounts of scientific data can be obtained at less cost and in a shorter period of time than with most other animals. Mice breed rapidly in captivity; can be obtained with known genetic backgrounds including in-bred strains; can be maintained in large numbers in less animal space; are susceptible to cancer induction by radiation, chemicals, and viruses; and will accept tumors through various transplantation techniques.

I can recall two illustrations which might help further to answer your question, Mr. Natcher. Leukemia 1210 is a type of leukemia easily transplantable in a certain strain of mice. If a known number of leukemic cells are transplanted, the scientist can predict when the mouse will die of leukemia. Every chemotherapeutic agent useful in childhood acute leukemia is an effective agent against L–1210 in mice. The concepts, combinations, and schedules of drugs currently used in the "total leukemic cell kill" therapy for acute childhood leukemia derive directly from L–1210 studies in mice.

As a second illustration, the toxicity of drugs proposed for use against human cancer is studied first in the mouse where untoward drug effects are sought in the blood, bone marrow, liver, kidney, and gastrointestinal tract, for instance, prior to pharmacologic investigations in other animals. We feel that the biologic significance and relevance of toxicity studies in mice for most classes of chemicals is firmly established and provides important information for the pharmacologist and toxicologist seeking safe and effective drugs for man.

In areas other than cancer research, the mouse is used in a significant number of diagnostic procedures, especially in the isolation and identification of certain viruses. Further, it is also worth noting that many of our biological products are standardized on the basis of their action in mice.

Mr. NATCHER. Dr. Stewart, we want to thank you for your appearance before our committee at this time, and certainly all of the members on this subcommittee, on both sides of the aisle, join Mr. Casey in his wish for you that you have the best of everything in your new endeavor. It has always been a pleasure to have you before our committee.

Dr. STEWART. Thank you very much, Mr. Natcher.

Mrs. REID. Thank you, Dr. Stewart.

EXPENDITURES FOR HEALTH AND MEDICAL CARE

Mr. NATCHER. We will place in the record, at this point, the table we requested on expenditures for health and medical care.

(The table follows:)

Table 5.---Health and medical care: Private expenditures and expenditures under public programs, selected fiscal years, 1928-29 through 1967-68

(Amounts in millions)

Type of expenditure	1928-29	1934-35	1939-40	1944-45	1949-50	1954-55	1959-60	1964-65	1965-66	1966-67	1967-68 [1]
Total	$3,589.1	$3,123.2	$3,804.6	$7,914.4	$12,129.5	$17,923.6	$26,366.7	$38,900.6	$42,267.9	$47,909.9	$53,122.2
Private expenditures	3,112.0	2,580.0	3,023.0	5,335.0	9,064.0	13,503.0	19,971.5	29,366.0	31,464.5	32,182.5	33,683.0
Health and medical services	3,010.0	2,570.0	2,992.0	5,305.0	8,849.0	13,178.0	19,447.5	28,198.0	30,305.5	31,055.5	32,356.0
Direct payments	[2]2,900.0	[2]2,500.0	[2]2,900.0	[2]4,875.0	7,146.0	9,418.0	13,087.0	17,590.5	18,856.5	19,006.5	19,696.0
Insurance benefits	.....	.....	.....	.....	879.0	2,344.0	4,697.5	8,280.5	8,935.0	9,313.0	9,750.0
Expenses for prepayment	.....	.....	.....	.....	274.0	596.0	792.0	1,211.5	1,317.5	1,491.5	1,633.0
Industrial in-plant services	30.0	30.0	40.0	90.0	150.0	210.0	265.0	330.0	345.0	360.0	380.0
Philanthropy	80.0	40.0	52.0	310.0	400.0	580.0	606.0	785.0	821.5	854.5	897.0
Medical facilities construction	102.0	10.0	31.0	30.0	215.0	325.0	524.0	1,168.0	1,159.0	1,127.0	1,327.0
Public expenditures	477.1	543.2	781.6	2,579.5	3,065.3	4,420.6	6,395.2	9,534.6	10,803.4	15,727.4	19,439.2
Health and medical services	372.5	495.1	679.5	2,468.2	2,470.2	3,862.3	5,346.3	7,636.3	8,683.9	13,403.0	16,904.8
OASDHI (health insurance for the aged)	.....	.....	.....	.....	.....	.....	.....	.....	63.6	3,394.6	5,347.2
Temporary disability insurance (medical benefits) [3]	.....	.....	.....	.....	2.2	20.0	40.2	50.9	54.3	53.7	53.0
Workman's compensation (medical benefits) [3]	75.0	65.0	90.0	122.0	193.0	315.0	420.0	580.0	630.0	700.0	770.0
Public assistance (vendor medical payments)	.....	.....	.....	.....	51.3	211.9	492.7	1,367.1	1,714.1	2,408.2	3,511.1
General hospital and medical care	117.1	225.3	297.6	364.8	886.1	1,297.6	1,973.2	2,514.7	2,720.4	2,701.8	2,550.6
Defense Department hospital and medical care	29.2	27.7	45.4	1,631.1	336.2	744.8	820.1	858.5	1,030.5	1,322.2	1,431.5
Military dependents' medical care	.....	.....	.....	.....	.....	.....	60.1	78.3	76.2	109.5	159.9
Maternal and child health programs	6.2	6.9	13.8	62.1	29.8	92.7	140.7	224.1	261.7	311.5	343.7
School health (educational agencies)	9.4	10.0	16.4	23.3	30.6	65.9	101.0	132.0	135.0	140.0	145.9
Other public health activities	88.8	112.2	154.5	178.0	350.8	383.7	401.2	669.9	726.8	831.8	999.8
Veterans hospital and medical care	46.7	47.8	61.5	85.5	582.8	721.5	879.4	1,120.9	1,175.2	1,259.3	1,381.6
Medical vocational rehabilitation	.1	.2	.3	1.4	7.4	9.1	17.7	34.2	48.0	67.4	99.6
OEO health and medical care	.....	.....	.....	.....	.....	.....	.....	5.6	48.2	103.0	111.0
Medical research	.....	.3	2.6	2.5	72.9	138.9	471.2	1,228.8	1,375.8	1,520.9	1,664.1
Medical-facilities construction	104.7	47.8	99.6	108.7	522.3	419.4	577.7	669.5	743.7	803.5	870.3
Defense Department	(4)	(4)	(4)	38.9	1.1	33.0	40.0	31.1	41.3	49.7	26.1
Veterans Administration	4.2	3.0	14.3	16.3	161.5	34.1	59.6	81.2	86.0	51.1	49.5
other	100.4	44.8	85.2	53.5	359.8	352.4	478.1	557.2	616.4	702.6	794.7

Total expenditures as a percent of gross national product	3.6	4.5	4.0	3.7	4.6	4.7	5.3	5.9	5.9	6.2	6.5
Public expenditures as a percent of total expenditures	13.3	17.4	20.5	32.6	25.3	24.7	24.3	24.5	25.6	32.8	36.6
Personal care expenditures[5]	3,272.1	2,941.5	3,501.8	7,505.6	10,577.5	15,905.9	23,357.2	33,492.5	36,379.6	41,410.9	45,871.8
Private expenditures	2,990.0	2,560.0	2,979.0	5,220.0	8,475.0	12,437.0	18,427.5	26,551.0	28,511.5	29,090.0	30,218.0
Public expenditures	282.1	381.5	522.8	2,285.6	2,102.5	3,468.9	4,929.7	6,941.5	7,868.1	12,320.9	15,653.8
Percent from:											
Private expenditures	91.4	87.0	85.1	69.5	80.1	78.2	78.9	79.3	78.4	70.2	65.9
Direct payments	88.6	85.0	82.8	65.0	67.6	59.4	56.0	52.5	51.8	45.9	42.9
Insurance benefits	.....	.....	.....	.....	8.3	14.7	20.1	24.7	24.6	22.6	21.3
Public expenditures	8.6	13.0	14.9	30.5	19.9	21.8	21.1	20.7	21.6	29.8	34.1

1 Preliminary estimates.
2 Includes any insurance benefits and expenses for prepayment (insurance premiums less insurance benefits).
3 Includes medical benefits paid under public law by private insurance carriers and self-insurers.
4 Data not available.
5 Includes all items shown under "health and medical services" except (1) "expenses for prepayment." (2) expenditures of private voluntary agencies under "philanthropy." (3) "other public health activities." and (4) administrative expenses for: "health insurance for the aged." maternal and child health programs," and "veterans' hospital and medical care."

Source: Merriam, Ida C., Skolnick, Alfred M., and Dales, Sophie R., "Social Welfare Expenditures, 1967-68." Social Security Bulletin. Volume 31, Number 12, December 1968.

Support of Medical Research

Mr. Natcher. We will also place in the record the tables on expenditures for medical and health-related research.

(The tables follow:)

Department of Health, Education, and Welfare

National Support for Performance of Medical and Health-Related Research
by Source of Funds, Fiscal Years, 1963-1969 1/
(millions of dollars)

Source of Funds	1963	1964	1965	1966	1967	1968	1969 2/
	Actual					Estimate	
Total	$1,486	$1,652	$1,841	$2,056	$2,264	$2,473	$2,635
Government	964	1,099	1,229	1,377	1,524	1,658	1,750
Federal	919	1,049	1,174	1,316	1,459	1,589	1,677
State and local	45	50	55	61	65	69	73
Industry	375	400	450	510	565	635	700
Private support	147	153	162	169	175	180	185
Foundations and health agencies	85	88	92	94	98	101	103
Other private contributions	21	22	25	28	29	30	31
Endowment	19	19	19	19	19	19	19
Institutions' own funds	22	24	26	28	29	30	32

Note:
The Nation's support--from all sources for the conduct of medical research--increased at an average annual rate of 11 percent from 1963 to 1968; the 1969 estimates, however, show a rate of increase of 6 percent over 1968. For agencies of the Federal Government, providing 65 percent of the total funds, 1969 budget estimates indicate an increase in medical research funds of less than 6 percent over 1968, in contrast with the 12 percent annual increase in Federal support, 1963-1968.

The estimates for medical and health-related research shown above update the series extending back to 1947 published in Resources for Medical Research, Report No. 10, "Dollars for Medical Research, Sources and Performers, 1947-1966," (PHS Publication No. 1612), and Resources Analysis Memo No. 10, "Biomedical Research, 1966-68."

Current data for the Federal Government were obtained through the annual survey, conducted by the National Institutes of Health, of Federal agencies' support for medical and health-related research. Estimates for state and local governments include appropriations made to educational institutions and hospitals for the performance of medical and health-related research. The industry sector includes data for the pharmaceutical, medical supply, and biomedical engineering industries. The non-industrial private sector covers the funds provided by philanthropic foundations, voluntary health agencies, and other private contributors to the support of medical and health-related research. Resources for Medical Research Report No. 10 also presents a detailed discussion of the definitions and statistical methodology underlying the time series.

1/ Coverage is limited to conduct and support of medical and health-related research. Support of other activities such as research training or capital outlays for research facilities is not included in this series.

2/ Data on Federal obligations are available at the beginning of the fiscal year. Firm data on non-Federal support cannot be obtained until after the end of the fiscal year; the estimates for 1969 may therefore overstate the Federal share.

Office of Resources Analysis
National Institutues of Health
February 1969

Department of Health, Education, and Welfare

Federal Support for Performance of Medical and Health-Related Research, FY 1967-1969 [1]
(thousands of dollars)

Agency	1967 Actual			1968 Actual			1969 Estimate		
	Total	Budgeted	Directly related	Total	Budgeted	Directly related	Total	Budgeted	Directly related
Total	$1,459,371	$1,173,806	$285,565	$1,588,892	$1,252,861	$336,031	$1,677,439	$1,324,813	$352,626
Atomic Energy Commission	95,907	9,027	86,880	95,014	8,858	86,156	98,872	9,273	89,599
National Aeronautics and Space Administration	81,623	--	81,623	108,588	--	108,588	114,233	--	114,233
National Science Foundation	13,845	--	13,845	21,068	--	21,068	21,915	--	21,915
Tennessee Valley Authority	1,484	--	1,484	2,202	--	2,202	2,320	--	2,320
Veteran's Administration	44,754	44,754	--	45,586	45,586	--	50,450	50,450	--
Department of Agriculture	45,440	--	45,440	46,185	--	46,185	46,338	--	46,338
Department of Commerce	1,059	--	1,059	722	--	722	727		727
Department of Defense	117,504	67,529	49,975	113,959	67,341	46,618	120,455	69,588	50,867
Department of Health, Education and Welfare [2]	1,051,183	1,047,900	3,283	1,133,448	1,125,722	7,726	1,196,235	1,188,467	7,768
National Institutes of Health	812,393	812,393	--	863,969	863,969	--	887,829	887,829	--
Health Services and Mental Health Administration	199,979	199,979		139,571	139,571	--	159,080	159,080	--
Consumer Protection and Environmental Health Service				84,518	84,518	--	102,868	102,868	--
Other DHEW agencies	38,811	35,528	3,283	45,390	37,664	7,726	46,458	38,690	7,768
Department of Interior	1,976	--	1,976	1,978	--	1,978	2,109	--	2,109
Department of State	2,166	2,166	--	2,676	2,676	--	3,842	3,842	--
Department of Transportation [3]	2,430	2,430	--	17,466	2,678	14,788	19,943	3,193	16,750

For 1969, the current fiscal year, a less than 6 percent increase over 1968 is projected in Federal funds for medical research, performed in Federal and nonfederal laboratories and clinics. The estimated annual increase is the smallest since 1947, with the exception of the 1952-53 period affected by the budgetary constraints imposed by the Korean war. This increase, however, is not uniform among the agencies, research programs for consumer protection, air pollution, and environmental control are projected to increase 20 percent over 1968; on the other hand, the biomedical research programs of the National Institutes of Health will increase 2.8 percent.

Note on Coverage and Sources

The statistics shown above -- actual obligations for fiscal years 1967, 1968 and estimates for 1969 -- were reported by Federal agencies to NIH following a review by each agency of its research activities to show explicitly obligations for medical and health-related in all fields of science (biological, medical, agricultural, psychological, physical, mathematical, engineering, social) distinguishing between (1) funds separately budgeted for medical and health-related research, specifically identified, programmed and justified as such, and supported for the purpose of improving

(continued next page)

human health (all of the research activities of agencies or sub-agencies whose sole mission is advancement of human health through research may thus be included); and (2) funds for research directly related to health in terms of substance or probable application, but which derive from funds budgeted, justified or supported for purposes other than medical or health objectives (for example, the general support of science, the promotion of agriculture, the achievement of the Nation's strategic objectives in outer space.) As the table shows, about 20 percent of the total represents this latter category of research directly related to health but supported for other purposes. The above update and continue the time series presented in Resources for Medical Research "Federal Support for Medical and Health-Related Research, 1947-1964," Report No. 4. (PHS publication No. 1068) and Resources for Medical Research Report No. 12, "Dollars For Medical Research, 1965-67," and Resources Analysis Memo No. 10, "Biomedical Research, 1966-68". These publications together with the revised data shown above for 1967-68 constitute the definitive time series on Federal support for the performance of medical and health-related research in the post war period.

1/ Coverage is limited to conduct and support of medical and health-related research. Support of other activities (such as training or capital outlays for research facilities) is not included in this series.

2/ As presented in this table, the data for DHEW health agencies reflects the organizational structure established in April 1968. For comparability, the NIH data for 1967 also includes the National Library of Medicine, and the Bureau of Health Professions Education and Manpower Training. For 1967, however, data are not available separately for the Health Services and Mental Health Administration, and for the Consumer Protection and Environmental Health Service.

3/ Includes research programs of the Federal Aviation Administration for all years and for 1968 and 1969 the National Highway Safety Bureau. Research programs of the latter bureau for 1967 may have approximated an order-of-magnitude of $5 million; this amount is not included in the above table.

Office of Resources Analysis
National Institutes of Health
February 1969

Special Reports

Mr. Natcher. Following our usual practice, we have asked you for several special reports on disease problems that involve significant work by more than one of the Departments' health and medical organizations. We will place them in the record at this point.

(The statements follow:)

RUBELLA

If a vaccine against rubella (German measles) continues to be as successful as present reports indicate, one of the viral diseases which has caused death and disability soon may join the ranks of the conquered.

More than 250,000 infants are born with birth defects each year in the United States - and each year, some 60,000 die as a result of these defects. Furthermore, at least 20% of these defects are said to be caused by the action on the pre-natal environment of foreign substances such as drugs and attack by the virus of German Measles. It has been conservatively estimated that following the 1964-65 rubella epidemic alone, between 20,000 and 40,000 infants were born mentally retarded or suffering such defects as heart, hearing, and eye disorders, in addition to a variety of blood, liver, bone, pulmonary and vascular abnormalities.

This report does not represent the entire field of rubella research but pertains solely to the efforts of the National Institutes of Health and the Health Services and Mental Health Administration.

NATIONAL INSTITUTES OF HEALTH

National Institute of Allergy and Infectious Diseases and the Division of Biologics Standards

Rubella Mildly Contagious

Rubella is far less contagious than other childhood ailments, such as chicken pox and rubeola (common measles). Although it usually occurs in the late winter and spring (in 1968, there were some 50,000 cases reported in the United States), rubella shares with some other viral diseases the tendency to occur in cyclic epidemics every 7 to 10 years (as in 1964-65, when the german measles virus caused nearly two million illnesses).

Spread by droplet spray from the nose and throat, the rubella virus may be air-borne for short distances. Its symptoms in children may include a slight headache, fever, some muscular pain and swelling of the neck prior to a cough, nasal congestion and a faint pink rash which persists for about three days. In women, rubella infection is sometimes accompanied by a transient stiffness of the joints (arthralgia) lasting for several days to two weeks; the severity of these symptoms apparently increases with the age of the individual.

Because of the relatively low degree of contagion, at least one person in five reaches adulthood without having had rubella. If a susceptible woman develops the ailment with the first 12 weeks of pregnancy, the rubella virus can pass through the placental wall to her unborn child, causing -- in about 20 percent of such cases -- stillbirth or congenital abnormalities. To add to the problem, a pregnant woman with rubella may show no apparent symptoms of the disease and yet produce a damaged child. The virus has been known to persist in congenital rubella babies for as long as two to three years after birth, during which time the child is a potential source of further infection.

Rubella and Birth Defects Linked in 1941

Rubella was first linked to birth defects in 1941, when Dr. Norman Gregg, an Australian opthalmologist, traced an unprecedented number of cataracts in infants to the 1940 rubella epidemic.

Only as recently as 1962 was the rubella virus isolated and grown in cell cultures; these vital research advances were reported simultaneously by investigators at the Walter Reed Army Institute of Research and Harvard University. Since that time, scientists have attempted to develop vaccines using both killed and live rubella virus. (A killed virus vaccine is produced by growing the virus in a tissue culture and then inactivating - or killing - the material by chemical or physical means. A live virus vaccine is made by repeatedly passing the virus

through tissue cells until it is attenuated - or weakened - to the point where it can produce immunity without causing the disease. Examples of these two types of vaccines are those developed against polio: the Salk is a killed virus vaccine while the Sabin is a live vaccine.)

When it became apparent that numerous complex problems were deterring the efforts of individuals to produce killed and live rubella virus vaccines, the challenging task of coordinating an intensive rubella vaccine program was assigned by the Congress in February 1966 to the National Institute of Allergy and Infectious Diseases. Drawing on the experience of its Collaborative Research Program in bringing together Government, industry and universities in a massive, cooperative voluntary partnership, the NIAID has utilized the knowledge and expertise of scientists at the Nation's leading pharmaceutical companies, university medical centers and private research laboratories, as well as those in the Bethesda, Maryland laboratories of the National Institute of Neurological Diseases and Stroke, the Division of Biologics Standards, and the National Institute of Allergy and Infectious Diseases.

DBS Reports First Promising Experimental Vaccine

In the meantime, as a result of increasingly intensive study of rubella by a number of investigative groups, the NIH Division of Biologics Standards had established a comprehensive research program for the gathering and evaluating of scientific information essential to the testing and licensing of the hoped-for vaccine. In charge of the DBS efforts were Drs. Harry M. Meyer, Jr. and Paul D. Parkman, who, by May 1966, announced their development of an attenuated rubella virus strain. In early trials it appeared to confer immunity without transmitting the infection to unvaccinated persons.

In their research, Drs. Meyer and Parkman had passed the rubella virus through primary African green monkey kidney cell cultures 77 times and, after a series of successful laboratory tests, the high-passage virus (called HPV-77) resulted in the production of immunity when inoculated into rhesus monkeys. Nor was there any indication that the rubella virus was present in the animals' blood (viremia) or that it spread to uninoculated animals. These results suggested that, for the first time in nearly four years of research, a rubella virus strain had been sufficiently modified by tissue culture passage for use as an experimental vaccine.

There followed the preparation - under the same rigorous standards and safety tests used in production of other live attenuated vaccines - such as common measles and poliomyelitis - a vaccine for use in small closed-population clinical trails. Conducted in one isolated cottage at the Arkansas Children's Colony, with eight girls serving as vaccinees and eight as controls, the results showed that all of the inoculated girls developed virus-neutralizing antibodies indicative of immunity. And, even though the attenuated virus was found in the nose and throat of some of the vaccinated girls, none of the control group developed rubella.

New Method of Measuring Immunity

To the DBS scientists also goes credit for adaptation of a method for measuring rubella immunity through a test known as hemagglutination-inhibition (HA-I test). Based on the biological principle of red blood cell clumping (hemagglutination) used successfully in studies on influenza and other diseases, the test performed by Drs. Meyer and Parkman utilized red blood cells from newly hatched chicks. When a sample of blood from a person immune to rubella is added to the chick cells, antibodies in the immune blood inhibits clumping; thus the absence of clumping demonstrates immunity to rubella. Because of the test's simplicity, speed, sensitivity and reliability, it has been possible to perform more rapid and effective clinical evaluation studies than would heretofore have been possible.

NIAID Accelerates Efforts

The value of contracted research, as administered by the NIAID Collaborative Research Program's Vaccine Development Branch, is amply demonstrated by the rubella efforts. With the announcement by Drs. Meyer and Parkman of the availability of their HPV-77 rubella virus strain, the work of a number of pharmaceutical companies under contract to NIAID for development of a rubella vaccine were quickly rechanneled into new programs of production. Four contracts concerned primarily with research and development of inactivated vaccines were terminated and the number of evaluation centers was increased, bringing to a total of 12 those involved in some aspect of rubella vaccine evaluation.

Using the parent strain (HPV-77), live, attenuated vaccines have been prepared in three tissue culture systems -- canine, monkey and duck -- and have been carefully studied in laboratories and evaluated in closed populations. As with HPV-77, the three derivatives showed no untoward clinical reactions and all have produced satisfactory levels of immunity. Although some individuals from all groups shed virus from the throat, there has been no evidence of viral transmission to any of the susceptible household contacts when a small number of family studies were done to determine how the virus would behave in other than closed population settings.

Evaluation Moves to Open Populations

Following the successful safety and efficacy tests in adults in closed populations and later in small family studies, the NIAID Vaccine Development Branch sponsored an intensively-monitored series of trials in large open populations.

One of the most comprehensive of these evaluations of HPV-77 and its derivatives was conducted by University of Washington scientists on the island of Taiwan where the entire population under age 10 is susceptible to rubella. Involving some 10,000 school children, the trial was particularly meaningful, coming as it did in the face of the first rubella epidemic on Taiwan since that of 1957-58. The scientists report most encouraging results: In Taipei, a total of 50 percent of the unvaccinated children showed rubella rash. However, among those vaccinated prior to exposure, more than 90% showed effective protection against the natural disease.

Although the vaccine had produced immunity when challenged by the rubella virus in closed population studies, its effectiveness in epidemic situations needed confirmation.

The Washington group, also investigating the value of intranasal administration of HPV-77 and other strains, found this route of administration to be less effective.

Also tested was a vaccine combining rubella, mumps and measles. This proved to be as effective as single doses of each.

Another study, conducted by investigators at New York University Medical Center - involving more than 600 persons in institutional and community programs - showed that more than 95% of the vaccinees developed a high level of immunity to rubella. The vaccine virus did not spread to other susceptible close contacts and in children there were no unpleasant side effects that could be attributed to the vaccine. In some adult women receiving the vaccine during preliminary trials, there was some evidence of transient arthralgia to about the same degree as that experienced by women developing natural rubella. However, the other typical rubella symptoms - rash, fever and malaise - were rare following vaccination.

Equally encouraging reports have been received from scientists at Yale University School of Medicine where rubella has been under study for many years. Approximately 2,500 school children in Danbury, Connecticut have participated in

the 1968 trials of an HPV-77 derivative vaccine, additional studies are now being conducted on long-term surveillance of rate of antibody level maintenance or decay as well as vaccine efficacy when confronted with natural disease.

Other investigations now being pursued include those by scientists at:

... Vanderbilt University in Nashville, Tennessee where various groups have been inoculated with an attenuated rubella strain to study vaccine acceptability, clinical reactions, and antigenicity and communicability in populations geographically and socio-economically different from those found in other studies;

... Case Western Reserve University, Cleveland Ohio, where in addition to vaccine trials antigenic components of rubella virus are being separated for possible later use in preparation of an effective subunit rubella vaccine;

... University of Cincinnati, Ohio, involving numerous clinical trials of candidate rubella virus vaccines in closed and open populations;

... University of Southern California, in conjunction with the Attending Staff Association of the Los Angeles County Hospital, concerned with evaluation of rubella virus vaccines in open and closed populations for such factors as reaction, antigenicity, communicability, and antibody persistence or disappearance;

... University of Vermont, Burlington, involving clinical evaluation of vaccines in susceptible populations and investigation of various rubella isolates in an attempt to detect variants with antigenic differences;

... University of Michigan, Ann Arbor, in which studies are being performed on possible transmission of rubella virus in a group of student families;

... Tulane University, New Orleans, involving family studies among military personnel and their dependents;

... State University of New York at Buffalo, where evaluation studies are being conducted in a school for the deaf, in a pediatric immunization clinic, and in the local public school system; and

... as a service to contractors not equipped to process large quantities of blood samples, one professional laboratory has been employed to perform necessary serological and virological procedures, thus permitting the scientists and their associates to proceed more expeditiously to completion of their assigned research projects.

The results of these and other studies being conducted throughout the world - to include, in addition to HPV-77, other vaccines which have been developed and tested by pharmaceutical companies and investigators not participating in the NIAID program - will be discussed during an International Conference on Rubella Immunization to be held February 18-20, 1969 at the National Institutes of Health. By this date, it is anticipated that reports will be available on results of studies of approximately 25,000 children and adults.

The conference, to which several hundred leading investigators in the fields of virology, clinical medicine and immunology have been invited, will cover all aspects of rubella: the disease, the virus that causes it, epidemiology, studies with experimental vaccines and human gamma globulin, the production of vaccines and biologics control. The sessions are being jointly sponsored by the National Institute of Allergy and Infectious Diseases and the Division of Biologics Standards.

Vaccine Still Sought for Women of Child Bearing Age

One important problem still exists. That is the development of a vaccine considered safe and effective for women of childbearing age. Physicians have long recommended that any live virus vaccine not be administered to a woman who might later discover she had been pregnant at the time of inoculation. For this reason, all possible avenues are being taken in an effort to produce a safe and effective killed vaccine for this group.

One of the important requirements for production of killed vaccine has been accomplished: the ability to produce large quantities of rubella virus in high titer in a line of continuous monkey kidney cells (Vero cells). Other investigations include:

... efforts to utilize a number of biochemical and physical methods of preparing viral fractions.

... A search for animal model systems in which virulent, attenuated and inactivated viruses may be administered subcutaneously, intravenously, and intranasally during various stages of gestation. At present, the rabbit appears to be the most promising animal model yet tested.

... A study of the dosage of Cobalt 60 irradiation required to destroy virus infectivity without altering its ability to produce immunity and the testing of conditions which influence radiation dose. It now appears that there is a dose-virus concentration relationship and that chemicals added to stabilize the virus alter its inactivation process.

... Use of sublethal concentrations of a chemical (betapropiolactone) and ultra violet light on rubella viruses.

Although the painstaking task of evaluating various techniques and systems for production of an inactivated rubella vaccine continues, public health officials confidently expect that - once vaccines are available for mass inoculation of school children - the problem of transmission of rubella virus from children to women of childbearing age will be effectively controlled.

Epidemilogical studies have shown that the prime source of rubella infection for susceptible women comes through transmission from school-age youngsters. Although rubeola (common measles) and poliomyelitis have not yet been totally eradicated, they are excellent examples of viral diseases which have been essentially controlled by mass inoculation of children in the school and community setting.

Even after vaccines are available, studies will continue for many years on maintenance of immunity levels. According to Drs. Meyer and Parkman, the children involved in their early trials in Arkansas in 1965 still have the high levels of rubella immunity they showed a few weeks after inoculation. If these encouraging reports continue, it may be possible for a child to have only one vaccination during his lifetime.

In summation, the outlook is exceptionally bright for an available vaccine against rubella. Credit for this accomplishment must be shared by Government, private industry, and the academic community.

HEALTH SERVICES AND MENTAL HEALTH ACTIVITIES

Community Health Service

It has been predicted that in 1970-71 the United States will experience a major German measles epidemic. The real threat of German measles is the danger it poses to the susceptible pregnant woman. Approximately 25% of adult women who contract German measles in the first trimester of pregnancy will give birth to children with severe congenital defects. During the 1964 epidemic 20,000 children were born with congenital abnormalities. It is imperative that action be taken to interrupt the transmission of the rubella virus in the community. Since the vaccine is not recommended for widespread use in adult women, and since the spread of the disease is normally from child to child and from child to adult, it is necessary to immunize the large group of preschool and school children who are responsible for spreading German measles. It is estimated that there are now 45 to 50 million children who need protection against german measles. Each year approximately 4 million newborns are added to the susceptible population.

A newly developed German measles vaccine is expected to be licensed in the Spring of 1969, at which time it is proposed that an intensive nationwide German measles immunization program be initiated as an emergency measure to assure that no time will be lost in mobilizing the Nation's health resources to meet the impending German measles epidemic. The program provides for the purchase of the new vaccine, and necessary personnel and other costs related to program implementation.

Past experience has shown that when new vaccines become available, there is usually widespread but haphazard application of the vaccine with little attention paid to the reservoirs of susceptibles. This results in continued epidemics, particularly among the urban poor. Oftentimes public apathy toward a disease results in needless delays in the effective administration of vaccines.

In 1970, the German measles program will be expanded to enable States and communities to continue intensive immunization activities against measles and polio which were begun under the Vaccination Assistance Act. The success of the measles campaign must be solidified. Outbreaks of polio around the country underscore the need for continuing to search out unimmunized pockets of susceptibles so that outbreaks can be prevented. It is also important that States and communities have the resources to undertake intensive immunization activities to assure that there is no spread of disease from isolated cases that may occur.

Thus, in 1970 there will be an intensive nationwide immunization program against measles and polio as well as German measles. This will provide for the second year of activity against German measles and will continue the campaign against measles and polio. These coordinated grant supported programs directed by State and local health departments take advantage of the many community resources that are vital to success, such as local medical professions, neighborhood health centers, well child clinics, volunteer groups, and Headstart programs. Such an approach, coordinated on a national basis, includes grant support for (1) personnel who engage in planning, organizing, and promoting activities in connection with community immunization programs, (2) intensive public informational, educational, and motivational activities, (3) intensive epidemiologic and laboratory surveillance, and (4) vaccines (German measles, measles, and polio) used in protecting susceptible persons. The measles campaign has proved that disadvantaged neighborhood residents participate in motivational and educational activities.

KIDNEY DISEASE

Diseases of the kidneys, and diseases affecting these organs, rank among the major ailments which undermine or destroy good health. Between July 1964 and June 1965, kidney disease victims totaled 7,847,000, of which 57,128 died. These statistics indicate that kidney diseases rank fourth as a chronic disease killer.

A common characteristic of almost all kidney diseases is their tendency to eventually progress to a common end-stage, the clinical syndrome of uremia. Uremia is the collection of signs and symptoms resulting from the loss of the kidney's functions of removing wastes from the body and of regulating the internal chemistry of the body. Patients with uremia may be divided into two groups--those with acute kidney failure and those with chronic renal insufficiency. In acute kidney failure, the kidneys are damaged by an acute insult or attack and the symptoms of uremia progress rapidly. The damage may be reversible after a short period, and the kidneys may heal and regain normal function. Chronic kidney failure, however, is brought on by gradually progressive destruction of the kidneys from which they do not usually recover. In these cases the kidneys never regain the ability to reverse the trend toward ultimate, fatal uremia.

A significant number of Americans who harbor infectious organisms in their urinary tract will have no warning of their disease until kidney damage is so severe that they cannot survive. Unlike the majority of chronic diseases, kidney diseases are particularly likely to cause death to patients in the middle, productive years. The social and economic impact of kidney diseases, therefore, is far out of proportion to what one would expect from simple analysis of the bare statistics.

The importance of the kidney organs can be judged in part by the fact that they receive about one-quarter to one-fifth of the blood volume pumped by the heart. By selective excretion of certain substances and reabsorption of others, the kidneys continually process blood to eliminate waste products detrimental to the body cells by regulating the concentration and composition of salts, and the amount of water in the blood and tissues. The kidneys also produce substances which are important in regulating blood pressure and in stimulating the bone marrow to produce blood cells.

The term "kidney disease" encompassesa number of conditions of varying causation which attack the kidneys. Among the leading causes of kidney diseases are:

1. Hypersensitivity diseases in which kidney tissue is destroyed by an immune reaction initiated by any of a number of causes, including streptococcal infection.

2. Infections in which kidney tissue is attacked and destroyed by microorganisms.

3. Circulatory diseases in which the kidney is affected as a result of disease of the blood vessels or the blood itself.

4. Metabolic diseases in which the kidney is secondarily affected, such as in diabetes or gout.

5. Developmental disorders in which kidneys fail to develop or develop in an abnormal fashion.

6. Obstructive conditions in which urine flow is blocked with resultant pressure damage to the kidney and repeated infections.

The development of two dramatic therapeutic approaches to end-stage kidney diseases, chronic kidney hemodialysis and kidney transplantation, has thrust the renal disease problem into the public eye and led to a proliferation of activities

directed toward reducing the renal morbidity and mortality. The artificial kidney has been employed therapeutically over the past two decades. However, little increase in its usefulness occurred until 1960 when the "Quinton-Scribner shunt" was developed. The shunt is an implanted plastic tube in an artery or vein of the patient, permitting repeated hookup and separation, without surgery, to obtain blood flow through the artificial kidney machine for its purification (hemodialysis).

Recently, another shunt technique has been developed. This is the internal, or subcutaneous arteriovenous shunt, which precludes the necessity of the implantation of plastic tubes. This dialysis hookup is accomplished by inserting a large needle into the previously constructed junction between a neighboring artery and vein. This technique can avoid some of the infection and other problems of the external shunt and improve patient safety.

Kidney transplantation is a technique whereby a functioning kidney from a donor is transplanted into a patient who has lost his kidney function. It has progressed rapidly over the past 15 years from a highly experimental procedure to an established therapeutic modality for end-stage renal disease. Hopefully, kidney transplantation, supplemented by efficient methods of hemodialysis until the patient is ready for an operation or until a suitable kidney is available for transplantation, will make fatal chronic uremia a menace of the past.

The surgical techniques for transplanting kidneys have in large part been developed and are constantly being refined. The body, however, ordinarily defends itself against a "foreign" transplanted organ by making specific antibodies to that graft and by other defensive processes such as thrombosis and phagocytosis. In a series of complex events not at all well defined, the foreign transplanted organ is attached and ultimately becomes functionless. Treatment with special drugs which suppress the host's immune response to transplanted foreign organs of a different tissue "type" (analogous to the well-known mutually-incompatible blood types) can abort such an attack temporarily. In the long run, however, only organs of identical tissue composition (obtained from an identical twin) or of closely matching antigenic composition bear the promise of prolonged, dependable function in the host.

Thus it has become increasingly apparent that improvement in kidney transplantation and organ transplantation as a whole will depend on additional knowledge of human tissue immunology. Sophisticated methods must be developed for close immunologic matching of donor and recipient tissues. In addition, new methodology must be sought for effective long-term preservation of donor organs so that at all times a sufficient number of pre-"typed" (tissue typed) organs with different antigenic composition are available for transplantation into (matching) patients who need them.

Existing hemodialysis facilities in hospital centers and in patients' homes treat only about 1,800 end-stage patients, while at the end of 1968 approximately 80 centers in 50 metropolitan locations were performing kidney transplantations. A total of 2,500 kidney transplants are estimated to have been performed by December 31, 1968. A five-fold increase in dialysis and transplantation facilities will have to occur if we are to be able to care for the up to 10,000 medically "most suitable" end-stage patients who will exist in 1970.

Today, research and services related to the prevention and control of renal disease are sponsored by the Health Services and Mental Health Administration, the National Institutes of Health, the Veterans' Administration, the Social and Rehabilitation Service, the Department of Defense and the Food and Drug Administration. State, local, metropolitan and many private groups are directing increasing efforts toward the prevention and control of kidney diseases.

Programs in the field of kidney diseases as carried out by the Health Services and Mental Health Administration and the National Institutes of Health are described below. The Division of Chronic Disease Programs of the Health

Services and Mental Health Administration is developing programs to stimulate kidney disease detection, diagnosis and treatment, to expand available medical and other data related to kidney hemodialysis and transplantation, to stimulate increased training of medical and paramedical personnel, to develop cost and other pertinent data and to provide current information to both the public and physicians. The National Institute of Arthritis and Metabolic Diseases of the National Institutes of Health conducts a research and development program in the broad area of kidney disease, artificial kidneys, and renal transplantation. In addition, the Division of Comprehensive Health Planning of the Health Services and Mental Health Administration has supported kidney dialysis projects under the authority of Public Law 89-749.

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Division of Chronic Disease Programs

In 1966, the Kidney Disease Program began to explore and develop a number of potentially fruitful approaches to the reduction of kidney disease mortality and morbidity. In the description that follows, this Program's plans and projects are grouped according to five major areas:

I. Preventive Programs

II. Chronic Dialysis and Transplantation Programs

III. Continuing Education, Training and Information

IV. Development of Basic Data

V. Development of Community Programs

The major objective in all of these areas is to help stimulate and then translate new developments into broadly applicable health programs for the prevention and control of kidney diseases.

I. Preventive Programs

In contrast to the treatment of end-stage kidney failure, which is limited to dialysis and transplantation, the prevention or therapy for early kidney disease varies, depending upon the pathologic process in question. In approaching the preventive aspects of kidney diseases, we are confronted with an array of diverse disorders; one simple approach to prevention of all kidney diseases is impossible.

While much developmental work has been done in sophisticated medical centers in the United States, many promising techniques for disease detection and improved management have not been brought into the field. Application of clinical and epidemiologic studies is needed to establish their efficacy, effect procedural improvements, and establish clearly the sites in which they can most profitably be utilized.

The Kidney Disease Control Program is developing and implementing plans to: (1) define the extent of the problem of kidney diseases in the population, (2) develop better methods of detection, (3) accumulate knowledge of the natural history of the disorders, (4) test current means of therapy and develop new modes of treatment, and (5) establish optimum locales for the development and testing of new and improved techniques for prevention, early detection, diagnosis and treatment.

In order to achieve the overall goals noted above, the Program is supporting and developing projects to meet short- and long-range public health needs in the

following five categories:

A. Infectious Diseases of the Kidney and Genitourinary Tract

The Program has placed a high priority on programming to control infectious diseases of the kidney and genitourinary tract. Infections cause 25 percent of kidney disease illness and 18 percent of the deaths. Persons otherwise requiring medical care are exposed to high risk of urinary tract infection. Some predisposing conditions are diabetes, neurological diseases, hypertension, urinary obstructive conditions, hypersensitivity diseases and pregnancy.

Other illnesses deserving special attention are those in which surgery or instrumentation to the urinary tract or adjacent body structures is required. Urinary tract infection causes not only destruction of kidney function, but also may cause general sepsis and death. For instance, improper use of urinary catheters often introduces infection. Studies of improved yet simple methods of draining the bladder of urine indicate that illnesses and deaths from catheterization could be decreased appreciably in the near future.

While illness in children and adults occurs at the same rate, death from renal infection is much more common in adults, demonstrating long-term progression of disease. Total deaths are almost equally distributed between males and females. Deaths in males occur at both ends of the life span. Infection in young boys is generally superimposed on congenital defects, while in late adulthood, it is associated with urinary obstruction or other disease.

Urinary infection susceptibility in women increases with age, reaching the highest level during the childbearing years, particularly among the economically deprived. The highest mortality rates in the United States occur, for reasons not yet fully known, in the District of Columbia, the southeastern States and the State of Maine. Infection in women generally is more difficult to control than is infection in men. Women have a short urethra which predisposes them to frequent infections. Since the rate of infection among normal women far exceeds the rate with which they develop serious complications, the problem here is to distinguish between those women for whom the infection is serious, and those for whom it is apparently a transient, relatively harmless occurrence. Tests now available allow this distinction, but are expensive and time-consuming to perform.

The Program is currently supporting studies to determine the prevalence, course, significance and treatment response of urinary tract infections among infants, school children, young women, pregnant women, and women with recurrent infections. Development is underway on a study of urinary infection and blood stream infection in males undergoing various forms of urinary tract surgery and instrumentation. The evaluation of two new methods of infection discovery and the development of a third method is being carried forward. The Program is also supporting the development of improved methods of testing the functional capacity of the kidney and urinary tract. Plans are underway to conduct a clinical trial of new methods for diagnosis of septicemia which is so often fatal because it is discovered too late to prevent death. A project is being mounted to develop an instrument for detecting urinary tract infection in the general population, a screening capability as yet unmet.

Previous projects supported by the Program have demonstrated that various enzyme assay tests are not reliable in diagnosing the site of urinary infection, as postulated in preliminary publications by the investigators. However, since the location of infection determines the treatment needed, such tests are vital to disease control; we are continuing to search for potential tests which are reliable, simple and medically acceptable.

B. Hypersensitivity Diseases

Hypersensitivity diseases of the kidney are those which damage or destroy renal tissue by an allergic reaction; such reactions are initiated by a number of causes, most of which are unknown, or inferential only. The epidemiology and natural history of these diseases is poorly understood, and clinicopathologic correlations are often ill-defined. Many therapeutic measures have been employed, but their efficacy remains to be proven. These diseases account for two-thirds of the hemodialysis and renal transplant patients. They are responsible for 1.8 million days of bed disability, and 770,000 work loss days per year with the rate of incidence being significantly higher in males than in females.

The Program is supporting several studies to define the epidemiology and natural history of one of the more important hypersensitivity diseases, acute glomerulonephritis. Support is also being given to the controlled clinical trial of specific drug therapy for the childhood and adult nephrotic syndrome. It is contemplated that these projects will provide a base for developmental work on sensitive indicators of early renal involvement in hypersensitivity diseases. Continued encouragement and support of controlled clinical trials of therapeutic measures is also being planned. Only through such studies, in conjunction with the efforts of the research laboratory, can effective prevention and control of renal hypersensitivity diseases be achieved.

C. Renal Calculus

Stones (urinary calculi) of the kidneys and urinary tract are familiar to everyone through personal experience, or that of close friends who testify freely to the acute pain and inconvenience caused by renal colic. Urinary calculi among the general population were responsible for 1,137,291 days of hospitalization for 35,119 persons (two-thirds of them males) at a cost of $48,035,795 in 1964. During this same year, urinary calculi caused 89,665 days of care, at a cost of $3,504,232 for Department of Defense active duty personnel and 5,354 days hospitalization at a cost of $226,207 in Public Health Service Hospitals. Costs of hospitalization for renal calculi in the United States are second only to those incurred for infection among diseases of the kidneys.

There is both familial and geographic predisposition to formation of urinary stones, and repeated episodes are common. Several therapeutic regimens for prevention of repeated calculus formation have been proposed, but their effectiveness is difficult to assess because there is at present no good test available to monitor effective drug levels. Lack of a simple test prevents us from establishing the prevalence of the disorder or identifying persons who are susceptible to stone formation.

As a first effort toward control of calculus disease, the Program is initiating a project to provide clinical trials of a test which shows promise of correcting this deficiency. If it proves effective, further studies of the epidemiology of the disease and the adequacy of preventive therapy will be planned.

D. Congenital Disorders of the Urinary Tract

Congenital disorders cause more than 50 percent of illness and death due to renal diseases among children under 15 years of age. They predispose to infection and may cause progressive renal failure because of urinary backpressure. At this time, little is known of their prevalence by age, sex or other characteristics which would help localize specific control programs.

The Program is supporting the planning for a broad-based collaborative study aimed particularly at children to define incidence and importance of ureterovesical reflux, one such disorder, and the effectiveness of currently available treatment. We are also supporting the development of a new test aimed at

decreasing the risk and cost of diagnosing and providing follow-up for patients with functional abnormalities. Future studies will be developed to define prevalence, reliable signs for detection, disease significance and therapeutic effectiveness for other types of congenital and functional abnormalities of the genitourinary tract.

E. Hypertensive Renal Disease

Three projects aimed at defining the factors responsible for correlations which exist between pyelonephritis (a bacterial kidney infection long known to be closely related to hypertension) and hypertension are being supported. Work is proceeding cooperatively with the Heart Disease and Stroke Control Program in an effort to define promising areas for joint investigation, such as determining if anti-hypertensive therapy will prevent progression of renal damage. Real progress in this area will depend upon the availability of improved renal function tests, an area being actively pursued through projects dealing with hypersensitivity diseases of the kidney.

II. Chronic Dialysis and Transplantation Programs

In the past nine years remarkable progress has been made in the management of patients with chronic renal failure. With the perfection in 1960 of the indwelling arteriovenous shunt, which allowed repeated access to the patient's blood stream, it was possible to perform long-term maintenance hemodialysis and thus extend the lives of these otherwise doomed individuals for several additional years. Another major improvement in the provision of this type of therapy was achieved in 1965 when it was first shown that patients could treat themselves in their homes at significantly less cost. Current feasibility studies sponsored by the Kidney Disease Control Program indicate that mortality in home treatment programs is certainly no greater than in the more expensive hospital-based operations.

A. Hemodialysis

The development of numerous community dialysis programs throughout the country has represented a singularly outstanding example of the evolution of a highly technical and experimental type of therapy into an efficient and effective lifesaving service. Nevertheless, no more than 5 percent of suitable dialysis candidates in the past eight years have been fortunate enough to receive this treatment due to the limitations of facilities, high cost, and lack of trained personnel. Potential solutions to the paucity of this treatment capability in relation to the number of available candidates lie in the development of an effective renal transplantation program as well as increased ability to effect preventive measures.

The Division of Chronic Disease Programs has been involved in the development and funding of artificial kidney projects since 1963. A total of 14 centers have been established through grant support to demonstrate the feasibility of kidney hemodialysis in the clinical setting.

These grant awards were made for a three-year period, with the grantee expected to continue the facility thereafter with local sources of funds. Several of the institutions have successfully met this objective and are operating independently on the basis of other Federal, State and private funds.

A recently completed study of 302 patients in 12 different centers shows a first year survival rate of 87 percent. Based upon our own experience, that of the Veterans' Administration and other programs, it has been demonstrated conclusively that carefully selected patients who are managed with scrupulous attention to all aspects of their care can be rehabilitated to the extent that they are able to carry on many of the activities considered a part of normal daily living,

including full-time employment.

Given the extremely high cost of chronic hemodialysis in a center or hospital setting, the need for developing effective low cost alternatives became imperative. The Program was appropriated increased direct operating funds in 1967 and 1968 to develop home dialysis training centers. Twelve centers were established to test the hypothesis that home programs, properly administered and controlled, can substantially reduce the cost of artificial kidney therapy without any sacrifice in the quality of patient care. The centers established under this program were:

University of Colorado Medical Center
Denver Colorado

City Hospital of Elmhurst
Mount Sinai School of Medicine
Elmhurst, New York

Mayo Foundation
Saint Mary's Hospital
Rochester, Minnesota

University of Missouri School of Medicine
Kansas City General Hospital
Kansas City, Missouri

Charity Hospital of Louisiana
New Orleans, Louisiana

Dallas County Hospital District
Dallas, Texas

Westchester County Hospital
Valhalla, New York

University of Miami School of Medicine
Jackson Memorial Hospital
Miami, Florida

Peter Bent Brigham Hospital
Boston, Massachusetts

Methodist Hospital of Indiana
Indianapolis, Indiana

University of Utah Medical Center
Salt Lake City, Utah

University of Texas Medical Branch
Galveston, Texas

Medically suitable patients (and their family members and local physicians) are being trained for an average period of about two to three months in the techniques of performing artificial kidney therapy in the home environment. The patients are then discharged from the training centers to continue treatment in their own homes. To date, approximately 200 patients have been trained and are carrying out this mode of therapy. Of these, well over half have been trained at Health Services and Mental Health Administration supported centers. Not only has home dialysis been shown to be much less costly than in-center dialysis, but it appears that greater patient rehabilitation is achieved due to a lesser disruption of their daily routines.

As a result of well planned, staffed and equipped training centers, plus a statistically significant patient population, the home artificial kidney programs are approaching their original objectives which are:

1. Test the feasibility of widespread and prolonged home treatment with the artificial kidney and various methods of providing it.

2. Collect and evaluate cost data on both the training center and the home treatment of patients.

3. Collect and evaluate uniform patient and medical data.

4. Determine the extent to which possible sources and combinations of funds (i.e., insurance, private funds, voluntary sources, and local, State and Federal sources) can be developed to support this need.

Information and data derived from these programs presently and in the future will help the Health Services and Mental Health Administration in the determination of requirements, and the development of guidelines, criteria and plans for efficient and effective ways to curtail the needless loss of lives each year.

An additional effort is being made to find funding sources for kidney dialysis therapy through a current project to survey life insurance companies, national and State organizations, and chronic disease programs, in an effort to explore how these various units can guide or participate in the solution of the cost problem.

B. Transplantation

Human renal homotransplantation is sufficiently well advanced today to regard it as an effective medical therapy for patients with end-stage renal disease. Survival data from the Human Kidney Transplant Registry indicate that kidneys from all types of consanguineous related living donors have a one-year survival of 75 percent and a two-year survival of 67 percent; kidneys from cadaver donors have a one-year survival of 45-50 percent and a two-year survival of 38 percent. Patient survival is even higher since a rejected kidney can be removed and the patient can be held on hemodialysis until receiving a second or even a third transplant at a later date. Sixty percent of the patients receiving kidney transplants from related living donors in the past four years continue to survive. Thirty percent of patients who received kidneys from cadaver donors more than four years ago continue to survive, while 65 percent of such recipients who were transplanted one to three years ago continue to survive. These figures reflect not only improvements in patient survival, but also the fact that the five-year survival rate for kidney transplants is better than the five-year survival rate of patients treated for most kinds of cancer.

Despite current success in renal homotransplantation, there are persistent problems and new challenges. Principal among these: Immunosuppressive drugs, without which kidney transplants would fail through rejection, have many deleterious side effects such as retardation of growth in children and marked reduction in the ability of the body to defend itself against bacterial, viral and fungal invasion; and they do not always prevent the rejection of the transplanted kidney. The most promising alternatives at present are antilymphocyte globulin (ALG) and advances in improving genetic compatibility between a given recipient and donor through tissue-typing techniques. Moral and ethical problems associated with the use of living donors impede the expansion of kidney transplantation capability. Increased use of cadaver donors may be a preferable organ source for kidney transplants, particularly as we find ways to maximally utilize them. Reliance on isolated local sources of transplantable kidneys needs to be superseded by cooperative metropolitan, regional and nationwide efforts coordinated to provide a wider selection of organs to improve opportunity for good matches. Effective employment of these resources will rely to a large degree upon successful resolution of logistic problems such as organ procurement and preservation and maintenance dialysis, as well as adjudication of matters relating to a definition of death and donation of human tissue. A major step in this latter area was the Uniform Anatomical Gift Act, prepared by the National Conference of Commissioners on Uniform State Laws and endorsed by the American Bar Association.

An initial step taken by the Program is the accumulation of representative cost data on kidney transplantations. While cost of kidney transplantation ranges from $3,000 in uncomplicated cases, to possibly $40,000 when extensive complications occur, a critical cost analysis on renal transplantation has not yet been done. Therefore, the Program has funded a project for the analysis of functional and cost information relative to clinical renal homotransplantation. This systematic analysis of six large transplantation centers is in progress and will be completed by June 30, 1969, and will provide an important part of the basic information on which future work can be developed.

The Program is also developing projects to demonstrate the effectiveness of metropolitan and/or regional cadaveric kidney procurement methods, a nationwide communications network for kidney transplants and automated donor-recipient matching programs. We support the concept of area and regional organization for transplantation activities, both for referral and management of patients and for the procurement, preservation and distribution of scarce anatomical resources. Through these efforts we plan to help resolve some of the key problems in renal homotransplantation.

III. Continuing Education, Training and Information

The expansion and application of research and new knowledge on kidney diseases, while presenting increased opportunities for training, have even more forcefully precipitated increased needs in the country for trained physicians and other medical personnel who can apply this knowledge. Knowledge of kidney diseases is particularly lacking at the level of the practicing physician and medical student because of the subtlety of the signs and symptoms of these diseases, lack of knowledge or confusion regarding the etiology and means of treatment, and the complications resulting from urinary tract disorders.

Both medical and paramedical personnel may receive training in the field of kidney disease from individual academic institutions, or through private foundations. As a rule, foundation support is for research. On the other hand, many dialysis units have trained physicians expressly for the development of competence in this field. These training programs are basically apprenticeships without standard curricula.

A 28-hour training course for dialysis technician instructors is being supported at the University of Washington. The course covers basic engineering principles, and theory of operation, repair, and maintenance of dialysis supply systems. Eighteen nurses and 10 dialysis technicians have been given in-depth training in the techniques of center and home dialysis at the Seattle Artificial Kidney Center and the University of Washington Hospital.

For those physicians who seek training to manage their home dialysis patients, training support is provided on a two-day individualized basis. This mechanism contributes to developing the capability of the practicing physician to care for patients with end-stage renal disease.

A curriculum for the training of dialysis nurses, technicians, and patients is in the final stage of development at the Seattle Artificial Kidney Center. This curriculum is being prepared in narrative style with textual illustrations and visual aids for both the instructor and student levels, respectively. This instruction material should significantly extend training capabilities through a uniformly comprehensive presentation of essential topics.

The Kidney Disease Control Program has co-sponsored with the National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, two scientific programs dealing with two specific problems of chronic renal failure. These were:

1. Conference on the Nutritional Aspects of Uremia

2. Conference on Divalent Ion Metabolism and Osteodystrophy in Chronic Renal Failure

To contribute to the education of nurses involved in the care of patients with end-stage renal disease, a dialysis symposium for nurses, with 275 persons in attendance, was presented in conjunction with the 1968 meeting of the American Society for Artificial Internal Organs. A similar nurse symposium is planned for 1969.

The Program is continuing to develop methods in an effort to increase public awareness of the importance of kidney disease. The basic philosophy underlying this approach is that an informed public is necessary for development of effective community-wide programs for kidney disease prevention and control. The importance of these diseases as a public health problem is not widely appreciated and the general public, until recently, has had little or no concept of the functioning of the kidneys or the nature of the diseases that can attack them. This is in contrast to other important chronic diseases such as heart disease and cancer where the efficacy of adequate public information programs has been repeatedly proven.

A wide variety of publications covering kidney disease topics has been developed by the Program. In addition to a booklet describing the artificial kidney, the Program recently published a brochure on hospital-centered, as well as home, hemodialysis treatment. A pamphlet on urinary tract infections has been developed emphasizing the importance of prevention in treating diseases which might lead to catastrophic kidney failure. Another booklet dealing with screening programs for high risk groups has also been written and will soon be in circulation.

Other material has been designed to inform professional audiences of kidney disease activities. A compendium of essays written by eight of the country's outstanding kidney disease experts, describing various approaches to a university kidney disease program, represents one important contribution towards achieving integrated nephrology programs at the university level. Entitled "Approaches to a University Kidney Disease Program," over 2000 copies have been distributed to nearly 100 major medical schools, voluntary kidney disease organizations and the country's leading nephrologists.

A plan for State comprehensive kidney disease control programs has been developed under a contract in Massachusetts, and the first year's report is ready for publication this year. Guidelines for community programs of chronic disease control have also been produced in response to requests by public health workers, and are being revised and updated for a second printing. The Guidelines cover the total spectrum of kidney disease and are directed to medical, paramedical and public health oriented individuals and organizations.

Exhibits are also playing an important role in the education of individuals and groups professionally associated with kidney disease prevention and control. The Program presented both of its existing exhibits at six major medical and professional health conferences during the past year, and plans further participation at these and other meetings in the future. One exhibit displays public information materials, while the other explains through the use of photographs and equipment the technical and medical aspects of chronic hemodialysis. A third exhibit concerned with the preventive aspects of kidney disease is being developed.

The Program has begun to use radio and television for increased dissemination of information on renal disease problems. Three television appearances and a number of radio interviews arranged for Program medical staff over prominent network stations were exceptionally well-received by the general public. The Program is proceeding with plans to produce spot radio and television announcements for public information on both the prevention of kidney disease and the treatment of the patient with chronic uremia.

IV. Development of Basic Data

The collection, analysis and dissemination of basic data is another area of high priority to the Program. Basic data relating to these diseases must be developed in order to describe adequately the extent and size of the problem and to help equip health planners throughout the country with factual basic information. A major aim is to ensure periodic collections of such data in a uniform manner so that comparisons can be made and program evaluation and effectiveness

may be judged. Portions of the data collection and analysis activity are being undertaken cooperatively with other agencies, in particular with the National Institute of Arthritis and Metabolic Diseases. Much additional data are evolving from the studies and developmental programs described elsewhere in this report. The Program has committed itself to assure timely and effective evaluation and distribution of such data as a means of assuring the availability of current information in the hands of physicians, State and local health departments and others. Two earlier projects supported have produced considerable information (now being disseminated) concerning the economic cost of kidney disease and socio-economic problems related to chronic hemodialysis.

Mortality estimates are being developed utilizing not only vital statistics of the United States, but also studies of the records of medical care institutions. Morbidity estimates have been obtained from the National Health Survey and these data are being supplemented from hospital record sources, data from selected health departments, and special studies.

Cost data from the 12 home hemodialysis contracts are being analyzed to ascertain the developmental and operating requirements of a chronic home hemodialysis training center and to demonstrate the feasibility of home hemodialysis from both a medical and a financial standpoint. A related study is also being conducted to provide detailed cumulative information depicting survival of chronic home dialysis patients. The medical and financial data generated from these projects will be published and disseminated to the medical community and pertinent health agencies.

A cost and functional analysis contract has been negotiated to develop data on renal homotransplatation to permit knowledgeable, long-range planning for expansion of the Nation's kidney end-stage treatment facilities to include transplantation as a complementary therapy. A study is also under way to identify the constraints limiting third party financial support for the treatment of end-stage kidney disease. The objective is to stimulate appropriate utilization of all financial sources available at the local level.

V. Development of Community Programs

As the magnitude and immediacy of renal disease problems have emerged, the Program has actively sought a collaborative role with State, local, private and Federal organizations and institutions to better correlate the unique contributions which each can extend. The objective is to augment kidney disease prevention and control by making readily available the results of Program-funded work, by maintaining maximum responsiveness to requests for information and consultation, and by providing a focal point through which the activities and experiences of all active groups are made available for community guidance or adaptations as they determine the solution to their needs and capacities to act.

A basic but very important activity in this regard has been the Program's development of a Kidney Disease Source Book, now being readied for its first printing. In early 1968 it became apparent that in order to develop a sound basis for planning kidney disease control programs at the local and other State levels, pertinent information relative to available services, facilities, programs and professional manpower was lacking. A national survey was therefore undertaken by Program staff, in collaboration with State departments of health, to collect this information on a State-by-State basis. The survey has resulted in organization of information on such matters as: State kidney disease advisory and study groups, voluntary agencies, planning groups, educational programs, screening programs, special studies and projects, chronic and acute dialysis facilities, transplantation facilities, tissue-typing laboratories, special State legislation, legislation on the legal aspects of kidney transplantation, and a summary of the policies of the various State agencies which contribute to dialysis and transplantation services.

The Source Book will demonstrate the magnitude of the kidney disease problem to the involved communities and will provide a base from which local planners can highlight the most critical needs in planning and coordinating kidney disease activities in community-wide disease control programs. The dialogue which has ensued in the course of planning the Source Book has significantly added to the Program's understanding of local and regional problems. At the same time, official, private and voluntary agencies have been motivated to plan together and coordinate effective kidney disease control programs. Advisory groups have also been stimulated to draft special State legislation for financial support of renal disease programs.

As a corollary activity, the Program is developing a project under which cooperating health departments will organize screening programs for bacteriuria (bacteria in the urine). Specifically, health departments with the capability of collecting data from their prenatal and other clinics serving groups known to be high risk populations for bacteriuria will conduct pilot demonstrations to document practical experience. This information will assist other health departments interested in organizing screening programs for bacteriuria to formulate sound plans with respect to cost, personnel, screening techniques, follow-up procedures, laboratory services, patient data, etc. The objective of this activity is to assist local public health authorities to make maximum use of existing facilities and resources.

With respect to coordination of preventive and end-stage kidney disease services, the Program is currently supporting two contracts to develop model comprehensive State plans which will be available to State agencies interested in planning and development of kidney disease control programs. One State has extended its work to develop a similar plan for the metropolitan level, seeking ways to identify the most efficient procedures to coordinate private medicine, community health agencies, official health agencies, and the community leaders, against kidney disease in a metropolitan area.

NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis and Metabolic Diseases

Kidney Disease Research

Clotting Disorder in Uremic Bleeding: In Institute-supported studies of blood clotting abnormalities as the cause of bleeding often encountered in uremic patients, the release time of platelet factor-III has been pinpointed as the failing step in clotting events. Release time returns to normal after dialysis treatment, indicating that an unknown dialysable material is responsible for the delayed platelet factor-III release time. These studies have resulted in a reliable method for quantitating platelet factor-III and have clarified the role of the platelet factor in uremic bleeding.

New Disease Entity: Grant-supported scientists have described a new clinical entity characterized by a disease pattern clearly distinguishable from regular glomerulonephritis, which it resembles in some aspects. The condition starts insidiously with decreased urine production and progresses to cessation of urine flow, hypertension, edema, nephrotic syndrome and death in from 5 to 27 weeks. It is remarkable for the clearly demonstrated absence of any history of acute streptococcal glomerulonephritis. No clinical, bacteriological or serological evidence of streptococcal infection, concomitant systemic disease, or drug ingestion is encountered. Death results from uremia and congestive heart failure.

The newly described condition affects adults, perhaps somewhat more often men, with more severe and rapidly fatal forms appearing in those over 40 years. Although the disease, called RPGN (for Rapidly Progressing Glomerulonephritis),

is still of unknown pathogenesis, unusual untramicroscopic findings provide evidence to warrant search for an immunologic cause of the condition.

Blood Glucose Utilization: Comparison of insulin and glucose relationships in uremic patients and in normal or diabetic persons has shown the long recognized diabetic-like impaired glucose tolerance of uremia patients to be due to a decreased sensitivity of uremic tissues to insulin action. Initial experiments suggest either the presence of specific insulin antagonists or of intracellular metabolic abnormalities. Additional studies will be carried out on this question since it may uncover new knowledge pertinent to other diseases of carbohydrate metabolism.

Vitamin D3 Metabolism: Abnormalities in calcium metabolism in patients with chronic renal failure have long been known. Grantee investigators have been able to show that although absorption of vitamin D3 is normal in uremia, renal failure causes an abnormal two-fold increase in the rate of its metabolism, producing an abnormal accumulation of biologically inactive lipidsoluble metabolites and abnormal increases in urinary excretion of both vitamin D3 and biologically inactive metabolites.

Normal vitamin D3 metabolism was found to be restored by renal homotransplantation but not by hemodialysis. Since therapeutic doses of vitamin D3 alone are not helpful in renal osteodystrophy, these metabolic defects in utilization of the vitamin are believed to be acquired with chronic renal failure.

Carbohydrates and Kidney Stones: Many patients who develop calcium-containing kidney stones have no obvious predisposing factor such as hypercalcemia, urinary obstruction or urinary infection. Although some patients have definite hypercalciuria, others cannot be distinguished from normal subjects inasmuch as their daily total urinary calcium excretion does not exceed the normal range.

It has now been shown by Institute grantees that both urinary calcium concentration and excretion rise sharply in calcium stone-formers and in relatives of stone-formers following sugar ingestion, effects which clearly distinguish these subjects from normal individuals. It is suggested that augmentation of urinary calcium excretion and concentration after meals, or after ingestion of carbohydrate-rich foods or beverages, may be one of a possible number of factors contributing to calcium stone formation in susceptible individuals.

Infection and Ureteral Peristalsis: The precise mechanism by which most instances of kidney infection (pyelonephritis) occur is as yet unknown. Grant-supported scientists at Duke University recently have described experiments with animals which suggest that the presence of live or dead bacteria in the ureter, without active infection, may facilitate subsequent development of pyelonephritis by causing cessation of normal ureteral peristalsis. When E coli bacteria cultured from urine of patients with pyelonephritis were introduced into the renal pelvis of dogs, ureteral peristaltic activity diminished in most cases by 50 percent and in some cases to zero. Endotoxin, a well-known toxic substance in the cell walls of the bacteria, was also shown to influence ureteral motility in vitro. These findings may open new approaches for research on the precise mechanism of infection of the kidney, particularly with organisms derived from the intestinal tract.

Hypercalcemia: Basic studies of mineral metabolism required for better understanding of kidney disease and therapy have produced two beneficial methods of chemical management for patients with hypercalcemia (abnormally high serum calcium levels). This condition occurs both in previously hypocalcemic uremic patients who develop subsequently secondary hyperfunction of the parathyroid glands and in patients with parathyroid gland tumors. Increased amounts of parathormone elaborated by the glands cause mobilization of skeletal mineral which may then be deposited in the soft tissues. Hypercalcemia also occurs in patients with other diseases such as multiple myeloma (a plasma cell malignancy),

sarcoidosis, and others.

In the case of hypercalcemia associated with uremic hyperparathyroidism, surgical removal of all but one fourth of one of the four glands was usually found to control the condition so that calcium behavior returned to that usually found in uremic patients. As an unexpected additional reward, this treatment also provided relief from the persistent intolerable itching found in some of these patients.

In the case of multiple myeloma, carefully scheduled phosphate administration was found to restore normal serum calcium levels without causing calcium deposition in the kidney. In this case the new therapy also caused an amelioration of bone pain, and in several cases, complete relief.

Hormonal Relationships: Failure of normal red blood cell formation (erythropoiesis) in the bone marrow is believed to be the chief cause of the anemia associated with uremia. Although both bleeding and hemolysis contribute to the anemia, they are generally considered secondary causes, while diminished secretion, by specialized cells in the kidney, of erythropoietin (erythropoiesis stimulating hormone) is viewed as the primary cause of the anemia of uremia. In recent studies, inhibitors of erythropoietin elaborated by kidney cells have been found in sera from patients with renal disease. According to these studies, secretion of the hormone does not typically diminish. The recent localization of increased inhibitory activity in a cytoplasmic fraction of diseased human kidney has redirected attention to the erythropoietin system in searching for methods for controlling the anemia of kidney failure.

Further work has also been done to elucidate the mechanism of hormonal action in the kidney. The enzyme, adenyl cyclase, which converts adenosine triphosphate (the power source of cellular chemistry) into the cyclic derivative cyclic adenosine monophosphate was found to be stimulated in kidney cells by parathormone and vasopressin. Specifically, parathormone was found to activate this enzyme primarily in the plasma membrane of renal cortex cells, whereas vasopressin stimulates the enzyme in cells from the renal medulla. Understanding of the mechanism of action of parathyroid hormone on calcium and phosphate balance has been advanced by these results.

Advances in Kidney Transplantation

At the present time, kidney transplantation is the most frequently executed and successful example of organ grafting both in the United States and abroad. It owes its success partially to the fact that an effective mechanical substitute organ (the artificial kidney) is available to rehabilitate the patient before surgery, to support the patient and the transplanted organ immediately thereafter and, if needed, to maintain the patient's life permanently (or until a second opportunity for transplantation arises) should the organ be rejected.

In recent years, due to improved immunologic matching of donor and host tissues, the acute rejection of transplanted kidneys has become less of a problem. The two-year success rate in kidney transplantation from a live blood relative (excluding twins) is about 60 percent; that involving well-matched cadaver kidneys is about 40 percent. In most cases the patient must continue taking immunosuppressive drugs in an effort to prevent any belated rejection reactions. The problem of eventual rejection and inactivation of the transplanted organ is far from solved; recent research data indicate that even in the absence of overt acute rejection reactions, a gradual degeneration of the transplanted organ takes place in cases (particularly involving cadaver transplants) where the tissue matching was not of the first order.

Adjuncts to Tissue Typing: Because transplants, except between identical twins, are often ultimately rejected by the body, the critical problem still is to find methods to reduce and some day to eliminate the immune response to grafts

without compromising the body's ability to fight off infection. Lasting success depends on matching the recipient's and donor's cells as closely as possible, and then overcoming any remaining minor incompatibility by inducing immunological tolerance in the recipient's body.

Certain immunosuppressive drugs for use in the prevention or control of the rejection phenomenon are being studied, with special emphasis on those drugs which will be more effective and less toxic than those presently available.

Antilymphocyte serum (ALS), as well as a more purified fraction, ALG (antilymphocyte globulin), have been used to help the body accept a new organ. The globulin tends to suppress the cellular reaction largely responsible for attacking the transplanted organ. Usually prepared in horses or rabbits against pooled human donor lymphocytes, the serum is commonly used in conjunction with other immunosuppressive drugs to combat rejection. It drew considerable attention among U. S. surgeons in late 1966 when a grant-supported Denver surgical team reported its use in the first of a renal transplant series.

In addition to antilymphocyte serum, total and subtotal body irradiation, cytotoxic drugs and surgical manipulations of the lymphatic system are being used in attempts to reduce or eliminate the lymphocyte population and thus increase tolerance to homografts. These methods, however, also cause undesirable general effects, such as depression of bone marrow and red blood cell formation.

Identification of Human Protein Antigen-Antibody Complexes: A major immunological technique which may aid tissue typing has been developed by an investigator at the Brooklyn, New York, Veterans' Administration Hospital, whose work is sponsored by a contract from the Institute's Artificial Kidney Program. The technique allows rapid identification of various human proteins by exposing them in succession to different antisera, to water vapor, and then by evaluating these complexes for their light-scattering ability.

This simple method is based on the knowledge that the ability of a solid to adsorb water is altered if it is first coated with a protein film and then exposed to water vapor. The protein films used in this study were either human plasma, a human fibrinogen-saline solution, a human albumin-saline solution, or a 7S gamma globulin-saline solution.

In all tests the protein film appeared darkest, hence presumably the wettest, where it had been exposed to its matching antiserum. Whenever the test-film had been in contact with a non-matching antiserum it continued to scatter light maximally (i.e., it was not wettable) and appeared lighter. Fibrinogen-coated surfaces, which were affected by antifibrinogen serum premixed with serum, did not respond to the same antiserum premixed with plasma. Plasma-coated surfaces were rendered most "wettable" by antiserum to fibrinogen. This water vapor-light scattering method of identifying protein antigen-antibody complexes may prove useful as a simple and rapid procedure in tissue typing.

Short-Term Preservation of Human Kidneys Prior to Transplantation: A transportable organ preservation machine has been developed by Institute grant-supported investigators. The machine has maintained human kidneys in a fully usable state for as long as 17 hours and animal kidneys as long as 72 hours prior to transplantation. Human kidneys obtained from cadavers have been transplanted successfully following preservation by the device, which permits transplantation to be a somewhat more elective procedure rather than an immediate one upon availability of a cadaver kidney. The device provides the necessary time for adequate tissue typing of the organ and proper matching to a suitable waiting recipient.

The unique machine consists basically of a membrane oxygenator, pulsatile pump, perfusion chamber, filter and heat exchanger. It differs from previous

perfusion devices in that its circulation pulsates, thus obviating the risk of uneven blood circulation within the organ and eventual local tissue damage. In addition, the machine utilizes as a perfusion medium plasma fortified with hormones and other additions instead of whole blood, avoiding harmful local blood clotting in the perfused organ and breakdown of red blood cells.

While the isolated organ is being perfused, time is gained to allow matching of donor and recipient by tissue typing and to do preparatory surgery. The machine also eliminates the problem of simultaneous surgery and the need for two surgical teams, one to remove the kidney from its original location and the other to transplant it into the new host. Because the unit is easily transportable, perfusion of the isolated kidney can be started immediately upon its removal from the expired donor in one hospital, and continued during transfer to another hospital, even in another city, where the recipient is ready for transplant surgery. Although developed specifically for the preservation of kidneys, studies are now underway to modify the machine for similar preservation of hearts and livers.

Artificial Kidney Program

If and when kidney transplantation becomes a routine procedure, the artificial kidney will not be discarded. Many chronically uremic patients are not medically or psychologically suitable candidates for transplantation. Furthermore, patients who are suitable candidates will have to be sustained with an artificial kidney until they are well enough to have a transplantation operation and until a suitable, antigenically matching donor kidney can be found for them. Also they may have to be placed on an artificial kidney after the operation if the donated kidney does not function properly for a time or is rejected.

The problem of perpetual maintenance of patients with artificial kidneys is complicated by the fact that the cost of currently available techniques is too high, both in terms of money and qualified manpower, to permit widespread patient treatment. Also, patients maintained with the aid of artificial kidneys continue to display a number of undesirable symptoms related either to the underlying disease or to the treatment.

The Institute's special Artificial Kidney Program has been created to deal with these problems. An up-to-date report of progress and future plans follows:

Background: In the United States today an estimated 55,000 individuals die each year as a result of irreversible kidney failure. The diseases which originally initiate the chain of events which terminate with advanced kidney failure vary considerably in nature. They may be primary kidney diseases like glomerulonephritis. In other instances progressive kidney damage may be induced by long-standing hypertension or diabetes, or kidney infection, and destruction may be initiated by obstructions such as kidney stones or hypertrophy of the prostate in aged males. Regardless of the original disease, the progressive kidney damage leads to a common final pathway, end-stage kidney disease, followed by fatal irreversible kidney failure.

Although artificial kidneys had been known for many years, until 1960 they could be used only a few times in each individual for lack of a practical method for repeatedly connecting the patient's bloodstream with the artificial kidney machine. In that year a group of Institute grantees at the University of Washington developed permanently indwelling plastic blood vessel connections ("cannulas") which made possible the repeated joining of patients with irreversible kidney failure to artificial kidneys for intermittent maintenance treatment. Subsequently, these investigators proved the feasibility of maintaining life in such patients for a number of years with the aid of artificial kidney treatments ("hemodialysis") given twice or three times each week. With increasing experience with this new treatment modality it soon became evident that existing artificial kidneys and dialysis methods were as yet not optimal, that maintenance treatment

with artificial kidneys was extremely expensive and not within the reach of most individuals who needed it, and that rehabilitation of patients on chronic dialysis, using present methods and equipment, was not always optimal. It was estimated, based on recent experience, that about 8,000 patients of the yearly 55,000 individuals with end-stage kidney disease would possess the necessary medical and psychological prerequisites necessary for successful long-term dialysis treatment.

The emergence of this new lifesaving treatment encouraged the Congress, in the summer of 1965, to appropriate funds to this Institute for the pursuit of a planned and centrally directed program of research and development, utilizing predominantly a direct contract approach, aimed at the development of improved and less expensive dialysis hardware and methodologies and at optimal rehabilitation of chronic dialysis patients.

The Program: The new Artificial Kidney Program was located in the National Institute of Arthritis and Metabolic Diseases (NIAMD), the Institute which has major responsibility for research in urology and renal diseases.

It was considered important to undertake such a program through the utilization of the best possible consultative talent from both outside and within the National Institutes of Health. Accordingly, 23 outstanding authorities active in the field of chronic uremia and hemodialysis have been appointed as consultants. Among them are physicians who have led programs in artificial kidney centers, renal physiologists, physical chemists and membrane specialists, chemical and electronic engineers, and those rare, talented individuals who combine several of the above qualifications. These consultants are assisting in setting the trend of the program and are reviewing the scientific merit and feasibility of contract proposals.

It was also considered important that the program be undertaken in close cooperation with the activities of the Kidney Disease Control Program of the Health Services and Mental Health Administration (HSMHA). The latter activity is concerned largely with the actual demonstration of chronic dialysis in a community setting - both in specialized dialysis centers and, where feasible, in the homes of selected patients. Staffs of both programs are in close and constant communication and work with a high degree of cooperation. This close cooperation assures a maximum of benefit and prompt application of research and development advances in the artificial kidney field.

Outline of Program Plans: A thorough study of the state of the art made it apparent that no single specific direction could be followed which would exclude others which might be relevant. Several different types of artificial kidneys are in use at the moment, and different methodologies are being advocated by the various workers in the field. Therefore, at this time, a variety of approaches in artificial kidney development are being supported. Once it becomes evident that one or more approaches show greater promise, efforts will be concentrated in these directions.

Problems of Highest Priority: The following are outstanding problems in dialysis toward which the Artificial Kidney Program is directing immediate efforts:

1. Cannulas. The life and function of the permanently implanted cannulas are still limiting factors in successful dialysis.

2. Dialysis membranes. Though effective, the cellophane membranes currently in use may not be optimal. The possibility of using other, perhaps more selective, membranes must be explored.

3. Design of individual dialyzer units. Most dialyzers presently in use are cumbersome and costly to assemble and sterilize. A dialyzer exists which utilizes a disposable dialysis-ultrafiltration

"cartridge"; this cartridge is expensive for maintenance of chronic patients.

4. High requirement for professional personnel. This requirement is based on the medical nature of dialysis, but aggravated by problems 1, 2, and 3 above.

5. Lack of effectiveness data. No objective information has been obtained through well-controlled studies which permits a meaningful evaluation of the comparative effectiveness of the various dialysis methods and equipment currently in use.

6. Undesirable symptoms frequently found in patients maintained by repeated dialysis.

   (a) Anemia. On the average, one or more blood transfusions are needed per month per patient maintained in dialysis -- with the attendant risk of transfusion hepatitis.

   (b) A significant incidence of peripheral neurological damage. This may be due to long-term effects of the semi-uremic state in surviving patients on repeated dialysis, or due to the dialysis procedure per se.

   (c) Pseudo-gout, secondary hyperparathyroidism, skeletal demineralization, and calcium deposition in joints and in the tissues throughout the body. The most recent findings involve calcium deposition in the cornea of the eye. Simultaneously, there is a tendency to decalcification of bone with resultant fractures produced by minor stresses.

Problems 1 through 4 are primarily responsible for the current high cost of dialysis, which averages $15,000 per year in patients maintained by hospital center dialysis.

Current Activities: At present about sixty carefully selected research and development projects are in existence, financed by the Program's contract funds. These contracts were placed with universities, nonprofit research laboratories and industrial concerns, and constitute a broad spectrum approach to the problems of highest priority. These projects involve development of improved blood cannulas and filtration membranes; evaluation and development of new polymer surfaces for artificial kidneys, cannulas and membranes which do not induce blood coagulation; design of more efficient, compact, and less costly dialyzer systems; development of a new concept of artificial kidney dialysis ("hollow fiber" or "capillary" kidneys); research on and development of absorption cartridges for blood purification; development of inexpensive disposable dialysis units; improvement and design of new automated dialysate delivery systems; improvement and design of new dialysis units with automated failsafe mechanisms; evaluation of a special protein restricted diet in the maintenance of uremic patients for whom chronic dialysis is deemed not feasible or unobtainable; isolation from dialysates and identification of the as yet unknown compound(s) which is (are) specifically responsible for the toxic symptomatology in uremia, and many other projects related to improved dialysis methodology or apparatus.

Accomplishments: During the past year there have been a number of accomplishments and encouraging developments derived from the ongoing research and development contract program. The new and unique hollow fiber capillary kidney, mentioned briefly in last year's progress report, which is being developed under a contract with the Dow Chemical Company, has progressed to full-scale clinical testing at the Northern California Dialysis Center, San Francisco General Hospital.

This low-cost, disposable small dialyzer is being produced at present in a semi-automated facility which has been set up under the contract in order to expand the production of prototype models for clinical testing.

The hollow fiber artificial kidney consists of 11,000 hollow cellulose threads bundled together into a compact plastic cylinder about the size of a quart milk bottle. Blood is passed through these manmade capillaries and they, in turn, are constantly washed on the outside by a blood purifying dialyzing solution. The unique construction of the kidney provides an enormous surface at the cellulosic blood-dialysate solution interphase at which toxic waste products migrate from the blood into the dialysate fluid. This new dialyzer is designed so well that no external blood pump is needed to drive the blood through it. Moreover, its internal blood compartment volume is so small that only about 70 milliliters of the patient's own blood are needed to prime the unit, thus eliminating the need for compensatory blood transfusions (and their attendant hazard of hepatitis) associated with the use of most conventional artificial kidneys. The new compact capillary kidney is easy to use in a hospital or home dialysis setting since it comes pre-sterilized, filled with saline and ready-to-use. Its cost projections make it more than competitive with conventional disposable coil dialyzers.

The new device has now proven its clinical effectiveness during more than 1,000 dialyses. It is routinely re-used three times before it is discarded. It has been established experimentally, however, that it can be re-used up to nine times and further studies are planned on this economically important facet. Future larger scale production of the new device is contemplated so that additional clinical trials in a number of dialysis centers throughout the United States can be made. In addition to this particular capillary artificial kidney, other possible designs are being explored by two other contractors of the Program, also utilizing the new hollow fiber dialyzer design.

Another contractor who is manufacturing the conventional Kiil dialyzer has been successful in the development of a major modification which is considerably more manageable because of its light weight and different structural arrangement. This new board-type dialyzer substitutes a combination of plastic foam and solid plastic composition for the previous type of construction which is quite heavy and cumbersome. It requires 50 percent less torquing for sealing and has a smaller blood priming volume. It weighs 30 pounds less which permits easier handling in the hospital or home. This new dialyzer already has been introduced into commercial usage.

The same contractor has also developed a considerably smaller and more efficient type of Kiil dialyzer distinguished by a new type of multiple minute, pyramidal membrane supports which increase the effective dialysis area of the membrane in it. Laboratory tests have shown that this new development has increased the dialyzing efficiency of the new modified Kiil-type dialyzer by about 40 percent. A series of the new experimental dialyzer is now being built for clinical testing with patients.

The same group of scientists at the University of Washington, Seattle, which last year devised a technique for storing and re-using artificial kidneys of the Kiil type and of the attached blood tubing (which reduces the cost and simplifies the work involved in performing hemodialysis in the home) has now developed a new type of "Quick-Connecting" cannula coupler for home use which can be activated by the patient with one hand only. Heretofore, connecting the patient to an artificial kidney machine (by uncoupling his plastic shunt and coupling his permanently implanted plastic cannula to the blood tubing of the artificial kidney) has always required two hands. Since shunts are usually located on the arm of the patient, this meant that one extra person had to be present to connect the patient to his artificial kidney; only in cases where the cannula had been placed in the patient's leg could the patient effect his own coupling and uncoupling in home dialysis. The newly developed, one-handed cannula coupler has now

seen successful initial trial in a small number of patients and will be tested further in preparation for larger-scale manufacture and distribution.

During the past year, the Artificial Kidney Program has striven to encourage clinical studies in the United States of a special diet, and modifications thereof, which has shown in trials in Italy and England that it permits moderate-term survival, cessation of symptoms, and rehabilitation in certain types of patients with chronic renal failure who are otherwise faced with the need for chronic dialysis or kidney transplantation. During a 21-month study period, Institute supported scientists in Los Angeles have indeed demonstrated that a 20 gram, balanced, low-protein diet limited largely to essential amino acids, but unlimited in carbohydrates and fats, can ameliorate uremic symptoms in patients with minimal, residual renal function while maintaining a satisfactory body nitrogen balance. The results of dietary treatment, as measured by amount of relief from previous uremic symptoms and total duration of remission, were significant in all patients with a urea nitrogen clearance greater than 1.5 cc/min. Of 27 patients who followed the diet, relief of anorexia, nausea, vomiting, weakness, fatigue and lethargy, was obtained in 23. The results of therapy were felt to be good to excellent in ten patients, with remission of symptoms persisting for 8.3 months in one patient. Serum urea nitrogen decreased in all patients. The resulting remission depends on prevention of acute deterioration of renal function and rigid adherence to the diet by the patient. The Program has recently activated investigations to study the efficacy of a maintenance regimen which combines the use of this diet with infrequently administered peritoneal dialysis or hemodialysis.

Similar encouraging results were obtained by another contractor at New York Medical College who has already progressed to maintenance of patients with a combination of this diet and infrequently applied hemodialysis (once every two weeks rather than the conventional three times per week).

Future Activities of the Artificial Kidney Program: The Program will continue all promising current research and development efforts and will pursue any new ideas and approaches which appear feasible. Among these is a new method of detoxification of uremic blood with the aid of special selective adsorbing agents (in contrast to the presently used purification with the aid of membrane dialysis). The complete success of such detoxification-by-adsorption hinges on the successful identification of all toxic substances which accumulate in the bloodstream in kidney failure. The Program is currently funding a number of studies aimed at the isolation and identification of such unknown toxic factors which may have to be removed from the patients' blood, in addition to metabolic wastes and other substances known to accumulate during kidney failure, such as urea, creatinine, uric acid, potassium, hydrogen ion, and water.

The Program intends to follow very closely the clinical and technological developments abroad and, when promising, to enlarge upon them for the benefit of U. S. patients as well. For instance, reports have been received of the preliminary development, in Scotland, of a new miniaturized dialyzer which requires little or no blood priming and of new selective membranes characterized by increased permeability to urea, heat sealability, and improved water flux. Should these new developments prove successful, the Program will be interested in fostering larger scale clinical trials and in placement of production of the new membranes and dialyzer in this country.

The Program will support further development of special diets (see above) for maintenance of uremic patients, to be used in conjunction with infrequent peritoneal dialysis or hemodialysis. For the latter type of regimen patients would be given surgically constructed, subcutaneous, natural arterio-venous blood vessel shunts (which are adequate for infrequently administered hemodialysis). It is hoped that with the aid of such a special-diet-infrequent-dialysis regimen patients would be maintained without the need for implantation of plastic shunts,

and that a larger number of patients with renal failure may be accorded life-saving treatment in this fashion in the face of the great expense of conventional chronic dialysis therapy which is unavailable to most patients with end-stage kidney disease.

Other research and development projects about to be activated by the Program include the development of a unique type of dialysis membrane from collagen (a structural protein found in the skin and connective tissues of mammals) and the development of implantable cannulas made from this naturally-occurring tissue protein. Preliminary experiments have given strong indications that a sophisticated laboratory modification of this material can yield a substance which is highly compatible with blood and mammalian tissues. This modified collagen would thus be a welcome substitute for currently used membranes and for implanted plastics (the latter not only in connection with dialysis cannulas but for many other prosthetic purposes). Other future projects deal with the possibility of developing substances which, once ingested, would sequester and trap specific toxicants in the gastrointestinal tract. Such a development could prove to be a helpful adjunct in the maintenance of patients with renal failure by permitting a decrease in the frequency of dialysis.

Conferences, Publications, and Scientific Communication: As a sequel to the previous year's two-day Conference on Nutritional Aspects of Uremia, the Program organized, in October 1968, a timely symposium on the abnormal calcium metabolism and osteodystrophy which characterize chronic renal failure and is found in many patients maintained with the aid of artificial kidneys. The purpose of the conference was to explore and elucidate the serious phenomena such as widespread calcification of soft tissues (including the eyes, joints, blood vessels and the heart), demineralization of the skeleton (leading to frequent fractures), and secondary hyperparathyroidism, which accompany renal failure of long standing and which are seen with increasing frequency in patients whose lives are being maintained with the aid of artificial kidneys or even with kidney transplantation. More than 20 papers were presented concerning various problems related to renal osteodystrophy and disturbed divalent ion metabolism in chronic renal disease and to the possible etiologies and their interactions. This symposium brought together a select group of experts representing several relevant disciplines from France, Switzerland, Canada, Australia, England, and the United States, and the proceedings will be published shortly and will be distributed widely in order to facilitate widespread efforts for dealing with the serious complications of long-term dialysis brought about by the abnormal calcium metabolism of renal failure.

Most of the Program's ongoing research and development contracts are systematically structured to yield specific goals according to a built-in time schedule. In many cases the attainment of targeted research and development goals in one contract is essential to the success of projects which are part of other contracts. Thus, close communication of research results between all of the Program's contractors is essential for maximum effectiveness of the overall effort. With this in mind, the Program brought together, in January 1968, all of the contractors' senior staff and the Program's consultants for a two-day working conference ("The First Annual Contractors' Conference" of the Artificial Kidney Program). On this occasion each project reported its positive and negative findings to all other active contractors in formal presentations followed by informal general brainstorming discussions. It was felt that this close communication and cross fertilization of ideas from a large number of active contractors and consultants coming from diverse biomedical and technological disciplines was highly productive toward attainment of the common goal of the Program - optimal artificial kidney technology, improved clinical methodology and patient rehabilitation - at an early time.

Printed proceedings have now been published and widely distributed to workers in the field and related disciplines. The publication highlights research results, both positive and negative, in four main areas of the Artificial Kidney Program: (1) solute removal, (2) hardware and instrumentation, (3) cannulas and biologically

compatible materials, and (4) toxic factors in uremia and dietary management of chronic renal failure. It also contains a body of technical information which was exchanged among the meeting's participants.

The Second Annual Contractors' Conference of the Program took place in January 1969, and again technical proceedings will be made available widely to all scientific workers in the field, in university settings, medical centers, and industry.

A 16-mm, 20-minute color film, "Gift of Life," on the artificial kidney and home dialysis has been produced by the Institute's Information Office to help in public education in kidney disease. Intended for use by television outlets, libraries, universities, civic and voluntary health organizations as well as professional groups, the film will be distributed by the National Medical Audio-visual Center and the National Kidney Foundation. The new film depicts a man who suffers loss of kidney function following progressive nephritis but who continues a productive life with the aid of artificial kidney treatment self-administered in his home.

Outlook for Kidney Disease Research and Development

Research conducted and supported by the National Institute of Arthritis and Metabolic Diseases has added much to the understanding and treatment of chronic kidney disease. Clearly this review of investigation and progress in the broad area of kidney disease, artificial kidneys, and renal transplantation, is not all-encompassing. Nonetheless, the variety and fruitfulness of the Institute's efforts and the stimulus to investigation is apparent. Investigations such as those discussed in this report have increased our ability to cope with the problems of kidney failure. Additional new research efforts are called for in order that a more widespread and permanent control of kidney diseases can be achieved. A meaningful program to reduce kidney disease must include all of the various components - research, prevention, treatment, and education - available in our armamentarium. Such a total program must be aimed at all the primary kidney diseases as well as at end-stage kidney failure. This combination, led by much-needed research, should yield maximal benefits in the number of lives saved today and the deaths prevented in the years to come.

EMPHYSEMA AND CHRONIC BRONCHITIS

In recent years chronic respiratory diseases have become the tenth leading cause of death in the Nation. In 1966, these diseases were the primary cause of 35,598 deaths. It is estimated that these diseases contributed to 57,000 additional deaths. Thus, in 1966, the chronic respiratory diseases were responsible for a total of 92,000 deaths.

Emphysema and chronic bronchitis constitute 71 percent of all chronic respiratory disease deaths. The number of deaths caused by emphysema and chronic bronchitis continues to double every five years and there are no signs that this upward trend is diminishing. In 1966 the number was 25,416 which is about four times the 6,535 deaths reported ten years earlier.

The highest incidence of deaths from emphysema and chronic bronchitis is occurring in the Rocky Mountain States and in the Pacific Coast States. However, the rapid increase in the number of deaths is occurring in almost every one of the 50 states and the rate of increase is about the same in each of them. The male to female ratio in the incidence of deaths is six to one. However, the rate of increase in deaths from year to year is almost as high for females as it is for males.

As a cause of disability, emphysema has risen to second place in recent years and ranks second only to heart disease. The Social Security Administration has added annually about 17,000 new disability cases to their pension rolls because of the crippling effects of emphysema. The cost of these pensions is now about $90 million per year. Of the 16,879 new cases in 1965, 55 percent were under 60 years of age and 11 percent were under 50.

Among the workers who have emphysema or chronic bronchitis but who are still working, the National Center for Health Statistics calculates that 6,328,000 days were lost from work because of these diseases during fiscal year 1967. Interviews conducted by the National Center for Health Statistics among the general population indicate that about 5 million Americans have emphysema or chronic bronchitis. Local surveys have indicated that there could be as many as 14 million Americans with abnormal lung function.

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Regional Medical Programs Service

Within the Regional Medical Programs Service, major responsibility for the prevention and control of emphysema and chronic bronchitis is carried out through the following programs:

National Clearinghouse on Smoking and Health

The National Clearinghouse on Smoking and Health conducts investigations of the behavioral aspects of cigarette smoking and carries out educational efforts for the public on the associated health hazards. Although these efforts are not directed toward specific disease entitites, the findings of behavioral research studies and the efforts of health education are an integral part of the total effort to prevent and control emphysema and chronic bronchitis.

Chronic Respiratory Diseases Control Program

Established at the request of Congress three years ago, this Program directed its initial efforts toward the demonstration and evaluation of treatment for patients with severe disease. As these projects approach completion, the program is allocating an increasing proportion of its budget for studies to determine the

nature and magnitude of emphysema and chronic bronchitis as a public health problem, and to investigate effective means for their detection and management in the early stages of disease.

Applied Research

Confident that the ultimate goal will be in the direction of prevention, greater emphasis is being given to the study of the natural history of the diseases. Epidemiologic projects are being designed to identify factors associated with increased risk of disease. Information so gained will become the stepping stones upon which future programs of prevention can be based.

As reported last year there is increasing evidence that emphysema and chronic bronchitis represent multiple conditions precipitated by a series of insults to one or more portions of the respiratory tract. These insults may be viral and bacterial infections; allergic reactions; and the inhalation of noxious agents such as air pollutants and cigarette smoke. Furthermore, it has been demonstrated that substandard living conditions and genetic factors play a role in their etiology. The facts suggest that emphysema and chronic bronchitis may have their origin early in life. Insults to which the lung is subjected beginning in childhood and extending over a period of many years, may result in disease first observed in middle aged and older individuals. Consequently, the Program has initiated projects for the long-term study of infants and children at four medical centers in an effort to uncover the relationship existing between pediatric pulmonary disease and chronic respiratory disease of adults.

A major difficulty in the understanding of chronic respiratory diseases has been the inability to distinguish clearly between the various conditions comprising the chronic respiratory disease syndrome. It is evident that sensitive new tests and refinements of current standard tests are needed to categorize successfully the many components involved. It is possible to prevent or reverse some aspects of chronic lung disease, but unless they can be clearly distinguished from irreversible elements, preventive efforts will remain haphazard.

At Baylor University, engineers are developing a highly sensitive, portable instrument for the Program which will permit measurement of the diffusing capacity of the lungs.

At Milwaukee, Wisconsin and Alexandria, Virginia, automated diagnostic procedures have been under test and results will be made available for publication.

Accurate classification of disease is important to programs aimed at preventing progression of disease among persons with early signs and symptoms. We must know what, exactly, constitutes early disease and how to identify those persons in whom the condition is most likely to worsen. In Jamaica, New York, and Tucson, Arizona, specialists are learning how to identify such patients and are exploring the results of medical intervention on the natural course of events.

Scientific and Public Information

The Program continues to inform the public about the nature and magnitude of the chronic respiratory disease problem and continues to disseminate research findings to the public health and research communities. A professional teaching film on intensive care for respiratory failure is now available to medical and nursing groups. Course materials and other training aids have been prepared for use by the nonspecialist physicians so that they may provide a higher standard of service to their patients. Last year, special effort was made to inform patients suffering from chronic respiratory conditions about their disease and how they can help themselves.

Regional Medical Program Grants

Regional Medical Program grants have helped initiate and develop a number of training programs in diagnostic and therapeutic centers for the control of chronic adult and pediatric respiratory disease.

In the area of adult pulmonary disease, funding is directed towards increasing the number of medical, nursing and allied health personnel skilled in the therapeutic and diagnostic procedures available for patients with emphysema, chronic bronchitis and other pulmonary diseases which are closely related to disorders to the circulatory system. The projects that have been funded deal with newer methods of diagnosis, prevention, therapy and rehabilitation of those patients with this disease.

The Texas Regional Medical Program has an area-wide respiratory care project located in the San Jacinto area, a twelve county area in southeast Texas. The project is based at the Baylor University College of Medicine and is coordinating its efforts with other hospitals and clinics in the area and with the local Tuberculosis and Respiratory Disease Association. The aim of the project is an improvement in the early diagnosis, treatment, prevention and rehabilitation of chronic respiratory disease patients, especially indigent patients with chronic bronchitis and emphysema. This proposal consists of several facets which expand on existing facilities and constitute a comprehensive respiratory care program. An attempt will be made to provide facilities and manpower for the delivery of total respiratory care for inpatients and outpatients at various locations in the area. These specialized units will be used for training allied health personnel and for the continuing education of physicians and nurses. One of the most important parts of the project is a chronic respiratory screening program which will expand on the present activities to detect this disease in the population in the San Jacinto area by questionnaire and spirometric analysis.

The Memphis Regional Medical Program has had a project approved which focuses on emphysema and cor pulmonale and has established a demonstration facility which would stimulate and train personnel managing such patients. A demonstration outpatient clinic will meet two mornings a week to evaluate fifty patients with chronic respiratory disease in the Memphis-Shelden County area. Certain baselines of prevalence and information related to microbiologic agents, especially viruses and mycoplasmas as well as the etiologic agents of intercurrent respiratory infection will be studied. Patients from this region will be seen and referred by private physicians for the utilization of this service. In addition, a visiting team consisting of a physician, nurse, pulmonary function technician and inhalation therapists and physical therapist will visit various hospitals and medical societies throughout the region

Pediatric Pulmonary

The proposals in the field of pediatric pulmonary disease provide a coordinated multi-disciplinary program at pediatric clinical research, service and training programs. These programs are directed toward the control of chronic nontuberculous respiratory disease which is associated with cardiovascular impairment. These centers will be based within existing medical centers possessing the necessary special competence, interest and facilities to develop and maintain comprehensive community programs with existing patterns of medical and health care. The centers will provide the surrounding geographical area directly with special diagnostic, therapeutic and social services in the hospital, clinic and home. Diseases such as chronic bronchitis and asthma would be most affected by programs of this nature. Examples of pediatric pulmonary disease centers funded by Regional Medical Programs are as follow:

(1) California Regional Medical Program subregion at Irvine has a pediatric pulmonary disease center at the Orange County Medical Center and Children's Hospital. The program is based in an area

of increasing population of about 300,000 children under the age of 10 years. The center concerns itself with comprehensive management of patients with acute and chronic pediatric pulmonary diseases including neonatal respiratory disease, bronchiolitis, cystic fibrosis and asthma. The outpatient department of the Orange County Medical Center and an inpatient unit consisting of three beds and three incubators will be the basis of the demonstration of quality care. Community physicians and allied health personnel will be invited to attend rounds at the medical center. Organized courses will be held for both physicians and nurses. Twice a year a 12 week nurse in-service "internship" utilizing both the outpatient department and the inpatient department will be conducted. Clinical research will be conducted in pollution factors and chronic pulmonary disease, effects of multi-acute episodes of pulmonary disease, techniques of evaluating patients with pulmonary disease, and clinical pharmacology especially in the field of drug toxicities.

(2) Georgia Regional Medical Program has a pediatric chronic pulmonary disease center whose purpose is to develop and provide the necessary and appropriate diagnostic and treatment services for children throughout the state and region along with the neighboring portion of South Carolina. Regional Medical Program funding will support expansion, renovation and addition of new equipment and personnel to the already existing respiratory disease center located on the campus of the Medical College of Georgia. The development of services, training of faculty members and professional staff and the operation of the clinic will be developed to enhance communication between the local community and the medical center.

(3) Washington-Alaska Regional Medical Program has a project based at the Children's Orthopedic Hospital and Medical Center which has been designated since 1962 as a Cystic Fibrosis Regional Center whose objective is to study cystic fibrosis by using a new technique of radioactive screening. The project will also train nurses, physicians, and allied health personnel in these newer techniques and will have an on-going continuing education program.

(4) The Lovelace Clinic in the New Mexico Regional Medical Program has a demonstration pediatric pulmonary clinic established which will meet two mornings a week. The demonstration of teaching components as well as a diagnostic and therapeutic aspect of the clinic will be for patients referred from all over the region with chronic or acute pediatric respiratory disease. The existing facilities at the New Mexico Cystic Fibrosis Research Center will serve as a model and work with the pediatric pulmonary center which is established by Regional Medical Programs. The program has patient service, clinical research and demonstration and training components described on a regional level.

(5) Colorado-Wyoming Regional Medical Program has a pediatric pulmonary disease center established. This region has been actively involved in pulmonary research and training for a number of years. The university is presently receiving support from the National Cystic Fibrosis Research Foundation. The Program will seek to familiarize the medical personnel in New Mexico, Western Kansas, Western Nebraska, Colorado, Wyoming, Montana and parts of Utah with the facilities at this center to attract more and earlier referrals. A main function will be comprehensive management and training in all forms of

neonatal and pediatric pulmonary disease. There will be visits to the medical societies in the areas mentioned above and lectures will be conducted to demonstrate the existence of this facility as well as encouragement of referral of patients for its use. A three day course will be held three times a year in the field of pediatric pulmonary disease.

Federal Health Programs Service

This Service treats over 5,000 inpatients annually for pulmonary disease in its ten general hospitals. This represents approximately 11% of the patients treated in our hospitals. In addition, there are approximately 15,000 outpatient clinic visits annually for the treatment of emphysema and related chest disease in the ten general hospitals and 28 outpatient clinics.

Clinical services devoted to pulmonary disease are centered in three hospitals located at New Orleans, San Francisco, and Staten Island. These services are engaged in treatment, research and training activities related to emphysema and other pulmonary diseases. Each of these hospitals has an inhalation therapy clinic. Fifty-seven full-time health workers are engaged in the pulmonary disease programs. Some of the research activities being conducted are:

1. The effects of physical training on pulmonary and bronchial circulation.

2. The evaluation of the efficacy of drugs on pulmonary disease.

3. Early detection of abnormal pulmonary function by means of computerized testing system.

4. The diffusing capacity of the lung before and after phlebotomy.

5. Ectopic hormone secretion in patients with carcinoma of the lung.

Additional activities include health education programs for patients and employees on smoking and its relationship to disease. The Staten Island PHS Hospital is currently developing a similar community-wide education program. A Cooperative Pulmonary Rehabilitation Service is planned which will involve the PHS New Orleans Hospital, Tulane University, and the National Air Pollution Control Administration.

In addition to the three hospitals with specialty services, the other seven PHS general hospitals are engaged in pulmonary disease research. Areas of study include: (1) improved treatment methods for chronic bronchitis, (2) pulmonary physiology, (3) improved diagnostic methods, and (4) epidemiological studies of pulmonary diseases.

A Look to the Future

Many complex questions remain to be answered. Prevention of emphysema will require the efforts and support of scientists, medical educators, public health officials, Government leaders, and the American people.

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

The National Air Pollution Control Administration supports intramural and extramural research on the relationships of air pollutants to chronic respiratory disorders. Community and industrial air pollution are significant factors in the causation and aggravation of chronic respiratory disease.

In the Environmental Control Administration, the Occupational Safety and Health program supports research to study the problems and etiology of chronic

lung disease associated with occupational factors, including a study of a Michigan foundry where the workers are known to have an excessive incidence of emphysema. The major research effort is concerned with pneumoconiosis in coal workers.

NATIONAL INSTITUTES OF HEALTH

National Institute of Allergy and Infectious Diseases

The Nature of Emphysema

For many years, a patient with chronic irreversible airway obstruction in the United States was diagnosed as having "emphysema" while in Great Britain, a similar condition would be termed "chronic bronchitis". In recent years, however, there is evidence that a patient with severe, chronic, irreversible airway obstruction may have reached this stage as a result of either pulmonary emphysema or chronic bronchitis.

Emphysema is a chronic, often progressive disorder of the lung in which the alveoli -- tiny air sacs clustered around the ends of the bronchial tubes -- are attacked and permanently damaged.

In the normal lung, fresh oxygen is absorbed into the blood stream and waste carbon dioxide is removed through small blood vessels in the walls of the alveoli.

However, in emphysematous lungs, the walls of the alveoli are irreversibly destroyed and broken down, leaving large, inefficient air spaces devoid of small blood vessels. The flow of air is restricted, removal of carbon dioxide is impeded, and breathing becomes increasingly difficult. Meanwhile, body tissue deteriorates and the heart tends to become overworked in an effort to compensate for the lack of a sufficient oxygen supply in the blood stream.

Chronic bronchitis is defined as excessive secretion of mucus from the bronchial tract resulting in a productive cough. Unlike emphysema, bronchitis is partially reversible. Although chronic bronchitis and emphysema are intimately associated, in some patients the symptoms of each begin simultaneously and progress rapidly. Any attempt to distinguish between the two diseases is clouded by the fact that each can cause a similar clinical picture; only after careful pathologic examination of the lungs can the relative role of the two diseases be evaluated.

Three-Pronged Attack on Emphysema

Scientists at the National Institutes of Health and other Government agencies recognized that the problems of emphysema are three-fold:

1. The cause or causes of emphysema must be found.

2. Better diagnostic procedures must be developed.

3. More effective treatment of the symptoms must be devised.

Since these problems can best be solved through utilizing the experience, skills, and disciplines established within the Department of Health, Education and Welfare, major responsibility has been assigned to:

1. The National Institute of Allergy and Infectious Diseases, NIH, for coordinating investigative efforts into the cause or causes of emphysema;

2. The National Heart Institute, NIH, for developing better diagnostic and treatment procedures; and

3. The Chronic Respiratory Disease Control Program, Bureau of Disease Prevention and Environmental Control, Health Services and Mental Health Administration, for coordinating efforts toward relief of symptoms and the training of the medical profession in recent therapeutic procedures.

Other related efforts are being supported by the National Center for Air Pollution Control, and such voluntary health organizations as the National Tuberculosis and Respiratory Disease Association.

NIAID Uniquely Equipped for Its Role

For several years, the NIAID has been actively concerned with the problems of emphysema and chronic bronchitis. Its fundamental philosophies and approaches to basic research made it uniquely equipped to respond to the Congressional mandate of 1966 for a program of special emphasis into the cause or causes of emphysema.

The entire NIAID program -- intramural, extramural, and collaborative contracted research -- has attracted the interrelated disciplines of microbiologists, immunologists, allergists, virologists, pathologists, and cellular biologists. The program has aroused the enthusiasm of a new community of scientists and has mobilized the scientific constituencies essential to contributing an imaginative impetus to the research efforts on emphysema, chronic bronchitis, allergic and respiratory disorders. The problem of emphysema is being attacked by an array of scientific talent joined together in a concerned and coordinated effort. As answers are found to the difficult questions posed by emphysema, we shall have gained likewise in knowledge of other disease entities affecting vast numbers of our society.

The Search for Causes

As epidemiological studies and sophisticated diagnostic techniques demonstrate the extent and scope of emphysema, one hard fact emerges; it is necessary to do more than attempt to alleviate the misery of those now suffering from the ailment. It is necessary either to prevent emphysema by removing the causes or to interrupt the disease process before it reaches the state of irreversible damage.

Although its causes are not yet totally defined, evidence is accumulating rapidly that emphysema is not merely a disease which strikes the tiny air sacs (the alveoli). It is now suspected that alveolar damage is the final stage of a disease process possibly precipitated by a series of "insults" to one or more portions of the respiratory tract. These insults may be acute viral and/or bacterial infections, allergic reactions such as asthma and hay fever, the inhalation of noxious agents such as cigarette smoke or the soot and fumes of urban environments, genetic factors, the body's allergic reaction to its own tissue's efforts to reject foreign substances to which it is exposed -- or a combination of some, or all of these factors.

Deaths Under-reported

Twelve years have now passed since scientists at the University of Colorado Medical Center in Denver began their Emphysema Registry in an effort to determine whether a number of different disease conditions are involved in emphysema. The NIAID grantees now have case histories on 390 subjects. Of these 190 have died and autopsies have been performed on 122.

It now appears to the Colorado group that the official death reports from emphysema and chronic bronchitis substantially understate the true frequency of these diseases as causes of death, as well as in the living population. They also

report that emphysema and chronic bronchitis alone or together, do not always cause chronic airway obstruction, but if obstruction is present the immediate causes of death are predominantly congestive heart failure and respiratory failure, both potentially treatable. They suspect that cigarette smoking, urban air pollution and repeated and neglected deep respiratory infections are related to the development of emphysema and chronic bronchitis. In addition, special post mortems have been performed on well over 500 patients, of whom 200 had clinical chronic airway obstruction. Of these, 75 were from the Emphysema Registry; the others were studied as controls.

A Community Under Observation

Scientists at the School of Public Health at the University of Michigan for some time have been studying the entire population of the small city of Tecumseh, Michigan, to determine how the many factors in an individual's makeup and in his environment contribute toward either the maintenance of health or the development of disease. Initially, approximately 10% of the population over age 15 had chronic coughs and sputum production, both common symptoms of chronic bronchitis. Since the start of the study, some of the individuals have had remission of their symptoms while others developed these complaints. Such changes in symptoms status have led to a search for clues as to the factors involved in initiation of chronic lung disease. Special emphasis is being placed on the relation of acute infections to the development and progression of emphysema and bronchitis. The microbial agents incurred in these illnesses are being identified and their importance assessed by measuring changes in symptoms and general state of health. Among pulmonary function tests being performed to determine effects of infection on lung efficiency, a gas distribution test has been found particularly helpful in identifying early lung abnormalities.

Smog Constituents Produces Emphysema Symptoms in Mice

A number of studies are being conducted on mice exposed to various chemical and biological agents. For example, NIAID grantees at the University of Southern California School of Medicine, Los Angeles, have been conducting long-term studies of mice exposed to certain constituents of polluted Los Angeles air in an effort to learn more about the effects on the respiratory tract and on the resistance of the animals to certain experimental pulmonary bacterial and/or viral infections.

In the California studies, animals allowed to breathe nitrogen dioxide (NO_2) in concentrations of 35 to 40 ppm (considerably stronger than that found in Los Angeles smog), for 60 days, developed marked and permanent changes in the lung tissue and a breaking down of the alveolar walls into spaces resembling emphysematous changes seen in man. When mice were exposed to lower concentrations for as long as six months, the lung structure appeared unchanged. However, even these latter animals had a diminished ability to clear their lungs of bacteria, indicating a lowered resistance. Interestingly enough, there was some evidence that animals exposed to either high or low concentrations of NO_2 developed an increased resistance to experimental influenza virus infections.

Additional studies are currently being made to test the effect of carbon monoxide (CO) and ozone (O_3) on the respiratory tract and other tissues of mice, rats, guinea pigs and dogs. Preliminary observations indicate that both carbon monoxide and ozone markedly suppress certain enzyme systems in the lungs without significantly altering lung structure. Sulphur dioxide SO_2, while suppressing enzyme action of lung tissue, did cause changes in lung structure. Studies are also underway to determine if animals exposed to O_3, CO and SO_2 at levels prevailing in nature are susceptible to bacterial and viral infections to the same degree as they were to NO_2.

At Stanford Research Institute, Menlo Park, California, NIAID grantee-scientists also carried out studies of rats exposed to nitrogen dioxide (NO_2) for periods ranging from one to 20 weeks before being transferred to chambers

containing pure air. Purpose of the tests was to determine whether the emphysema-like pulmonary changes noted in such animals might regress if the animals were protected from NO_2. Upon post-mortem, lung sections were tested for collagen and tissue elasticity. The results recently reported by the scientists indicate that enlargement of the lungs exposed to NO_2 concentrations for as long as 20 weeks was partially reversible with time; however, there appeared to be only partial reversal of alveolar and ductal architecture, with a resultant difference in relative sizes of air spaces. Rats allowed to recover for several months after their 20-week exposure to NO_2 regained their weight and appeared to function adequately within their customarily confining environment, although their capabilities with increased activities have not yet been tested.

Bacteria Studied as Triggering Factor

Although there have been conflicting clinical observations as to whether bacteria are a primary factor in the initiation and progression of emphysema and chronic bronchitis, there is sufficient evidence to support the hypothesis that bacteria are at least a contributing factor.

At the University of Texas Southwestern Medical School at Dallas, NIAID grantees have been able to develop a model of chronic bronchitis in the rat exposed to prolonged concentrations of sulphur dioxide (SO_2) and to produce emphysema by injecting a chemical -- papain -- into the rat's airways. Further studies are now underway to evaluate the effect of superimposing bacterial infections on the chemical agents and to attempt to produce similar chronic bronchitis and emphysema lesions with bacterial agents alone. Investigations include evaluation of the functional changes of the lung during life and microscopic examination after death. In addition, the scientists are investigating the effects of chronic bronchitis, emphysema and the combined lesions on the rat's ability to clear bacteria from the lungs and the possible role of bacterial enzymes on the onset of emphysema.

Lung Damage and Lung Repair

Scientists at Duke University Medical Center, Durham, N. C., are expanding their basic emphysema research project into an interdepartmental program to study environmental health as well as the toxicology of environmental pollutants and their effects on the lungs and other body systems.

Concentrating on studies of the lung as the organ of entry for airborne materials and the site of initial cell-agent interactions, the Duke scientists also plan to investigate the effects of both absorbed airborne agents and materials which enter by way of the intestines and the skin.

They hypothesize that emphysema may represent an attempt by the lungs to repair alveoli damaged by infection, air pollution, allergic reactions and genetic disorders of tissue, and are using several approaches to explore these problems at the cellular and subcellular levels. They are attempting to characterize the response of the respiratory tract cells when challenged by potentially injurious agents such as airborne contaminants acting in consort with microbial agents. To shed light on the process by which inhaled particles are cleared from the lower portions of the human lung, the scientists are studying the clearance mechanism of frog lungs. And they are conducting other investigations -- primarily in patients with emphysema and chronic bronchitis -- correlating measurements of pressures and flow in the lung with airway structures in an effort to explain why air movement becomes difficult in diseased lungs.

The cilia -- tiny hair-like cell projections attached to the lining of the respiratory tract -- are being examined meticulously for their role in chronic respiratory diseases. In their healthy state, cilia vibrate and, by their constant motion, propel mucous and foreign matter (such as dust and pollen) toward the mouth where it can be removed by "clearing the throat". The Duke studies indicate that clearance of this foreign matter is increased by water deposition, elevated temperature, and breathing movement, but is reduced by drying.

At St. Vincent Hospital Research Foundation in New York City, other studies of cilia action are being conducted by NIAID-supported scientists, who also are investigating two specific portions of the overall system the body uses for defense of the respiratory tract against bacterial invaders or foreign particles generally.

In their investigations, the New York scientists have shown that oxygen administered in concentrations of 40% interferes with the function of cilia. Since digitalis, serotonin and epinephrine compounds are strong stimulants to ciliary activity, the researchers recommend that epinephrine compounds be used during extended periods of oxygen therapy. Although the exact mechanisms whereby oxygen interfers with mucous flow are still under study, it appears that it may be due to a blocking of carbohydrate metabolism.

The St. Vincent's group, in studying alveolar macrophages, found that these cells which ingest and kill invading bacteria (1) depend upon oxygen for their function, (2) have a very high concentration of enzymes, and (3) mobilize 2-1/2 fold in the face of bacterial challenge. At present, bactericidal capacity and metabolic factors are under study in relation to alcohol -- which has been found to interfere with macrophage mobilization -- as well as other pulmonary irritants. The scientists hope to learn more about the specific susceptible site in the patient with bronchitis.

At the University of Vermont College of Medicine, Burlington, scientists also are investigating the role of the alveolar macrophage system in broncho-pulmonary resistance, on the theory that many of the agents which contribute to the development of chronic broncho-pulmonary disease may damage the lung by impairing the macrophage cells' ability to ingest foreign matter in the alveoli. Alterations in the function of this cellular mechanism in response to viral infection, acid-base disorders, respiratory insufficiency, air pollutants and related factors are being studied in an effort to discover the mechanisms of damage to the lung produced by these agents and their relationship to the subsequent development of chronic bronchitis and emphysema.

Studies continue at Yale University School of Medicine at New Haven, into the role played by viral infections in the development of chronic bronchitis and emphysema. On more than 50% of the occasions when such patients were examined, they were found to be harboring one or more viruses in their respiratory passages. Since this was true not only during acute flare-ups, but also during quiet periods or between acute attacks, the scientists suggest that these patients either experience very frequent respiratory virus infections which produce no unusual symptoms, or that viruses persist in their respiratory tracts for unusually long periods of time. A group of subjects with no chronic bronchitis and emphysema is now being studied for comparison purposes.

Multi-Discipline Approach to Acute and Chronic Infections

Scientists at the College of Medicine of Ohio State University in Columbus have embarked on a comprehensive and systematic study of acute and chronic effects of infectious microorganisms on pulmonary function. This team of workers is attempting to correlate the microbiological, physiological, histopathological and biochemical events which occur in germ-free rats exposed to mycoplasma organisms causing pneumonia. Excised lung tissue damaged during acute or chronic infection is being examined for cell structure and function while other portions of the same lung are being analyzed for alterations in chemical components; the results of these studies are then being compared with similar tests on healthy lungs. These scientists hope to clarify the underlying mechanism of respiratory disease and to develop an animal model system applicable for study of the role of microorganisms in human pulmonary infection.

Tears Found Key to Protein Presence

At State University of New York Downstate Medical Center, Brooklyn, scientists working under grant support from NIAID analyzed tears for levels of IgA (immunoglobulin A), a class of antibody protein found in secretions, and discovered that several patients with chronic pulmonary disease lacked this antibody in their secretions. Also, it was found that tears contain a protein, not noted in the blood, which aided the protein lysozyme in destroying bacteria. Through these studies, it has been possible to identify certain patients who have chronic pulmonary disease perhaps as a result of protein deficiency and to reveal in more detail how the body fights infection.

Research on the hydrocarbons which may be present in automobile exhaust fumes -- also conducted by the Downstate Medical Center investigators -- indicate that when these hydrocarbons come in contact with proteins such as antibodies and lysozyme, a change occurs in the proteins so profound as to destroy their antibacterial effectiveness.

Translaryngeal Aspiration Employed

At the Veterans Administration Research Hospital in Chicago, in conjunction with Northwestern University, scientists have employed a technique known as translaryngeal aspiration (withdrawal of secretions from the respiratory tract beyond the larynx or voice box, by a suction apparatus).

Role of Infection in Emphysema

At the University of Utah Medical Center, the role of infection in emphysema is being evaluated by long term studies on a group of patients. Specimens of blood and respiratory secretions are being cultured for virus, mycoplasma and bacteriologic infections and to date, strains of all of these disease-causing organisms have been isolated in varying numbers.

Virus versus Bacteria

It is generally accepted that virus infections such as colds and influenza seem to predispose to more severe and prolonged bacterial diseases. It had been assumed that the virus, injuring or destroying the cells of mucous membranes, caused the release of nutritional substances in which the bacteria could thrive. However, in studies at Louisiana State University Medical Center at New Orleans, scientists appraising the impact of combined viral and bacterial infections on respiratory function have shown that this assumption was incorrect.

Using as a model chick embryo infected with influenza C virus on which could be superimposed an infection with the bacterium Heophilus influenzae, the investigators found that the severity of the infection and the death rate was much greater for the combined virus-bacterium infection. This enhancing effect was due to both general increase in bacterial growth and to a predominance of the more lethal type of H influenzae. These studies are being extended to identify biochemically the substances produced by the infected embryo that have growth and virulence enhancing properties. Once these substances have been further characterized and their identity revealed, this study should have important implications for the eventual prevention of virus infection and its serious complications.

Emphysema Produced Experimentally in Cows

Scientists at Washington State University, Pullman, have discovered that emphysema can be produced experimentally in cows by administration of huge doses of tryptophan, an amino acid that is a natural component of protein. The disease is apparently produced in the cow when tryptophan is given orally, but not when it is injected into the blood or body. This, the scientists believe, would indicate that the tryptophan is changed by bacteria in the rumen to a substance capable of

producing the disease. Although it is not known whether this is the same disease that occurs in man -- or whether there is even any relationship -- research is continuing from a biochemical and enzyme-related standpoint to determine any common linkage. Continued study of the pathology of the cow's lung may establish this as a useful animal model for human emphysema.

Chemical Agents Action on the Lung

Investigators at St. Luke's Hospital Center, New York City, are studying the structural changes which occur in the small pulmonary blood vessels and respiratory part of the lung as the result of the action of two chemical agents, (histamine and serotonin), produced by the body and known to play a role in response to injury. The study is aimed at determining whether complete healing occurs following these structural changes, or whether some permanent damage results which may be significant in causing pulmonary emphysema. A pilot study of normal mammalian lung structures has indicated that previously published reports of this structure are in error.

Antibiotic Therapy Useful in Selected Groups

Four areas of investigation on chronic bronchial infections are being conducted by scientists at the University of Illinois Medical Center at Chicago. One involves the study of patients with chronic bronchitis and others with bronchiectasis, (a chronic dilatation of the branches of the bronchial tree), who have been treated with continuous antibiotic therapy since 1957. Although preliminary studies indicated that those under treatment had fewer days of lower respiratory infection and less time off from work than the control groups, an evaluation over a period of four years indicated little difference in these factors in both groups. The scientists now conclude that long-term antibiotic therapy may be useful in individuals with considerable broncho-pulmonary infection and considerable sputum production, but that it is relatively unsuccesful in persons with lesser degrees of disease.

Relationship between Allergy and Emphysema Investigated

For some time it has been suspected that allergy -- one of the "insults" to the lung -- may contrubute to emphysema. At Marquette School of Medicine in Milwaukee, scientists are studying an allergic lung disorder found in some pigeon breeders. Symptoms include chills, fever, tight chest and shortness of breath followed -- in some cases of prolonged exposure -- by an incapacitating lung damage resembling emphysema. This type of allergic disorder is also found in other occupations involving exposure to organic dust. Investigations are underway to reproduce this condition in monkeys in an effort to learn more about the allergic mechanism involved.

Bronchiolitis and Chronic Lung Disease Relationship Probed

At the Hospital of the University of Pennsylvania in Philadelphia, studies are continuing on a group of children who had suffered episodes of bronchiolitis (bronchopneumonia) in infancy. Approximately half of those under observation have wheezed recurrently since the bout of bronchiolitis; in these children, also, there has been a high incidence of major allergic manifestations with an increase of symptoms as the children grow older. The Pennsylvania investigators suspect a possible relationship between bronchiolitis and allergy of the respiratory tract and now are questioning the relationship between the childhood ailment and later chronic obstructive lung disease.

Intramural Research

Augmenting the research on emphysema and chronic bronchitis being conducted under grants to universities and hospitals throughout the country, is the work of NIAID scientists. In its Bethesda, Maryland, Laboratories, studies have been

carried out on acute respiratory diseases, caused by viruses and mycoplasmas, sites of virus multiplication, new techniques for recovery of respiratory tract viruses, and the course of experimentally produced acute respiratory diseases in adults.

At the Rocky Mountain Laboratory in Hamilton, Montana, investigations cover such broad areas as the mechanism and role of allergy in disease and the relationship of viruses to certain chronic diseases of man.

The Future

The solving of the problems of emphysema and chronic bronchitis will not be quick or easy. The past two years have brought proof of the value of the multidisciplined research approach. But the prevention of these diseases will require the continued efforts of scientists, and the continued support of medical educators, public health officials, Government leaders, and the American people.

National Heart Institute

During fiscal year 1968, NHI supported 149 grants totalling $4,153,838 for research on emphysema and related cardio-pulmonary disorders.

Major research areas included:

- studies aimed at defining the causes of emphysema, still poorly understood.
- studies on the causes, consequences, and clinical management of elevated blood pressure in the pulmonary circulation.
- development of diagnostic techniques for evaluating pulmonary bloodflow and gas exchange in the lung.
- development of reliable techniques for evaluating lung function and for early detection of chronic lung diseases.
- development and evaluation of mucolytic agents, bronchodilators, and respiratory stimulants for relief of the distressing symptoms of emphysema.
- development of respiratory-assist devices, blood oxygenators and related techniques for the treatment of acute respiratory failure.
- research seeking more effective means of coping with circulatory complications of chronic lung diseases, such as pulmonary hypertension, right-heart failure, and secondary polycythemia (increase in number of circulating red blood cells stimulated by chronic underoxygenation.)

Diagnostic Techniques

Emphysema develops so insidiously that many victims are completely unaware that anything is seriously wrong until 50% or more of their lung function has been destroyed. Since the damage done to the lungs by emphysema cannot be undone, the development of reliable pulmonary function tests for the early detection of the disease in individuals who have experienced few noticeable symptoms is an urgent need. Ideally, these tests should be simple enough to perform in the average physician's office and should not require elaborate equipment beyond the capabilities and the means of the average physician.

During the past decade, NHI-supported research has contributed to the development of a wide variety of tests yielding reliable indices of lung function. These tests have proved highly useful in detecting and assessing deterioration in lung function due to emphysema and other causes. Also developed during recent years have been catheterization techniques for measuring blood pressures in the pulmonary arteries and radioisotopic techniques for evaluating lung perfusion and for localizing and evaluating the extent of lung damage. However, these sophisticated diagnostic procedures are usually available only in large, lavishly-equipped clinical centers.

Of particular importance toward the early detection of pulmonary diseases in general practice or in the health screening of large numbers of people has been the development of simple, rapid, single-breath tests of lung volume and gas exchange. The widespread application of such diagnostic tests is contributing to more frequent detection of emphysema during its early stages, when the physician is better able to initiate measures to halt further progress of the disease.

Treatment

Present therapeutic measures are aimed primarily at arresting or slowing down the progress of emphysema; relieving its distressing symptoms; improving the patient's general physical condition; and helping him to make the best possible use of whatever lung function the disease has left him.

Bronchodilators are widely used to make breathing easier for emphysema victims. Usually administered via inhalers, these drugs help to open up constricted air passages.

Steroids, which help to supress inflammation, are sometimes helpful in clearing inflammed, congested airway passages and in reducing the intensity of allergic reactions. Unfortunately, steroid therapy is ineffective in many victims of emphysema and is frequently attended by undesirable side effects. A most serious consequence of steroid therapy is the resultant decrease in the patient's resistance to infections, specifically respiratory infections that can seriously complicate the course of emphysema.

A number of effective expectorants have become available during recent years. These drugs help to liquify viscid mucous clogging the air passages so that the patient can cough them up. Chronic coughing contributes to the discomfort of emphysema, but physicians are wisely reluctant to administer sedative agents to supress the cough reflex; for such agents may also reduce respiratory drive, with potentially dangerous results in patients with emphysema.

A number of portable oxygen devices have been developed for the ambulatory patient with emphysema, some of them compact enough to be carried in a pocket, briefcase, or purse. The oxygen output of these devices can be adjusted to meet the oxygen needs resulting from exertion or mild to severe episodes of breathlessness. Other mechanical devices, designed to assist the patient in breathing by increasing intra-abdominal pressure, are compact and light enough to be worn by the patient without interfering with his activity.

Severe respiratory distress in victims of far-advanced emphysema may be managed through intermittent positive-pressure breathing apparatus. However, such therapy is practical only in hospitalized patients because, though often beneficial, it is also potentially hazardous unless administered by trained therapists under the supervision of a qualified physician. Careful monitoring of blood gases provides a reliable check on the effectiveness of therapy.

An essential feature of any program for helping the victim of emphysema to live with his disease is training in breathing exercises which help him make better use of his limited vital capacity. Such exercises frequently enable emphysema patients to resume activities formerly beyond their endurance. Similarly,

a program of general physical conditioning, with exercises carefully tailored to the limitations of the individual patient, may help him carry out customary daily activities with greater ease and comfort.

Currently under study for their potential therapeutic value in emphysema patients are respiratory stimulants which act on nerve centers in the brain or chemoreceptor mechanisms in the lung or elsewhere to increase respiratory drive. Several promising agents have been developed, but clinical experience with them is limited.

Antibiotics have proven valuable in the long-term management of the emphysema patient, primarily as a means of protecting him against potentially serious respiratory infections. Needless to say, the emphysema patient should also be protected by flu shots or other available immunization procedures, especially during those seasons of the year when the threat of respiratory infections is greatest.

Presently, relatively little can be done for victims of far-advanced emphysema; but much research is being directed toward the development of efficient, low-cost blood oxygenators for the management of episodes of acute respiratory failure. Research also continues to progress, albeit slowly, toward effective means of storing and transplanting lungs.

The major problem in lung transplantation, as in other organ transplantation procedures, is the rejection of the transplant by the body of the recipient. Still other problems are posed by the fact that transplants are deprived of neural, biochemical, and other regulatory mechanisms that normally control pulmonary function. In a few instances, lung transplants have been attempted in patients moribund from advanced pulmonary disease; but in no case has a transplant significantly prolonged the patient's life.

Prevention

Until the cause or causes of emphysema are known with certainty, it is unlikely that effective means of preventing or curing the disease can be developed; hence a high proportion of funds for emphysema research are allocated for studies on causation.

Although the causes of emphysema are still poorly defined, two factors -- cigarette smoking and air pollution -- are strongly suspected of contributing importantly to the development of emphysema and toward aggravating its clinical course. Emphysema is 13 times more prevalent among cigarette smokers than among non-smokers and the death rate from emphysema among smokers is 7 times that of non-smokers. Numerous epidemiological studies have also established a relationship between levels of air pollution and illness and death from chronic respiratory disorders.

An important epidemiological survey currently being supported by the National Heart Institute is investigating environmental and other factors which might account for the striking differences between England and the United States in mortality from chronic pulmonary disease and coronary heart disease. British mortality from coronary heart disease is substantially lower than ours, but their mortality from chronic lung disease is much higher.

English migrants to the United States are being compared with their relatives who remained at home and also with their contemporaries in the United States.

The control group for this study consists of native Norwegians, who exhibit unusually low mortality rates both from chronic lung disease and coronary heart disease.

Current Research Efforts

The National Heart Institute currently conducts or supports extensive research concerned with lung structure and lung function; neural, hormonal, chemical, and mechanical factors affecting respiration; gas transport and gas exchange; the destruction, repair, and regeneration of lung tissue; and the causes, clinical physiology, diagnosis, and treatment of chronic pulmonary diseases.

Basic studies in respiratory physiology, by helping to clarify the role of the central nervous system, chemoreceptors, stretch receptors, and other factors on respiratory drive, may provide clues to the development of improved therapeutic measures to relieve the breathlessness of emphysema. Other studies, centering on the various secretions of the lung, may lead to more effective mucolytic agents and expectorants for relieving clogged airway passages. Of particular interest is recent research on the pulmonary surfactant which decreases surface tension in the air sacs of the lung and acts to prevent pulmonary collapse. A deficiency of this chemical surfactant appears to be an important factor in the respiratory distress syndrome which kills some 25,000 infants per year. A deficiency of this substance may also play some role, as yet unidentified, in the development of emphysena.

Epidemiological studies in human populations also suggest that certain individuals may be genetically predisposed to chronic lung disease. Data obtained thus far indicate that emphysema appears to develop more frequently in individuals with an inherited deficiency of serum alpha$_1$ antitrypsin, other things being equal, but the significance of these observations remains to be established.

Studies currently underway on the destruction, repair, and regeneration of lung tissue may provide much-needed information on the manner in which emphysema does its damage. This research may also provide leads for slowing, halting, or perhaps reversing the course of the disease.

An area in which additional research may prove fruitful is lung transplantation, which, if perfected, might save many lives currently lost not only to emphysema but to lung cancer and other major cardio-pulmonary diseases.

Also of particular urgency is the need to develop a suitable animal model for studying the development of emphysema and for evaluating preventive or therapeutic measures. A disease resembling emphysema sometimes develops spontaneously in race horses (and this disease model is being studied by NHI grantees); but emphysema does not occur naturally in any commonly used laboratory animal, and currently employed methods for inducing emphysema in such animals do not reproduce the naturally occurring disease in humans.

Conclusion

During 1968 a Cardiopulmonary Disease Advisory Committee was formed at NHI for the prupose of keeping the Institute and the National Advisory Heart Council informed on research and training opportunities in the cardiopulmonary field. The Committee will evaluate the current status of cardiopulmonary research, attempt to identify specific roadblocks to continued progress, and assess research and clinical manpower needs. The Committee will be instrumental in strengthening the Institute's program in this important disease area.

Only during recent years has emphysema developed into a major health problem. The causes of the disease remain obscure, and far too little is known about factors in the individual or in his environment that increase susceptibility to emphysema or contribute to its development. All too often, the disease is diagnosed only after it had done considerable irremediable damage. Currently available therapeutic measures still leave much to be desired. During recent years more and more scientists and clinicians have focussed their attention on this health problem. The resulting vast increase in emphysema research holds forth the promise that solutions may be forthcoming to these problems and that more effective means of prevention, diagnosis and treatment will be found.

STROKE

Strokes, known in the medical world as cerebrovascular accidents, continue to rank third among causes of death in the United States, exceeded only by heart disease and cancer. Each year about 400,000 people have strokes, and about 200,000 die. It is estimated that there are two million victims of stroke alive today, one-third of whom were wage earners before they were stricken. The economic cost of strokes has been estimated at more than one billion dollars a year — $440 million for direct costs of medical care, and $700 million, or 179 million man-hours, in lost productivity. There are thus immense possible benefits to be achieved through research in this field — in both dollar and human terms.

Cerebrovascular disease may be a slow process, extending over many years. The basic causes are still poorly understood, but the acute stage of the disorder—the stroke—is usually preceded by one of three events; (1) thrombosis — the formation of a blood clot which remains at its point of formation in a blood vessel; (2) embolism — the sudden blocking of a blood vessel by a particle such as a blood clot, carried by the blood stream from a larger to a smaller vessel which it obstructs; or, (3) hemorrhage—the rupture of a blood vessel so that blood leaks into surrounding tissue.

All cells require oxygen, and most receive their supply entirely from the blood stream. The importance of an adequate blood supply to the brain is seen in the fact that although the brain comprises only 2 percent of the total body weight it normally utilizes 20 percent of the total oxygen supply of the body. Brain tissue cannot store oxygen and is completely dependent from minute to minute on an adequate flow of blood. When brain tissue is deprived of oxygen for more than a few minutes, the cells die.

NATIONAL INSTITUTES OF HEALTH

National Institute of Neurological Diseases and Stroke

The period from 1965 through 1968 has seen substantial growth in the Institute's cerebrovascular research and training program. Since stroke is a problem of the blood vessels of the nervous system, the National Heart Institute also maintains a strong program in this area, supporting related research, and participating in program planning and management. This activity is accomplished by a Joint Subcommittee of the Advisory Councils of the two institutes.

Research Centers

Eighteen cerebrovascular clinical research centers, located in major university medical complexes about the country, now make up the largest segment of the program. The centers vary considerably in their research emphasis; several concentrate on single research approaches, as at Johns Hopkins University, where the epidemiological aspects of stroke are being studied--incidence and prevalence, methods for early detection of "high risk" segments of the population, familial aggregation of stroke, and similar questions. A center at Boston University devotes its efforts to research in aphasia--speech disorders following strokes. Here, anatomical studies of corticocortical connections in humans and animals, and studies of the neuropsychology and statistical properties of aphasic language are being carried out.

Some stroke research centers are broader in research focus, often working with several related approaches, such as the physical mechanics of cerebral blood flow, cerebral cellular metabolism, and efforts to control these factors with drugs, inhaled gases, and other means. All centers, except the two devoted to epidemiology, have interrelated clinical and basic research programs, and include

accommodations for one to 30 research patients. Most of the centers also conduct training programs, and are staffed by 10 or more physicians and scientists from a wide variety of disciplines.

One center, headed by Dr. James L. O'Leary at Washington University in St. Louis, has just announced the establishment of an intensive care research unit especially equipped for special studies of acutely ill stroke patients. The unit is staffed around the clock, and monitoring equipment constantly records the patient's response to various forms of therapy. Coordinated with the unit are blood coagulation studies, efforts to find better indicators of "stroke proneness," and other investigations.

A very recent expansion of this program provides for grant support of research units for human studies on an outpatient basis. These units will greatly expand opportunities in epidemiology and other research areas where ambulatory patients can be studied.

Project Grants

In addition to the broadly targeted work of the clinical research centers, about 50 research projects are being conducted with Institute support. These cover the entire spectrum from basic laboratory studies in such fields as neurophysiology and biochemistry to clinical investigations of drug effectiveness, the improvement of diagnostic devices and techniques, and development of improved surgical approaches.

Cooperative Studies

Another approach to the problem of cerebrovascular disease is through cooperative studies. This technique is applicable to those problems where sufficient data can be collected and analyzed only through the combined efforts of a number of institutions. The Institute has been supporting a "Cooperative Study of Intracranial Aneurysms and Acute Subarachnoid Hemorrhage" among 24 university--based centers here and abroad. Personnel at a central registry at the University of Iowa have analyzed the accumulated data on over 6,000 cases, and have published a wealth of carefully derived information of value to physicians in deciding upon courses of treatment. As an example, a conclusion recently drawn from the study has been that surgery in the first 14 days after subarachnoid hemorrhage carries such an excessive risk, that its use needs to be reserved for only very select cases. The first therapeutic task is to maintain the patient through his first two weeks without additional subarachnoid bleeding, and only then should surgery be considered.

Another cooperative study underway aims to provide better data on the effects of blood-pressure-lowering drugs on stroke. It is well known, for example, that the cerebral arteries make a protective adjustment to sustained high blood pressure. After this has happened, a sudden lowering of blood pressure by drugs, shock, or any other means, can produce a disastrous reduction in blood supply to the brain, usually because the vessels do not readjust fast enough. The study will provide information on how much blood pressure can be safely reduced in these patients, and how fast this can be done. Scientists will also learn more about the long-term effects on the brain of moderate high blood pressure, and the long-term effects of drug treatment.

The National Heart Institute is sponsoring a "Joint Study of Extracranial Arterial Occlusions." The purpose of this study is to improve the criteria for selecting patients for carotid (neck) artery surgery, and to enable surgeons to better predict in which types of patients they can expect success with the procedure. Twenty-seven investigative teams are contributing to this study, and much valuable data are being produced.

Training

Since its establishment in 1951, the Institute has allocated about 25 percent of its budget to training support for teaching and research -- well over 9,000 of today's physicians and research scientists have received training through this program -- but it has only been within the past several years that it has been possible to begin training programs specifically on stroke. The Institute now has seven cerebrovascular training grants active at leading universities and hospitals, and these are supplemented by over 130 grants for training programs in neurology, neurosurgery, and all the other neurological disciplines involved in cerebrovascular disease research and medical care.

Direct support to individuals is also provided under cerebrovascular clinical traineeships. These are for practicing physicians seeking intensive study of the latest developments in diagnosis and therapy.

A new program for clinical training of cerebrovascular nurse-specialists is planned. This program gives nurses who have the Registered Nurse degree 6 to 12 months of specialized "bedside" training in the field, and will give nurses holding the baccalaureate degree, specialized training necessary for developing improved methods of cerebrovascular care. Stipends for the trainees are to be paid by the Public Health Service's Division of Nursing, the training environment to be provided in the stroke clinical research centers described above.

Communication

The improvement of communication in the stroke field has been an urgent need. NINDS and NHI sponsor scientific conferences, both on specific aspects of the problem, such as aphasia, and rehabilitation, and on the whole field. The sixth in a series of biennial general conferences was held at Princeton, New Jersey in 1968, and several smaller meetings, including a workshop for chiefs of the stroke centers, were held.

Communication projects include a quarterly Cerebrovascular Bibliography, a Cerebrovascular Survey Report reviewing the entire field, and a reprint service for physicians. Substantial assistance has been provided to the Division of Regional Medical Programs in preparation of guidelines for establishing cerebrovascular care facilities.

Research Progress

Epidemiological studies of stroke are of utmost importance, because detailed and reliable knowledge of the distribution of the disease, correlated with genetic and environmental factors, diet, and other influences, can provide important clues to its causes, and possible means of prevention.

For example, accumulated data have suggested striking differences in the occurrence of death due to stroke in different parts of the United States. Incidence has appeared much higher than average in the southeastern part of the country, and lower in the Rocky Mountain area. However, scientists have not been certain of this; the statistical differences could have resulted from a number of unmeasured factors, such as reporting practices.

In late 1968, the difference was definitely verified. A 9-city epidemiological project headed by Dr. Abraham Lilienfeld of Johns Hopkins University and funded by NINDS showed a measurably higher rate among white males in the deep south than in other parts of the country. The study involved the validation of death certificate information (a notoriously unreliable source) by hospital and home interviews, and will provide a firm basis for projects aimed at finding out why this group faces an increased risk.

Also of interest this year have been reports from a collaborative study being conducted by scientists at Kyushu University in Japan, and at the University of Minnesota. For years the Japanese have been reporting a higher incidence of brain hemorrhage in relation to infarction, or clotting, than seemed to be the case in the United States. The study has shown the reports to be incorrect--that the ratio in Japan is quite close to that in the U.S. It has also brought out an unexpected finding: that in Japan, cerebral infarctions occur more often because of obstruction in the smaller vessels of the brain; in the United States they occur more often in the middle-sized and larger vessels. The finding narrows the focus of research in this area, and may speed understanding of the mechanisms of cerebral thrombosis.

Cerebrovascular surgery is a field showing steady progress and constant refinement. NINDS grantees at the Medical College of Georgia have reported animal experiments in which they have joined small blood vessels with plastic adhesives. Although the technique is not yet ready for use in humans, the scientists have eliminated several types of plastic from consideration, and have found isobutyl cyanoacrylate to be the most promising of the materials tried.

Some scientists feel that an era of successful intracranial surgery is about to begin; yet the necessity for very rapid work, the inaccessible position of many of the brain's blood vessels, the friable vessel walls, and the problem of controlling bleeding all make suturing exceedingly difficult. One contribution toward a solution to this problem, reported by NINDS grantees, has been their development of clip-grafts -- teflon or dacron grafts attached to spring metal clips. The grafts were successful in 46 experimental animals, and in a limited number of patients. The investigators feel that they will come into wider use for human endarterectomies, embolectomies, aneurysms, and in the repair of major vessels injured in tumor surgery.

Stroke diagnosis is also a field exhibiting constant progress and refinement. Utilization of the familiar "Doppler effect" was reported on this year by Institute grantees, who have obtained profiles of the velocity of carotid artery blood flow in 30 patients. In the project, a sonic beam of 5 megacycles was directed transcutaneously along the carotid artery. The back-scattered waves, being slightly more or less than 5 megacycles, depending upon the direction and velocity of the reflecting medium, in this case the red corpuscles, were picked up and converted into an electrical signal on an oscilloscope. The researchers noted that arteriosclerotic disease at the carotid bifurcation causes easily recognizable changes in the velocity profile, and that the method may prove to be a useful adjunct to auscultation, angiography, thermography, and other methods of detecting lesions in this area.

A report from National Heart Institute grantees is of interest to stroke diagnosticians. Their project is a continuation of studies of the electrocardiogram in stroke patients. For several years it has been known that intracranial disease exhibits electrocardiographic changes consisting of dramatic giant T wave inversion; however these investigators have observed less obvious and more subtle changes, consisting of prominent upright T waves frequently associated with prominent U waves, prolonged Q-T interval, and T-U fusion. Of 55 patients with electrocardiographic changes assumed to be related to intracranial lesions, 38 had the type with upright T waves.

There continue to be many needs in the field of cerebrovascular disease, many of which are still unmet. With increasing numbers of Americans moving into the age groups menaced by stroke, it becomes increasingly urgent that the Institute's research and training program continue to gain momentum. The Federal effort has already had a major impact on the field, and promises to more than repay its supporters in terms of better health.

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Regional Medical Programs Service

Research

Stroke is the third leading cause of death in the United States. The chronic disability produced in many of the patients makes it an important part of any chronic disease program.

The available data illustrate the magnitude of the problem and show the need for increased and continued effort and support to alleviate the deficits caused by stroke and ultimately eliminate this disease.

Incidence

A. 2.3/1,000 population (all ages)

B.

Age	Incidence
55-64	4.0/1,000
65-74	9.4/1,000
75-84	21.0/1,000
85 and over	50.0/1,000

Prevalence

A. .75-1.5 million or 1,000/100,000 population

B. 50-70% of stroke survivors live at home

5% below age 45
30% age 45-64
65% over age 65

C. 30-50% of stroke survivors institutionalized

5% below age 45
15% age 45-64
80% over age 65

(While the above Incidence and Prevalence figures are statistically valid, for the region(s) from which they were obtained, we still lack good National estimates of these important disease parameters.)

Death and Death Rates (1966)

A. 204,841

B. Total death rates 104.6/100,000 population

C. Age specific death rates

Age	Death rate/100,000
All	104.6
1-14	0.7
15-24	1.6
25-34	4.8
35-44	15.6
45-54	43.4
55-64	124.1
65-74	432.0
75-84	1318.8
85 and over	3739.1

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Economic Impact

Stroke imposes a multimillion dollar burden on the Nation's economy as well as upon its victims each year.

The most recent data from the National Center for Health Statistics indicate that in 1962 the loss from the labor force reached 177,700 manyears at a cost of $701,800,000.

Nearly 50% of the direct costs or $211.6 million was expended for hospital care. The 283,000 patients who were discharged from the Nation's short-term hospitals had stayed an average of 16.4 days, a longer average stay than for any cardiovascular disease.

Another $108.7 million, approximately 25% of the direct costs, was spent for nursing home care. Stroke patients constituted 16.5% of the patients in skilled nursing homes that year.

The Heart Disease and Stroke Control Program has recognized the importance of stroke and has developed a separate administrative section devoted to work in this field. The Stroke Section has supported a number of studies, surveys, conferences, rehabilitation programs, and publications in the field of cerebrovascular disease. Long-range plans have been developed to approach possible solutions necessary for the reduction of the occurrence of the disease. In addition to these, attempts are under way to alleviate the mortality and morbidity resulting from stroke. Important among these activities achieved this year were:

1. The orientation, training of personnel and pre-test phases of the Collaborative Community Stroke Study have been conducted. The operational phase of this Study is presently under development, which will serve in the gathering of more precise and complete knowledge to clarify the geographic distribution of stroke. The data gathered from this survey will serve as a foundation to test the feasibility of prevention and control activities in the present study sites.

2. Participated in the evaluation of a study to validate and standardize the application of thermography to practical diagnostic situations such as cerebrovascular insufficiency to detect the stroke-prone individual.

3. The first study site of the Stroke Rehabilitation Survey has become operational in Pittsburgh, Pennsylvania. The objective is to describe the care services provided for stroke patients during the acute and chronic phases, to evaluate the short and long term benefits derived from rehabilitation services, and identify services contributing to optimal care.

4. The Nassau County Stroke Survey, Garden City, New York, (a study of services, facilities, and needs) was completed and has served as the basis for the development of a community sponsored service program - the Nassau County Stroke Community Action Program.

5. Certain elements have emerged from the concepts derived in the Stroke Intensive Care Unit located at St. Francis Hospital, Pittsburgh, Pennsylvania which have led to the support and study of a comprehensive hospital-based stroke program at St. Luke's Hospital in New Bedford, Massachusetts, which is another approach to care of stoke patients.

6. A set of guidelines and standards for a comprehensive stroke program has been under development and is near completion.

7. Negotiations are underway in an Ohio community to test a proposed system for efficiently defining the nature and extent of the stroke problem. If successful, this system will provide an invaluable tool for use by community as well as national health planners in the development of a comprehensive approach to reducing mortality and morbidity from stroke.

8. Produced a 16mm sound film to provide a test of the reliability of blood pressure readings by field investigators employed in mass screening studies for hypertension. Hypertension is suspected of being one of the major risk factors involved in the etiology of cerebrovascular disease.

Stroke has long been neglected, and great deficits remain in our knowledge. These deficits are at all levels: basic investigation, primary patient care, and community programming. Needed insight has been gained by the aforementioned studies, but much greater efforts are needed in the future. Among the areas needing further efforts are the following:

1. More precise and complete data on the incidence of various kinds of stroke. The Collaborative Community Stroke Study is being initiated in Nassau County, New York; Alameda County, California; Jefferson County, Alabama; Salt Lake and surrounding counties in Utah; Washington County, Maryland; and Chatham County, Georgia to accomplish this goal.

2. Community facilities for determining the prevalence of stroke risk factors and to improve methods for their detection and control. Stroke risk factors among the elderly and selected cultural groups are being given special attention. Evaluation of thermography and other techniques designed to identify the stroke prone needs particular emphasis.

3. Community studies to determine optimal acute and comprehensive care techniques to supplement the efforts now under way in Pittsburgh, Pennsylvania and New Bedford, Massachusetts. Further evaluation of community based rehabilitation programs is also needed to supplement the data now being gathered in Pittsburgh, Pennsylvania to give the output of the program a greater national base.

4. Evaluation of stroke educational and training techniques and efforts in technical assistance and consultation to communities beginning stroke programs

Regional Medical Program Grants

The President's Commission on Heart Disease, Cancer and Stroke, the basis for Regional Medical Programs, emphasized that "the problem of stroke must be approached from a number of aspects including the development of community resources to provide the best medical care." Effective comprehensive community stroke programs should have the study of the prevalence, incidence and an assessment of the existing resources in the community included within the proposal. Risk factors such as obesity, diabetes and hypertensive disease related to stroke and the development of specific community programs aimed at their prevention and control consistent with the resources of the community involved are necessary. A major objective is to assure that people will benefit

from the advances made by medical science against stroke. Thus, physicians and allied health personnel must be supplied with the latest knowledge and tools to accomplish this end.

Examples of how the Regional Medical Program brings to the community a comprehensive approach to the overall care of the stroke patient are manifested by the following operational projects funded by Regional Medical Program grants:

1. Intermountain Regional Medical Program located in Utah, portions of Wyoming, Montana, Idaho and Nevada has established (1) a visiting consultant and teaching clinic that will bring expert consultation service related to cerebrovascular disease into the local community, and (2) will provide continuing education for nurses and physicians. They will also collect data about the types of patients seen with these diseases and will serve as the basis for increasing the level of information disseminated and meeting an unmet medical need.

   The region has established an information library and telephone consultation service which would keep the practitioner abreast of knowledge of the care of the stroke patient. It would also provide him with advice the moment he needs it. A 24-hour consultative telephone service and an information library service will be maintained at the University of Utah Medical Center. The third objective of this proposal would be to establish an in-service training program in neurology, to train practicing physicians in the latest diagnostic and treatment techniques available.

   In addition, a model demonstration acute stroke care and rehabilitation unit was funded to provide a model for research, education and demonstration of exemplary care in cerebrovascular disease. This unit will serve to define the necessary and feasible components for "optimum management" for patients with cerebrovascular disease. Thus, one proposal including continuing education, demonstration of patients' services as well as research and development are coordinated by this one region.

2. Memphis - The Memphis Regional Medical Program has been funded to establish a stroke center. This model center for management of stroke, including a special unit for the intensive care of stroke has been developed in the University of Tennessee - City of Memphis Hospital. The center is used for training in special nursing skills; for dissemination of new information and techniques and therapeutic approaches; and for expansion of physical therapy and training facilities. The facility is available for complex diagnostic problems referred from medical institutions in the regions.

3. Metropolitan D. C. Regional Medical Program has three projects dealing with cerebrovascular disease. At the Freedmen's Hospital a stroke station for the diagnosis, treatment and investigation of cerebrovascular disease has been established. A team of physicians, social workers, psychologists and occupational therapists will be involved in this particular activity.

   A follow-up surveillance system at Georgetown University has been established. The incidence of stroke effectiveness of care and results of follow-up efforts will be recorded.

At the Washington Hospital Center, a training program for cardiovascular technicians has been established to meet the needs for specially trained paramedical manpower to support physicians and nurses in a highly technical medical and surgical way.

4. The Mississippi Regional Medical Program with Regional Medical Program funds has had a stroke care unit established at the University Hospital in Jackson. The program calls for (1) training of nurses, technicians and physicians in the latest aspects of stroke, and physicians from all over the region will be able to refer patients to this facility. This is the only unit of this type caring for stroke patients in the State.

5. Missouri Regional Medical Program which has a number of activities coordinated to improve the level of care in cerebrovascular disease includes a multiphasic testing program which has been established to screen an ambulant population which would among other things screen for hypertensive disease and diabetes.

   A stroke intensive care unit at the University of Missouri Medical School has been established which would demonstrate newer advanced techniques for the care of the stroke patient and would train nurses and other personnel to use these techniques. Follow-up studies in this type of care will be assured by a team of physicians, physical therapists and social workers.

   At the Kansas City General Hospital, a comprehensive cardiovascular care grant has been awarded which would develop, demonstrate and train physicians and technicians working with patients, stressing the continuity of care from the on-set of the cardiovascular crises through recovery and rehabilitation.

   At the Kirksville College of Osteopathy and Surgery, a cooperative stroke pilot project has been funded to study and demonstrate how physicians, clinics and hospitals may improve stroke detection, care and rehabilitation in a rural five county area. This project demonstrates how osteopaths and physicians may coordinate their activities to achieve this particular desired goal.

6. North Carolina has had a comprehensive stroke program approved which shows community development through a coordinating unit at the Bowman Gray School of Medicine. Activities included will be publication of guidelines for community stroke programs, arranging educational activities such as training programs for nurses, conducting an annual stroke workshop and developing a family-patient education unit. This family-patient education unit is a demonstration project to show the usefulness of modern teaching devices in helping patients and their families learn to cope with the long-term effects of stroke disability.

These are some examples of the varied programs around the country supported by Regional Medical Programs in the field of stroke. These proposals are locally identified and formulated by the regions and reflect the problems, concerns and involvement of those people working together for a common benefit.

EPILEPSY

Epilepsy is a major health problem in the United States. It is generally estimated that there are at least one and a half to two million victims of epilepsy in this country. However, because of the social stigma and unfavorable economic and insurance position of sufferers from epilepsy, no reliable data are available about the true prevalence of this condition.

Epilepsy costs the Nation millions of dollars in patient care, research, and lost earning power. Overall, the economic burden in direct and indirect costs is probably well over one billion dollars a year. Unfortunately, much of this cost is unnecessary. Many, perhaps most, of the victims of epilepsy are intelligent, capable people with high potential earning power. Much greater efforts are needed in education and in placing victims of epilepsy in suitable employment.

Scientific opinion differs on the fundamental cause or causes of the disorder. Some believe that all forms of epilepsy arise from a single disease entity. Others feel that certain common mechanisms of neuronal discharge may occur in all cases, but that the specific etiologic, chemical, anatomical, or functional defect may vary widely. Epilepsy not infrequently results from injury or disease of the brain.

During the last 30 years, a number of drugs have been developed which, if taken daily, can control 80 percent of the cases of epilepsy. In about 50 percent of the cases there is complete control, while in the remaining 30 percent the frequency of seizures is reduced markedly. Occasionally, surgery can help. If there is a tumor or scar on the brain from previous injury it can, in some instances, be removed. The recording of the electrical activity of the brain (electroencephalogram--EEG) is a widely used means for diagnosis and study of the disorder.

But medicine is only the first step in helping the person with seizures. He is not so much crippled by his disorder as he is by public prejudice. The word "epilepsy" strikes fear into many people--fear that is rooted in misunderstanding. Prejudice against the person with epilepsy denies him a normal life and forces him to become a burden upon his family and society. Such an attitude is not justified.

It takes the combined efforts of all segments of the lay and professional communities to attack the problem of epilepsy successfully. Doctors must keep abreast of the latest developments. Teachers must be willing to accept and understand children with this disorder and recognize that they should have the benefit of regular schooling. In most cases, school-age children with epilepsy do not require special classes. Social agencies must be aware of the special problems associated with this disorder. Employers must be acquainted with the true capabilities of employees who have epilepsy and the local laws affecting their status. (Most states now assume the financial risk of on-the-job injury to employees with epilepsy.) Families must be helped to recognize the true nature of the disorder and to feel no shame.

These goals can be achieved by any community willing to face up to its responsibilities to epilepsy victims and their families. The epileptic population represents a tremendous source for potentially productive citizens if they get help.

Programs against epilepsy are carried out by the Regional Medical Programs Service of the Health Services and Mental Health Administration and the National Institute of Neurological Diseases and Stroke of the National Institutes of Health. The activities of each are discussed below.

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Regional Medical Programs Service

To make it possible for persons with epilepsy to benefit not only from medicine but also from a new and enlightened public attitude, the Neurological and Sensory Disease Control Program works with other groups and voluntary agencies throughout the country to provide clinics, social consultation, vocational rehabilitation, and health education. Research has exploded the myths about epilepsy and enabled the nature of these seizures, to which everyone is susceptible, to be understood. The greatest need of the person with epilepsy is for acceptance and understanding. The Program promotes public awareness and understanding of epilepsy and the problems that confront the epileptic by making available personnel for television and radio appearances. In addition, the comprehensive team approach to the epileptic by professional personnel is stressed by a display which is shown at professional meetings. Public inquiries regarding epilepsy have necessitated publication of a brochure, which is distributed by the Program.

The Program assumes executive responsibility for the Service and Service Training Subcommittee of the PHS Advisory Committee on Epilepsies. This subcommittee has appointed a Task Force, staffed by the Program, to perform an opinion survey of existing services for the epileptic in selected regions of the United States in order to provide important background knowledge to support future reports of the committee regarding present facilities and future needs for the epileptic. Preliminary findings of the survey indicate a majority of epileptics are cared for by physicians without formal training in the neurological sciences (i.e. general practitioners and pediatricians). The importance of post-graduate education to disseminate newer knowledge about the care of epileptics to these physicians is obvious. The Committee is contemplating development of a programmed text (for non-neurologically trained physicians) for post-graduate education in the field of epilepsy.

Unfortunately in some small communities the facilities and medical and paramedical personnel for a comprehensive approach to the epileptic are not available, and even in some larger communities are woefully inadequate. The means of providing these extremely important services for these disabled individuals are being sought. The possibility of a Program similar to that recently provided for by the Regional Medical Programs for cancer, heart disease and stroke is being pursued.

Means of alleviating the shortage of medical and allied health personnel who have the specialized knowledge needed to provide the best services to epileptics are being considered. One possibility is joint sponsorship of a conference to discuss ways of recruiting new electroencephalographers.

The possibility of a digital computer to provide an accurate and low cost method of interpreting electroencephalograms is being investigated. At the present time each electroencephalographic record must be interpreted by an individual electroencephalographer. Lack of qualified electroencephalographers has led to underutilization of this valuable test in some areas and poor reliability in other areas. When the digital computer method has been perfected, transmission

of electroencephalograms by dataphone to a computer bank hundreds of miles away will be possible with an almost immediate reply. Besides making electroencephalography available in areas where it is not now offered, it could assist even large centers by performing the routine analyses, thus allowing the electroencephalographers more time to deal with complex cases.

Technical consultation is continuing to be provided to regional offices on applications for institutions wanting to establish comprehensive clinics for seizure patients.

Partial support was provided to a conference on Vitamin B_6 in metabolism of the nervous system. The clinical portion of this conference dealt with the role of B_6 in convulsive disorders. The proceedings of this conference are soon to be published.

NATIONAL INSTITUTES OF HEALTH

National Institute of Neurological Diseases and Stroke

The Institute's programs in epilepsy are attacking the problem through approaches designed to provide a better understanding of the basic chemical, structural, or functional mechanisms which are disturbed in the disorder; the factors that precipitate seizures; and the basis for effective treatment of epilepsy.

Five clinical epilepsy research centers are sponsored by the Institute. One is located at the University of Washington where studies of the fundamental mechanisms underlying epilepsy are being conducted by a multidisciplinary research team. Another center at the University of Wisconsin is conducting both clinical and basic research studies. A third center at the Brain Research Institute, University of California at Los Angeles, is concentrating on a study of the electrical process underlying the epileptic state in animals and in man. A fourth center at Yale University is conducting a program of research into mechanisms of epilepsy and of phenomena associated with seizure states. In addition, the Institute supports the Neuropharmacology Research Center of the University of Utah, which is primarily concerned with the mode of action of anticonvulsant drugs.

The Collaborative Study of Epilepsy, a large project supported by the Institute, concluded its pilot phase in December 1968. Four medical centers, Marquette University, the University of Virginia, Montreal Children's Hospital, and the New England Medical Center participated in this study. The immediate goal of this program was to establish a therapeutic baseline, or frame of reference, for seizure control. Information gathered in the pilot phase of this study is now under analysis and the results will be published. The methodology for data collection, storage, and retrieval will be employed in contracts solicited for the clinical investigation of anticonvulsant drugs.

The Institute has begun a program of encouragement and support for clinical trials of anticonvulsant drugs. A symposium, "Laboratory Evaluation of Anti-epileptic Drugs," was held in Salt Lake City, Utah, May 1968. One anticonvulsant drug study began in 1968 at a State hospital. Additional new drug studies are anticipated so that pharmaceutical companies discovering promising agents may have an opportunity for an Institute-supported drug trial. The Institute plans to continue and expend these activities to provide opportunity for clinical evaluation of all promising new agents. This is to include the sponsorship of laboratory studies of promising anticonvulsant compounds.

In recent years, many basic research studies have contributed to the understanding of epileptiform seizure mechanisms in man. However, these studies have not been sufficiently applied to the specific problems of epilepsy. In a major effort to bridge this gap, the Institute and PHS Advisory Committee on the Epilepsies sponsored a symposium on Basic Mechanisms of the Epilepsies. At the meeting attended by some 400 scientists from 17 countries, basic researchers in such fields as neurophysiology, neurochemistry, biophysics, electroencephalography, pharmacology, endocrinoloy, and genetics presented highlights of their own studies and their relationship to epilepsy. These papers will be published to provide reference guide to epilepsy researchers and to investigators in subspecialty areas whose work may be related to current investigations in the epilepsies.

This past year the Institute sponsored a special medical exchange mission to the USSR. A group of six American medical scientists, designated as the Delegation on Problems of Higher Nervous Activity, visited four major Russian medical research centers in May 1968. Although the delegation was originally conceived as a mission to study epilepsy in the Soviet Union, Soviet neurologists urged that the delegation be broadened to include higher nervous functions. A report will be published on the mission at a later date.

An important part of any concerted attack on a disease is communication. It is essential that investigators be aware of what colleagues are doing, and what their results are; that practicing physicians are promptly apprised of new possibilities in therapy; and that administrators have a firm basis for program planning. This past year considerable progress has been made in this direction. The Institute published a new monograph, "The Clinical Neurophysiology of Epilepsy: A Survey of Current Research," which surveys current electrophysiologic research in man which is pertinent to an understanding of the epilepsies. The monthly publication "Epilepsy Abstracts," first issued in November 1967, has been enthusiastically received by the scientific community. Some 2,250 scientists have subscribed to this Institute-sponsored publication.

Research Progress

Despite a good deal of special attention to epilepsy research over the past several years, progress has not been rapid in the areas of drug therapy, surgical treatment, electroencephalography, or basic research. During the past two years, however, the Institute's epilepsy research program has been reorganized and new goals have been established. It is hoped that a greater emphasis on this serious problem will accelerate research progress. However, despite the relatively slow pace of ongoing research, several new advances have been reported this past year.

Drug Therapy Research

Important work is under way in the study of drug effects. In one study, for example, Dr. Henn Kutt of Cornell University, an NINDS grantee, describes two unusual responses which may occur from the usual treatment with diphenylhydantoin (Dilantin): a low tolerance to the drug and refractoriness to it. A few patients have been found to have low tolerance to the drug that in normal doses causes a very high level of the drug in the patient's body. This is due to an inability to metabolize the drug and eliminate it from the body. Refractory patients include those who for various reasons do not respond to treatment with

Dilantin and continue to have seizures. In some of these cases the drug was metabolized very rapidly and produced only quite low drug levels in the blood. Not only does this study provide guidance to the physician in the treatment of epileptic patients with the drug Dilantin, it may be a source of information towards developing new therapeutic agents.

In another important drug study, a gas-liquid chromatographic method for measurement of diphenylhydantoin in serum has been developed. Knowledge of the blood level of an anticonvulsant drug will make it possible for the physician to relate therapeutic effect and side effects to dose, and thus be able to manage his patient more effectively. Accurate data on drug blood levels will help to provide some needed information on the action of drugs in the body and how they are eliminated. Reliable methods for measuring amounts of a drug in the blood should also prove invaluable in research for new, improved anticonvulsants.

One drug has been found to have a special application in surgery. Dr. Mary A. B. Brazier of the Brain Research Institute of the University of California at Los Angeles reports that small doses of thiopental, a rapidly acting barbiturate commonly used to induce surgical anesthesia, can be used to pinpoint areas of diseased brain tissue responsible for epileptic seizures. Gradual administration of thiopental evokes specific brain wave patterns that can be used as markers. By exact localization of the diseased area, surgeons are able sometimes to remove it, relieving seizures.

Possible Factors Influencing Epileptic Seizures

In the past, there has been some evidence pointing to genetic factors causing or predisposing to generalized epilepsy. However, it has been assumed by some that heredity was not likely to be important in focal seizures. In a study of the families of 31 focal epilepsy patients, Dr. Eva D. Andermann, of McGill University, reported findings supporting the view of a genetic basis for temporal epilepsy. Dr. Andermann found that incidence of abnormalities among families of epilepsy patients was significantly higher than in control subjects, with a predisposition to both generalized and focal epilepsy.

Another group of investigators studying central nervous system phenomena have found evidence that the excitatory level of the cortex and subcortical structures may be dependent upon release of specific amino acids. Liberation of these amino acids appears to be dependent upon activity of neurons in the nonspecific or midline thalamic nuclei and rostral midbrain regions. These data, considered preliminary by the investigators, may provide a better understanding of the mechanisms responsible for electrophysiologic alterations which accompany normal physiologic states as well as pathophysiologic phenomena characteristic of certain of the epilepsies.

Other Research Findings

One of the greatest needs of epilepsy investigators is a better animal model for research. A number of relatively good experimental animal models have been used over the years. The chief fault with these models has been that none were found in which epileptic seizures occur spontaneously; all seizures in these animals were induced mechanically. Scientists have discovered a baboon (Papio papio) in Senegal, Africa, that sustains an epileptic seizure in response to a flickering light stimulus. This animal model should provide the basis for research into the physiology of this pathological response to light as well as a model for testing drugs with a potential efficacy in this condition.

An Institute scientist has been able to pinpoint selective intellectual deficits in children with temporal lobe or centrencephalic epilepsy. Specific patterns of intellectual impairment were observed in children with unilateral temporal lobe or centrencephalic epilepsy. The left temporal patients showed learning and memory deficits on verbal tasks while their performance on non-verbal tasks was unaffected. The converse was true for children with right temporal involvement. In contrast to the two temporal groups, the centrencephalic patients were without significant memory defect; instead, they showed lower scores on a test of sustained attention. The results are similar to those obtained in studies of adults with comparable cerebral dysfunction. The findings suggest that cerebral differentiation of intellectual processes is established in childhood.

Four critical periods in the epileptic's life occur at ages 6, 14, 35 and 60, according to a neuro-physiologist at Northwestern University. Brain waves are most likely to show epileptic patterns during these years, possibly because they represent periods of major change in the lives of most people. At six, the child first enters school. At 14, he enters puberty and adolescence. Around 35, he experiences a peak in the struggle to succeed, often **accompanied** by soul-searching on his course in life. And at 60, he faces the prospect of retirement. The investigator has pinpointed these danger years by a study of the brain-wave patterns of 1,355 patients with epilepsy.

A research team under the direction of Dr. Maitland Baldwin at the Institute's Bethesda laboratories reports successful results in treating 15 children suffering from intractable and **frequent** epileptic attacks. An effective therapeutic regimen consisting of a combination of anticonvulsants, Valium, and corticosteroids on the one hand, or a high ketogenic diet on the other, produced complete control of attacks in these children who had been averaging between 10 and 100 seizures per day.

Outlook

While many persons with epilepsy are able to live normal, productive lives, many still suffer from seizures that cannot be controlled. The Institute's epilepsy research programs have two aims: to develop effective treatment methods, and to understand the basic defect so that epilepsy can be "cured."

Great attention is now being focused on studies to develop and evaluate new anticonvulsant drugs that will be effective for those patients who are not helped by drugs currently available. Epidemiological studies are needed to supply more information on who develops the disorder before physicians can understand various aspects of epilepsy.

DIABETES

A complicated disease, for which there is no known cure, diabetes ranks seventh on the list of diseases causing death in the United States. Diabetes has been known for some time to be a hereditary disorder. As a result of the body's inability to metabolize carbohydrates normally, the diabetic is unable to convert carbohydrates properly into the stored form, glycogen, or to utilize them for the energy required for normal body functions. The carbohydrates, in the form of glucose, accumulate in the blood and overflow into the urine. As the disease progresses, abnormal carbohydrate metabolism becomes associated with a noticeable derangement in the metabolism of fats and proteins.

In its severe form (occurring more frequently in juvenile diabetes) the untreated disease rapidly progresses to a grave metabolic disorder, keto-acidosis, which may result in coma and death unless controlled by insulin administration and specific supportive therapy. In its less severe form, diabetes patients may suffer from accelerated degeneration or "hardening" of the arteries, and thus, may have a greatly decreased life expectancy. Although the disease can be fatal unless properly treated, in most cases it can be well controlled. Today, with proper treatment, most diabetics can lead a normal life and live almost as long as their fellow human beings. Despite good control of clinical symptoms, however, and the usual ability to hold in check the abnormal blood sugar level, in too many cases the long-term complications of diabetes, primarily those affecting blood vessels, peripheral nerves, kidneys, and the eyes, apparently develop relentlessly.

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Regional Medical Programs Service

High Yield Screening

Screening for diabetics and pre-diabetics is of major importance in the control of this disease. Recent advances in research give great hope for significant breakthroughs in either prevention of diabetes or in our ability to cure the disease. When such breakthroughs occur it is of extreme importance that we know to whom we can apply this knowledge. While significant improvements have been made in the quantity and quality of screening, at current levels of expenditure we are barely keeping pace with the growth in population and are hardly making a dent in the estimated 2 million undetected diabetics. Much more needs to be done to be able to apply current available information, to say nothing of knowledge immediately available from major breakthroughs in our understanding of the disease.

A continuous diabetes screening program for Federal employees offered an opportunity to evaluate, over a period of several years, the yield of new cases in persons with positive test results who had not been diagnosed as diabetic upon initial screening. Almost one in four of the persons with initial positive results were identified by a private physician as diabetic within the two year period.

Analysis of the data from the same Federal employee screening program reveals that new cases of diabetes are diagnosed more frequently among screenees with selected characteristics than among the general population. Case yields are higher in those who are older, overweight, or have a family history of diabetes.

Diabetes screening reports to the Public Health Service for fiscal year 1967 indicate that about 800,000 were screened for diabetes (blood test). The number of new cases found was 8,683. The new case yield is 11.0 per 1,000 screened.

Diabetes Education

Serious deficits exist in the educational aspects of diabetes, both from the standpoint of professional as well as patient education. A physician in practice today who received his medical training over 10 years ago and has not had the opportunity to return to up-grade his knowledge of diabetes is sadly out of date with the current level of the science of diabetes. Very little has been done to remedy this situation. The same is true of allied health professionals, for example, nurses who are the mainstay of patient education. Hundreds of them today do not know as much as we expect patients to know of their disease. Patient educational techniques are also seriously deficient. In a disease which requires as much self care as diabetes, a much more comprehensive understanding is required than is currently being made available.

Diabetes is a self care disease. This means that the patient must learn how to take his own medication including injection of insulin, make small adjustments in his dosage, test his own urine to evaluate his control, and regulate his diet which may include weighing all of his foods. It can be seen that the patient must act as his own physician, nurse, dietitian, and laboratory technician.

In order to do this, the patient must be firmly grounded in all the various aspects of his disease. Motivation also plays an important part. This disease is symptomatic only when the blood sugar is at the extremes, that is very high or very low. Levels of sugar short of these extremes do not cause the patient to feel ill but are considered by most diabetologists to be related in some way to the early vascular complications of diabetes. Therefore, it is important that the patient realize the necessity for control even when he is symptom-free.

Recently compiled data from the special Diabetes Supplement to the National Health Survey (July 1964-June 1965) indicate that many patients have not been given sufficient information about their diet, and many others are not motivated to follow a diet. Approximately 77.1 percent of the diabetics who were surveyed reported that they had been given a diet for diabetes, but only 52.7 percent said that they followed one. In all age groups, females more often than males were given diets and more often followed them. The greatest attention to diet was reported by persons between 55 and 64 years of age. This significant study also indicated other serious deficiencies in diabetes patient education.

The program has also developed inexpensive food models that will enable dietitians to more accurately express portion size in teaching the diabetic. The models demonstrate correct methods of exchange systems.

Epidemiology of Diabetes

Studies are being carried out at the Boston Field Station on the relationship between diabetes and pregnancy, the prevalence and incidence of diabetes in several communities (Sudbury and Oxford) and studies on the relationship between blood glucose, lipids, and insulin in both the diabetic and nondiabetic. These studies have been valuable in ascertaining to what extent any casual relationships exist between factors that are common in diabetes, such as obesity and aging, and the onset of the disease. Also, effects of pregnancy as an etiologic factor in diabetes are being explored.

A study is underway which will, hopefully, answer the question of whether abnormal sugar levels in the elderly are truly abnormal and, therefore, signs of diabetes, or whether the higher levels are only manifestations of normal aging.

Much effort is being directed at the development of a compact, portable instrument that can analyze blood glucose at the rate of 100 or more specimens per hour. With such a machine, diabetes detection programs would be much more effective--volunteers could be immediately informed if they should see their own physician for diagnosis. Also, certain community or "high-risk" groups (nursing

homes, for example) could be tested much more economically and efficiently. Studies continue to explore the variability of the glucose tolerance test and all of the factors which contribute to variability.

Studies have been continued which we feel will give a better estimate of how predictive certain factors relating to diabetes really are. Measurement of obesity by skinfold (thickness, etc.), age, family history of diabetes, degree of kinship, cholesterol count, and other special studies are being evaluated by statistical methods. The results should give us a more exact definition of the relationship of these factors to the disease.

Outlook

Because of deficits existing in diabetes casefinding, patient education, and knowledge of epidemiologic factors in diabetes, the Diabetes and Arthritis Control Program of the Regional Medical Programs Service has used a multiple approach to the total problem. The development of more efficient and less costly methods of casefinding is receiving high priority. Newer methods for patient motivation and education are being sought and older methods evaluated. Hopefully, the epidemiologic explorations in diabetes will be as valuable in this disease as in conquering contagious diseases.

NATIONAL INSTITUTES OF HEALTH

National Institute of Arthritis and Metabolic Diseases

Last year's special report on diabetes reflected a trend toward studies of a more fundamental nature which have yielded information leading toward a better understanding of the underlying causes of diabetes. This trend is continuing, with the most provocative findings having resulted from the continuing search for the precise mechanism of insulin secretion and action, findings which could lead more directly to the understanding of the etiology of the several different forms of diabetes.

A number of notable clinical advances have also been made, including successful preliminary trials of a new oral antidiabetic drug and further clarification of the relationship between obesity and adult-onset diabetes.

According to the best estimates there are, at present, approximately four million diabetic people in this country. Moreover, another five million of our present population are expected to develop the disease during their lifetime. It is this knowledge which makes continued, intensive and effective research on diabetes an unceasing obligation on the part of scientists at the National Institute of Arthritis and Metabolic Diseases (NIAMD) and investigators elsewhere who are supported by the NIAMD.

Insulin

Many diabetes investigators today believe that determination of the precise mode of action of insulin - how it is produced and released by the pancreas and how it does its vital work in human tissues - is essential to clarifying the cause or causes of diabetes. To this end many skilled scientists are currently devoting their time and efforts. During the past year several revolutionary findings by Institute scientists in Bethesda and Institute-supported investigators elsewhere prompted the president of the International Diabetes Federation to declare that "the next one or two years promise to be a very exciting period in the field of diabetes."

Proinsulin

The first of these findings was by a University of Chicago scientist who has discovered a precursor form of insulin in the human pancreas. The investigator, whose research has long been supported by the Institute, has labeled the substance "proinsulin," and has suggested that a partial or complete failure of proinsulin conversion to insulin may account for some form of diabetes.

Proinsulin was first found by the scientist in a study of insulin biosynthesis by a pancreatic tumor removed from a patient. The substance was later recognized in insulin preparations from several other species, including the cow, pig, and rat, suggesting that it is a normal constituent of all insulin-secreting cells.

Studies have revealed that proinsulin is a larger protein than insulin, and that it contains the ultimate components of the end product, insulin, which can be structurally combined and released by the action of several enzymes. Proinsulin *per se* was shown to have very little biological insulin activity, and evidence is accumulating to indicate that it may function primarily as a necessary intermediate in the proper assemblage of the insulin molecule. Conversion of proinsulin to biologically active insulin was clearly shown to occur within the insulin-producing cells of the pancreas.

The discovery of proinsulin and clarification of its molecular structure also has important implications for the eventual commercial synthesis of insulin in that it may suggest useful steps in the eventual laboratory syntheses of the hormone.

Big Insulin

Coinciding with the discovery of proinsulin was the revelation by an Institute scientist in Bethesda that the insulin which circulates in the blood stream may exist in two distinct forms in man: "little insulin", indistinguishable from the insulin in the pancreas, and "big insulin", which is a larger molecule and comprises up to 50 percent of the insulin in the circulation. It is believed that the physiology of insulin secretion should be re-examined in light of these new findings, particularly in such conditions as obesity and maturity-onset diabetes in obese individuals, which are characterized by glucose intolerance and excessive production of insulin.

The source of both big and little insulin was shown to be the pancreas. In addition, in normal individuals, virtually all plasma insulin was found to be little insulin 15 minutes after glucose ingestion. There was a gradual rise in big insulin over a subsequent two-hour period, by which time a significant amount of big insulin was found in the plasma. Following a prolonged period of fasting, the percentage of big insulin in the plasma was even greater. Further studies are now underway to determine the biological activity of big insulin, its relationship to little insulin, and its relationship, if any, to proinsulin.

Obesity and Insulin Resistance in Diabetes

Evidence continues to accumulate rapidly linking onset of the adult form of diabetes to obesity. During the past year an investigator receiving Institute grant support showed that fatty tissue from obese individuals contains unusually large fat cells which are distinctly resistant to the action of insulin in facilitating glucose metabolism. Following weight reduction, and a consequent reduction in the size of these cells, however, both the insulin resistance and the glucose intolerance known to be characteristic of obesity were reversed. Inasmuch as most patients with adult-onset diabetes are obese at first, these findings may shed light on the natural history of this most common type of diabetes.

The investigator is presently attempting to determine the precise mechanism or primary tissue defect which underlies the diminished insulin sensitivity in such enlarged fat cells.

In relation to this finding, it was reported two years ago that significant small blood vessel disease (the so-called microangiopathy of diabetes) can be demonstrated in genetically prediabetic subjects prior to the onset of metabolic abnormalities. This finding suggested that small blood vessel pathology (primarily a distinct thickening of the capillary basement membrane), generally believed to be characteristic of overt diabetes, may actually represent the primary lesion of diabetes, followed only secondarily by derangement in carbohydrate metabolism. This observation afforded diabetes investigators a new angle of attack.

At an international insulin conference this past year a number of investigators, including an Institute scientist from Bethesda, presented evidence to indicate that the insulin "resistance" encountered in certain tissues of obese and diabetic individuals may result solely from decreased transfer of the hormone across the capillary wall, from the blood stream to the tissue cells. Conceivably, the abnormal thickening of the basement membrane in capillaries affected by diabetic microangiopathy may constitute a hindrance to hormonal transfer.

Thus, there would appear to be a link between the small blood vessel disease observed in genetically prediabetic subjects and the apparent inability of the capillary wall to transfer insulin normally from the blood stream to the tissue cells. Further studies will be required, however, to determine any possible relationship between small blood vessel disease, tissue resistance to insulin, and an inhibited transfer of the hormone across the capillary wall.

Pancreas Transplantation

This past year, at the University of Minnesota, a surgeon receiving research grant support from the Institute established the feasibility of transplanting a normally functioning pancreas into selected persons suffering from severe diabetes. Three of four patients thus treated were dying from kidney failure, caused by diabetes, at the time of the transplants.

In three of the four patients the transplanted organ produced sufficient insulin to control the blood sugar levels of the person into whom it was transplanted. Although none of the patients survived for more than a few months following the surgical procedure, the study proved that it is technically possible to transplant the pancreas. The Minnesota surgeon has predicted that such a procedure will become more common within the next five years, particularly in selected patients with severe pancreatic diseases that are not satisfactorily treated by current methods.

Antidiabetic Drugs

Four years ago Institute-supported scientists at the Joslin Clinic in Boston reported results of preliminary studies of a new oral antidiabetic drug, acetohexamide. These studies showed acetohexamide to be a safe and effective agent in certain cases of maturity-onset diabetes, and suggested that it had a number of advantages over several antidiabetic drugs now in use.

During the past year the same investigators reported their experience with acetohexamide in the treatment of 290 diabetic patients for periods as long as six years. Satisfactory control of blood sugar levels was achieved in 70 percent of the patients, and side effects of the drug were neither frequent nor severe. A satisfactory response was obtained most frequently in persons with adult diabetes of recent onset and in previously untreated patients. Thus, acetohexamide joins

the armamentarium of oral antidiabetic drugs which, either singly or in combination, provide control of blood sugar levels in a great majority of patients with adult-onset diabetes, the most common form of the disease.

While the Boston investigators were proving the efficacy of acetohexamide, other grant-supported scientists at the University of Cincinnati were conducting preliminary clinical trials of glycodiazine, a newly discovered oral drug which also is believed to have antidiabetic properties. Seventeen patients with adult-onset diabetes were studied for a period of 27 weeks. Elevated blood sugar levels declined significantly in every patient treated with glycodiazine and remained at safe levels as long as the drug was administered, without any evidence of untoward side effects. The investigators believe that long-term studies are warranted in order to evaluate further the safety of glycodiazine in man.

In the same research area, the Joslin Clinic grantee-scientists recently concluded a postmortem study of diabetic patients who had been treated for two years or more during their lifetime with oral antidiabetic drugs of the sulfonylurea type, such as chlorpropamide and tolbutamide. Results were compared with similar studies of closely matched diabetic patients who had been treated either with insulin or exclusively by dietary restriction during their lifetime.

Results of the study showed that the relative frequency of heart disease, cancer, stroke, or severe diabetic complications in patients treated with such compounds is not significantly different from that of patients treated either with insulin or by dietary restriction. On the basis of these findings, it was concluded that administration of sulfonylurea drugs to diabetic patients over a period of several years does not alter in a statistically significant fashion the incidence of the specific complications of diabetes or the pattern of other severe diseases which may affect diabetic patients.

Alcohol and Diabetes

Diabetic patients are warned constantly of the dangers of excessive use of alcohol, which may impair the patient's judgment and cause him to administer an overdose of insulin or to neglect an injection altogether. An Institute-supported investigator at Harvard University reported during the past year results of a study which showed that alcohol augments the activity of insulin and causes excessive depression of blood sugar levels. Two diabetic patients dependent upon regular insulin injections died without regaining consciousness following an alcoholic binge, while three others suffered severe and permanent brain damage requiring continuous custodial care after being discharged from the hospital.

Because it was impossible to obtain positive proof that these patients had in fact taken insulin and alcohol concomitantly, the investigators tested the effects of simultaneously administered insulin and alcohol in several healthy volunteer subjects. It was found that while both insulin and alcohol, when administered individually, were capable of depressing blood sugar levels as expected, concomitant administration of insulin and alcohol markedly inhibited the subsequent return of the lowered blood sugar levels to normal.

The investigators concluded that the irreversible low blood sugar state induced by the combination of insulin and alcohol predisposes the diabetic patient to multiple complications, and even death, and that diabetic patients receiving any blood sugar lowering agent, including oral antidiabetic drugs, should be warned against excessive use of alcohol.

Idiopathic Edema

Two years ago grantee-scientists at the University of Vermont obtained evidence suggesting that idiopathic edema may be a sign or complication of hidden diabetes. Patients with idiopathic edema, which is characterized by localized

or generalized swelling associated with fluid retention, were found to have an abnormality of the small blood vessels and impaired carbohydrate tolerance, conditions which are known to precede the onset of clinical diabetes.

Other grantee-scientists at Hahnemann Medical College and Hospital of Philadelphia now have shown that phenformin, an oral antidiabetic drug, when used in conjunction with a diuretic agent, appears to be an effective form of therapy for some patients with idiopathic edema. This therapy was based upon evidence developed by the investigators which indicated that idiopathic edema may be caused by a metabolic abnormality which has been seen in some diabetic and pre-diabetic subjects. In addition to reducing the characteristic swelling of idiopathic edema, the described therapy also reversed the biochemical abnormalities of carbohydrate metabolism seen in these patients. These findings strengthen the concept that patients with idiopathic edema may be predisposed to diabetes.

Epidemiological Studies

Continuing epidemiological studies of the Pima Indians of Arizona, who have the highest incidence of diabetes in any population ever reported, are providing information concerning several facets of this complex metabolic disease. Investigators at the Institute's Clinical Field Studies Unit recently compared obesity and diabetes rates among the Pima Indians with those of the Cocopah Indians of southwestern Arizona. It was found that the frequency of obesity was similar in the two tribes, but the prevalence of diabetes was significantly lower in the Cocopah. The investigators concluded that the frequency of obesity does not account for the difference in the prevalence of diabetes between the Cocopah and the Pima Indians and that obesity *per se* cannot account for the high incidence of diabetes among the Pimas.

In a subsequent study, the scientists showed that congenital anomalies occur more frequently in the offspring of women who developed diabetes before age 25 than in the offspring of women who developed the disease later in life. Although a genetic mechanism could not be completely excluded, the findings support the theory that diabetes produces fetal anomalies among the Pima Indians by its influence upon the intrauterine environment during early pregnancy.

Outlook

A great deal has been learned about diabetes during the past few years. Only a short time ago, diabetes was believed to be solely a disorder of carbohydrate metabolism characterized by excessive amounts of sugar in the blood and urine. It is now viewed as a hereditary disease complex which produces various syndromes as it progresses through a series of stages, eventually including one marked by loss of carbohydrate tolerance. Although many questions have been answered, many remain, and these are undergoing intensive study. Research findings of the coming years may bring us additional important achievements such as deferment of the onset of diabetes in genetically predisposed individuals, suppression of its severe complications, and, ultimately, its prevention.

MONDAY, MARCH 17, 1969.

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

WITNESSES

CHARLES C. JOHNSON, JR., ADMINISTRATOR
E. R. LANNON, ASSISTANT ADMINISTRATOR FOR ADMINISTRATION
THOMAS J. LAWLER, DIRECTOR, DIVISION OF BUDGET
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

Mr. NATCHER. We have before the committee at this time Mr. Charles C. Johnson, Jr., the Administrator of the Consumer Protection and Environmental Health Service of the Department of HEW, together with certain members of his staff.

Mr. Johnson, I believe that you have a general statement for the committee?

Mr. JOHNSON. I do, Mr. Chairman.

Mr. NATCHER. We will be glad to hear you.

Mr. JOHNSON. Before I start I would like to introduce my colleagues accompanying me. On my left is Mr. Lannon, the Assistant Administrator for Administration; Mr. Lawler, the Director of the Division of Budget for my service. You know Mr. Cardwell on the end.

Mr. NATCHER. Gentlemen, we are glad to have you before the committee.

Mr. JOHNSON. Mr. Natcher, I would like to read my statement. It would take about 15 minutes.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. NATCHER. We will place your biographical sketch in the record and you may proceed.

(The biographical sketch follows:)

CHARLES C. JOHNSON, JR.

Mr. Johnson, who is an Assistant Surgeon General in the Commissioned Corps of the U.S. Public Health Service, has been a member of the Corps since 1947, and has had extensive experience in the field of environmental health. For a year and a half preceding his appointment as Administrator he was the Assistant Commissioner of Health for Environmental Health, New York City Health Department, with responsibility for the environmental health programs and activities for the city of 8 million people. He was the New York City Health Department representative on numerous boards and committees, including air pollution, the mayor's emergency control board, consumer councils, and water advisory committees. He also served as adjunct associate professor, school of environmental medicine, New York University.

For 10 years Mr. Johnson was with the PHS Division of Indian Health, the last year as Chief, Office of Environmental Health, and Chief Engineer Officer for the Bureau of Health Services.

Mr. Johnson was a member of the Surgeon General's Task Force on Health in Housing and Urban Development; the Surgeon General's Task Force on Organization of the National Center for Urban and Industrial Health; the PHS Water Specialist Team to India; the PHS Career Development Committee; and the District of Columbia ad hoc Advisory Work Group on Environmental Protection. He is a registered professional engineer in the District of Columbia and a Diplomate of the American Academy of Environmental Engineers. He holds the PHS commendation medal for his work in the Service's engineering programs.

He served in the U.S. Marine Corps from December 1942 to June 1946 attaining the rank of second lieutenant on his discharge.

Mr. Johnson was born in 1921. He attended the Dowling Junior College in Des Moines, Iowa, then Purdue University, where he received his B.S. degree in civil engineering in 1947 and his M.S. in the same subject in 1957.

General Statement

Mr. Johnson. Mr. Chairman and members of the committee, this is the first time that the Consumer Protection and Environmental Health Service's programs of the Department of Health, Education, and Welfare are being presented to you in their new alinement. This alinement was created by the reorganization of July 1, 1968 and places within this Service the Food and Drug Administration, the National Air Pollution Control Administration, and the Environmental Control Administration. The reorganization was designed to provide a more effective approach to solving the health problems generated by the dynamic interaction of the conditions that make up our environment.

ENVIRONMENTAL HAZARDS

If we examine some of these conditions individually, the picture which emerges is that of an environment which man is making increasingly hazardous to his own existence. Pollutants are being discharged into the air over the United States at the rate of more than 142 million tons a year from such varied and ubiquitous sources as motor vehicles, factories, powerplants, municipal dumps, and backyard incinerators.

The Nation discards more than 165 million tons of solid wastes each year, not counting those from industry and agriculture. In low income urban areas the undisposed garbage and other refuse abets the breeding of rats and disease. Throughout the Nation, mountains of refuse impinge on our senses and scar our landscape. Odorous, smoking dumps created by waste disposal aggravate the pollution of both air and water.

In the workplace, the combination of materials and machinery and the methods in which they are used has produced a setting in which thousands of workers suffer unnecessarily from cancer, lung disease, hearing loss, dermatitis, or other preventable maladies because industry, unions, and Government have failed to give adequate attention to occupational hazards.

This inadequate attention to safety and the protection of human health extends beyond the workplace and is woven into our broader social and cultural surroundings—onto our streets and into our homes. Accidents kill 100,000 Americans each year and injure 52 million more. Some 3,000 deaths occur every year, mostly among children, from accidental ingestion of poisons.

New sources of hazard, still poorly understood, are proliferating throughout the country in the form of radiation sources. They range from the large-scale applications of nuclear energy, particularly in electric power generation, to applications of laser and microwave technology in industry, the use of radionuclides and X-rays in the healing arts and the use of microwave ovens and other electronic equipment in the home and workplace. Animal studies and human epidemiologic studies have shown that such radiation can cause adverse physiologic

effects and actual disease. We are concerned, for example, with life shortening effects and congenital abnormalities which exposure to ionizing radiation may cause. We are also concerned with adverse effects which have been noted from nonionizing radiation sources including lasers and microwave devices. Our society is growing increasingly dependent on various forms of radiation as sources of energy and as tools in communication and other activities. In this development, we must exercise continued surveillance if we are to avoid the proliferation of health hazards.

The use of additives to impart flavor, color, and other qualities to food has reached the point where each of us consumes an average of 3 pounds of these chemicals yearly. Among other chemicals reaching us from the environment are the pesticide residues on produce, the traces of veterinary drugs in meat, milk, and eggs, and the chemicals which find their way into our streams and waterways and eventually into our drinking water. New chemicals and chemical compounds are being introduced into our work, community, and home environment at the rate of more than 500 per year.

We cannot consider the hazards of man's ingestion of these incidental chemicals without considering those compounds which man takes into his system intentionally in the form of medicines. Thousands of drugs, the products of modern pharmaceutical research, are available today to treat disease problems. We must take every step necessary to bring to our citizens the benefits of modern drug therapy when needed while at the same time protecting them against undesirable effects and insuring purity and potency of prescription drugs. The extent of this problem is broadened by the variety of over-the-counter drugs and substances available to today's consumer.

Each of these problems, taken separately, is complex and difficult enough to cope with. But there is an interrelationship and an interaction among them which demands both a sharing of knowledge and a coordination of effort among the programs seeking to minimize the specific hazards of the environment. These programs are currently grouped within the three component administrations of this service.

ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES

The Food and Drug Administration, of course, is responsible for assuring that foods are safe, pure, and wholesome; that drugs and medical devices are safe and effective; that cosmetics are safe; and that all of these are honestly labeled and packaged. In addition, shellfish certification, product safety, pesticides research, and poison control activities, formerly conducted by other organizations within the Public Health Service, have been transferred to them.

The National Air Pollution Control Administration conducts a comprehensive program of research, training, surveillance, and financial and technical assistance to State and local agencies, and abatement and control activities. In these ways it fulfills the requirements of the Air Quality Act of 1967 to inevstigate the causes of air pollution, determine its effects upon life and property, and develop air quality criteria and effective means of air pollution prevention and control.

The Environmental Control Administration conducts a national program to identify and control a wide range of problems relating to the

environment in which modern man lives, works, and spends his leisure time. The solid waste, occupational health, and water hygiene activities, urban health planning, the injury control program, and the radiological health program constitute the principal components of the Environmental Control Administration.

The Commissioners of these three Administrations will appear before you subsequently and will explain their specific operations. For my part, I would like to describe the interrelationships among the Administrations and the need for and values of this particular alinement.

The Consumer Protection and Environmental Health Service was established to make possible a more effective and systematic approach to the problem of maintaining an environment conducive to human health and well-being in a world undergoing profound and accelerating change. Our primary goals are to achieve a deeper insight into the relationship of man to his environment, to assess the total impact on the human organism of many separate environmental stresses which simultaneously impinge on man, to provide criteria by which our Nation may evaluate its diverse activities affecting the human environment, and to implement a variety of action programs to help the Nation achieve needed environmental improvement.

The human body, in reacting to a chemical insult to which it is subject, does not always differentiate as to method of entry or origin. An insult may have the same effect upon the living human organisms whether it gains entry through the water man drinks, the air he breathes, the food he eats, the therapeutic drug he ingests, or some other product he consumes or uses. Furthermore, effects of a chemical reaching man through several media are generally additive. Recognition of these relationships among all environmental impacts is the basis for the establishment of this Service and the development of its organizational pattern.

The total impact of chemicals on modern man is an excellent example of a hazard which spills across the lines of the traditional concept that the environment is a collection of separate domains. Pesticide problems, as a more specific example, are clearly of concern to all three Administrations. The Food and Drug Administration is concerned with pesticide residues in food; as a pollutant of the air, pesticides constitute a problem of the National Air Pollution Control Administration; the Environmental Control Administration has concern for recommending methods to protect workers in the occupational setting and for guarding against pesticide residues as a contaminant of drinking water supplies.

Pesticides provide an example of the largely unexplored hazards associated with the total chemical burden accumulating in modern man. Ingestion of pesticides affects the metabolism of certain drugs, particularly the barbiturates. Furthermore, the average American has accumulated DDT in his fatty tissues at a level of about 12 parts per million. Weight loss in time of illness releases this stored chemical burden, for potential interaction with therapeutic drugs.

With the programs under our jurisdiction, we can coordinate community studies, research in analytical methodology and toxicology, dietary studies, and action programs to protect against occupational exposure and against residues in food, milk, and water, while at the

same time developing more complete knowledge and control of these related hazards.

Accident prevention, injury control, and occupational safety and health constitute another area of shared interest and involvement for the Food and Drug Administration and the Environmental Control Administration. FDA activities are primarily product-oriented, including the controls of hazards from various consumer products such as flammable fabrics and other household items, pesticides and poisonous substances and medical devices; Environmental Control Administration activities concern electronic devices, covered by the "Radiation Control for Health and Safety Act of 1968," occupational injury, and accident prevention. Close coordination of research data is critical to effective handling of each of these programs. In many cases, it will be possible for one agency to conduct investigations useful to both, avoiding duplication and fragmentation of effort.

The regulatory and persuasive functions of the programs within the Service, while varying in the degree to which they are imposed, must be alike in their effectiveness, that is, they must insure the health and safety of the public while permitting rapid flow of the benefits of modern science and technology to the public. The functions constitute a special area of expertise which each of the Service's Administrations share and which require scrutiny to insure that the best interests of the public are being served.

Various tools, ranging from simple demonstration to enforcement through court action, are employed by each of the three Administrations in carrying out regulatory responsibilities. Legal enforcement is but one of these. Other means include education and training; the enunciation of criteria for the guidance of industry and Government; the development of model codes, ordinances and regulations; and research and technical assistance activities designed to make possible coordination between industry, Government, and the consumer.

With the establishment of this Service, the Federal Government has given evidence that it now perceives that environmental problems require coordinated attempts at solution. We are now better able to avoid creating one problem in the process of solving another. The integration of these environmental programs into a single service should and will, in our expectation, improve their effectiveness.

The emphasis of the activities within the Office of the Administrator will be on the continued implementation of the responsibilites placed upon the Service in 1968. As I have mentioned, the recent reorganization of the Department's health activities was designed to provide a more reasonable and effective approach to solving the health problems of the Nation. The Administrator of the Service must be in a position to provide the leadership and guidance to our constituent programs if this goal is to be realized.

SUMMARY OF APPROPRIATIONS

The total appropriation requested for the Consumer Protection and Environmental Health Service for fiscal year 1970 is $233.4 million, an increase of $10.7 million over fiscal year 1969. By Administration, the requests are as follows:

Food and Drug Administration—$72.7 million, an increase of $2.2 million over the previous year.

National Air Pollution Control Administration—$96.8 million, an increase of $12 million over 1969, including $1 million carryover;

Environmental Control Administration—$57.7 million, a decrease of $3.9 million.

Salaries and expenses requested for the Office of the Administrator total $6.2 million, an increase of $373,000 over fiscal year 1969.

In addition to these appropriations requests, $400,000 is being requested under the "Buildings and facilities" appropriation for needed repairs and improvements to existing facilities.

That is our statement, Mr. Chairman. When you resume we will be glad to answer any questions that you may have.

Mr. NATCHER. Thank you, Mr. Johnson.

The committee will adjourn until 2 o'clock.

AFTERNOON SESSION

Mr. NATCHER. The committee will come to order.

Mr. Johnson, I hope you plan to stay throughout the hearings on the items that fall under your jurisdiction because I plan to save most of my questions on these very important programs until we get to the individual appropriation items, and I am sure all of the subcommittee members would like to have the head man to be present.

Do you plan on being present during the hearings?

Mr. JOHNSON. I do plan to be here during the entire course of the hearings.

STATUS OF FOOD AND DRUG ADMINISTRATION

Mr. NATCHER. Good. There has been some opposition to the inclusion of the Food and Drug Administration in your group. Frankly, it is not entirely clear to me what the real basis of these objections is. What is behind the objections and what is your answer to them, Mr. Johnson?

Mr. JOHNSON. Mr. Chairman, I would have to admit that I am perhaps as puzzled as you are as to what the objections are. My answer is that I think that there are very good and fitting reasons as to why the FDA should be a part of this Service.

During the course of my statement, I pointed up some areas in which there is mutual interaction between the three Administrations. There are many other examples that I could give.

This gave us an opportunity to consolidate many related but fragmented activities within the Department of HEW into the Food and Drug Administration, and with the other two Administrations, to bring about a more cohesive and systematic approach in dealing with the problems that bear upon man and his relationship to his environment.

I can only say that within my own staff and the immediate people that report to me, I do not know of any overt reaction and I might say even covert reaction to the alinement.

I might point out that the actual genesis of this type of organization started within the Food and Drug Administration. It was Under Secretary Gardner's administration when he was looking about the Department, attempting to find ways to eliminate duplication, to bring

about a better organization for efficiency and relevance to the problems that we deal with that he first set up a task force to study reorganization and the results of the efforts of this task force in terms of our food programs, our pesticide programs, our research programs, certainly our hazardous substances and poison control programs, related to a need to bring about a different kind of alinement than we had at that time.

On the basis of that and following that, it was in the Food and Drug Administration that the skeletal outlines of the kind of organization we now have first originated.

RELATIONSHIP TO INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

Mr. NATCHER. We have the appropriation "Environmental health sciences" in NIH. What is the line of demarcation between what you do and what is done under that appropriation, Mr. Johnson?

Mr. JOHNSON. If we can go back just a moment to the reorganization of the Public Health Service that was discussed by the Surgeon General earlier, as you recall we had a basic research responsibility that was NIH's basic preventive and medical care program, that is the Health Services and Mental Health Administration, and the activities of the Consumer Protection and Environmental Health Service.

Insofar as research from the basic approach is concerned, the Environmental Health Sciences Institute has a responsibility to conduct basic research related to the environment.

Now the kind of information that is derived from this can be of benefit to any one of the three components as a whole or any one of us separately in terms of the basic approach to the problems that we have to deal with. They do feed us the results of their information. We sometimes carry on correlated research in a specific, a very specific, area that might be in air pollution or might be in toxicological properties of elements and their relationship to cells and the like.

But by and large, theirs is the basic research responsibility. We have both basic and applied responsibility that will in time show up in terms of specific criteria and standards and programs to actually protect people against adverse conditions in the environment.

Mr. NATCHER. Thank you, Mr. Johnson.

Mr. Michel?

PESTICIDES

Mr. MICHEL. Thank you, Mr. Chairman.

Turning first to your testimony here, Mr. Johnson, on page 6 you say "pesticides provide an example of the largely unexplored hazards associated with the total chemical burden accumulating in modern man," and so forth.

Then you also make mention that, "Furthermore, the average American has accumulated DDT in his fatty tissues at a level of about 12 parts per million." I recall just having read an article in our local paper back in Peoria—it always gets to Washington a few days late—addressing itself to that particular subject so far as our own State legislature is concerned. As a matter of fact, I think they are considering at the State legislative level outlawing and prohibiting the use or limiting the use of DDT to a considerable degree.

Incidentally, Mr. Natcher and I just came from a subcommittee appropriation hearing in which we get the other side of this DDT and pesticide story, where we are trying to get the people better and more food at cheaper cost. We run into somewhat of a conflict.

You are well aware, I am sure, in times past of the cranberry controversy and the lack of coordination between Agriculture particularly and HEW on this very subject. I hope that you are well aware that there has to be a continuing dialog, particularly between these two Departments on this problem.

Mr. JOHNSON. I am very much aware of this, Mr. Michel. The Federal Committee on Pest Control is an interagency subcommittee developed to assure that this kind of awareness does exist between the departments.

Besides that, our scientists do carry on coordinated conversations and we do have a direct legal responsibility that we exercise with the Department of Agriculture. So there are many avenues to assure that we are speaking the same language, trying to coordinate our individual responsibilities, and still protect the health of the public, which is protection both from the misuse of pesticides and at the same time assuring pesticides where they are needed to protect the health in terms of food production, nutrition, and so forth.

Mr. MICHEL. Mr. Moyer just handed me an article under date of March 4 from the Wall Street Journal entitled "Wisconsin Hearing on Bid To Ban DDT Could Affect Future of All Such Products."

So it is one of these things that is getting a lot of attention these days.

Mr. JOHNSON. Could I comment on that a second?

Mr. MICHEL. Yes.

Mr. JOHNSON. You know it is very important that we constantly keep in mind that it is important that any of these new technological developments, such as the use of pesticides to increase food production and there are other examples in other fields, are promoted in such a way that they do the job without the expense to human health and well-being that sometimes obtains if we are not conscious of what could happen.

And when you consider in the United States we are producing something like a billion tons a year of pesticides that are being spewed across the Nation in, many times, uncontrolled situations, that they do have an opportunity to find their way into the soil, they do at times exceed the recommended limits in residuals on food crops, that they can enter into our daily lives unknowingly, I think it is also important that we have a surveillance system that is capable of telling us what is happening so that if the time comes that we do have to ban something, we do this on knowledge and availablbe information and data and not on scare tactics. But I think if there has to be an error in exercising this judgment, it should be on the side of prudence and on the side of safety to the individuals.

Mr. MICHEL. I am happy to hear your response and your specific phrase of not wanting to resort to "scare tactics." Because that brings to mind some testimony Mr. Natcher and I heard a few days ago before that very same Agriculture Subcommittee on Appropriations as to some unfounded charges, at least up to date, that the seepage of some of these chemicals into Lake Michigan was responsible for the

fish kill when, as a matter of fact, they have no conclusive evidence yet at all, to substantiate this charge. Someone popped off for some newspaper or some television station without really knowing for sure what he was talking about. And as a result, you get all kinds of people worked up in a variety of ways with no justified cause.

I should also make mention of the fact that our news media themselves have a very important obligation to be very careful with their facts. We just had disclosed before our Agriculture Subcommittee this afternoon, as a matter of fact, and read into the record, as you well know, Mr. Chairman, as our plan was to do, a special report of our own committee's investigators with respect to the CBS television program having to do with hunger and malnutrition. We lay it out very specifically.

For example, the child who was depicted on the television screen as dying from malnutrition was, as a matter of fact, a 7-month premature male child born at a weight of slightly in excess of 2 pounds, and the death certificate officially stated it died of septicemia, meningitis, and peritonitis. This was the same child depicted to the general public as having died because we failed to provide an adequate and nutritious diet.

This is the kind of thing we want to be absolutely sure of when we go off in these very controversial, ticklish areas. We have got to be sure that we are on good sound ground and that we have checked our facts carefully before making them public. We've observed in the example just given some very irresponsible reporting, and we will have some more to say about that at a future time when that particular record gets published and disseminated.

HUMAN ECOLOGY SYMPOSIUM

Incidentally, Mr. Johnson, you may or may not know that I had inserted in the Congressional Record on January 7 a recent speech of our one-time ranking member of this committee Mel Laird, whose shoes I am obliged to fill, but very inadequately, I am sure. If I might just quote several passages from that speech that was given to a Human Ecology Symposium last November, Mr. Laird said that:

> As with most of the serious problems we face in this country, solving the environmental crisis will require a complex coordinated effort by national, state and local government, by private organizations, universities and business. Our greatest challenge as we approach the decade of the 1970's is to find mechanisms and to institute arrangements that will bring this coordinated effort about. We must marshal the dynamic forces that made this nation great and unleash a concerted attack that will lead to cleaner air, less polluted water, and improvement in the conditions in our cities, and better preservation of our natural resources while countering the undesirable side effects of our expanding technology.

I also understand that the remarks you made on that particular occasion were similarly inserted in the Congressional Record at a later date, and I got the full text of those remarks and went over them very carefully. If I am correct, on that particular occasion you said:

> We suffer no illusion either as to our own limitations or the difficulty of the task. We cannot manage the environment and no single agency of government can do so for just as every human activity has contributed to our environmental problems, every human activity without exception is going to have to be involved in their solution.

Is that correct?

Mr. JOHNSON. That is correct, sir.

Mr. MICHEL. One other quotation of yours says:

> We intend to become the spokesman not just for conservation or pollution abatement or food and drug protection or sanitation, but for man, the citizen, and consumer. We intend to become the advocate and spokesman for human ecological wisdom applied throughout our society.

I might say the full text of what you had to say there was very enlightening, just as your testimony here I thought was most enlightening.

Mr. JOHNSON. Thank you.

INFORMING THE PUBLIC

Mr. MICHEL. In your remarks there, further, you spoke about this broad approach of insults on the environment of man. Do you have any plans to produce broad communication media that will motivate the public and professional in the large view of human ecology?

Mr. JOHNSON. We do, sir. I might say that I think perhaps one of the critical things in this whole environmental problem is that we need to make man aware of what he is doing to himself. These things do not just happen; we make them happen. I think if we are able to articulate to the public the kind of things that are done where a little prevention in the beginning can solve a number of problems in the end, that we will be able to give him a kind of knowledge and information that they will be in a position to make the decision and to let you in Congress know what kind of decisions that they want to be made so that we can really protect ourselves from the environment.

I think nothing is more important that public awareness. I think that if man—and we have an educated society these days—has a capability of making choices as to whether or not he wants to do something now and pay the consequences later, or pay for changing it now so that the conditions can be alleviated later, that he will make that decision, whichever it is, but he needs to know, and I do not think, despite what we read in our papers today, that there is enough information given to the public.

I would hope we might develop some demonstration projects that would permit us to help inform the public about his relationship to the environment and the fact that sometimes very unrelated incidences have very direct consequences on us even though we may not even be in the same location when these things occur at a particular time. I hope that we can carry out some type of program that will help to give this information to the public.

Mr. MICHEL. I hope whatever they might be would be in clear and understandable terms and professionally done. I hate to make this personal reference back to this other subcommittee where we were talking about some of these other things again, but we can publish all the books we want to and long dissertations, but somehow or another, in many quarters people do not want to or simply cannot read. It is easier to sit before the tube, to have it all laid out for you kind of comfortably with a beer and a little cheese on the side. And since that is the popular medium, do you have a problem at all getting public service time to do the kind of selling job that ought to be done in this area?

Mr. JOHNSON. One, I would like to agree with you that we have got to use new methods for new problems and we have to take advantage of new technology and there is no doubt we can reach many, many more people through the medium of television than we can through other means of mass communication at this particular time.

I think it is also important that we be technically sound, so that we do minimize the problems that you sometimes have in getting public time on the television media. I think we have to take advantage of other organizational institutions that perhaps may have an easier time of getting time on the public media.

For instance, I am very much impressed at this particular time of one thing I have heard about, and I am investigating it at this time. I understand that the medical societies across the country have been very successful in getting health problems before the Nation through their local country chapters, getting prime time on television when the programs are right. This is a medical problem that we are dealing with in terms of the environment and its relationship to man.

I would hope that we might involve them in some way in helping to sell this concept of human ecology and prevention that is so important.

Mr. MICHEL. I had the very good fortune and privilege of going to Europe and attending a world health assembly just prior to the time that our late Chairman John Fogarty died. We were good friends. I recall soon after having come back from that trip, I happened to witness with him a particular film or preview of a film called "Beware of the Wind," and I remember at that time he stated that he hoped that not only the citizens throughout the country would see this program, but he felt frankly that our own public health officials should really be required to see this kind of thing.

Our onetime ranking member of this committee, Mel Laird, pretty much shared those views.

Do you have any comment on that?

Mr. JOHNSON. I have talked with your onetime committeeman, Mel Laird, also. We see a great deal eye to eye on this kind of an approach to public awareness, public education. As a matter of fact, he has commented on several occasions that it is time the public health people stopped talking to themselves and started talking to people that can do something about their problems.

As I said before, I think it is the people that are going to be ultimately able to do something about the kind of problems we have. I am aware of the film that you mentioned, "Beware the Wind." I think it is an excellent professionally produced piece of media.

There are several others that have been equally well-produced. The National Institute of Mental Health has begun to utilize this kind of a concept on a demonstration basis and they just recently had a series of three television films under the name of "The Distant Drummer," and this had to do with the whole area of drugs you are so interested in. I would commend these to you also if you are so inclined.

Mr. MICHEL. I think I saw the tail end of one of those a few weeks ago on television.

Mr. JOHNSON. That is right. It was on nationwide television. I think if we produce the right kinds of information and films and it is professionally done, we too can get this.

USE OF CONTRACTS

Mr. MICHEL. Here is where I have asked some very critical questions as members know here in this subcommittee. I guess I have asked any number of witnesses from time to time, how much of your budget is contracted out, and give me some details on who is getting this contracting business and for what reason.

I recognize that if we did not resort to that mechanism and we did it all in-house in our own shop, a Government shop, Government-produced, written, disseminated, the public could be very well propagandized and spoonfed by only one source and that is bad. In other words, if one particular individual in your shop liked a particular approach, that is what goes out, but if he did not like it it did not go out.

How are we protected to make sure that the general public is not just getting spoonfed, what a few people would like to have them be fed without getting a good broad base. We are interested in the facts, no distortion, no propaganda. This is the thing that kind of bugs me. Should we go to the outside to have this stuff done or should we do it in-house. What is your comment in that regard?

Mr. JOHNSON. To answer your first question, how much of our total budget is in grant or contracts as well as in-house, I believe that overall our extramural research runs a little better than 45 percent and the other would be extramural research in the research grant area. This would include demonstrations.

This is a fair balance. Whether you can do it inside or outside, I think, depends upon whether this is going to be a long-term venture or a onetime exercise. Certainly if it is a onetime exercise, you perhaps should not try to build up the staff to do this in-house, you should go outside with a grant or a contract, as the needs may be.

I think there are other things, however, that enter into whether you should go outside to do a particular project or stay inside, and that is your capability. Even if we were to have an inside capability, it may not always be as competent to the particular needs of a specific situation and you would not want to expand this again, perhaps for a onetime need. I think that you look to see what has been done in a particular area and you make an evaluation as to whether or not you can do as well, not only in producing the product that you want but also in merchandising the product that you produce.

And these are considerations that you have to give in this area of communications. In terms of "The Distant Drummer" and the concept that was behind that particular demonstration project, I would say at the moment we do not have the capability in-house to produce that type of a document and put it before the public in the fashion that it was put.

I think that the cost to us might be more unless of course we have access to the same facilities that were used in that particular situation. My present understanding is that we do not.

EFFECTS OF EMPLOYMENT RESTRICTIONS IN REVENUE AND EXPENDITURE CONTROL ACT

Mr. MICHEL. How many total people do you have in your shop on board at the present time?

Mr. JOHNSON. For the total service, that is Consumer Protection and Environmental Health Service, we have approximately 8,000. I am looking here at the actual count. It is 7,400 employees subject to the Revenue and Expenditure Control Act.

Mr. MICHEL. As of what date?

Mr. JOHNSON. March 10, 1969.

Mr. MICHEL. Let me ask what it actually was July 1, 1968.

Mr. JOHNSON. On July 1, 1968, we started the fiscal year with 7,900 employees subject to the Revenue and Expenditure Control Act.

Mr. MICHEL. So is this reduction due to the Revenue and Expenditure Control Act?

Mr. JOHNSON. That is correct.

Mr. MICHEL. Solely?

Mr. JOHNSON. This reduction that is reflected here is solely due to the Revenue and Expenditure Act. We have actually lost 397 people from our fiscal year 1968 base.

Mr. MICHEL. Would there be any significant areas where those would have fallen that caused a real hurt?

Mr. JOHNSON. I think there are two. One, I think we have to look at the effect of the Revenue and Expenditure Act on new programs that we were unable to expand or implement because of the act, and this—I believe we have that information.

Mr. MICHEL. If I might just observe further, I did not vote for that particular proposition for several reasons, and one of them was that I do not think that is altogether the best way of achieving a reduction in personnel, because it denies to a top administrator the flexibility I think he ought to have to pick and choose where the reductions can better take place without hurting any given program.

In other words, if one or another programs within a given shop are the priority items, then with an overall ceiling he proceeds in those areas where he thinks it is more important to press forward and he cuts back where he thinks we do not have to push ahead so fast.

Now maybe, having said that, you have more answers.

Mr. JOHNSON. I do.

In terms of new authorizations in fiscal year 1969, I believe that the Congress took into consideration the Revenue and Expenditure Control Act, and it failed to authorize about 76 positions in the Food and Drug Administration. In addition, 273 positions in the National Air Pollution Control Administration, and 126 in the Environmental Control Administration authorized in the 1969 appropriation were eliminated during the initial implementation of the act.

These were all positions that we had considered necessary and justified for expansion of existing programs or implementation of new programs.

Mr. MICHEL. In the 1970 budget, how many of those have been requested?

Mr. JOHNSON. In the 1970 budget we have requested approximately the same number of positions that were eliminated, 280, but this is not necessarily in the same areas in terms of the considerations that we took in fiscal year 1969 at the beginning of the year.

Mr. MICHEL. Have there been shifts of priorities or adjustments?

Mr. JOHNSON. There have been some adjustments in emphasis. We continue to have the air pollution control activity as very high priority

in the Department. Because of certain other considerations, we have had some shift of emphasis in the Food and Drug Administration to which Dr. Ley will speak in detail a little later, and in the Environmental Control Administration we have had some shift due to actual changes as a result of conditions brought on by the Revenue and Expenditure Act.

CONSTRUCTION

Mr. MICHEL. How much is in your budget for construction this year, in the 1970 budget?

Mr. JOHNSON. In the 1970 budget we have only $400,000. This is for M. & R. consideration. There is no new money for the actual facility construction.

Mr. SHRIVER. What is M. & R.?

Mr. JOHNSON. Maintenance and repair.

Mr. SHRIVER. Where is it?

Mr. JOHNSON. This is to actually bring up to date some of the facilities that are beginning to deteriorate. It is normal routine maintenance and repair that you have to do to facilities that are in use over a period of time.

Mr. MICHEL. Was that your request to the Bureau of the Budget or is the fact it is limited to the $400,000 a Bureau of the Budget consideration rather than your own?

Mr. JOHNSON. I believe that reflects the request to the Bureau of the Budget. May I check that?

Mr. MICHEL. Yes; and in the interest of time, supply it for the record.

(The information follows:)

Our request to the Bureau of the Budget was $1,800,000 and we were allowed $400,000. The reduction of $1,400,000 included $238,000 for the design of the Southeastern Radiological Health Laboratory, and the remaining $1,162,000 was for repairs and improvements to our existing facilities.

EXTENSION OF SECTION 104 OF THE CLEAN AIR ACT

Mr. MICHEL. Do we have anything in this budget for proposed new legislation?

Mr. JOHNSON. In this budget there are no items for proposed new legislation. We are unsure at this moment just exactly what the administration's legislation program will be. It is under consideration, and I would presume that if such legislation required additional financial support, they would have to return to the Congress.

Mr. MICHEL. One item would be the extension of a part of the Air Pollution Act, would it not?

Mr. JOHNSON. Section 104 has to be extended.

Is that not corerct, Dr. Middleton?

Dr. MIDDLETON. Yes.

Mr. MICHEL. How much roughly would be involved in that?

Mr. JOHNSON. We are actually submitting our budget——

Mr. MICHEL. Am I correct it would be roughly $21 million?

Mr. JOHNSON. That is correct.

I should say, however, our budget does reflect an anticipated extension of that act.

INDUSTRIAL ACCIDENTS

Mr. MICHEL. What is your department doing to help stop industrial accidents?

Mr. JOHNSON. We have an occupational health program, Mr. Michel, that is conducting research in occupational disease, not so much in terms of the safety side of the program as on the disease side of the program, the general division of responsibility places safety in the Department of Labor and diseases in the Department of Health, Education, and Welfare.

Mr. MICHEL. I stand corrected, but it is a real problem.

If my information is correct, we have an average of 39 persons a day killed in industrial accidents, and a total of 14,500 last year, or 20 per 100,000 workers.

If I recall the Surgeon General's testimony earlier this morning, that is just about half of the number of men dying of cancer in this country. It is a shocking figure.

Another one I guess just for the record, there is something like 2.2 million injuries a year from industrial accidents, or over 6,000 a day.

While you say your obligation is more on the health side of it, and that the more mechanical aspects are in the Department of Labor, it is kind of hard sometimes to divorce the two.

Mr. JOHNSON. At any time you consider health and safety legislation for the occupational area, we believe that the two should be considered together. It is hard to divorce these two in actuality.

I think you would be surprised at the number of preventable diseases that also occur among our occupational work force.

In my way of thinking, this adds to the other problem you were discussing with the Surgeon General earlier, the lack of medical doctors and facilities and others.

There are just many, many preventable diseases that if we would spend as much time on prevention as we do on cure, and cure is most important, I think that we might be able not only to relieve people of some unnecessary suffering, but also relieve in terms of the overall need for medical staff and medical personnel.

This is one area I am very personally concerned with, and I think we need to give a great deal more attention to the prevention of disease as well as to the curing of the patient after he becomes ill.

SOLID WASTE DISPOSAL

Mr. MICHEL. One final point. I was quite interested in your remarks with respect to solid waste disposal, what are we going to do about it or hope to do about it in the future. I cannot help but be reminded of the fact when I was a kid I spent many hours cleaning up the feedlot back home and at that time we thought it paid to take a vast amount of manure from the cowbarn and take it back out and spread it around on the land, it was a good fertilizer. Now we are learning that to go through all of this operation, the favorable cost-benefit ratio just is not there and it has to be disposed of by some other means than taking it back out on the land and distributing it again.

That is just one little aspect of it. We used to carry the bottles back and forth, now we do not want to be bothered with that and so we throw away bottles, and that fills up some more garbage pails.

How do we get rid of it, do we use it for land fill? It is a most interesting problem. I hope you all find some answers to this thing in the foreseeable future.

Mr. JOHNSON. We will try.

Mr. MICHEL. That is all, Mr. Chairman.

Mr. NATCHER. Mr. Shriver?

POSSIBLE AMENDMENTS TO BUDGET

Mr. SHRIVER. Thank you, Mr. Chairman. I just have two or three questions.

You were discussing some questions relative to the number of people employed in the area under your jurisdiction. Do you anticipate amendments to your budget that you are presenting here today?

Mr. JOHNSON. No, sir; I do not, not as we are presenting it here today.

Mr. SHRIVER. And that calls for an increase of $10.7 million?

Mr. JOHNSON. That is correct.

Mr. SHRIVER. Over fiscal 1969?

Mr. JOHNSON. That is correct.

COORDINATION OF EFFORTS

Mr. SHRIVER. Mr. Johnson, your statement explains the need for a coordinated effort against health hazards in the environment and the products we buy, but it is not clear to me how this coordination would be obtained under the new organization.

Can you tell us more specifically what new implements for cooperation among the three Administrations are available which were not possible under the old organizational chart?

Mr. JOHNSON. I would like to, Mr. Shriver. Actually, it is inherent in the very organization that we have set up. Let me give you a brief description of how we operate.

With the three Administrations, I have also three Assistant Administrators, one for Research and Development, one for Program Planning, and one for Administration.

I also have a Legislative Assistant and a Public Affairs Director as well as my Deputy and Associate Administrator.

We sit as a policy group in carrying out the operations of this Service. This gives us an opportunity to do planning so as to complement and supplement each other's operations without duplication or contradiction, and I say without apology that occasionally you have seen some contradictions in our environmental programs or in the Department.

We have through this reorganization taken steps to eliminate these.

We do a common planning operation in our research and development efforts so that we can see where we can get the maximum benefit

out of a research project, even though it may or may not totally lie within the total responsibility of one of the three Administrations.

There will be times, of course, when duplicative and correlative research is desirable. I think we see evidence of this every day. When we have a particularly difficult problem you want more than one researcher to give you the avenue that you should proceed on and to develop the kinds of protocols that are necessary to solve the problem.

But by and large, because we do operate as a team, we are able now to utilize without duplication the technical skills and competencies in one administration vis-a-vis another administration.

An example of that might be in our radiological health effort. Within the Bureau of Radiological Health, they have developed over the years I think a skill and technique and competency second to none and they are able to supplement and serve the needs of the Food and Drug Administration when we start dealing in the problems of radiopharmaceuticals, radiological devices, this type of thing.

The Food and Drug Administration then does not have to build up the same competency.

In the Air Pollution Control Administration, they are developing techniques for the measurement of insecticides in the air where the primary responsibility for measuring the whole burden of pesticides is in the Food and Drug Administration. This they do not have to duplicate. They can look to the National Air Pollution Control Administration for this skill and for this competency.

In the establishment of networks across the country, for instance the water supply network, there is a great deal that the Food and Drug Administration needs to have in terms of information from such a network, but since the Environmental Control Administration is establishing and continuing to operate such a network, FDA can look to them for the information and they do not have to duplicate the network.

There are many areas of examples I can give you here. I will be glad to give you more if you wish.

Mr. SHRIVER. You mention in your statement it will now be possible for one of your agents to conduct investigations useful to others, and that is the very thing you are referring to?

Mr. JOHNSON. That is correct.

Mr. SHRIVER. How will such joint efforts be identified and funded?

Mr. JOHNSON. We will fund these through the Administration that has what you might call primary responsibility.

Mr. SHRIVER. Thank you.

Thank you, Mr. Chairman.

RADIATION HAZARDS

Mr. NATCHER. Mrs. Reid?

Mrs. REID. Thank you, Mr. Chairman.

Mr. Johnson, I have questions which I will direct to your associates rather than take up your time now because they deal with the agencies which make up the Service. On page 2 of your statement you make

reference to sources of hazards in the form of radiation. You make special reference to electric power generation. I know the Atomic Energy Commission is constantly studying this problem. What is your role in this?

Mr. JOHNSON. We serve as one of the seven members on the Federal Radiation Council, which has a responsibility for producing guidance to the various agencies of which AEC is one of the members in this whole field of radiation protection.

Our primary role is to protect the environment, that is the overall surrounding areas, whether this be in and around a powerplant or in and around other places where radioactive-producing substances are either used, produced, handled, et cetera.

We do have a very real role and very real contribution in this area of environmental control of radiation-producing sources.

Mrs. REID. Do you feel there is duplication as far as what you do and what the Atomic Energy Commission does? Is there coordination?

Mr. JOHNSON. There certainly is coordination. We work very closely together.

As you know, the Secretary of HEW chairs the Federal Radiation Council. In this way we are able to keep duplication, if it occurs, to an absolute minimum.

Once again, in terms of research efforts, I for one do not think that duplication is always bad. It would be bad, I think, if you did not have the confirmitory judgment that you sometimes get through parallel research efforts. No; I do not see any areas of real concern insofar as duplication is concerned.

Mrs. REID. I touched on this subject because I have received mail from the people in my district about this.

Mr. JOHNSON. Yes.

Mrs. REID. I think that is all now.

Mr. NATCHER. Mr. Johnson, thank you very much.

Mr. JOHNSON. Thank you very much.

MONDAY, MARCH 17, 1969.

FOOD AND DRUG CONTROL

WITNESSES

DR. HERBERT L. LEY, JR., COMMISSIONER
WINTON B. RANKIN, DEPUTY COMMISSIONER
RUPERT F. MOURE, EXECUTIVE OFFICER
CHARLES C. JOHNSON, JR., ADMINISTRATOR
E. R. LANNON, ASSISTANT ADMINISTRATOR FOR ADMINISTRATION
THOMAS J. LAWLER, DIRECTOR, DIVISION OF BUDGET
JAMES B. CALDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	41,350	44,039	45,648
Positions other than permanent	93	127	128
Other personnel compensation	473	400	400
Special personal service payments	39		
Total personnel compensation	41,955	44,566	46,176
Personnel benefits: Civilian employees	4,069	4,311	4,457
Travel and transportation of persons	1,776	1,876	1,937
Payment to interagency motor pools	452	452	466
Transportation of things	377	439	455
Rent, communications, and utilities	1,600	1,568	1,724
Printing and reproduction	416	480	486
Other services	9,385	9,657	9,600
Supplies and materials	2,328	2,346	2,466
Samples	386	387	403
Equipment	1,836	1,971	2,137
Lands and structures	7	6	6
Grants, subsidies, and contributions	2,680	2,381	2,381
Insurance claims and indemnities	4	4	4
Total obligations	67,271	70,444	72,698

PERSONNEL SUMMARY

Total number of permanent positions	4,603	4,247	4,370
Full-time equivalent of other positions	75	75	75
Average number of all employees	4,288	4,222	4,280
Average GS grade	9.0	9.1	9.1
Average GS salary	$9,952	$10,638	$10,882
Average salary of ungraded positions	$5,612	$5,680	$5,728

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

Program by activities:			
1. Medical evaluation:			
(a) Grants	891	821	821
(b) Direct operations	18,643	17,953	18,853
2. Scientific research and evaluation:			
(a) Grants	870	870	870
(b) Direct operations	15,320	15,508	15,969
3 Education and voluntary compliance	1,363	1,275	1,296
4. Regulatory compliance:			
(a) Grants	919	690	690
(b) Direct operations	28,154	28,515	29,338
5. Program direction and management services	4,939	4,812	4,861
Total program costs, funded	71,099	70,444	72,698
Change in selected resources [1]	−3,828		
Total obligations	67,271	70,444	72,698
Financing:			
Comparative transfers to other accounts	6,983	2,432	
Comparative transfers from other accounts	−12,109	−12,313	
Unobligated balance lapsing	685		
Budget authority	62,830	60,563	72,698
Budget authority:			
Appropriation	66,000	67,296	72,698
Transferred to other accounts	−3,170	−8,322	
Appropriation (adjusted)	62,830	58,974	72,698
Proposed transfers from other accounts for pay increases		1,589	
Relation of obligations to outlays:			
Obligations incurred, net	62,145	60,563	72,698
Obligated balance, start of year	12,396	10,631	11,384
Obligated balance, end of year	−10,631	−11,384	−14,672
Adjustments in expired accounts	−1,643		
Outlays	62,267	59,810	69,410

[1] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $9,569,000 (1968 adjustments, −$1,427,000); 1968. $4,314,000; 1969, $4,314,000; 1970, $4,314,000.

Mr. NATCHER. We take up at this time food and drug control. We have before the committee Dr. Herbert L. Ley, Jr., our new Commissioner.

Dr. Ley, it is a pleasure to have you appear before our committee at this time.

As I recall, you are the successor to Dr. Goddard.

Dr. LEY. That is correct.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. NATCHER. I notice that you have a biographical sketch, which we will include in the record at this point.

(The biographical sketch follows:)

HERBERT L. LEY, JR., M.D., COMMISSIONER OF THE FOOD AND DRUG ADMINISTRATION OF THE CONSUMER PROTECTION AND ENVIROMENTAL HEALTH SERVICE

Dr. Ley served for 2 years as Director of the Bureau of Medicine in FDA before his appointment as Commissioner. Before that, Dr. Ley has primarily served a professor and chairman of Departments of Microbiology at the Harvard School of Public Health and George Washington University. In 1961–63 he served as Chief of the Biological and Medical Sciences Branch and Acting Chief, Scientific Analysis Branch, Life Sciences Division, U.S. Army Research Office.

From 1947 to 1958 Dr. Ley was in the Medical Corps, as 1st lieutent to lieutent colonel U.S. Army Reserve colonel, general staff. His duties and responsibilities ranged from rickettsial disease research in Mexico and Malaya, as a staff member of the Army Medical Service Graduate School, and epidemiologist of the Medical General Laboratory in Tokyo, to that of Chief of the Preventive Medicine Research Branch in the Office of the Surgeon General of the Army.

Dr. Ley was born in Columbus, Ohio, in 1923, attended Harvard College as a national scholar, receiving a war certificate and honors in physics in 1943. In 1946 he received his M.D. gum laude from Harvard Medical School; and in 1951, from the Harvard School of Public Health, a master's in public health, magna cum laude.

Dr. Ley is licensed to practice medicine in the District of Columbia. His awards and honors include: Soma Weiss Prize, Harvard Medical School, 1946; Delta Omega, honorary society of public health, 1951; certified by the American Board of Preventive Medicine in Public Health, 1953; Bronze Star in 1954; Sigma Xi, 1959; Smith-Reed-Russell Honor Society, 1960; and the FDA Award of Merit, 1968.

Mr. NATCHER. Further, in examining this biographical sketch, Dr. Ley, I see that you were born in Columbus, Ohio, in 1923.

Dr. LEY. That is correct.

Mr. NATCHER. Dr. Ley, I believe that you have with you one or two of your associates. Would you like to present these people before you give us your statement?

Dr. LEY. I would like to present Mr. Rankin, Deputy Commissioner of the Food and Drug Administration and Mr. Rupert Moure, our executive officer.

Mr. NATCHER. Delighted to have all of you gentlemen before the committee at this time.

Dr. Ley, we will be pleased to hear from you.

Dr. LEY. Thank you, sir.

GENERAL STATEMENT

Dr. LEY. Mr. Chairman and members of the committee:

Thank you for this opportunity to discuss the Food and Drug Administration's budget requirements for the coming year.

As you know, there have been significant changes within the Food and Drug Administration this year. We are now a part of the Consumer Protection and Environmental Health Service of the Public Health Service. Important new responsibilities have been added to our mission of consumer protection as a result of the reorganization of the Public Health Service. These new responsibilities are in the areas of poison control, shellfish-sanitation certification, product safety, and pesticide controls. The chief advantage to the recent reorganization, in my opinion, is the potential for better consumer protection than now exists as a result of pulling together certain programs that were previously splintered throughout DHEW. The advantages to the reorganization are most apparent to us in FDA in the areas of product safety and pesticide control, where we can now see the interaction between various health hazards and measure their cumulative, as well as their relative, effects. Now that we have a broader responsibility in those areas, we can gain an overview of health problems that stem from many different environmental sources and can place emphasis where it is most needed or where it will have the widest ranging effects.

At the same time, we had adopted new approaches to carry out more effectively our ongoing responsibilities. These innovations include a program of intensified drug-plant inspections and a centralized system of drug analysis using automated methods and other assembly-line techniques.

We are asking for an increase in 1970 of 123 positions and $2,254,000. Of that amount, $1,128,000 is for built-in increases: The cost of within-grade pay increases and the cost of "annualizing" 10 days of the 1969 pay raise. The balance of $1,126,000 is needed to fund increases in the following specific drug programs:

First, new drug evaluation: We worked hard to eliminate the backlog of new drug applications that had developed subsequent to enactment of the Drug Amendments of 1962. We want to keep current with them in the future. We also want to devote more effort in 1970 to the review of NDA supplements and investigational drug applications. Backlogs exist in both of those areas, and the workload continues to increase. Our overall goal is to reduce the time required for FDA to review industry submissions so that promising new drugs will reach the market sooner. A total of 18 positions and $222,000 is requested in this area.

Second, drug information and research: We must continue to collect information about drugs, not only while they are in development, but after they are marketed as well. We plan to carry on our epidemiology programs, and we are asking for an additional eight positions and $495,000 to expand our research into the possible side effects of oral contraceptives and our studies of possible differences in clinical performance among drugs that are chemically equivalent.

Third, sample analysis: We believe it is important, not only to continue, but to expand the development of the analysis of drug samples at the National Center for Drug Analysis (NCDA) to supplement our activities in the field laboratories. By using assembly line methods and automated equipment, NCDA gives us the capability of selectively analyzing large volumes of drugs to pinpoint quality problems and indicate priorities for corrective action. This facility greatly enhances our capability to monitor the Nation's drug supply effectively. We

want to augment this program in 1970 with seven positions and $188,000.

Fourth, intensified inspections of drug firms: A steady increase in the number of drug recalls led us to seek a new approach to the surveillance of drug firms and their products. We now have under way the intensified inspection program in which the FDA gives continuing attention to a drug firm until that firm achieves compliance with current good manufacturing practices. An additional 90 positions and $221,000 are requested to carry this program into another 115 drug plants in 1970. We also plan to divert 50 positions and $458,000 to these inspections from other activities dealing with sanitation and economic problems associated with foods.

Mr. Chairman, that concludes my opening remarks. My staff and I will be happy to answer any questions that you and the other members of this subcommittee may have for us.

INCREASE FOR MEDICAL EVALUATION

Mr. NATCHER. Dr. Ley, the largest part of your program increase is $717,000 for medical evaluation. For 1965 this was budgeted for $4,360,000 and now for 1970 you are requesting $18,670,000.

I know that you have new laws to carry out but could you give us a little more detail on why such a terrific increase is necessary in just 5 years?

Dr. LEY. Mr. Chairman, the agency has been within this past 5 years in a state of transition following the Kefauver-Harris amendments. I also believe that industry has been in a state of transition. The situation which I met when I joined the agency in September of 1966, in the Bureau of Medicine, was one in which there was a tremendous backlog in both the original new drug applications, supplemental drug applications, and in investigational new drug applications. We worked extremely hard with the staff we had at that time to bring to a current status, that is, complete the total review within the required 180 days of all of the original new drug applications. We still have remaining a sizable backlog in new drug supplements and IND review that also must be reduced to zero or as near to zero as we can get. Once we achieve currency in IND, investigational new drug review applications, this will begin to pay rather large dividends in more efficient and prompt review of original new drug applications.

I would say, in part, the problem is one of slowly achieving a balance with the new requirements placed on the agency, part of which stems from additional responsibilities which we have received in the past 2 years from the National Academy of Science; National Research Council efficacy review of the drugs marketed in 1938 to 1962. The NAS/NRC review will bring into our Administration, as you see in the budget document, a great number of new supplements and will thus increase our workload over the next 2, 3 years.

Mr. NATCHER. Dr. Ley, does the law call for more evaluation than is really necessary as a practical matter?

Dr. LEY. Mr. Chairman, on the basis of my experience in the Bureau of Medicine prior to July 1 of 1968, I do not believe that the law does require more than is practical. The critical questions to which the law demands answers are two: One, is the drug safe for use in man? Sec-

ond, does it perform the function which the manufacturer claims for it?

In my experience the amount of review which the applications have been receiving is not in excess of that amount which would give answers to these two questions. I have publicly and also in discussion with members of the drug industry pled for what I consider the major change that would simplify our review process. The quality of information being supplied to us today from the drug industry is in the majority of instances of a very low quality, requiring unusual amounts of review to ferret out the really significant features of the data.

Mr. NATCHER. What do you foresee as the trend for the next 5 years with regard to the cost of this work?

Dr. LEY. Mr. Chairman, I indicated in remarks a few moments ago one of our objectives within this 5-year period is to achieve currency in our review of IND's. This is in the opening stage of the manufacturer's work on many of the new drug compounds to date, and the data are in the budget. The majority of these IND submissions are not reviewed within 60 days of receipt, nor is there an active dialog between the agency and the industry in terms of designing critical protocols to test the efficacy of the drug product.

As soon as the backlog in the IND area can be reduced to zero, the dialog between us and the industry can occur. At that point in time and with that change I would envision that the manpower required for review of the original new drug applications will decrease.

I do not see any change in supplementary drug applications review manpower but I can foresee within the 5-year period a decrease in manpower required for original new drug applications.

PERSONNEL INCREASE FOR REGULATORY COMPLICANCE

Mr. NATCHER. The largest personnel increase is 90 more people and $783,000 for regulatory compliance.

Mr. Harris, all of the requests for additional personnel in the Department's budget are purely academic if the personnal restrictions in the Revenue and Expenditure Control Act are not changed; is that correct?

Mr. HARRIS. I think that is generally correct, Mr. Natcher. I think it is conceivable that if the limitations were not removed, that the Secretary might want to place greater emphasis on certain areas, emphasis which would require increases above the presently authorized number of positions and you would have to do this by making offsetting larger decreases in other parts of the Department. The budget before you was formulated on the assumption that the personnel limitations in the Revenue and Expenditures Control Act would not be in effect in 1970.

Mr. NATCHER. Thank you, Mr. Harris.

ASSISTANCE TO DRUG INDUSTRY

Dr. Ley, as I understand it, this increase plus 50 people shifted from food programs is to help improve individual plants in the drug industry. Is that correct?

Dr. LEY. That is correct.

Mr. NATCHER. Tell us why this is necessary and a little more specifically what these people will do to help these plants.

Dr. LEY. The inspectional approach in the past has been to send one inspector into a plant to look at a single product which a firm was producing. This approach was considered to be not as efficient as one involving the entire plant.

Last July we began an intensified drug inspection program within a selected number of companies. Five hundred is the overall target. The difference here is to bring within that plant, for an estimated average of 1 man-year per plant or a four-man team for 3 months, for example, a team of FDA personnel who are experienced in manufacturing methods, quality control methods, and analytical methods. The objective is to review the entire operation of the plant for all products which this firm produces, and during the course of the inspection in a series of conferences with management, to achieve an overall compliance in the total plant which has never been approached before as an objective.

The response from industry to this approach has been extremely favorable. This has been one of the very pleasant surprises in following the development of this program over the past 9 months.

I might outline some of the types of errors that were discovered. One small firm in New York responsible for a large number of so-called generic products was using a 400-pound Toledo scale to weigh gram quantities of material. Ludicrous.

The plant promptly purchased the required scale for the production, and as we left the plant it was in compliance.

Our objective, to put it rather harshly, is to help the plant get into compliance or help it get out of business. To date there are four actions in the court out of 177 inspections that have been initiated in the past 9 months, which I think is pretty good evidence of the degree of compliance on the part of industry.

To my way of thinking, the staff is completely behind me both within the districts and at the headquarters that this approach to drug manufacturing has been one of the major changes in the past decade in food and drug operations. We see it as bringing about a major improvement in drug production in this country.

(The following additional information was submitted subsequently:)

Following is a status report of the intensified drug inspection program as of the end of Februry 1969:

Assigned	250
Initiated:	
Manufacturers	166
Commercial laboratories	11
In progress:	
Manufacturers	127
Commercial laboratories	9
Terminated voluntarily:	
Manufacturers	34
Commercial laboratories	2
Terminated pending legal action	4
Terminated legal action adjudicated	1

Mr. NATCHER. It seems to me that the plants would receive considerable financial benefit. If this is so, why shouldn't the plants pay for this expense?

Dr. LEY. I do not believe that plants achieve financial benefits directly, sir. They would have a stimulus on the advice given by our staff who may be competent in the area regarding changes in production details that lead to greater quality, lesser numbers of errors in labeling, things of this sort.

It would be extremely difficult in this area to establish any financial value to the plant resulting from the inspection. We do not offer a certificate of inspection or any other license as a result of this.

Mr. NATCHER. In your statement to the committee you point out on page 3, "A steady increase in the number of drug recalls led us to seek a new approach to the surveillance of drug firms and their products."

If we have fewer recalls, wouldn't you consider that beneficial as far as the firms are concerned? Wouldn't it save them considerable money?

Dr. LEY. This is one area in which I would grant, if a firm's number of recalls decreases, that it would have less expenses in terms of follow-through on the recall and in the products involved.

There is still a sizable investment in the batches recalled.

RESEARCH ON SIDE EFFECTS OF ORAL CONTRACEPTIVES

Mr. NATCHER. This really goes back to the medical evaluation, but what is the difference between the research you do in the potentially harmful side effects of oral contraceptives and the work in this area that NIH is doing?

Dr. LEY. Mr. Chairman, this is a question that we have had asked more than once. There are two programs: One under the Institute of Child Health and Human Development, and our program of contract research in the oral contraceptive area. These programs are very carefully coordinated through joint meetings of both staffs. We participate in their population planning councils. Dr. Corfman, Deputy Director of the Institute, participates as a very active member of our Obstetrics and Gynecology Advisory Committee, which has chief surveillance over these groups of products.

We are cognizant of the rather highly targeted study they have initiated in Walnut Creek with the Kaiser firm, an organization in California. As a matter of fact, we developed jointly the protocol that was eventually used.

Similarly, they are quite cognizant, through Dr. Corfman's participation in our Committee of the projects that are under consideration for funding within our agency. The types of research that are conducted are supplementary, not duplicative.

Mr. NATCHER. Mrs. Reid.

Mrs. REID. Mr. Chairman.

I just wondered, is there any target date as to when your study will be completed and a report issued?

Dr. LEY. Mrs. Reid, this is a very complicated question and I would like to spend 5 or 10 minutes, if I might, on the overall picture. You are speaking particularly of the oral contraceptive area?

Mrs. REID. Yes.

Mr. MICHEL. While on this subject, didn't we all get a task force report in our offices on the subject matter a few weeks ago?

Dr. LEY. You very likely received, Mr. Michel, a report of the Obstetric-Gynecology Advisory Committee to the Food and Drug Administration that was published in the fall of 1966. There is a second edition of that report which is scheduled for publication in the fall of 1969. The committee is working actively on this report at this time.

Does that answer your question?

Mr. MICHEL. I am not altogether sure. We got some task force report in this general area within the last month. I wondered if we are going to have some more studies. Are you going to study what the task force said or are you going to duplicate it? It gets a little confusing, as the chairman indicates.

Dr. LEY. The only task force report of this nature that I am aware of which deals with the safety and efficacy of these products is our OB-GYN Committee report published by the Government Printing Office. We are not going to duplicate the work of the OB-GYN task force.

If I may backtrack, Mrs. Reid, the oral contraceptive products were under investigation for the better part of the last 10 years. For a sizable period of time, up until the early sixties, these compounds or collection of compounds, most of them with at least two materials in them, were studied under investigational controls. The early data demonstrated practically total efficacy, 100 percent efficacy for all practical purposes. There were concerns expressed regarding the long-term safety of the use of these products. Some of the most vocal of the critics were members of our own advisory committee.

In the early 1960's the medications were released for marketing with labeling that recommended use only for a limited time period, originally 2 years and subsequently extended to 4.

In the summer and early fall of 1966, the OB–GYN Committee met on repeated occasions and produced a task force report which I think you referred to, Mr. Michel. They concluded that on the basis of the evidence, all evidence available and reviewed by the committee, there was no need at that point in time for restriction on the use of the product. The labeling was changed and products were marketed from that time on without any recommended limitations on time of use.

Any concerns about safety of the product up until that time were based largely on theoretical grounds, and to some extent on limited human experience. The one thing that you have to remember in the development of any drug product, whether oral contraceptives or others, is that the clinical studies on safety and efficacy—the new drug applications—are conducted in a very limited number of patients. Even 5,000 or 10,000 patients is a very small number in comparison with the 4 to 6 million which we estimate as the range of present usage in the female population of this country.

BRITISH STUDIES ON ORAL CONTRACEPTIVES

With any drug product, limited studies in 5,000 or 10,000 people may not turn up relatively rare side effects. In the case of the oral contraceptives, the British studies last year and our own studies which are underway at Johns Hopkins University indicate there is a seven- to tenfold increase in the risk of thromboembolism from use of the pill

when compared with nonusers. This figure seems to hold up. Still risks are relatively remote. The normal incidence of this condition in women is one in 20,000. The incidence associated with the pill would be one in 2,000.

Mrs. Reid. I read the other day about the danger of various blood types taking the pill.

Dr. Ley. May I elaborate on that as we go on?

Mrs. Reid. Yes.

Dr. Ley. We in the Food and Drug Administration responded to the British studies with a prompt change of the labeling of the product calling this fact to the attention of the physician prescribing the products.

We not only changed the labeling but we distributed—Dr. Goddard at the time—a letter to every physician in the United States pointing out the results of the British studies, their impact and evaluation by our OB–GYN Committee and giving the actual incidence figures.

We feel that with a product of this sort the balance between risk and benefit is still highly in favor of benefit and that our responsibility is to call all current information regarding side effects squarely and forcibly to the attention of every physician in this country. He is the one that must make the judgment and advise the patient.

Subsequent to that action, two other things have happened. One is the article that you saw in the paper the other day regarding the different incidence or frequency of blood clots in persons of different blood types. These studies appear to be general. They are not limited solely to women on the pill. Our staff has not yet seen the final published report, although we have been in close communication with Dr. Jick in Boston, one of the three authors of the report. The report is on its way to us at the moment in the Journal.

I have directed the Bureau of Medicine to bring the paper, when received, to the attention of the OB–GYN Committee and evaluate it critically from their point of view. My own staff informed me in the Bureau of Medicine that the results are as applicable to nonpill takers as pill takers. There appears to be no specific effect of pills in regard to a blood group above and beyond that reported last year in the British studies.

There is one other element that has been in the press here recently. This concerns the possible increased incidence of intraepithelial neoplasia in the cervix in users of the pill. The OB–GYN committee has considered very informal reports from groups who are still investigating the problem. You have to remember again that this condition is very frequent in women, particularly after several children and as they advance in age. The reported frequency of occurrence varies depending on the criteria of diagnosis. Such neoplasias can be observed in women not taking a pill as often as one in a thousand women. The very rough but still totally unofficial estimates are a twofold or fourfold increase in this. If the woman receives a Papanicolaou smear every 6 months, as is recommended, this lesion or displasia as it is called, can be identified early and the difficulty completely removed.

Under any conditions, it takes, in the estimate of our OB–GYN committee, a period of 6 or 7 years before this displasia progresses to anything more serious. We are concerned about following through on this. As soon as an article is eventually published, this will be reviewed

and the question of risk versus benefit will again be weighed. If the decision is still to permit marketing, labeling will be changed and the information transmitted to all physicians.

Mrs. REID. Thank you, Mr. Chairman.

NATIONAL CENTER FOR DRUG ANALYSIS

Mr. NATCHER. Dr. Ley, what is the National Center for Drug Analysis? Where is it located? What it is doing? Why does it need seven more people and an additional $188,000 for the fiscal year 1970?

Dr. LEY. I think that you should know about it. The National Center for Drug Analysis was created in St. Louis in the summer of 1966. The stimuli for its creation were several. The scientific stimulus was that drug analysis on a large-scale basis required an instrumentation and a capability in terms of personnel and physical support that are not readily available in each one of district laboratories. So that it seemed very logical to develop an automated laboratory which could handle large-scale chemical analyses of drug products in the marketplace in this country.

The second reason St. Louis was chosen, was that in the district itself, the workload was changing in nature so we could hardly justify its continuation as a district. Quite frankly, there was a building and there was a staff of people trained in the analytical chemical area, so that we drew upon both the building and staff and converted from a district to a drug analysis laboratory on a pilot basis.

Mr. NATCHER. At that point, Dr. Ley, in a different appropriation don't you have some money for a new building?

Dr. LEY. We have money for a building. We are considering the location of NCDA either in St. Louis or another area.

Mr. NATCHER. You have been bragging on this building you were using. You don't mean to tell us that you want to throw this aside this quickly and build a new one?

Dr. LEY. Mr. Chairman, when one tries a pilot study of this sort, one is happy to do with whatever facilities one can get. That was the case in St. Louis. To construct a permanent NCDA facility, we plan to reprogram same $3,900,000 from two construction projects, the St. Louis and New Orleans District offices, which we now consider of lesser priority. The estimated design and construction schedule cannot be determined at this time.

Mr. HULL. Would you yield at this point, Mr. Chairman?

Mr. NATCHER. Certainly.

Mr. HULL. Dr. Ley, where would you like to locate the Center and why?

Dr. LEY. If it is at all possible, I would like to locate the National Center for Drug Analysis in the St. Louis area. The primary reason is because we are presently operating the facility with 46 highly skilled and trained pharmaceutical chemists and support staff. Relocation of the facility outside of the St. Louis area would probably result in significant losses of these personnel. In addition, we already have the land set aside in the St. Louis area for this facility adjacent to a Veterans' Administration installation. We expect to share with them to the greatest extent possible the utilities and maintenance costs. We believe also that by remaining in St. Louis we would lessen to a great

extent the logistic problems which are attendant to moving a laboratory oriented function and reduce the loss of productivity which can result from a major geographic change.

Mr. NATCHER. What about the seven people? Are they necessary?

Dr. LEY. They are necessary, Mr. Chairman, in order to expand the analytical capabilities of the Center. Our projection of sample analyses in this facility beginning in 1968 started with 7,500 samples annually, and up to 1970 it is increased to 18,000 samples. Assuming the increase in staff requested and the instrumentation which is also involved, we propose by 1974 we will be doing 100,000 samples annually. There may be three, four, or 10 separate analyses per sample.

PRODUCT SAFETY

Mr. NATCHER. I notice that you are in the product safety business. Apparently there are some half a dozen other agencies in the same business, Dr. Ley. How is your activity different from that of the National Commission on Product Safety or the Federal Trade Commission, for instance?

Dr. LEY. Mr. Chairman, there is a wholly different type of relationship in these activities. The National Commission on Product Safety was established to review data and to recommend appropriate legislation for additional product safety measures. The FDA at this point, and before that Mr. Hansen's group with another portion of the Public Health Service have been involved in gathering material both for the Commission on Product Safety and for certain types of regulatory action which may be possible. As such, our product safety activities are at this point in time largely oriented to supporting the Commission in terms of medical data which it analyzes and reviews. More than 50 percent of an activity in the product safety area is concerned with flammable fabrics, which brings me to the relationship between product safety and FTC. This deals specifically with the flammable fabrics area in which the Department of HEW has the responsibility of medical evaluation and preparing a report to the FTC on an annual basis. The FTC is the responsible agency for action in the flammable fabrics area.

Mr. JOHNSON. May I add to that?

Mr. NATCHER. Yes.

Mr. JOHNSON. Actually the Food and Drug Administration has some very specific legislative responsibilities in this whole area of product safety. They operated even before the reorganization under the Hazardous Substances Act, and under the Child Protection Act. These were product oriented in terms of protecting the consumers from very hazardous kinds of products. This is not sufficient breadth of responsibility to really protect the public from products that are rather unsuspecting. He needs to be educated. We have an educational phase to the product safety program. We need to work with the industry to see how we can make products safer so that they are not only safe for the consumer to use but so the consumer knows how to use them safely.

The Federal Trade Commission is a little more involved in the advertising side of the game, not directly involved in the actual modi-

fication, if you will, or change in products per se. Whereas the Department of Commerce does have some specific recommendations in terms of regulations and recommendations to be made in terms of flammable fabrics, the basic responsibility for the epidemiology and the criteria associated with the establishment of standards in flammable fabrics is in the Public Health Service. It is in the Products Safety Office of the Food and Drug Administration.

Mr. NATCHER. Dr. Ley, you say on page 19 of the justifications, a research program will be developed in this area.

Why is this necessary?

Dr. LEY. In the product safety area?

Mr NATCHER. Yes.

Dr. LEY. The areas here that require——

Mr JOHNSON. Can I help a little bit?

Mr. NATCHER. Go right ahead.

Mr. JOHNSON. This is that area I was talking about a little earlier where prevention is worth all the medical care that you can buy and still have money left over. When you consider injuries in the home—around 18,000 Americans are killed and an additional 20 million injured. We need to know why these things happen. We have under way now—and we need more of these—research analysis groups—one in Boston and one in Denver.

Dr. LEY. Those are the two locations.

Mr. JOHNSON. They are undergoing a specific epidemiological study of the kinds of people that come into emergency treatment rooms; why are they injured; what type of accident; under what conditions did it happen; how could it have been prevented?

As I told you before, some of our accidents happen because the products themselves are not safe. If we can find out exactly which ones of these are involved we can put our technicians and engineers to work with industry to make them safer. Some of them happen because people don't utilize them properly. This is a behavioral sort of a thing and we need to educate the public to the safe use of things that they are going to have on a day-to-day-basis.

Statistically we are spread pretty thin. You need to broaden this kind of epidemiological treatment out into other sections of the country. When we really stop to think, we see that accidents are the number four cause of deaths in this country, and very few State and local health departments have either the staff, many of them have not the competence or the programs to begin to deal with it. If we value human life we need to work on those things that are causing us to either be killed or impaired because of something that is going on in the environment. This is the kind of research we are talking about: One, epidemiology; two, technology so that we can get all the bugs out of the kinds of things that cause people to be hurt.

Let me give you one example. The Product Safety Commission recently had a hearing on glass doors. One would think that this is no problem in our environment. Still, we have untold thousands of people injured every year simply because they walk through a glass door. We do know how we can avoid some of these things. Take the glass door. We know that we can put in a tempered glass pane that will shatter instead of breaking when you hit it. Then it does not create the same

amount of damage to the person as the current types of glass that we are using today.

We can work with the manufacturers and the people that have building codes to require these kinds of glass panes to be put in. It becomes a two-pronged approach, and this again is some aspect of the accident problem, product safety problem we have to work with.

If you recall, sometime back when the rotary lawnmower was first introduced into our society we had people cutting off their toes and feet right and left. We did work with the manufacturers of the lawnmowers and we believe that there has been some reduction in these kind of accidents. There are some things no matter how safe you make them people are going to use them wrong anyhow. Then we start working with the people on the behavior aspect and the health education the Surgeon General was talking about today.

Mr. NATCHER. Thank you, Mr. Johnson.

Mr. Michel?

Mr. MICHEL. Doctor, I have to run to another meeting but let me put a few questions here and if they need enlargement just see that the record is supplied.

Dr. LEY. Yes, sir.

PRICE OF ORAL CONTRACEPTIVES

Mr. MICHEL. Noting this $495,000 increase in the oral contraceptive area, how many firms do we now have? How many firms are making oral contraceptives?

Dr. LEY. Approximately 10 at this point. Many products with each firm.

Mr. MICHEL. What is the price spread among these? If there are 10 firms, how many actual different brands or makes, or whatever you call them, are there on the market?

Dr. LEY. I will have to get that. I can provide that for the record.

Mr. MICHEL. Also supply for the record the spread in price for a month's protection.

Dr. LEY. Yes, sir.

(The information follows:)

WHOLESALE PRICE QUOTATIONS FOR ORAL CONTRACEPTIVE DRUGS, MAR. 18, 1969

Drug firm and product	Form and number of months supply	Unit cost per month
Eli Lilly & Co.: C-Quens	Folders/6	$1.35
Mead Johnson & Co.: Oracon	Dispensers/6	1.35
Ortho-Pharmaceutical Corp.:		
Ortho-Novum, 10 mg.	Dialpak/1	3.60
Ortho-Novum, 2 mg.	Dialpak/6	1.41
Ortho-Novum, 1 mg.	do	1.26
Ortho-Novum, 1 mg., 28-day		(1)
Ortho-Novum 1/80, 21-day		(1)
Ortho-Novum 1/80, 28-day		(1)
Ortho-Novum Fe-28		(1)
Ortho-Novum SQ	Dialpak/6	1.41
Parke-Davis & Co.:		
Norlestrin 2.5 mg.	Folder/5	1.35
Norlestrin 1 mg., 20-day	do	1.20
Norlestrin 1 mg., 21-day		(1)
Norlestrin 1 mg., 28-day	Folder/5	1.29
Norlestrin Fe, 28-day		(1)
G. D. Searle & Co.:		
Enovid 5 mg.	Bottle/5	1.75
Enovid-E	Box/6	1.35
Ovulen	Compaks/6	1.20
Ovulen-21	do	1.20
Ovulen-28		(1)
Ovulen Fe-28		(1)
Syntex Laboratories, Inc.:		
Norinyl 10 mg.		(1)
Norinyl 2 mg.	Dispenser/6	1.40
Norinyl 1 mg.	Dispenser/5	1.25
Norinyl 1 mg, 21-day		(1)
Norinyl 1+80, 21-day		(1)
Norinyl 1+80, 28-day		(1)
Noriday	Package/6	1.32
Norquen	Dispenser/6	1.38
Upjohn Co.: Provest	Daypak/1	1.32
Wyeth Laboratories:		
Ovral	Dispenser/6	1.35
Ovral Fe, 28-day		(1)

[1] Information and prices not readily available.

Source of price quotations: 1969 Drug Topics Red Book.

INSPECTION OF DRUG PLANTS

Mr. MICHEL. On this item of drug firm inspections, you are asking for an increase of 90 positions. How many are there now in that category?

Dr. LEY. 240 at this point.

Mr. MICHEL. You want 90 more?

Dr. LEY. That is right.

Mr. MICHEL. That is a 35-percent increase in 1 year?

Dr. LEY. Yes, sir. However, the increase will be phased in at a rate of 10 new inspectors per month for 9 months until the total of 90 positions have been filled. This will involve the expenditure of 30 man-years of effort in the current fiscal year.

Mr. MICHEL. How many drug plants are there in the country?

Dr. LEY. Approximately 11,000.

Mr. MICHEL. What is your mission, to have an inspector in every one of these plants?

Dr. LEY. No, sir. Our mission is to cover the 500 major producers of drugs in the marketplace of this country. There are 500 that you can identify as major source.

Mr. MICHEL. Since you don't have a sufficient number to give them all the surveillance you want, what is your criteria for setting a system of priorities as to which plants get this and which do not?

Dr. LEY. This is based on several features. Two of them very importantly are the total drugs produced by a particular firm; and secondly, the number of recalls which that firm has been faced with in recent times. Another factor is the inspectional history of the firm.

DRUG RECALLS

Mr. MICHEL. On that subject, could we have supplied for the record the number of recalls for the past 5 years?

Dr. LEY. We have that.

(The information follows:)

Drug recalls, 1964–68

1964	110
1965	340
1966	538
1967	530
1968	640

FINGERNAIL STRENGTHENERS

Mr. MICHEL. This is a question I have to ask because of one of my secretaries. They have been using some nail-strengthener product. They complain they are splitting their nails. Do we have anything on that? Do you have anything of significance on that that we can pass on to our secretaries with respect to their nail-strengthening products?

Dr. LEY. Yes, sir; however, I am going to have to give you the same answer I give my wife. She has the same problem. There is nothing that I can advise her to use that will solve her problem. We were at one point within the past 2 years ready to embark on a $50,000 clinical study at Georgetown to determine whether the claims for gelatin nail strengthener that one takes by mouth had any truth in fact. We had other more important projects at the time and elected not to proceed with that study. There is nothing in the way of good, hard facts to support the claims for any of these products.

ANIMAL FEED ACTIVITIES

Mr. MICHEL. The Department of Agriculture is requesting funds to study antibiotic feeding and I note that you are doing some studies on the transfer of antibiotics to man. Are you working with the Department of Agriculture?

Dr. LEY. Our Bureau of Veterinarian Medicine is in close contact with them.

Mr. MICHEL. Are you coordinating your work on salmonella with the other departments doing similar work?

Dr. LEY. Yes, sir. We have recently received a major report from the National Academy on salmonella as a public health problem. This has been widely distributed among the other interested in involved parties.

INTERSTATE MILK CERTIFICATION PROGRAM

Mr. MICHEL. The interstate milk certification program has heretofore been handled by Urban and Industrial Health. Somewhere along the line we heard that they are thinking of putting that in your shop.

Dr. LEY. The program has not yet been transferred. Mr. Johnson might speak to that.

Mr. JOHNSON. That is correct. That program will be transferred into the Food and Drug Administration, which will be one of the remaining acts of consolidation of like programs within the same Administration.

Mr. MICHEL. That would be as of what date?

Mr. JOHNSON. This is under preparation now. In terms of moving the budgets and staff and the program, I would say in the next 30 to 60 days. Before the end of the fiscal year.

Mr. MICHEL. Does this contemplated move have the approval of the big milk-producing areas around the country?

Mr. JOHNSON. We had a meeting with them. As a matter of fact, Dr. Ley attended that meeting in Wisconsin. After we explained what it was that we were trying to do, there would be essentially no change in the immediate method of operation as far as the milk producers were concerned. They see no objection to this move.

Mr. MICHEL. Will you be using roughly the same number of people and resources?

Mr. JOHNSON. We will be using the same number of people and resources until such time as we see there will be a need for additional and we would come back to this committee.

Mr. MICHEL. I thought you were going to tell me how much more efficiently you could do it for less. Thank you.

DIFFERENCES IN CHEMICALLY EQUIVALENT DRUGS

Mr. NATCHER. Mr. Shriver?

Mr. SHRIVER. Thank you, Mr. Chairman.

On page 2, Dr. Ley, of your statement, you mention possible differences in clinical performance among drugs that are chemically equivalent. Would you explain that?

Dr. LEY. The number of instances in which there have lack of equivalencies demonstrated has been rather few. We state that there have been fewer than two dozen fully documented instances in which drugs which are chemically equivalent do not produce equivalent responses in man. The best example that I can give you is chloramphenicol capsules which we acted on in the fall of 1967, in which case about six other manufacturers entered the marketplace following the expiration of Parke, Davis patents on chloramphenicol. These products were admitted to the market place after prior discussion with us on the basis of our belief that the product which could be synthesized, chemically tested precisely, and produced by good manufacturing practices would produce comparable results in man.

We were wrong. The cause for the difference in performance is still not adequately identified. It is obvious, however, that all of the new products failed to produce blood levels of chloramphenicol as rapidly as the reference product which was originally marketed. We reacted to that, giving the manufacturers, the six new ones, the choice of two courses of action: Either (*a*) they would have to produce clinical data to prove that their product cured typhoid fever, salmonellosis, and other diseases for which the drug is indicated, or (*b*) they could modify their formulation so that their product produced the

same blood levels as the reference Parke, Davis product when given to human subjects in an appropriate controlled design.

They chose the latter course of action and two of the six are now back on the market with chloramphenicol which is absorbed just as promptly and effectively as the Parke, Davis product. Our objective, across the board, is to insure that all products of the same name produce the same results in man. It will take some time to achieve that, but the increases requested are very important for continuation of this type of work.

INVESTIGATIONAL AND NEW DRUG APPLICATIONS

Mr. SHRIVER. How much of the budget increase requested to review industry applications for investigational and new drugs is to be used to process the increase in the number of such applications?

Dr. LEY. This is a very difficult question to answer, Mr. Shriver. Because of the backlog figures that I informed you about earlier, we anticipate as nearly as we can at the present time, an increase in the number of supplementals and originals during the next year, as follows:

We anticipate an increase of approximately 20 IND applications, approximately 50 original new drug applications, and because of the NAS/NRC review, approximately 250 supplemental drug applications above and beyond the numbers submitted last year.

Mr. SHRIVER. On page 13 of the justifications, you point out the law which provides that clinical tests in humans can begin as soon as the investigational new drug is submitted to your agency. You also say that Food and Drug Administration tries to review all such drugs within 60 days of receipt. Is that adequate protection for those persons involved in clinical tests?

Dr. LEY. This point was argued in some detail in 1962 in the Kefauver-Harris hearings. Canada has a different system. Our system was the one chosen by the Congress at that time. It perhaps does not give as complete assurance of safety as the Canadian system but, on the other hand, if we review the applications promptly we can react and terminate the investigation if this is necessary.

Mrs. REID. Would you yield?

How many times or in how many instances have you had to suspend clinical tests on humans?

Dr. LEY. The number inactivated in any one year is about 500 or 600. Of these, I would say it would be most unusual that more than 5 percent would be terminated at our direction. There is a formal procedure for doing this. The manufacturer is notified and given 10 days to provide additional information to justify continuation. If it is not available then we terminate.

USE OF NONPROFESSIONALS

Mr. SHRIVER. On page 14, you say that preliminary studies indicate that nonprofessionals can be trained to assist professionals on some of your review work.

Dr. LEY. For some types of review, this is very true.

Mr. SHRIVER. Have you started any such programs?

Dr. LEY. Yes, sir. The areas that are principally of significance here, for example, are those checking labeling which essentially is a proofreading-type operation which can be done very commonly by a nonprofessional. They still have to have a high degree of skill and they have to know the vocabulary in the area. Another area where we have utilized professionals at a lower pay group for work is with the pharmacists, who themselves have been doing some of the types of work that pharmacologists have been doing before. This is a substitution of a lower paying professional for a higher one.

These are the types of changes that we have put into effect, and there are others that may be worthy of further consideration as well. There is no substitute, however, for a final review of animal pharmacology data by a trained pharmacologist or review of manufacturing and chemical data by a person experienced in this area. At the moment we are considering a pilot study to transfer to one district on a pilot basis the supplements which are submitted to us solely as a result of chemical or manufacturing changes. We believe that district personnel, who have in general lower average grades than at headquarters, are not only capable of doing this job but may be able to do it better than our headquarters staff because of their close contact with the manufacturers in the field. These are the types of substitutions that we have in mind.

BACKLOG OF DRUG APPLICATIONS

Mr. SHRIVER. You request an increase of 10 positions and $114,000 for the review and evaluation of investigational drugs and new drug applications. Since the investigation of new drugs backlog has been reduced steadily, it appears that there is no backlog of the new drug applications, so why is the increase necessary at this time?

Dr. LEY. I wish that I could say that at this point there is no backlog in original new drug applications. The last month's management report which I received indicates there are approximately 20 such originals over the 180-day period. We are going to have to readjust some of the personnel between IND and NDA review in the remaining 3 months of this year to bring that back down to where I want to see it the 1st of July.

The best answer I can give is that the 1969 estimate of zero as of the end of this fiscal year is not correct as of today.

Mr. SHRIVER. I think I remember that.

Dr. LEY. The budget submission did state zero but the actual figure today is as indicated.

RESEARCH IN DRUG EQUIVALENCY

Mr. SHRIVER. On page 17 you request an increase of eight positions and $220,000 for expanded research in drug equivalency.

Dr. LEY. Right.

Mr. SHRIVER. While at the same time you say, "There is no evidence at this time of a major problem in this area." Why is that necessary?

Dr. LEY. The facts are as I indicated: There have been fewer than two dozen well-documented examples to date. We have within the past 6 months seen a major recall of millions of tablets of a product by Merck because of this type of problem. There is continuous strong

pressure on the agency in the area of drug equivalency. We are reviewing data at the moment on one of the tetracycline products which indicates lack of equivalency on which we are going to be forced to take regulatory action.

Because the number of examples is increasing, we have to learn more about this situation.

FLAMMABLE FABRICS

Mr. SHRIVER. You mention on page 19 your activities regarding flammable fabrics and all of us on this committee are interested in the preventive action to reduce this hazard.

Just for the record, you do not need to discuss it here, would you put in the record what progress has been made recently to update last year's hearings?

Dr. LEY. We will be glad to.

(The information follows:)

FLAMMABLE FABRICS

This is a report on the activities connected with investigation of burn injuries, particularly those associated with flammable fabrics, since the fiscal year 1969 hearings.

This information is summarized from data in our files and is based on some 303 indepth investigations which were completed as of October 1968. These investigations were conducted primarily by injury study units of the Office of Product Safety in Boston, Mass., and Denver, Colo., and by the University of Iowa Institute of Agricultural Medicine under contract.

The garments most frequently involved in fabric burns were shirts and blouses, night clothes, and trousers. The types of fibers used for the clothing items, in terms of the frequency of injury involvement, were found to be: cotton, 75 percent; nylon, 10 percent; other synthetic fibers, 6 percent; cotton combinations, 5 percent; and all other fibers, 3 percent.

Since Dr. Prindle testified last year we have revised estimates of the number of burn injuries upward to 175,000 per year and the number of deaths 4,000 per year.

Secretary Finch has recently commented to Secretary Stans on the need for a new standard on flammable fabrics and has listed five principals which our Department recommends be reflected in such a standard.

The progress in the flammable fabrics area during fiscal year 1969 was made without benefit of the funds and positions appropriated by the Congress for this work. Under the recent Revenue and Expenditures Act the positions were not able to be filled.

During fiscal year 1970 the flammable fabrics program will receive top priority in the Office of Product Safety. We will make indepth investigations of burn injuries and continue to accumulate the data needed for promulgation of flammable fabrics standards by the Department of Commerce.

MASTER DICTIONARY OF DRUGS

Mr. SHRIVER. On page 26 you point out the development of an FDA master dictionary of drugs. Is this the same as the United States Compendium of Drugs requested last year?

Dr. LEY. No, sir; this is quite separate and distinct. The dictionary is a number coding system for drug products in this country. As we in FDA see this, the principal benefits of the drug dictionary and publication of a number code system for drugs would be in poison control centers and hospitals. When a patient sees a new physician and brings in a drug product, he may not even known the name of the drug.

There is frequently no way that the new physician can tell what the drug is unless he goes back to the original pharmacy which dispensed it, which is sometimes difficult.

Medically, we feel it would be highly advantageous from the viewpoint of poison control and medical treatment to have such a dictionary available. It would also be crucial for many of our internal management reports.

Mr. SHRIVER. What will that cost?

Dr. LEY. The cost at this point in time for the processing of the coding material coming in from firms runs $136,000 a year. The publication and distribution twice yearly of the listing, three copies to every hospital and poison control center in the United States, we estimate would amount to an added cost of about $600,000 annually.

CONGRESSIONAL LIAISON ACTIVITIES

Mr. SHRIVER. Under the item "Office of Commissioner" you request appropriations for congressional liaison activities. How many positions and how much money is involved in this area for 1970?

Dr. LEY. I am going to have to ask my executive officer to answer this question.

Mr. MOURE. There are four individuals and $40,000.

Mr. SHRIVER. Thank you.

COUNTERFEITING OF DRUGS

Mr. NATCHER. Mrs. Reid?

Mrs. REID. In the justification, Dr. Ley, you say you will continue to stop the counterfeiting of drugs. How much of a problem is this today?

Dr. LEY. There was a recent meeting in New Jersey at Rutgers in which this problem was discussed. The impression reached was that counterfeiting is still with us and indeed it is probably much more sophisticated today than it has been in the past.

The types of problems we have faced in the past have been illegal marketing of such items as amphetamines, barbiturates, and so forth, which are now the responsibility of the Department of Justice. We have not had any recent reports of significant counterfeiting of drugs, and I will check with Mr. Rankin to see if he is aware of any in recent times.

Mr. RANKIN. I am not aware of any.

Dr. LEY. But the reaction in industry is that this is presently an important problem and conceivably could become more important as time goes on.

PACKAGING

Mrs. REID. I think the danger of food contamination from pesticides and food additives is easily understandable by the average person, but you say another major source is packaging material, which most people do not stop to consider. Is this a growing problem?

Dr. LEY. This is not a growing problem because I believe it is fairly well under control. This is the indirect food additive area.

Let's take, for example, a firm which decides to package sliced ham in a see-through plastic container. There are certain plastics approved for this purpose, which do not contaminate the ham. There are certain plastics which would contaminate the ham and would not be acceptable for this purpose.

There is a fairly good program in effect for describing standards for packaging material.

COSMETICS

Mrs. REID. You mention in your justifications that recently bacterial contamination of some cosmetics presents a new danger, particularly to infants. Do you foresee the need for legislation in this area and what do your studies show?

Dr. LEY. The studies in this particular product, which was a baby lotion, showed significant contamination due to the organism involved, which is not normally pathogenic for man, but which in large numbers can be, and particularly in young infants. There have been two reports of serious injury which are currently being investigated, presumably as a result of exposure of the infant to the baby lotion.

I do not believe that it is necessary for us to have new legislation to insist that harmful microorganisms be kept out of such things as baby lotions. However, the overall area of cosmetics is a very difficult one at this particular time because we have not been able to reach any agreement with the cosmetic industry in terms of possible preclearance of cosmetics before they are admitted to the market. There is a legal question at the moment which is before the courts and the matter is on dead center pending the outcome of that case.

Mrs. REID. You were talking about investigating products to be sure they do what they say they are supposed to do. Does this apply to cosmetics?

Dr. LEY. It does not.

The only area in which we are authorized to make certain the product does what it claims to do is in the human and veterinary drug area.

Mrs. REID. Cosmetics are not covered by this?

Dr. LEY. If there is damage or injury to the user, then we may move to take action against the product. This is the same way that we respond to injuries with household cleaning materials, but in most cases there has to be demonstrated injury before we may take action.

Mrs. REID. I think this is an area which should be closely examined.

Thank you, Mr. Chairman.

Mr. NATCHER. Dr. Ley, we want to thank you for an excellent statement, and certainly we want to wish you the best of everything in your new assignment.

JUSTIFICATION MATERIAL

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Food and Drug Control

Amounts Available for Obligation

	1969	1970
Appropriation	$67,296,000	$72,698,000
Transfer to:		
"Operating expenses, Public Buildings Service," General Services Administration	-62,000	---
"Salaries and expenses," Department of Justice	-8,260,000	---
Comparative transfers to:		
"Salaries and expenses, Office of the Administrator"	-2,380,000	---
"Salaries and expenses, Office of Community and Field Services"	-52,000	---
Comparative transfers from:		
"Patient care and special health services"	568,000	---
"Communicable diseases"	8,368,000	---
"Urban and industrial health"	3,377,000	---
Cutback required by PL 90-364	-835,000	---
Total currently authorized for obligation	68,020,000	72,698,000
Plus: proposed release of reserve for increased pay costs	835,000	---
proposed transfer of reserves from "communicable diseases" for increased pay costs	1,589,000	---
Total obligations	70,444,000	72,698,000
Disposition of cutback:		
Increased pay costs in this account	835,000	---

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
12	1. Medical evaluation:						
12	a. Research grants...		$821,000		$821,000		---
12	b. Direct operations...	754	17,953,000	780	18,853,000	+26	+$900,000
	Subtotal...	754	18,774,000	780	19,674,000	+26	+900,000
22	2. Scientific research and evaluation:						
22	a. Research grants...		870,000		870,000		---
23	b. Direct operations...	929	15,508,000	936	15,969,000	+7	+461,000
	Subtotal...	929	16,378,000	936	16,839,000	+7	+461,000
29	3. Education and voluntary compliance.....	72	1,275,000	72	1,296,000	--	+21,000
32	4. Regulatory compliance:						
32	a. Research grants...		690,000		690,000		---
32	b. Direct operations...	2,139	28,515,000	2,229	29,338,000	+90	+823,000
	Subtotal...	2,139	29,205,000	2,229	30,028,000	+90	+823,000
38	5. Program direction and management services..	353	4,812,000	353	4,861,000	--	+49,000
	Total obligations....	4,247	70,444,000	4,370	72,698,000	+123	+2,254,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions	4,247	4,370	+123
Full-time equivalent of all other positions	75	75	--
Average number of all employees	4,222	4,280	+58
Personnel compensation:			
Permanent positions	$44,039,000	$45,648,000	+$1,609,000
Positions other than permanent	127,000	128,000	+1,000
Other personnel compensation	400,000	400,000	---
Total personnel compensation	44,566,000	46,176,000	+1,610,000
Personnel benefits	4,311,000	4,457,000	+146,000
Travel and transportation of persons	1,876,000	1,937,000	+61,000
Payment to interagency motor pools	452,000	466,000	+14,000
Transportation of things	439,000	455,000	+16,000
Rent, communications, and utilities	1,568,000	1,724,000	+156,000
Printing and reproduction	480,000	486,000	+6,000
Other services	9,657,000	9,600,000	-57,000
Supplies and materials	2,346,000	2,466,000	+120,000
Samples	387,000	403,000	+16,000
Equipment	1,971,000	2,137,000	+166,000
Lands and structures	6,000	6,000	---
Grants, subsidies, and contributions	2,381,000	2,381,000	---
Insurance claims and indemnities	4,000	4,000	---
Total obligations by object	70,444,000	72,698,000	+2,254,000

Summary of Changes

1969 estimated obligations	$70,444,000
1970 estimated obligations	72,698,000
Net change	+2,254,000

	1969 Base Positions	1969 Base Amount	1970 Change from Base Positions	1970 Change from Base Amount
A. Increases:				
1. Built-in:				
(a) Annualization of 1969 pay raise costs	--	---	--	$100,000
(b) Within-grade and longevity costs	--	---	--	1,028,000
Subtotal	--	---	--	1,128,000
2. Program:				
(a) Medical evaluation Direct operations	754	$17,953,000	26	717,000
(b) Scientific research and evaluation Direct operations	929	15,508,000	7	188,000
(c) Regulatory compliance Direct operations	2,139	28,515,000	90	221,000
Subtotal	--	---	123	1,126,000
Total Increases	--	---	123	2,254,000
Net change	--	---	123	2,254,000

EXPLANATION OF CHANGES

Medical Evaluation

Direct operations

A program increase of 26 positions and $717,000 is requested to expedite the review of new-drug submissions from industry, to fund further research into the potentially harmful side effects of oral contraceptives, and to support additional drug-equivalency studies. FDA is required by law to evaluate New Drug Applications and supplements within 180 days, and it has a responsibility to shorten the length of time it takes to review all industry submissions. Oral contraceptives are used by millions of women in this country today; more information is needed on the long-term effects of these potent and widely-used drugs. It is also important for FDA to explore more fully the reasons underlying the apparent differences in the clinical effect of certain drugs that are chemically equivalent.

Scientific Research and Evaluation

Direct operations

A program increase of seven positions and $188,000 is requested to expand operations at the National Center for Drug Analysis to analyze an additional 6,000 drug samples in 1970. The use of automation and production-line methods at the Center enables FDA to broaden the scope of its surveillance of marketed drug products; FDA expects to analyze about 18,000 drug samples at the Center in 1970.

Regulatory Compliance

Direct operations

A program increase of 90 positions and $221,000 is requested to conduct additional intensified drug inspections in 1970. With this increase and with resources diverted from other areas, FDA plans to carry this program to 340 of the 500 major drug firms in the country that have been selected for eventual coverage. These comprehensive inspections are designed to reduce the drug-recall rate, which has continued to rise over the past several years, by bringing drug firms into line with the good-manufacturing practices recommended by FDA.

Explanation of Transfers

	1969 Estimate	Purpose
Transfer to:		
"Operating Expenses, Public Buildings Service," General Services Administration.....	$62,000	Rental of space.
"Salaries and expenses," Department of Justice.....	8,260,000	Transfer of drug abuse control function.
Comparative transfers to:		
"Salaries and expenses, Office of Administrator," Consumer Protection and Environmental Health Service.....	2,380,000	Transfer of certain administrative functions and consumer-specialist activities.
"Salaries and expenses, Office of Community and Field Services".....	52,000	Transfer of consumer-specialist functions.
Comparative transfers from:		
"Patient care and special health services".....	568,000	Transfer of poison-control activities
"Communicable diseases".....	8,368,000	Transfer of pesticide activities.
"Urban and industrial health"..	3,377,000	Transfer of shellfish and product-safety activities.

Food and Drug Control

	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$12,132,000	$13,800,000	$13,800,000	$13,800,000
1961	19,176,000	18,648,000	19,176,000	18,848,000
1962	23,580,000	23,580,000	22,000,000	23,000,000
1963	31,826,000	29,064,700	30,564,700	29,064,700
1964	35,805,000	35,805,000	35,805,000	35,805,000
1965	40,370,000	40,370,000	40,370,000	40,370,000
1966	53,079,000	53,079,000	53,079,000	53,079,000
1967	65,139,000	65,139,000	61,685,000	61,685,000
1968	66,749,000	66,225,000	66,000,000	66,000,000
1969	69,801,000	67,296,000	67,296,000	67,296,000
1970	72,698,000			

Introduction

The Food and Drug Administration (FDA) conducts multiple programs with a single goal--consumer protection. FDA's mission is to ensure that (1) food is safe, pure, and wholesome; (2) drugs are safe and effective; (3) cosmetics are harmless; (4) therapeutic devices are safe and effective; and (5) that all of the above are honestly and informatively labeled and packaged. In addition, FDA takes steps to ensure that dangerous household products carry adequate warnings for safe use and are properly labeled; that counterfeiting of drugs is stopped; and that personal injury from flammable, poisonous, and other hazardous products is minimized.

To accomplish its mission, FDA conducts research; works with industry to promote voluntary compliance; conducts a program of consumer information and education; works with State and local agencies; clears new drugs for safety and effectiveness before they are marketed; administers grants and contracts for program-oriented research; establishes safety tolerances for food additives, pesticide residues, and some color additives; operates the national clearinghouse for poison control centers; and identifies hazardous consumer products. Also, FDA inspects factories, warehouses, and distributors; samples and examines interstate and imported shipments; prevents the use of unfair or deceptive methods of packaging or labeling; reviews and evaluates the labeling and safety of household products containing hazardous substances; prevents the sale of dangerous toys and products too hazardous to be adequately labeled for safe home use; works with the Department of Justice to bring court actions where necessary; checks claims for medical devices, vitamins, and "miracle cures"; takes action against false claims and bogus devices; evaluates State shellfish sanitation programs; and establishes food standards.

The programs in support of these objectives are discussed in five basic budget activities: (1) Medical Evaluation; (2) Scientific Research and Evaluation; (3) Education and Voluntary Compliance; (4) Regulatory Compliance; and (5) Program Direction and Management Services.

The programs discussed in these activities are in most instances closely interrelated and complementary to the achievement of an overall administration objective. For example, one goal is to protect the consumer from drug hazards. Programs to accomplish this goal can be found in each budget activity. The actual pre-clearance review of an industry application to investigate and/or market a new drug falls under the Medical Evaluation activity. The development of testing procedures and standards for monitoring a drug's purity and potency comes within the Scientific Research and Evaluation activity. The Regulatory Compliance activity encompasses the actual task of checking for good manufacturing practices and checking the integrity of drug preparations on the open market, and the Education and Voluntary Compliance activity concerns itself with the conduct of workshops aimed specifically at promoting voluntary compliance on the part of the drug industry.

In 1970, additional resources are requested to enhance FDA's ability to review industry applications for investigational and new drugs and to intensify its efforts to find answers to the problems associated with drug equivalency and oral contraceptives. An increase is requested to provide additional support to the National Center for Drug Analysis and to expand the intensified drug inspection program.

1. Medical evaluation

This activity centers on the Food and Drug Administration's (FDA) responsibility to assure the safety and efficacy of drugs and devices for man and animals, and to evaluate substances found in or proposed for use in foods, drugs, veterinary preparations, cosmetics, and hazardous household substances.

In July 1968, reorganization of the Public Health Service transferred additional responsibilities to FDA and broadened the scope of this budget activity to include programs to reduce accidental hazards from consumer products and from poisoning by toxic substances, and epidemiological studies of pesticides and their effects on man.

a. Research grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Noncompeting continuations.	13	$649,000	8	$398,000	-5	-$251,000
New grants	3	172,000	7	423,000	+4	+251,000
Total	16	821,000	15	821,000	-1	---

Basic research is conducted to develop data on injury causation as related to product hazards and product use. Research grants are awarded to institutions, organizations, and individuals scientifically qualified to answer questions about cause-and-effect relationships between certain injuries or accidents and product characteristics. Questions such as the degree to which product hazards are influenced by use patterns must be answered before control measures can be developed to minimize or eliminate such hazards. Research grants are also awarded to develop criteria for safety standards and methodology for determining compliance with standards. In the area of poison control, research grants are awarded in the field of pharmacology and toxicology to develop better understanding of the effects of poisonings and to collect information to improve treatment. Research on treatment during the past decade has contributed dramatically to the reduction of mortality and morbidity of certain poisonings, and continued work in this area holds further promise. Overall, research grants provide a basis for mission-oriented programs to reduce the estimated annual 18,000 deaths and 20 million injuries associated with chemical, electrical, and mechanical products.

b. Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	754	$10,072,000	780	$10,642,000	+26	+$570,000
Other expenses..	--	7,881,000	--	8,211,000	--	+330,000
Total	754	17,953,000	780	18,853,000	+26	+900,000

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(1) Availability of drugs	333	$4,906,100	351	$5,224,700	+18	+$318,600

One of the major objectives in this area is to ensure the safety and efficacy of drugs, and this is accomplished in part by the pre-market clearance of drugs. The Federal Food, Drug, and Cosmetic Act, as amended, requires that an approved New Drug Application (NDA) be in effect for a new drug before it may be marketed. The statute also requires FDA to regulate the interstate shipment of new drugs intended for clinical investigation to ensure that the people involved in such trials are properly safeguarded.

IND and NDA review

There are many stages in the development of a new drug, but at some time it must be tried out on humans. Before such tests can begin, drug manufacturers must claim exemptions from the ban on interstate distribution of any unapproved new drug, so that they can send drugs to clinical investigators for testing. This exemption claim for an investigational new drug (IND) contains information on the results of animal pharmacology studies performed which indicate the reasonable safety of the drug for investigation in man. It also contains a plan for the clinical investigation, a description of the chemical composition and manufacturing data for the drug, and the qualifications of the investigators. Since the law provides that clinical tests in humans may begin as soon as the IND is submitted, prompt review of the submission is essential to ensure that the clinical tests proposed are safe. If they do not appear to be safe, FDA must stop tests immediately. In addition to the initial evaluation of the IND, amendments and progress reports are reviewed to maintain surveillance over the investigation until it is completed or terminated.

When clinical trials are completed, manufacturers may submit a new drug application proposing that a drug be sold to the general public in either prescription or over-the-counter form. At this point the NDA is reviewed by FDA to verify that the methods, facilities, and controls for manufacturing the drugs are adequate, that the drug is safe and effective, and that the proposed labeling is accurate. Approval of the NDA authorizes commercial distribution of the drug.

Over the next five years, an estimated 5,000 new drugs will undergo clinical testing, and some of them may be tested on more than a thousand patients. FDA places a great deal of importance on the prompt review of IND's, because human lives may be at stake when a clinical investigation is initiated. Therefore, FDA strives to review all IND's within 60 days of their receipt. In 1968, FDA reduced from 640 to 304 the long-standing backlog of IND's that had gone more than 60 days without an initial review, despite a 25-percent increase in submissions. FDA plans to reduce that backlog to 200 in 1969 and 100 in 1970. After initial review, an IND may remain active for years; consequently, provision must be made for the continuing surveillance of an increasing number of active IND's.

FDA's primary goal in the area of drugs is to prevent unsafe and ineffective drugs from reaching the market. The agency also hopes to shorten the length of time that it takes for a new drug to be approved. Different ways are being sought to expedite the review of New Drug Applications, and one way is to work more closely with drug manufacturers and clinical investigators during the early stages of drug testing--the IND phase. If the initial tests of a drug are conducted along predetermined lines in anticipation of FDA requirements for the subsequent NDA, the review time for the NDA can then be shortened. Action is being taken to improve procedures between investigators and FDA. In 1969 and 1970, FDA will continue to investigate situations where inadequate procedures are suspected and will conduct conferences and seminars for investigators involved in testing certain drugs.

A long-range goal is to reduce the overall development time for new drugs from an average of seven years to five years or less by 1974. FDA is working closely with the drug manufacturers to assist them in the design of IND protocols that will shorten the review time when the NDA is submitted. There has been improvement in this area, and FDA expects considerable improvement in the next 12 to 18 months as manufacturers see the results. Also, by working closely with manufacturers, FDA plans to improve the presentation of NDA data in order that it can be reviewed promptly and effectively. This project is paying dividends and is helping to prevent a backlog. FDA believes that the exchange of information between the manufacturers and the reviewers in the early stages of drug development has greatly improved in the past 2½ years and that it will continue to improve. Internal workload studies have been undertaken. Preliminary results of these studies indicate that nonprofessionals can be trained to assist professionals on some of the review work.

The following tables indicate workload trends associated with IND/NDA review and evaluation:

IND Workload

	1967 Actual	1968 Actual	1969 Estimate	1970 Estimate
Backlog, end of year	640	304	200	100
Submitted	710	890	900	920
Initially reviewed	*	1,012	1,000	1,020
Inactivated	594	576	690	800
Active, end of year	2,058	2,372	2,582	2,702

* Figure not available

NDA Workload

	1967 Actual	1968 Actual	1969 Estimate	1970 Estimate
Backlog, end of year	0	7	0	0
Total submitted (original and resubmissions)	583	406	400	450
Actions taken	627	452	400	475
On-hand, end of year	189	143	143	118

An increase of ten positions and $114,000 is requested in 1970 for the review and evaluation of IND's and NDA's. This increase will permit FDA to keep abreast of incoming and active submissions and to continue to work more closely with industry to reduce the time required for the review of those submissions.

NDA supplement review

The heavy influx of NDA supplements has made it difficult to stay current in their review, but some progress was made during 1968 in reducing the large backlog. There were 1,047 supplements over the 180-day time limit at the end of 1968--a reduction of 12 percent in nine months.

An important factor influencing the level of NDA supplements in 1970 will be the efficacy review of NDA's approved for safety between 1938 and 1962. In 1962, the Kefauver-Harris Drug Amendments required the drug industry to submit data to support efficacy claims for those drugs on the market previously approved under the NDA procedure between 1938 and 1962. Originally, an effort was made to evaluate the efficacy of those drugs by an in-depth review of the original NDA whenever a supplement to that NDA was submitted. In practice, however, this proved to be an impossible task and the number of supplements reviewed was considerably reduced. Other means had to be sought. The problem was primarily solved by enlisting the aid of the National Academy of Sciences-National Research Council (NAS/NRC), which designated expert panels to review the efficacy claims for those drugs and determine whether they were effective, ineffective, or questionable. The NAS/NRC review is almost completed, and FDA has now begun to implement the findings of those panels. Some labeling will be revised in 1970, and ineffective drugs will be removed from the market. FDA has withdrawn its approval of three NDA's involving three drugs, as a result of NAS/NRC recommendations. As of December 31, action was pending to withdraw approval of 28 more NDA's involving 66 drug products.

The following table indicates NDA supplement workload trends:

	1967 Actual	1968 Actual	1969 Estimate	1970 Estimate
Backlog, end of year (over 180 days)	*	1,047	905	900
Total submitted	1,120	1,637	1,656	1,900
Actions taken	970	1,595	1,764	1,800
On-hand, end of year	1,638	1,680	1,572	1,672

* Unknown

An increase of eight positions and $108,000 is requested for NDA supplement review to stay current with an increasing volume of incoming submissions.

The increase for the drug-availability program is $318,600, of which $222,000 is for program increases and $96,600 is for mandatory increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(2) Drug hazards..	148	$4,900,600	156	$5,430,800	+8	+$530,200

Programs in this area are aimed at the surveillance of drugs after they have been approved by FDA and placed on the market. Even though the agency has determined that a drug is safe and effective, the possibility exists that individual lots of that drug will not meet FDA specifications or that adverse reactions to the drug will come to light after it has come into common use.

Drug information

Information about drugs is critical to FDA's surveillance program and is obtained from many sources: from reports that manufacturers are required by law to submit periodically, from adverse-reaction and drug-experience reports submitted by hospitals and physicians, from epidemiological studies of specific population groups, and from various research projects and clinical studies. The application of computers and automated information-retrieval methods facilitates the processing of drug information and makes it possible for FDA to collect and evaluate large amounts of drug data.

FDA has maintained an adverse-reactions reporting network for several years. In 1968, 86 hospitals participated in this program and submitted more than 26,000 drug experience reports; the adverse reaction network will continue to function at the same level in 1969 and 1970. Two hospitals (one in Massachusetts and one in Maryland) are currently involved in epidemiological studies of certain drugs, such as oral contraceptives, that have been selected for more intensive studies. Another epidemiological study is being conducted in California involving many drugs. This expands the study to a much broader scale.

Another major source of drug information is the periodic reports received from drug manufacturers on NDA drugs. These reports often assist FDA in updating drug labeling claims. In 1968, FDA received 5,652 such reports which led to the submission by drug manufacturers of 231 NDA supplements revising labels. About the same number of reports are anticipated in 1969 and 1970 and the agency expects to remain current in the review of these reports.

Oral contraceptives, which contain potent hormones, were first approved for marketing in 1960 on the basis of the best scientific knowledge available. They have proved to be extremely effective. However, certain issues of safety have been raised by responsible individuals after consideration of the known pharmacological properties of the compounds and of the results of use in large populations of women. In light of the ever-increasing use of these products (approximately 6 million American women currently use oral contraceptives), the possibility that they cause undesirable side effects in otherwise healthy populations assumes serious dimensions. The occurrence of side effects even of relatively low incidence is magnified by the potential seriousness of the health hazard involved.

Generally, the known side effects of these compounds are an increased risk of thromboembolic disease and an increase in abnormalities of carbohydrate metabolism. Other possible but not specifically identified side effects are (1) an increased rate of cervical carcinoma; (2) a detrimental effect on urinary tract function; and (3) an increased incidence of congenital malformations in pregnancies.

An increase of $275,000 is requested to support an expanded program of research into the possible long-term side effects of the use of oral contraceptives in a controlled population. Priority subjects for study are the relationship between oral contraceptives and the incidence of breast cancer and congenital malformations.

Clinical studies on specific drugs also will be undertaken during the year in connection with regulatory proceedings, such as a recent study of L-glutavite, claimed to be effective in the treatment of mental symptoms in the aging. One such study was carried out in 1968 and four studies have already been initiated this year.

Drug equivalency

Recent scientific evidence indicates that certain drugs that are chemically identical to others are not absorbed into the blood stream at the same rate or in the same concentration. This variance in turn may have an impact on both the effectiveness and the safety of a drug. It now appears that in some cases apparently innocuous differences in manufacturing methods may have important implications on the intended therapeutic effect when the drug is used by a patient.

To investigate this problem, FDA now has 15 clinical studies under way. While there is no evidence at this time of a major problem, the number of studies should be increased to ensure the availability of sound information. An increase of eight positions and $220,000 is requested in 1970 for expanded research, which is essential if FDA is to maintain clinical studies in those areas where problems are suspected. Ten classes of drugs will be the subject of equivalency studies in 1969 and 1970: oxytetracycline, tetracycline hydrochloride, chlortetracycline, penicillin G., diphenylhydantoin sodium, pentaerythritol tetranitrate, thyroid, griseofulvin, hydrocortisone and acetate, and warfarin sodium.

Medical advertising

FDA will continue to campaign against misrepresentation of drugs. In 1968 FDA took action to correct 113 misleading prescription drug advertisements and 131 Physicians' Desk Reference monographs, and required drug firms to send out 17 letters to physicians to correct erroneous advertisements. FDA issued three important advisory letters to physicians during the year involving the sulfonamides, chloramphenicol, and the oral contraceptives. In 1970 this program will continue to be given high priority, and corrective action will be taken wherever necessary to assure that accurate drug information is provided to physicians through drug advertising.

The increase for drug hazards is $530,200 of which $495,000 is for expanded research in oral contraceptives and drug equivalency and $35,200 is for mandatory increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(3) Hazardous products	131	$6,081,300	131	$6,085,000	--	+$3,700

In line with the reorganization of the Department's health activities in 1969, FDA absorbed programs involving poison control, human health aspects of pesticides, and the product-safety aspects of the Federal injury-control program. These activities were brought together with FDA's own ongoing hazardous substances program.

Poison control

FDA's primary objective in this area is to make information available that will help in the treatment of accidental poisonings. The 560 Poison Control Centers located throughout this country serve as the repositories of this data. More than 100,000 reports on poison incidents are voluntarily submitted by hospitals and physicians to the Centers each year. FDA examines and tabulates that data and distributes it among the Centers. Estimates of accidental ingestions by children of potentially harmful substances range from half a million to over a million annually. Physicians called on to treat these children need information about the ingredients and the toxicity of a wide range of products, as well as the signs and symptoms of poisoning, and the recommended treatment to counteract the substance involved.

Pesticides

Pesticide programs in this activity concentrate on these potentially harmful chemicals as they exist in the entire human environment and not merely as residues in foods.

One program, involving about twelve manyears of effort, centers on the registration of pesticide applications by the Department of Agriculture. FDA will review about 10,000 applications for registration in 1970, compared with 8,716 in 1968 and an estimated 9,000 in 1969, to determine if there is any question of a

potential health hazard to humans. If there is, FDA conducts an in-depth review of the toxicological data in the application and relates that data to the proposed uses of the pesticide formulations in question. In the first half of 1969, FDA recommended changes in about two percent of the applications. Responsibility to make those changes is vested in the Department of Agriculture, in accordance with the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act.

A new program was initiated in 1968 to improve the competence of State health departments to handle pesticide-related public health problems. Eight states were included in this program in 1968, and 12 projects will be under way by the end of 1969. These projects are aimed at: (1) training local and State health department personnel in chemistry, chemical epidemiology, laboratory diagnostic procedures, and other functions related to pesticides and public health; (2) reviewing local pesticides legislation and usage; (3) investigating human illnesses where pesticide chemicals are suspected to be the cause in order to identify the exact agent and the route of exposure; (4) improving the recognition and diagnosis of pesticide-caused illnesses and deaths; (5) obtaining specimens of human tissues for pesticide-residue storage measurement, and (6) conducting environmental studies around areas of heavy pesticide application.

Consultation and technical assistance is provided to States, upon request in the areas of medicine, law, epidemiology, and chemistry. In 1968, 115 consultations were held with health and allied agencies. A monthly abstract bulletin, Health Aspects of Pesticides, and various teaching aids are prepared, as well as a quarterly publication, the Pesticides Monitoring Journal.

FDA also conducts epidemiological and chemical investigations to carry out its responsibility to determine the effects of pesticides upon the health of the American population. These studies are conducted in various communities through contracts with State health departments and medical schools or other departments of universities. There are 16 studies in progress at the present time, located in areas where there is a high rate of pesticide use: Arizona, California, Colorado, Florida, Hawaii, Idaho, Louisiana, Michigan, Mississippi, New Jersey, Puerto Rico, South Carolina, Texas, Utah, and Washington. The studies focus on a comparison of the health of a population sample of people who are occupationally exposed to pesticides with that of a group of people not so exposed. Preliminary findings of a California study revealed that persons exposed to lindane had blood abnormalities. Another study of workers in a pesticide-manufacturing plant suggests that chronic exposure to pesticides may impair the function of the liver and kidneys. To obtain more valid information on the long-term effects of exposure to pesticides, these studies should be continued for at least another five years.

Product safety

An estimated 18,000 Americans are killed and an additional 20 million are injured each year in accidents associated with consumer products (excluding motor vehicles). As a direct result of these accidents, there are 36 million days of work lost, 50 million days of bed disability, and 200 million days of restricted activity, amounting to an economic loss to the nation in excess of three billion dollars, aside from the loss suffered by others not directly involved in these accidents. In an effort to cope with the problem of death and injury associated with consumer products, FDA has identified several areas in which action must be taken:

(a) For example, there is a continuing need for more extensive and reliable data to serve as a basis for assessment of the product-injury problem. At present, data is being collected by injury-study units on a case study basis in the geographical areas of Denver and Boston. In an effort to increase the reliability of data and to obtain greater geographical coverage, a national surveillance and epidemiological network must be established to determine the cause-and-effect relationship between certain products and injuries. This data will be used to develop criteria through liaison with industry for the establishment of manufacturing standards for products involved in the greatest number of serious injuries. This data will also support

efforts of the National Commission on Product Safety, which will identify for the President and Congress the most hazardous consumer products in the marketplace. FDA will also cooperate with the Commission in the evaluation of safety standards and other voluntary industry efforts to control product hazards.

(b) In 1970, priority will be given to the investigation and testing of products associated with injuries, with major emphasis on flammable fabrics. The data from these investigations will be the basis for the development of criteria in proposing to the Department of Commerce new or revised flammable fabric standards, and to provide documented evidence of noncompliance with standards to the Federal Trade Commission.

(c) In developing preventive measures, FDA will work closely with research and development staffs in industry, in universities, and in private laboratories. In addition, a research program will be developed, relying on contracts and grants, to find answers to questions about safety aspects of technological developments in an effort to develop criteria for product standards. FDA will also promote and assist State and local efforts to strengthen their statutes and to seek uniformity in them.

The increase of $3,700 for hazardous products programs will fund mandatory increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(4) Food, cosmetics and devices ..	42	$590,400	42	$602,100	--	+$11,700

In addition to the drug and product-safety programs that are a part of this activity, there is a continuous responsibility to maintain and apply medical expertise in the program areas of foods, cosmetics, and therapeutic devices. Medical opinion underlies FDA's policy decisions and its regulatory actions in those areas. The agency will continue to devote roughly the same amount of effort to this type of work.

Research shows that administration of certain antibiotic preparations containing streptomycin or dihydrostreptomycin alone or in combination with procaine penicillin to food-producing animals causes residues of the antibiotics in their edible tissues and by-products for prolonged periods of time. For example, it has been found that residues of streptomycin persist in the tissues of treated animals for more than 75 days. These residues could present a health hazard to people who are sensitive to antibiotics and could also lead to the development of organisms that are resistant to antibiotics. Therefore, FDA has initiated action to prevent the use of these antibiotic preparations in animals that are intended for food-producing purposes. Also, as of December 31, 1968, FDA had discontinued certification of 12 antibiotic preparations which, when administered to dairy cows, caused residues in milk.

Increased surveillance effort will be directed toward detecting practices resulting in the drug or chemical contamination of food products of animal origin. The Department of Agriculture will cooperate in this program by providing the results of analysis of samples which FDA collects.

The increase of $11,700 for food, cosmetics and devices programs will fund mandatory increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(5) Veterinary drugs	100	$1,474,600	100	$1,510,400	--	+$35,800

Current trends indicate that the number of Veterinary Investigational New Drugs (VID's) submitted to FDA is increasing and will continue to increase. However, VID workload statistics are somewhat misleading when compared with prior data. Totals for VID's are higher now because FDA now requires separate VID's for each drug and for each drug combination used on each specie of animal, whereas previous VID's might have merged some of that information in one application. The new procedure, however, should expedite the review of VID's and improve the agency's control over investigational studies. Despite the upward trend in the number of submissions, FDA anticipates that these new procedures will enable the agency to keep pace with the workload and continue to process about 90 percent of the VID's within 60 days. The remaining 10 percent are those which are unusually complex, requiring a period of time longer than 60 days for evaluation and processing.

The number of original and supplemental veterinary new drug application actions completed by FDA has steadily increased over the last four years, from 448 in 1965 to 1,321 in 1968. There will be much greater increase in NDA volume in the next two years as a result of a recently completed NAS/NRC efficacy review of 706 veterinary drugs marketed before 1962. It is estimated that there are five generically similar drugs on the market for each of those covered in the NAS/NRC review for which manufacturers will have to submit abbreviated NDA's to prove that these drugs are the same as the ones reviewed and that their label claims are consistent with those which have been found to be appropriate. Guideline labels are being prepared for those drugs determined to be effective. Industry will be notified of the agency's final conclusions by letter and by publication of announcements in the Federal Register and furnished an opportunity to supplement their NDA's with additional efficacy data or appropriately revised labels. NDA's covering drugs no longer marketed will be revoked.

The number of Medicated Feed Applications (MFA's) continues to increase each year. About 500 MFA's are received each time a new drug substance is cleared for use in feed. Two steps have been taken recently to assist in processing MFA's more efficiently. First, FDA has gone on record stating that MFA's will not be accepted until after the basic NDA's have been approved. This will reduce substantially the number of incomplete submissions of MFA's. Second, a revised Medicated Feed Application form has been approved and implementing regulations published in the Federal Register. The revised application is simpler than its predecessor, and MFA's will be processed more quickly with no loss in control over the use of drugs in feeds.

The following table indicates estimated workload trends in the areas discussed above:

	1967 Actual	1968 Actual	1969 Estimate	1970 Estimate
1. Medicated feed applications*				
Number received	6,912	6,423	7,491	9,301
Number reviewed	6,186	7,087	8,066	9,233
Pending at end of year	1,456	792	217	285
Approved for marketing	2,989	4,030	6,375	7,200

	1967 Actual	1968 Actual	1969 Estimate	1970 Estimate
2. New drug applications				
Number received	171	362	1,000	700
Number reviewed:				
Action completed	171	312	796	792
Pending at end of year	86	96	300	208
Approved for marketing	16	36	600	550
3. New drug application supplements				
Number received	779	1,052	1,200	1,500
Number reviewed:				
Action completed	699	1,009	1,213	1,550
Pending at end of year	159	202	189	139
Approved for marketing	134	195	280	320
4. Veterinary investigational drugs*				
Number received	1,119	1,568	2,000	2,500
Number reviewed	1,204	1,621	1,986	2,453
Pending at end of year	235	182	196	243

* Original and supplemental submissions

Veterinary drug research

The major research problem in this area will continue to be the study of the development of resistance to antibiotics by various organisms and their ability to transfer that resistance to other organisms. This research is vitally important in view of the widespread veterinary use of antibiotics. In 1968, FDA completed several preliminary studies designed to examine the incidence of resistance and to develop techniques in the study of transfer of resistance to susceptible organisms. In 1969, a broad epidemiology study in collaboration with the National Communicable Disease Center and the Department of Agriculture will be conducted to determine if there is a link between the development of resistance in the animal population and the transfer of resistance to the human population.

Veterinary drug information

Information on adverse reactions and drug experience in the veterinary area comes from three primary sources: reports from drug manufacturers as required by law, voluntary reports by users of the drug, and research. FDA has developed a new computerized system to keep abreast of industry reports, which are being submitted in greater numbers than ever before. The voluntary adverse-reaction reporting program, centering around an "alert card" that is being distributed by FDA to veterinary colleges and practitioners across the country, has been in effect for less than a year. During the first quarter of 1969, a total of 33 adverse drug-experience reports were submitted under this system, but it is still too early to assess the success of this new procedure.

The increase of $35,800 for veterinary drug programs will fund mandatory increases.

2. Scientific research and evaluation

This activity encompasses those programs designed to provide the scientific support required for FDA's regulatory efforts. Scientific research primarily involves the design and execution of investigations into the composition, quality, and effect of foods, drugs, cosmetics, and pesticides, as well as studies to establish the reliability of new analytical methods. Scientific evaluation includes the development of scientific standards for products, primarily foods, under FDA's jurisdiction, as well as the analysis of regulatory samples. The scientific staff also provides expert advice to other agency components on matters relating to research, technological developments, and the interpretation of scientific data.

Also included in this activity is the responsibility for the broad overview of FDA's scientific programs and for the management of the Administration's science-information system and of its research grants and contracts.

The recent reorganization of the Public Health Service has broadened the scope of FDA's effort in this activity to include research and regulatory work relating to the effects that pesticides have on man in all areas of the human environment.

a. Research grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Noncompeting continuations	20	$788,000	13	$432,000	-7	-$356,000
New grants	2	82,000	7	438,000	+5	+356,000
Total	22	$870,000	20	$870,000	-2	---

The purpose of this program is to protect consumer health through better understanding of the pathways by which food may become contaminated with harmful substances, primarily pesticides, as well as the quantitative extent of such contamination. Large tonnages of such poisons for the control of weeds, crop-destroying insects, fungi, and rodents are required annually in our modern technology of producing foods for the marketplace. Unfortunately, some of these undesirable substances may persist in soils for long periods, find their way into ground water, be taken up by subsequent crops or aquatic plants, which are part of the food chain, and thus, also enter the tissues of animals used as food by consumers. In addition, pesticides under field conditions may undergo chemical transformations due to sunlight, oxygen, moisture, soil organisms, or systemic metabolism by plants, yielding products with changed human toxicity, sometimes less, sometimes greater. Little is known about the details of these pathways and transformations at present.

Some of the scientific research areas included in this program are soil-pesticide interactions, the mechanism of action of insecticides, the influence of pesticides on natural populations of plants and animals, possible alternatives to pesticides (such as insect-attacking viruses), the pathways of natural destruction of pesticides, and the interrelationships of pesticides in soil, water, and plants. The new knowledge obtained through these grants will, for example, help to control the amounts of pesticides in foods to low levels well within the limits of safety to health.

b. Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	929	$10,717,000	936	$11,050,000	+7	+$333,000
Other expenses ...	--	4,791,000	--	4,919,000	--	+128,000
Total.....	929	15,508,000	936	15,969,000	+7	+461,000

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(1) Foods	534	$8,056,000	534	$8,245,000	--	+$189,000

Research

The efforts of FDA in its food program emphasize the reduction of consumer hazards, both health and economic. They can be categorized by type of problem involved: microbiological contamination, such as salmonella; chemical contamination, which includes pesticides; foods for special dietary use, such as infant formulas and those food products critical to the maintenance of dietary control of diabetes mellitus; and product debasement and other forms of economic cheats.

Microbiological contamination of food continues to be a major health problem. The increased concentration of processed and fabricated food production in large factories requires constant attention to avoid or limit contamination with bacteria and mold or their carriers, such as rodents and insects. If the contaminating microorganism is a human pathogen (salmonella, staphylococci, clostridia) and conditions suitable for growth exist, a potentially hazardous condition can develop. The magnitude of the problem is evidenced by the fact that nearly 20,000 cases of salmonellosis were reported in 1968, and evidence indicates that 99 cases out of 100 go unreported.

One way that FDA can contribute to better control of microbiological contamination of foods is by developing methods for the detection of food-borne pathogens in many kinds of raw, frozen, dried, precooked, and prepared foods. These methods are used by industry as well as by our field laboratories. Six were developed in 1968 by FDA, and others are in various stages of development and validation. Studies are also underway on the ecology and control of salmonella, to provide better information so that this type of contamination can be controlled at its source.

Another major contaminant of food is the chemicals which come from pesticides, food additives, packaging materials, and natural poisons. The trend in pesticide use has led away from a few inorganic chemicals, which were stable and relatively easy to identify; it has swung to nearly a thousand organic chemicals, some of which are more toxic and many of which change to different forms by combination with other chemicals or by chemical alteration under the influence of sunlight, weathering, or even the body's metabolism.

There are 475 pesticides registered for use on food crops. There is at least an equal number which may not be used for that purpose but which may present misuse problems. FDA must know the chemical identity of all toxicologically significant residues which occur in food from registered use or misused pesticide chemicals

and be able to detect and measure the significant chemicals in a food-monitoring program. Furthermore, FDA must be able to detect pesticide residues in food products quickly and economically. Speed is essential to remove adulterated products from the market before they reach the consumer, and efficiency is important to gain the maximum benefits from the existing staff. Therefore, FDA has constantly sought analytical methods that will detect as many pesticides and alteration products as possible in a single test. A procedure has been developed to detect 60 organochloride pesticide residues. Methods have also been developed to analyze for 70 phosphorous compounds, including their alteration products, and they now require refinement and validation. The development of these multiple-detection methods contributed in part to the deployment of 30 positions in 1968 and 63 positions in 1969 to other important program areas.

Toxicology studies must be carried on to verify and extend the chronic effect data submitted by the manufacturers of pesticide chemicals. Studies are made to determine the possible enhancement of toxic effects from mixtures of pesticides and combinations of pesticides with drugs, industrial chemicals, etc. These studies will be utilized to help evaluate the total toxic hazard to man from pesticides in the presence of other chemicals in his environment.

Chemical contamination of food also involves additives and packaging materials. Today, the typical large supermarket carries some 8,000 different food items, most of which contain direct food additives or traces of indirect additives arising from packaging materials and processing aids. There are approximately 2,500 chemical food additives in use or proposed for foods. These chemicals are used as preservatives, emulsifiers, flavors, and colors. Most of them, unlike pesticides and colors, do not present major problems. There are several hundred, however, whose use must be controlled. FDA does not have the kind of multiple-detection methods for food additives that it has for pesticides. Therefore, efforts are under way to develop methods that will detect a great many food additive chemicals in a single test.

Another form of chemical contamination consists of naturally occurring poisons, called mycotoxins, which are produced by certain molds in much the same way that penicillin is produced. They were not recognized as health problems until relatively recent years. The current interest in this field was stimulated in 1961 when a large number of turkeys died in England. The toxic agent was found to be a variation of the mold aspergillus flavus, which was found in peanut meal coming from Brazil. Since then, several other similar toxins have been isolated which produce significant harmful responses in many species of animals at extremely low feeding levels. Significant progress has been made in the development of a method of analysis for aflatoxin in certain specific commodities. This method is currently in use by both FDA and the Department of Agriculture in field surveillance programs. Methods development work is continuing to expand and improve this method and to develop methods for detection and the analysis of other toxins. In addition, animal studies must be carried out to determine the potential danger to humans of each compound.

It has become apparent that more information is needed about the nutritional value of certain food components, such as trace elements, particularly in view of the fact that new food-processing methods and the development of synthetic foods are having a greater impact on the total diet of American consumers. Another important problem facing FDA is the substitution of cheap food materials for better but more costly ingredients. The types of such substitutions or adulterations may change, depending upon the economic value of various foods, but the problem always exists. In the past, butter was commonly adulterated with vegetable oil or animal fats; now vegetable oils are adulterated with animal fats. Olive oil, one of the most costly vegetable oils, is sometimes adulterated with less costly fats and oils. The substitution of low-quality fruits in preserves and purees, of one species of fish for another, or of buckwheat hulls for spices are also examples of this practice. Such adulteration and substitution can partly be controlled through the establishment of food standards, which prescribe the content of various foods.

Fourteen new food standards were initiated in 1968 by FDA, and 51 new standards and amendments to standards initiated by industry were published. Generally speaking, industry initiates standards with an eye toward gaining a competitive advantage or for reasons that are primarily profit-motivated. It is important for FDA to develop more standards, so that the public can be assured that certain foods are uniform in quality and content.

Scientific support and coordination

In 1968, primary attention was directed toward improving the quality and utility of scientific data-retrieval services to agency users. Continuing attention was directed toward improved coordination between headquarters and field laboratories through the media of analytical procedures manuals and seminars.

During 1969, a number of sophisticated science information systems will be introduced and subjected to user tests. Of these, the chemical substructure search system and the selective dissemination of information system are expected to be operational in 1969. Revised manual issuance systems encompassing changes and additions to approved analytical methods for food additives and pesticides will be developed and distributed within FDA and to cooperating laboratories at the state and local levels. Concurrently, continuing attention is being directed toward quality-control programs which will ensure the accuracy, uniformity, and reproducibility of analytical results in the headquarters and field laboratories. Operational plans are being formulated for assumption of the agency-wide scientific research grants activity, which has come to the agency as a result of the recent reorganization.

Little change in program emphasis is anticipated for 1970, apart from development of a research grants structure which will provide maximum support toward achievement of FDA's program objectives. Pilot programs for development of computer-assisted analytical methods will be carried out in selected district laboratories. The initial thrust of these feasibility studies will be directed toward development of automated analytical systems for pesticides.

The increase of $189,000 for food programs will fund mandatory increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(2) Drugs	216	$3,044,000	223	$3,296,000	+7	+$252,000

Research

Technological advances in the development of newer and more potent drugs requires more rapid and improved methods for analyzing chemical components of drugs. More sensitive methods must be found to assay a single tablet or capsule, because individual dosage forms may vary significantly within one batch of the same drug.

A significant part of FDA's scientific research on drugs is in the area of chemical and biological assay methods development. Thirty-three studies were completed in 1968. Accomplishments include the development of improved chemical assay procedures for morphine in opium, reserpine, digitoxin, barbiturates, thyroid, and oral contraceptives. Progress was also made in the application of new techniques and instrumentation to the analysis of pharmaceuticals.

Scientific research is also directed at the biological effects of drugs, particularly interaction with environmental contaminants. The side effects that may be revealed when a new drug is available to a large population may not be predicted by pre-marketing clinical studies. These adverse reactions are sometimes due to interactions of drugs with each other or with other chemicals in the diet or environment. Recent studies have pointed out reactions with pesticides, such as DDT, or with such a common chemical as ethyl alcohol. Research in this area is also

concerned with effects on behavior produced by the very potent drugs now available to modify action of the central nervous system.

Another difficult problem facing the drug scientist is that of drug equivalency, discussed under the medical evaluation activity. The principal effort of FDA's scientific staff in support of the drug equivalency program has been the development of standard protocols for antibiotic testing. Blood-level studies were initiated on ten drugs, involving 21 drug firms and 36 products manufactured by a number of firms. Six studies have been completed. It is anticipated that the number of studies will rise to 55 in 1969, with most to be completed by the end of the fiscal year. Attempts have been made in 1968 to correlate blood-level studies with laboratory tests, such as studies of the dissolution rates of certain drug chemicals. These studies will continue in 1969 and 1970.

Scientific support and coordination

Routine, systematic analysis of a large volume of drug samples is essential to FDA's surveillance program, for two reasons: (1) it enables the agency to compare the overall rate of violative samples in any given program area to the rate of regulatory effort expended in that area, thus pinpointing the areas where FDA should focus its attention, and (2) it brings to light specific, individual products that are substandard so that immediate regulatory actions can be taken to improve the manufacturing conditions that led to the deficiency and to prevent widespread dissemination of the faulty product.

FDA has found that the most efficient and economical way to expend its drug analysis capability is through the use of a centralized analytical center: the National Center for Drug Analysis (NCDA). The present district laboratories lack the space and/or the staff to analyze the large volume of samples that are required for thorough coverage of the drug industry. More important, centralization of this function will permit the use of automated methods and other assembly-line techniques to handle more samples per manyear of effort than would be possible in separate field laboratories. Sample examinations at NCDA are expected to reach a level of about 12,000 per year in 1969, compared with 7,500 in 1968. This increase in productivity has been achieved without an increase in staff, as a result of greater reliance on automated methods. An additional seven positions and $188,000, part of which will fund the purchase of more equipment, are requested in 1970. This increase will enable FDA to process an additional 6,000 samples at the facility. This program requires constant development of accurate and rapid automated methods. In 1968, automated methods were developed for 29 drugs for use in surveillance programs at the Center.

A major accomplishment in 1968 was the development of a mechanism for establishing a Drug Label Data Bank, a preliminary data bank of elemental information relating to prescription and certain over-the-counter drugs. This data bank is the beginning of a modern, efficient, computerized system to respond quickly to the continuing need for current information concerning all pharmaceutical products of interest to FDA, the drug industry, and the medical profession. The data bank can be updated continuously and is designed to furnish information for publication. Formative plans were also made for the development of a consolidated Central Retrieval Index to systematize and bring together in a cohesive form the diverse scientific data-retrieval systems throughout the agency.

In 1969 the Drug Label Data Bank will be enlarged to encompass the trade names and active ingredients of drugs marketed from 1938-1962 which were studied for efficacy by the National Research Council. The development of an FDA Master Dictionary is planned as the first step in the development of the Central Retrieval Index. Continuing attention will be focused on coordination of intramural and extramural research activities. Seminars and conferences will be employed to facilitate the interchange of scientific information. The Directory of Drug Analysis will be updated and expanded to include all approved methods for chemical analysis of drugs and drug products.

The drug industry is expected to supply much of the information. This directory will facilitate the computerized processing of drug data by governmental agencies, manufacturers and distributors of drugs, hospitals, and insurance companies.

FDA plans to have a Central Scientific Retrieval System operational in 1970, and also plans to update the directory as necessary to meet FDA's needs. Continuing attention will be directed toward developing an effective program for ensuring quality performance by drug analytical laboratories.

The increase of $252,000 for drug programs will fund a program increase of $188,000 for NCDA and $64,000 for mandatory increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(3) Cosmetics and devices	38	$582,000	38	$594,000	--	+$12,000

Research

Although the cosmetics industry is approximately the same size as the prescription drug industry and there is a continuous flow of new products to the market, there is no preclearance or registration required by law, nor are their ingredients required to be declared on the label. There is no requirement that ingredients be tested to assure that they are not toxic. Since formulas are rarely divulged by industry and labels contain little useful information, the presence of harmful ingredients ordinarily is not revealed until users are injured.

The research program on methods of analysis for cosmetics has made significant advances, and through these efforts many potentially harmful cosmetic ingredients have been characterized. Considerable progress has been made in techniques for the characterization of essential oils which may cause allergic reactions in users, such as perfume ingredients in cosmetics and flavoring ingredients in toothpaste.

Recently, bacterial contamination of lotions, ointments and ophthalmic preparations has resulted in human illness. This could be particularly hazardous in the case of products marketed for use on infants. Bacteriological methods of analysis are now being developed for use on cosmetic products. Research is continuing in areas such as hair dye toxicity, skin penetration, and retinal toxicity.

Scientific support and coordination

During 1970, literature services support will be provided to FDA scientists and administrators at the same level of effort as in 1969. A data bank of elemental information relative to cosmetics and devices will be developed in 1970.

The increase of $12,000 for cosmetics and devices programs will fund mandatory increases in those areas.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(4) Hazardous products ...	141	$3,826,000	141	$3,834,000	--	+$8,000

Research

Pesticides and other chemical contaminants continue to pollute man's environment (air, water, soil, food, clothing, etc.) in steadily increasing amounts.

FDA's program in this area has as its major thrust the evaluation of the impact of exposure to pesticides on the health of the human population and the development of defenses against any harmful effects resulting from such exposure to pesticides.

Included among the defenses is the development and testing of improved procedures for the identification and quantitative measurement of these chemicals and their residues in man and his environment. Extremely sensitive chemical methods are required and continuous methodology research, quality assurance, reference standard, and training programs are necessary. At the present time, methods are available for the detection of a number of the chlorinated hydrocarbon pesticides in six human tissues of interest: kidney, liver, fat, gonads, brain, and blood. The development of methods for detection of the organophosphate and carbamate pesticides in these tissues is now underway and will continue in 1970. The quality assurance program, operated by FDA's Pesticide Research Laboratory in Perrine, Florida, now includes 21 cooperating laboratories. The number of control samples sent to them for analysis will be increased from six to ten per year by 1970. A pesticide repository maintains about 400 analytical-grade pesticide chemicals and metabolites for distribution to laboratories for active pesticide programs. About 100 new compounds should be added in 1970. Training in chemical methodology is conducted to disseminate research information as well as to assure competency in the FDA monitoring and surveillance program and among state and local chemists and other health personnel. During 1968, 47 chemists were trained. A like number will be trained in 1969 and in 1970.

Another defense is the development of new data on acute and chronic toxicity of economic poisons on humans having heavy environmental exposure and volunteers experimentally exposed to pesticides. Tests will be conducted with experimental animals (rats, rabbits, and monkeys) to improve the diagnosis and treatment of poisoning and to determine the mode of action of pesticides. Pharmacologic studies directed toward the investigation of the physiological and biochemical mechanisms involved in the transportation, detoxification, and metabolism of pesticides are now underway. Particular emphasis is applied to the chronic effects of low-level, long-term exposure. Two of these involve cooperative efforts in the Aedes aegypti program with the Environmental Control Administration and the aquatic weed control program with the Corps of Engineers. Research on another 20 compounds will begin in 1970. The Toxicological Laboratory in Atlanta has supplied expert toxicological and chemical advice to State Public Health Departments, other federal agencies, and the World Health Organization. In all, the laboratory assisted in investigations involving 46 incidents. Participation in the sheep-kill incident at the U.S. Army's Dugway test grounds in Utah is typical of this activity.

Scientific support and coordination

During 1970, literature services support will be provided to FDA scientists and administrators at the same level of effort as in 1969. A data bank of elemental information relative to hazardous household products will be developed in 1970. A revised manual issuance covering approved analytical methods for all products covered under the Hazardous Substances Act will be prepared and distributed to FDA and cooperating state laboratories.

The increase of $8,000 for hazardous products program will fund mandatory increases.

3. Education and voluntary compliance

This activity is directed towards the education of the public in the wise purchase and use of regulated items and towards the creation of a positive atmosphere for FDA's regulatory programs. This is accomplished through a comprehensive consumer education program, including direct contact with individual consumers, and through other programs aimed at promoting and assuring voluntary compliance on the part of industry with the laws and regulations enforced by FDA.

Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	72	$851,000	72	$872,000	--	+$21,000
Other expenses	--	424,000	--	424,000	--	---
Total	72	1,275,000	72	1,296,000	--	+21,000

Foods

FDA's Self-Certification Quality Assurance program was instituted in 1968. This program represents a new approach to the problem of providing safe, wholesome, and properly labeled food for the consumer by developing cooperation between Government and industry. Experience with the first pilot program at the General Foods Corporation revealed a number of areas which needed more intensive review and evaluation, and, in June 1968, a second pilot program was negotiated with Green Giant Company and the State of Minnesota.

Though emphasis will be given to the Self-Certification program, existing ongoing activities will not be deferred. In 1970, FDA will continue to administer workshops and conferences and to provide training assistance and printed material for seminars and symposia. These activities provide the means for an important two-way communication between FDA and industry. In the food-related programs, seven national conferences and 116 district workshops are planned.

Drugs

The regulatory problems in the drug industry are often due to the failure of drug manufacturers and repackers to comply with current good manufacturing practices (GMP's) and regulations. One FDA approach to the problem is to conduct and participate in seminars and workshops to explain various provisions of these regulations to key personnel, such as quality-control staff and production supervisors, who are primarily responsible for adherence to GMP's. Moreover, there are approximately 127,000 wage and salary workers employed in the drug industry, many of whom are unaware of the severe circumstances that could result from not following GMP's. In an attempt to help with the problem of training these employees, FDA provides material for in-plant training and thus helps to remove sources of human error which may not be correctable by regulatory actions alone.

Another voluntary compliance effort which has been welcomed by industry is the drug-recall case study. This program aids firms in learning the causes of errors from the mistakes of other unidentified firms whose products have been subject to recall action.

The total anticipated 1970 drug workload output in this activity includes 9

national and regional conferences, 40 drug-recall case studies, 10 motivation and training programs for industry employees, and support of 46 district workshops, of which 16 will be directed toward the 12,000 medicated-feed mills registered with FDA.

Cosmetics, devices, and hazardous products

Each year the cosmetic industry introduces new products to the consumer. Concurrently, advances in scientific knowledge are revealing that some of the ingredients in these products are harmful and that some ingredients, old and new, contain microbiological contaminants. To make these substances known, FDA plans to develop a data bank of elemental information relative to harmful ingredients that have been identified by the scientific research and evaluation programs mentioned earlier.

Similar problems have arisen in the field of therapeutic devices. There has been an increase in recalls, largely resulting from problems attendant to the rapid innovation and marketing of disposable devices. The industry itself is so concerned that it has approached FDA for assistance in establishing voluntary standards. These and similar programs in the area of hazardous products planned in 1970 will involve 22 district workshops and 12 national conferences, in addition to publication of cosmetic-recall case studies and the establishment of guidelines for good manufacturing practices.

Other programs

FDA operates a comprehensive consumer-information program through contacts with the press and other public information media. For maximum coverage, these activities are coordinated through contacts with key individuals and organizations in the field of education. Through the efforts of the consumer and educational services programs, a positive attitude of public awareness and support has been fostered, facilitating and strengthening consumer protection at all levels.

The consumer services staff is responsive to the problems of immediate concern to the public. Inquiries from consumers continue to increase: from 13,760 in 1968 to an estimated 16,500 in 1969. Part of this increase can be traced to the fact that FDA is reaching more people and making them aware of its mission and goals. A large number of recent inquiries, for example, relate to products that have been highlighted because of FDA's concern about them: chloramphenicol, Neo-Barine, oral contraceptives, cyclamates, and special dietary foods. In addition, the Consumer Specialists in the field generate public interest in FDA issues and a corresponding number of inquiries. More sophisticated and penetrating inquiries are common today, necessitating the use of more individual responses and the constant revision and updating of printed materials. Consumers have responded in increasing numbers to FDA's invitation to report instances of adulterated or misbranded products. These reports have been a valuable auxiliary in the surveillance of labeling, particularly with respect to its conformity to the Fair Packaging and Labeling Act.

An educational services program has been implemented to complement consumer services. Its activities are directed toward establishing relationships with school and educational program-development officials in an effort to have relevant FDA educational information incorporated into the curricula of elementary and secondary schools, colleges, and universities.

The efforts in educational services programs are supported by the publication and press-relations staffs. The publication staff provides editorial review and clearance of FDA publications and assists FDA authors in the development of copy and the preparation of pamphlets, articles and other written materials. It also designs and produces exhibits and other visual materials, such as slides and posters. The need for these services has increased greatly with the advent of the voluntary compliance program.

Another informational medium is the FDA Papers, the official periodical of the Food and Drug Administration. This publication satisfies the requirements of the Federal Food, Drug, and Cosmetic Act to report all judgments, decrees and court orders rendered under that law, and in addition it disseminates vital information involving imminent danger to the health of the consumer.

The total increase in this activity is $21,000, all of which is for mandatory increases, including periodic step increases and annualization of the 1969 pay raise.

4. Regulatory compliance

FDA develops regulations, model codes, and other standards to guide industry in the manufacture and distribution of foods, drugs, and other regulated products. Steps taken to encourage voluntary compliance are discussed in the preceding budget activity. This budget activity includes the development and execution of programs to ensure that regulated industries comply with these standards; it centers for the most part on the regular, periodic inspection of various establishments throughout the country (manufacturers, distributors, retailers, etc.) and the continual collection and analysis of product samples. Also included in this activity are resources for the direction and guidance of FDA's overall regulatory compliance efforts.

The recent reorganization of the Public Health Service has broadened the scope of FDA's activities in this area to include the administration of the nationwide shellfish-sanitation certification program.

a. Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Noncompeting continuations	9	$453,000	6	$207,000	-3	-$246,000
New grants.....	2	237,000	4	483,000	+2	+246,000
Total.....	11	690,000	10	690,000	-1	---

Improved control of shellfish sanitation is the major objective of this extramural program. Grants are made to universities, colleges, public agencies, and nonprofit institutions for research on such topics as: purification of hard clams from polluted waters, marine toxins of the tropical oceans, multiplication of enteric viruses in shellfish, studies of dinoflagellates, contamination of oysters by pesticides, and the microbiology of shellfish pollution.

The information obtained through this program will assist in minimizing the consumer health hazards which are associated with contaminated shellfish.

b. Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	2139	$23,393,000	2229	$24,176,000	+90	+$783,000
Other expenses..	--	5,122,000	--	5,162,000	--	+40,000
Total.....	2139	28,515,000	2229	29,338,000	+90	+823,000

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(1) Foods	980	$12,809,000	930	$12,618,000	-50	-$191,000

There are at least 50,000 establishments that process, manufacture, or distribute food products for wholesale trade channels in this country. These establishments have a common responsibility: to provide the American consumer with safe and wholesome food. The major problems facing the food industry today center around the microbiological contamination of food; the adulteration of food by chemicals, such as agricultural pesticides and natural poisons; the existence of nonhazardous but offensive filth in food; and the potential for misrepresentation in the packaging and labeling of food.

FDA will continue to develop and disseminate regulations and guidelines for good manufacturing practices in the food industry, concentrating on areas where the greatest potential for health hazards exists. An initial step in this program was the publication in 1968 of the General Regulations for GMP's for good sanitation. These regulations established general criteria for the food industry; specific regulations for particular foods will be developed as appendices in 1969 and 1970. Guidelines are being developed for hot smoked fish, dried milk products, dried yeast, breaded shrimp, and frozen and dried eggs; additional types of food will be covered in 1970.

Bacterial contamination led to 48 recalls of food products in 1968, and FDA initiated 65 seizure actions. Investigations by FDA and by other agencies have revealed that millions of illnesses are caused by contaminated food products every year; this problem could be alleviated by industry's adoption of improved control systems designed to prevent the contamination of food by these organisms. As part of its emphasized effort in this area, FDA conducted four bacteriological-sanitation training courses in 1968 for 152 of its inspectors; another course is scheduled in 1969 for 36 more participants. Among the most harmful and widespread food contaminants in this country is the salmonella organism, which causes about two million illnesses a year. Last year the field force concluded a program of intensive inspection and sampling of the dried milk industry--the products of which are particularly susceptible to salmonella contamination. Recognizing this as a serious problem, FDA cooperated with other Federal and State agencies, and gave individual attention to all of the 300 or more dried-milk establishments in this country.

Among the major sources of chemical contamination in foods are agricultural pesticides and food and color additives. The incidence of foods containing these chemical substances in excess of established standards is very low; however, the chemicals are often highly toxic and their use is extensive, so that a continuous surveillance effort is mandatory. This will be accomplished in 1970 through two nationwide pesticide sample-examination programs, through additional investigations of growers, and through added emphasis in inspection of food manufacturers on the use of food and color additives. Of special significance are the two pesticide sampling programs which involve about 76 manyears of effort. One is designed to collect a statistically valid sample of a wide variety of raw agricultural commodities and manufactured products, such as milk and dairy products, in various channels of distribution; the other measures pesticide levels in a representative diet of 82 different foods collected from retail food stores. In those instances where accepted tolerance levels are exceeded, investigations will be conducted and appropriate corrective measures taken. In 1968, seven shipments of agricultural products were recalled because of chemical contamination, and 17 lots were removed through FDA regulatory action. In 1969, several significant

pesticide-residue problems have been revealed by surveillance in the field, one involving lettuce and another carrots. In the latter case, the grower refused to recall or stop distributing his product, and FDA was forced to institute a widespread seizure effort.

Mycotoxins, which are substances produced by molds, were first recognized as being potentially hazardous in 1961. FDA's research and field investigations since that time have focused on one of these substances: aflatoxin. A broad surveillance program is now under way, covering all foods, with emphasis on nut products. In the first half of 1969, 16 lots of peanut butter were voluntarily recalled because of the presence of aflatoxin.

In addition to problems relating to the contamination of food, FDA is faced with problems involving misrepresentation and economic cheats. The increasing popularity of prepackaged food has made the consumer more dependent than ever on the descriptive material that comes with the food he buys. Experience indicates that this material can often be misleading or even false. The Fair Packaging and Labeling Act requires FDA to promulgate regulations and take action in this area. Regulations have already been issued under two sections of the Act. In 1969 and 1970 FDA plans to develop regulations that will (a) establish and define standards for describing the size of packages, (b) place some kind of reasonable control on discount or "cents-off" promotions, and (c) prevent the partial or "slack" filling of packages.

The agency plans to divert 50 positions and $458,000, largely from sanitation programs which are judged not to involve health hazards, to the intensified drug-inspection program, where there is greater need for the protection of the consumer from health problems.

FDA also carries out a shellfish-sanitation certification program in 22 States involving the cooperative effort of the Federal Government, the States, and industry. FDA is responsible for coordinating the activities of the States and for developing appropriate guidelines and standards for their use in ascertaining the quality of shellfish. FDA will evaluate State efforts through the inspection of 860 of the 1,300 interstate shippers or packers; it will review sanitary-engineering and oceanographic surveys of some 450 growing areas; it will evaluate State laboratory services in support of regulatory programs; and it will conduct surveillance activities to ensure the sanitation of shellfish resources on the Federally-controlled continental shelf from New York to North Carolina. FDA also publishes a list of certified shippers and conducts a series of training courses in sanitary survey methods and in the patrol and control of harvesting from restricted activities.

FDA's overall efforts in this activity in 1968 led to 112 recalls of substandard food products from the market and to 373 seizures. These legal actions involve a very small percentage of the food production of this country, but there are two important aspects to this kind of regulatory activity. A great many illnesses are averted when substandard products are recalled or seized; one action might involve thousands of retail items. Equally important is the deterrent effect that this kind of action has on a food firm; a company involved in an action suffers a direct economic loss when its products are removed from the market, and it also suffers an indirect loss as a result of adverse publicity which might be considerably more serious.

In addition to seizures and recalls, there were about a thousand regulations, standards, policy statements, applications, and petitions reviewed, approved, or issued. Tolerance levels for DDT used on fruits and vegetables were lowered. A public hearing is under way on regulations proposed by FDA for special dietary foods.

The net decrease in foods is $191,000, which results from the diversion of $458,000 to the drug area, offset by $267,000 for mandatory increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(2) Drugs	1057	$14,312,000	1197	$15,297,000	+140	+$985,000

Over 11,000 establishments manufacture, repack, relabel, and store human drug products. FDA has a statutory obligation to inspect all of them at least once every two years, which necessitates 5,500 inspections annually. FDA conducted 7,043 drug inspections in 1968 and will schedule 7,400 in 1969 and 7,500 in 1970. About 25 percent of these are follow-up inspections of firms where violative conditions were found.

It appears that routine, periodic inspections of drug firms do not have the impact necessary to upgrade and maintain the quality of the country's drug supply. The number of defective prescription drugs that currently reach the market is excessive, and the trend is unfavorable: Drug recalls have continued to increase in the past five years, as indicated below.

Drug Recalls, 1964-1968

1964	1965	1966	1967	1968
110	340	538	530	640

Although the drug industry has developed the scientific expertise necessary to prevent unsafe and ineffective drugs from reaching the market, their manufacturing processes, quality controls, and marketing practices are not always sufficient to assure that a safe and effective product reaches the American consumer. FDA sees one of its primary roles as that of providing industry with standards for Good Manufacturing Practices and helping industry adhere to them.

In calendar year 1968, FDA developed a revised set of GMP regulations for drugs, in cooperation with the industry. This revision will soon be published in the Federal Register and, after industry comments are evaluated, a final order will be issued.

At the same time, FDA has initiated a program specially designed to bring the drug industry into line with these recommended procedures. About 500 firms manufacture the bulk of the drugs used in this country today; these firms have been selected as the target for intensified drug inspections. An intensified drug inspection differs from a routine inspection in that it requires the FDA inspector to make an in-depth review of the manufacturing and quality-control practices applied to every product in the manufacturer's line. The inspector, in effect, conducts operations analyses to ensure that a manufacturer adheres to the GMP's required by FDA. His efforts are supported by extensive sample analyses. The inspector is trained not only in the enforcement aspects of FDA's mission, but is also oriented toward a philosophy that encourages open discussion of problems and observations with plant management. Intensified coverage of a plant requires that an inspector spend enough time in a plant to become thoroughly familiar with all of its operations. Consequently, the length of time required for an inspection may vary widely, depending, for example, upon the number of products manufactured and the size and complexity of operations. FDA originally estimated that an average of one manyear would be required per plant, and that estimate is still valid.

A total of 225 establishments are planned for coverage under this program in 1969. Thus far, 142 have been brought into the program: eleven have been judged as being in compliance with GMP's and have been returned to a regular surveillance-inspection category, while regulatory action is pending or has been completed against three establishments where efforts to bring about improvements through voluntary means failed.

Because of the significant role that drugs play in the lives of American consumers, and because of the excellent potential of this particular approach, an increase of 90 positions and $221,000 is requested in 1970. This increase, combined with 50 positions and $458,000 diverted from food programs in this activity for a total of 140 positions and $679,000, will permit expansion of the program to include a total of 340 drug firms in 1970.

Another means of identifying drug problems and of measuring the extent of industry's adherence to established standards for the identity and quality of drugs has been devised by FDA, in addition to inspectional program. This is a statistically-designed nationwide program to analyze drug products in certain classes or groups. Five classes of drugs were studied in 1968: one of the studies uncovered two serious problems in the area of oral anticoagulants, which are critically important products. One problem involved the methodology required to confirm adherence to quality standards for those drugs, and the other concerned the way tablets were manufactured. Twelve classes of drugs will be examined in 1969, and 15 are scheduled for analysis in 1970.

To support FDA's medical-evaluation activities, the field force will continue to conduct investigations and inspections of manufacturers of new drugs, investigational drugs, and clinical investigators. In 1968, 272 of these inspections were carried out. As part of its surveillance over veterinary-drug and medicated-feed firms and their products, FDA has placed increased emphasis in 1969 on the training of State officials and on the development of State capabilities to join the FDA in a cooperative surveillance program. As the States assume more responsibility in the area of medicated feeds, FDA will shift its attention to veterinary drugs in 1970.

FDA's overall efforts in the drug area led to the voluntary recall of 640 lots of drugs in 1968; in the first half of 1969, 289 lots were recalled. Administration officials met with representatives of the Pharmaceutical Manufacturers Association (PMA) to discuss revisions in regulations dealing with the declaration of established names for prescription drugs in drug labeling and advertising; these discussions prompted withdrawal by the PMA and member firms of litigation against the regulations proposed. More than 150 FDA inspectors attended training courses involving basic drugs, radiopharmaceuticals, and experimental therapeutics. The first Federal Register publication was issued that involved action to recall drugs which have been found ineffective by the NAS/NRC.

The increase of $985,000 in drugs consists of $458,000 diverted from the foods area, a program increase of $221,000 and mandatory increases of $306,000.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(3) Devices	33	$456,000	33	$466,000	--	+$10,000

Programs in this area deal with such problems as fraudulent devices, defective prophylactics, and substandard clinical thermometers. Emphasis will continue to be placed on violations involving a potential hazard to health. FDA's efforts will involve investigational follow-ups of consumer complaints, inspections of known or suspected violators, surveillance over imported products, and investigations of instances of medical quackery, which so often prey on the aged and the chronically ill. In 1968, 123 lots of domestically-manufactured devices were removed from the market through voluntary recalls and seizure actions, and 99 lots of imported devices were detained because they failed to meet FDA standards. An additional $10,000 is requested for mandatory increases in the devices area.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(4) Cosmetics	17	$235,000	17	$240,000	--	+$5,000

Cosmetics present a potential threat to the American consumer because they come into contact with sensitive parts of the body, such as the eyes and the mouth. Surveillance of the industry is complicated by the fact that new products are constantly introduced, many of which have a short market life. However, FDA will continue to keep abreast of developments in the industry, investigating consumer complaints, inspecting establishments, and removing from commercial channels products that are identified as unsafe. An additional $5,000 is requested for mandatory increases in the cosmetics area.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(5) Hazardous products	52	$703,000	52	$717,000	--	+$14,000

Certain household products are extremely hazardous, by nature of their toxicity, corrosiveness, inflammability, etc. FDA's goals in this area are aimed at reducing the thousands of accidents that occur each year as a result of such products. FDA inspects manufacturers in an effort to discover new and potentially hazardous products or their ingredients; investigates consumer complaints about specific products; and reviews labels of existing products to ensure that banned products are not being marketed or used as ingredients and to ensure that labels adhere to the standards set forth in the Federal Hazardous Substances Act.

In 1968, FDA denied entry to 30 different types of products offered for import into this country. It reviewed labels of products manufactured by over 50 percent of the industry, and in 1969 will cover another 25 percent of the industry in its label review. An increase of $14,000 is requested for mandatory increases in the area of hazardous products.

5. Program direction and management services

The functions included in this activity provide general direction to the Food and Drug Administration, as well as certain centralized staff and administrative services required in the course of FDA's daily operations.

Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	353	$3,844,000	353	$3,893,000	--	+$49,000
Other expenses	--	968,000	--	968,000	--	---
Total	353	4,812,000	353	4,861,000	--	+49,000

Office of the Commissioner

The Commissioner is responsible for the effective and efficient implementation of FDA's programs. Staff support is provided to the Commissioner in several important areas: legislation, intergovernmental operations, field coordination, and planning. This support involves the following responsibilities:

-- maintenance of continuous liaison with the Congress, answering requests for information on the Administration's activities and formulating proposals for new legislation;
-- provision of guidance to the States and to foreign governments on matters that have an impact on the development and implementation of consumer-protection programs in their own jurisdictions;
-- development of program goals, objectives, and priorities for the Administration's field operations;
-- conduct of a continuous program for long-range planning and for evaluating the progress of the Administration in meeting its immediate and long-term objectives.

Office of Administration

Fundamental to the efficient operation of FDA is the capability of the administrative staff to utilize all management resources for the proper implementation of operating programs. This staff's primary responsibility is to advise the Commissioner on such matters and to provide leadership and direction to the various administrative organizations. This support involves the following responsibilities:

-- planning, coordination, and control of FDA's financial resources, including formulation and execution of the Administration's budget, provision of technical financial-management assistance to the operating units, and the preparation of special reports on FDA programs and on its financial status;
-- acquisition, maintenance, and control of the physical structures and equipment necessary for FDA's operations, including accountability for personal and real property, effective utilization of space, provision of construction and engineering services for FDA facilities, administrative processing of contracts and grants, maintenance of FDA's nationwide communications network, provision of printing and reproduction services, and administration of the mail and central records functions;
-- provision of assistance in the development of effective organizational structures and management systems;
-- recruitment, placement, development, and training of FDA's employees, including pay administration and position classification.

The total increase in this activity is $49,000, all of which is for mandatory increases, including periodic step increases and annualization of the 1969 pay raise.

New Positions Requested
Fiscal Year 1970

	Grade		Annual Salary
Medical Evaluation			
(5) Medical officer	GS-15		$105,490
(21) Medical officer	GS-14		415,191
		(26)	520,681
Scientific Research and Evaluation			
Chemist	GS-12		12,174
(3) Chemist	GS-11		34,689
(3) Chemist	GS-9		30,462
		(7)	77,325
Regulatory Compliance			
(5) Supervisory inspectors	GS-12		60,870
(5) Inspectors	GS-7		34,905
(44) Inspectors	GS-5		252,208
(15) Inspector technicians	GS-4		77,175
(10) Inspector technicians	GS-3		46,000
(11) Clerk dictating machine transcriber	GS-3		50,600
		(90)	521,758
Total new positions, all activities		(123)	1,119,764

MONDAY, MARCH 17, 1969.

AIR POLLUTION CONTROL

WITNESSES

DR. JOHN T. MIDDLETON, COMMISSIONER
ROBERT PERMAN, EXECUTIVE OFFICER
AGOSTINO PRATICO, BUDGET OFFICER
CHARLES C. JOHNSON, JR., ADMINISTRATOR
E. R. LANNON, ASSISTANT ADMINISTRATOR FOR ADMINISTRATION
THOMAS J. LAWLER, DIRECTOR, DIVISION OF BUDGET
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET
ROBERT HARRIS, BUDGET ANALYST, OFFICE OF THE SECRETARY

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	7,910	9,538	10,800
Positions other than permanent	323	370	400
Other personnel compensation	108	150	200
Total personnel compensation	8,341	10,058	11,400
Personnel benefits: Civilian employees	1,116	1,388	1,583
Travel and transportation of persons	876	1,499	1,900
Transportation of things	229	632	1,000
Rent, communications, and utilities	722	1,587	2,300
Printing and reproduction	236	600	620
Other services	15,597	28,125	34,897
Supplies and materials	1,159	1,555	1,900
Equipment	2,504	2,680	2,000
Lands and structures	65	2,350	400
Grants, subsidies, and contributions	30,822	34,345	38,800
Total obligations	61,667	84,819	96,800

PERSONNEL SUMMARY

Total number of permanent positions	1,070	1,065	1,203
Full-time equivalent of other positions	67	74	78
Average number of all employees	1,011	1,083	1,205
Average GS grade	8.0	8.0	8.5
Average GS salary	$9,664	$9,928	$10,586
Average salary of ungraded positions	$6,285	$6,285	$6,287

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Program by activities:			
1. Abatement and control:			
(a) Grants	17,021	22,755	25,300
(b) Direct operations	4,370	8,861	10,077
2. Research, development, and demonstration:			
(a) Grants and contracts	7,641	24,701	31,300
(b) Direct operations	14,327	20,943	22,033
3. Manpower training:			
(a) Grants	2,706	3,159	3,500
(b) Direct operations	1,251	1,900	1,990
4. Program direction and management services	2,280	2,500	2,600
Total program costs, funded [1]	49,596	84,819	96,800
Change in selected resources [2]	12,071		
Total obligations	61,667	84,819	96,800
Financing:			
Comparative transfers to other accounts	1,065	490	
Unobligated balance available, start of year	−4,040		−1,000
Unobligated balance available, end of year		1,000	
Unobligated balance lapsing	5,482	2,141	
Budget authority	64,174	88,450	95,800
Budget authority:			
Appropriation	64,185	88,733	95,800
Transferred to other accounts	−11	−283	
Appropriation (adjusted)	64,174	88,450	95,800
Relation of obligations to outlays:			
Obligations incurred, net	62,732	85,309	96,800
Obligated balance, start of year	17,901	41,892	61,719
Obligated balance, end of year	−41,892	−61,719	−80,554
Adjustments in expired accounts	−137		
Outlays	38,604	65,482	77,965

[1] Includes capital outlay as follows: 1968, $1,721,000; 1969, $5,030,000; 1970, $2,400,000.
[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $4,882,000 (1968 adjustments, −$137,000); 1968, $16,816,000; 1969, $16,816,000; 1970, $16,816,000.

Mr. NATCHER. At this time we take up air pollution control, and we have before the committee Dr. John T. Middleton, the Commissioner, together with certain members of his staff.

Dr. Middleton, it is a pleasure to have you appear before our committee.

BIOGRAPHICAL SKETCH

We have a biographical sketch of the principal witness which will be placed in the record at this point.

(Biographical sketch follows:)

JOHN T. MIDDLETON, PH. D., COMMISSIONER OF THE NATIONAL AIR POLLUTION CONTROL ADMINISTRATION OF THE CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Dr. Middleton was professor and director of the University of California Statewide Air Pollution Research Center at the time of his appointment to the then-named National Center for Air Pollution Control on January 1, 1967. His pioneer studies of the environment as a regulating factor in disease development in agricultural crops enabled him to first recognize photochemical air pollution as an adverse economic factor to California agriculture in the mid-1940's.

Dr. Middleton has a B. S. degree from the University of California and a Ph. D. from the University of Missouri. An author and lecturer, he is a recognized international authority in the broad field of air pollution.

Dr. Middleton has served in the past as: chairman, California Motor Vehicle Pollution Control Board; member, Governor's Interagency Committee on Air Pollution, and Executive Task Force on Waste Management; consultant, U.S.

Public Health Service, National Advisory Committee on Community Air Pollution, Executive Office of the President, Office of Science and Technology, and the World Health Organization. He is a member of numerous professional associations and is currently serving as a director for the Air Pollution Control Association.

Mr. NATCHER. We will be pleased to hear from you.

Dr. MIDDLETON. Thank you.

May I first introduce my executive officer, Mr. Perman, to my left, and Mr. Agostino Pratico, the budget officer.

Mr. NATCHER. We are glad to have you before the committee. Go right ahead.

GENERAL STATEMENT

Dr. MIDDLETON. The budget proposal, Mr. Chairman, covers the second year of operation under the Air Quality Act of 1967. Primary responsibility for implementing the act has been delegated to the National Air Pollution Control Administration. The Administration was established on July 1, 1968, as part of the Consumer Protection and Environmental Health Service. The reorganization which created this Administration provided for increased autonomy and visibility for the Department of Health, Education, and Welfare air pollution control activities and brought together those Department programs having mutual responsibilities for reducing the total injury and insult that man is subjected to from the environment.

PROGRESS UNDER THE 1963 ACT

Progress in air pollution control has been made under the Clean Air Act of 1963. Awards of Federal grant funds have expanded State and local control programs. Federal abatement proceedings have brought action against severe interstate pollution problems affecting millions of Americans. Application of Federal motor vehicle emission standards to 1968 and 1969 model vehicles has resulted in a reduction of pollution from these two model years, giving the Nation its first incremental relief from the most important single source of air pollution. However, these vehicles only represent one-fifth of the current motor vehicle population. But despite these gains, the continuing increases in urbanization, industrial expansion, the large population of uncontrolled used vehicles, and continuing dependence on motor vehicles have created increased pollution faster than we have been able to control it.

Likewise, air pollution control to date has not been carried out as part of a planned, national effort. The control activities of States and communities have been marked with great unevenness and disparity of effort. In some areas, essentially no effort has been discernible, while in others it remains inadequate despite increasing State action. Forty-six States have some form of control legislation, but only 34 authorize the establishment of air quality basins, air quality standards and emissions standards, and only 26 have a provision for emergency actions. Of the estimated $50 million that is being spent at the State and local level to control air pollution, $25.8 million is being spent in the five States of California, Illinois, New Jersey, New York, and Pennsylvania.

The act provides for an orderly, systematic, and scientific attack on one of our most complex environmental problems which man has ever been called upon to face—the prudent management of his air resource.

There is now a mechanism for controlling industrial and other stationary sources of pollution through regional action involving basic responsibility for regulatory control by State and local agencies.

There is now a requirement for the Federal Government to provide to the States scientific statements on the known effects of air pollutants and an assessment of available control techniques to facilitate the States' development and implementation of standards and regulatory programs.

There is an increased national research and development effort to control pollution, emphasizing cooperative government-industry programs, specifically directed to finding more effective methods of controlling air pollution from those major critical sources, be they heat, power, propulsion, or consumer products.

We are now entering a critical phase in the most comprehensive effort yet undertaken to restore the air resource to an acceptable quality and prevent its future contamination. The programs proposed for 1970 have been designed to edge us forward in this crucial period of implementation of the act.

The Federal-State relationships under the act require important actions from both levels of government. For example, the designation of air quality control regions by the Federal Government is an initial and fundamental step leading toward action by State governments. They are required to adopt and enforce standards to control air quality on a regional basis. The Administration must concurrently develop and publish air quality criteria and control techniques documents for pollutants adversely affecting man and his welfare. Criteria indicate the extent to which air pollution is harmful to health and property while the control techniques detail the available methods and processes for preventing and controlling pollution.

Since our last appearance here, we have made considerable progress in carrying out the initial requirements of the national control plan. We have designated air quality control regions in several of our major pollution problem areas, such as the metropolitan area complexes of New York, Chicago, Philadelphia, Denver, and Los Angeles, as well as Washington, D.C., involving portions of 11 States and the District of Columbia. By the end of fiscal year 1970 we expect to have completed the designation of some 50 regions, bringing about 70 percent of the Nation's urban population within the regional control system. These regions will beneficially influence the air quality for the neighboring rural population.

PLANS FOR 1970

Air quality criteria and related information on control techniques for the sulfur oxides and particulate matter, two of the most important classes of pollutants, were published and notice of their issuance appeared in the Federal Register of February 11. Plans for 1970 include publishing documents on carbon monoxide, photochemical oxidants, and photoreactive compounds, including the oxides of nitrogen.

The development of these criteria—which will provide the foundation for State control actions—involves difficult, costly, and complicated scientific and technical procedures. We have increasingly enlisted the knowledge and skills of the scientific and industrial communities and the Federal Establishment, to help us prepare these documents. We have established a National Air Quality Criteria Advisory Committee, whose membership consists primarily of scientists working in universities and industry. The 1970 research and development program calls for increased activity in delineating the impact of pollutants on humans and on their economic activities. The statutory requirement for Federal publication of air quality criteria, as a prerequisite to State development of air quality standards, based on sound technical knowledge, calls for a broadening and strengthening of our clinical, epidemiological, and related health effects research, as well as research on the economic impact of pollutants.

Fiscal year 1970 is a most critical phase in the launching of a new collaborative air pollution control system. The States, in 1970, will be squarely faced with unprecedented scientific, technical, manpower, and regulatory demands directly attributable to the act and its requirements for State performance. State standards and implementation plans for federally designated regions must be developed and submitted on a rigid schedule fixed by law.

With the publication of the criteria and control technology documents by the Federal Government, States have 3 months to signify their intent to set air quality standards for the pollutants involved for areas included in designated air quality control regions. They will then have 6 months to hold public hearings and adopt standards, and another 6 months to adopt plans and schedules for implementation and enforcement of the standards. Their standards and plans must be submitted to the administration for review and approval. The task of developing ambient air quality standards and emission reduction plans necessary to achieve the adopted standards is the heaviest single responsibility assigned to the States under the act.

The proposed budget for grants-in-aid to States and communities represents a basic financial assistance structure which is directly geared to assuring State and local capability for response. The grants-in-aid estimate, calling for an increase of $2,545,000, places primary emphasis on support of those agencies within the air quality control regions we expect to have designated. In conjunction with the financial assistance proposed, the proposal calls for increased technical assistance and training activities. These activities are directed at assisting the State and communities, as well as the industrial sector. Lack of adequate Federal financial and technical assistance to the States, including the training of the many urgently required new air pollution control technicians, has the potential for nonperformance or inadequate performance by the States. Such conditions may require direct Federal involvement in regional standard development and enforcement, which, in my view, would seriously delay achievement of the goals sought and be a more time-consuming approach to air pollution control.

CONTROL TECHNOLOGY RESEARCH AND DEVELOPMENT

Turning to the important area of control technology research and development, Mr. Chairman, here again it is obvious that the States cannot be expected to develop and enforce fully effective regional control programs nor can the response be prompt and adequate unless assistance is provided in the form of new and improved methods and practices which can be adopted by the States.

As you know, many sources of air pollution can now be controlled with existing equipment and techniques, and these should be brought under control after the States take action on the basis of the regional formula established in the act. But some types of pollution are still not amenable to adequate feasible control. This is true for sulfur oxides and nitrogen oxides. Emissions of sulfur oxides from various sources are currently increasing at a rate of about 6 to 7 percent per year. By 1976, sulfur oxides emissions from the combustion of fuels could climb from its present level of 30 million tons per year to more than 40 million tons per year. To meet such problems the Congress provided authorization for a greatly increased national research and development effort—with, under section 104 of the act, special emphasis on practical control techniques applicable to air pollution associated with fuel combustion. Emphasis was also placed on the utilization of the private industrial sector in finding solutions.

The budget proposal before you, Mr. Chairman, provides for an increase in the Government-industry research and development contract program. This activity involves the combined efforts of several agencies of the Federal Government and non-Federal organizations, including industrial firms and research institutions. The sulfur oxides program is the predominant single program of research and development being conducted by the administration. The 1970 program also provides for limited additional activity on techniques for the control of nitrogen oxides.

In dealing with the control of pollution from vehicular sources, a twofold approach of Federal regulatory control and research and development is employed.

New and more stringent Federal exhaust emission standards for vehicles are scheduled to become effective this year with the 1970 models. We can expect a further reduction in automotive air pollution from the 1971 model vehicles with the control of fuel evaporation emissions. These reductions unfortunately, can now be viewed only as a temporary respite. Expected increases in vehicle population and vehicle use will not only add to the presently uncontrolled pollutants such as nitrogen oxides and particulate matter, but will overcome the gains made by regulated emission controls of carbon monoxide and hydrocarbons. We must not only improve our control methods for today's internal combustion engine vehicles but develop alternate propulsion systems for tomorrow's vehicles which must be essentially pollution free. The program calls for implementation of the tightened 1970 model standards, work on extending the standards for the 1971 model vehicles, the development of improved test techniques, including systems for inspecting vehicles in use, developmental work in automotive particulate and nitrogen oxides emissions, and continuation of a limited, highly significant, and very important activity directed to the development of pollution-free vehicular power systems.

In addition to the activities I have touched on, the budget proposal provides for the development of mechanisms to implement the Federal responsibility under the act to take emergency measures to abate air pollution when serious episodes threaten. Further, in 1970, the formal registration of several initial classes of fuel additives will commence, as required by the act. The proposal also provides for our continuing program of minimizing air pollution from Federal facilities and insuring that such facilities perform in an exemplary manner.

BUDGET SUMMARY

In summary, the 1970 budget proposal calls for $96,800,000, which includes a carryover of $1 million into 1970 for carrying out section 104 of the act. This is an increase of $11,981,000 over the current fiscal year budget. This increase consists of $3,761,000 for abatement and control activities; $7,689,000 for research, development, and demonstration activities; $431,000 for manpower training activities; and $100,000 for program direction and management services.

We have moved forward on the course of actions set forth in the 1967 legislation, Mr. Chairman. This budget proposal will help maintain the momentum required to achieve restoration of our air resource.

I will be pleased to respond to questions.

NEED FOR AUTHORIZING LEGISLATION

Mr. NATCHER. Thank you very much, Dr. Middleton.

Dr. Middleton, your 1970 estimate includes $21.9 million for which there is no authorizing legislation. Is that correct?

Dr. MIDDLETON. That is correct, sir.

Mr. NATCHER. What program is involved?

Dr. MIDDLETON. That is a very important development of control technology for the pollutants that very seriously affect us, largely the sulfur oxides and the beginning of the nitrogen oxides program. This is that part that deals with section 104, which deals specifically with combustion arising from fuels not only from stationary sources, but vehicular sources as well. This is largely a contract program in which we involve the affected industries and attempt to bring industries with innovative ideas into a new control program in which they would contribute to the resources we require for actually abating air pollution and preventing it in the future. It is a very important aspect of our total program.

Mr. NATCHER. Has authorizing legislation been introduced?

Dr. MIDDLETON. It has been introduced. I might add, Mr. Chairman, that the amount of money, $21.9 million, is still within the congressional appropriation limit authorized in the Clean Air Act, as amended.

Mr. NATCHER. Dr. Middleton, do you have any idea about enactment of this legislation before we mark this bill up, hopefully, by the first of June?

Dr. MIDDLETON. I do not have personal information in that regard, Mr. Chairman. Perhaps the Office of the Assistant Secretary, or Comptroller, does.

Mr. HARRIS. I do not know.

MAJOR SOURCES OF AIR POLLUTION

Mr. NATCHER. Are automobiles our greatest air pollution problem?

Dr. MIDDLETON. Yes; they are the largest single source of pollution. That is not to say there are not other very important sources of pollution, but the automobile as an entity, wherever it is, is a very important source of pollution.

Mr. NATCHER. What proportion of your total $95.8 million request for 1970 is related to automobile exhaust?

Dr. MIDDLETON. In the direct operations of our budget, it deals primarily in the bureaus of engineering and physical sciences, and abatement and control, and the amount for 1970 is $2,620,000.

Mr. PERMAN. That is in direct operations. In addition to that, we have a contract program and this is approximately $3.5 million. The total automobile figure, Mr. Chairman, in the budget is approximately $6.1 million.

Mr. NATCHER. What are the other more important sources of air pollution?

Dr. MIDDLETON. The next most important source of pollution, Mr. Chairman, apart from transportation would be in the field of combustion of fuels from stationary sources, where sulfur oxide is the most notable contributor.

As my testimony suggests, there is now about a 30-million-ton-a-year sulfur oxides emission into the air resource of the Nation, of which about 23 million tons come from the combustion of fuels. The others are distributed between industrial sources and a variety of other things.

Mr. NATCHER. Dr. Middleton, do you believe we are concentrating our money and efforts on dealing with the most serious sources of pollution at this time?

Dr. MIDDLETON. I think that the budget before you demonstrates that we must be concerned with the future utilization of our fuel resources for the greatest social benefit, be they for heat, power, or propulsion. The very significant research and development program that we have for the control of the sulfur oxides and particulate matter, and the development of a nitrogen oxides program, is dedicated toward relief from those sources of pollution for which there are no known practical control measures.

One may think that the amount of money is inappropriately distributed between stationary sources and mobile sources, since the motor vehicle is the greatest single source of pollution; but emissions from motor vehicles, with the present Federal emission regulation, is now on the descendancy. The contribution from vehicles of carbon monoxide and hydrocarbons with the new standards to be invoked in the model year 1970, and the evaporative emission in 1971, will bring down still further these emissions until about 1978 to 1980; at that time we will then begin to lose the hard gains won and the levels of those pollutants will begin to rise.

It is in that interim period that we are initiating this new motor vehicle control program which we expect to be truly innovative. We are trying to find new power propulsion systems. In this budget we have some $650,000 dedicated specifically to a low pollution vehicle propulsion system, and this is a relatively small amount of money.

However, this is the beginning of a larger program which will evolve in the interval when the drop is taking place in carbon monoxide and hydrocarbons, so at the time the levels begin to ascend again, we will expect to have prototype vehicles low in pollution which will overcome the significant vehicle population growth and thereby take care of that very serious vehicle pollution problem.

Today the area of poorest control, the least knowledge, poorest technical background, is in the area of the control of fuel combustion, primarily from stationary sources, utilizing coal and oil. It is in this area that we are attempting to stimulate, not only from our own work but through our contract program, the very significant industrial participation needed so that we can get control systems for those very important sources of pollution.

Mr. NATCHER. Thank you, Dr. Middleton.

The committee will adjourn until 10 o'clock in the morning.

TUESDAY, MARCH 18, 1969.

STATE AND LOCAL EFFORTS

Mr. FLOOD. Gentlemen, the Clean Air Act of 1963 says:

> The prevention and control of air pollution at its source is the primary responsibility of the State and local government.

We read a great deal in the papers and get all sorts of letters coming from the coalfields about air pollution and we have a special kind there from burning culm banks.

How are the States and the localities doing? How much are they spending on air pollution control compared with what they were spending, say, 5 years ago?

Dr. MIDDLETON. Mr. Chairman, in my opening statement yesterday I said that about $50 million was being spent for air pollution control, of which five States including the State of Pennsylvania accounted for about half of that expenditure. Of the total, the Federal Government provides $22.7 million.

To your point, where there are State programs, the States are spending about $9.5 million. Where there are local programs which the Federal Government also assists in supporting, the local programs are spending about $17.2 million.

Mr. FLOOD. Are the States pulling their weight in this boat?

Dr. MIDDLETON. The States are not doing as much as they should in many places. Some States have beginnings of good programs. There is very great unevenness and disparity.

Mr. FLOOD. The law specifically declares the intent of Congress; this is primarily a State show. If that is so, do the States recognize that it is their primary responsibility?

Dr. MIDDLETON. Mr. Chairman, I can assure you that with the Clean Air Act and its most recent amendments in 1967, and the national plan for clean air, the States get put in the driver's seat and assume their proper primary responsibility. The Secretary of Health, Education, and Welfare has begun the machinery to oblige the States to be responsive.

Mr. FLOOD. Are you spending any money in States that are not spending anything themselves?

Dr. MIDDLETON. The Federal money that is awarded to the States for air pollution control is always on a matching fund basis.

Mr. FLOOD. What about the locality? You mentioned something about that. How do localities assume the burden here?

Dr. MIDDLETON. The cities were among the first groups of local governments to recognize that air pollution was a problem and needed to be controlled.

Mr. FLOOD. Outside of New York, Philadelphia, Newark, what other cities?

Dr. MIDDLETON. There are many cities across the land.

Mr. FLOOD. Doing what?

Dr. MIDDLETON. Chicago is an example, of a city having an air pollution control program. The bay area, San Francisco, is a situation in which the cities have gotten together on a regional basis to cope with this problem.

Mr. FLOOD. Before the 1963 act or after?

Dr. MIDDLETON. Most action has come after 1963. The Federal Government has been a real instrument in seeing that State and local governments begin to assume their responsibilities.

Mr. FLOOD. You are prodding them?

Dr. MIDDLETON. We are doing that by having the air quality control regions designated. Those cities——

Mr. FLOOD. How many regions do you have set up?

Dr. MIDDLETON. We have six now and two more consultations completed and we expect by the end of this year to have 20 regions designated.

Mr. FLOOD. Will that cover the entire country?

Dr. MIDDLETON. No. That is just a beginning. We expect through the 1970 budget before you to have about 50 regions designated. This will include about 70 percent of the urban population of the country. That is a very significant step.

Mr. FLOOD. Are you in a hurry about this, excited, or just going along as usual?

Dr. MIDDLETON. I am excited. I am doing this not in a hurried fashion, not in a hasty fashion, but in a deliberate, fast pace so we can assure the cities' response as well as the States.

Mr. FLOOD. That is not one of those Federal programs that will go on like Tennyson's brook, ad infinitum; will it?

Dr. MIDDLETON. I propose that it does not. With the manpower difficulties that we have and the budget restraints, naturally the pace is somewhat fixed by the program limitations. It is my intent to use what resources we have, by shifting priorities within the program, wherever I can, to assure that we oblige the States to be responsive.

BACKGROUND OF COMMISSIONER

Mr. FLOOD. How did you wind up in this job? What do you know about it?

Dr. MIDDLETON. I sometimes ask myself how I wound up on this job.

Mr. FLOOD. I am sure of that. So do I.

Dr. MIDDLETON. I accepted the opportunity offered me by the Department of HEW.

Mr. FLOOD. Are you an engineer?

Dr. MIDDLETON. I am a biologist. I am primarily concerned with seeing what we know about air pollution and its effects upon health and welfare is brought into bearing so that air pollution can be controlled. My record in the University of California was finding out what happens to people and things because of air pollution and then what to do about it.

AIR POLLUTION CONTROL EFFORTS BY INDUSTRY

Mr. FLOOD. What is industry doing? Since they are the casus belli, what are they doing?

Dr. MIDDLETON. Various industries are doing something and many industries are doing nothing.

Mr. FLOOD. What do you do about industries doing nothing?

Dr. MIDDLETON. We are attempting to do something about that. May I give you an example? The smelting industry is an old well-established industry. It is a source of sulfur oxides.

The industry is often remote from cities, in distant places, yet the contribution they make through whatever height their stacks does contribute significantly to air pollution across the country. We have designed a plan which will make a systematic approach to the control of effluents from smelters by using the contract technique—section 104 opportunities—by having a contractor who has an affiliation with and an understanding of smelters bring, through a liaison committee of the smelter industry to the contractor and ourselves, sense to what the problem is and what to do about it. Then collectively make a decision on who will do what parts of the planned work on control technology and then take action.

We are now at the point of assessment of the problem in the smelter industry through a contract with the A. G. McKee Co.; the next step will be to develop an action plan to see that the control technology we have is in use and what we need to develop is in the process of evolution.

Mr. FLOOD. Suppose the industry people get bored and go away?

Dr. MIDDLETON. They don't go away, because they see this as an opportunity for collaboration, assistance, and having some leadership in recognizing the problem and what their compliance time schedule can be.

One of the advantages of the Clean Air Act is that there is a schedule of compliance, mandatory compliance.

ENFORCING COMPLIANCE

Mr. FLOOD. How do you enforce that? Do you just say, "Go and sin no more," or do you do something?

Dr. MIDDLETON. We really do something about it. At least we are planning to do something about it.

Mr. FLOOD. Are there any cases where you have slapped anybody down?

Dr. MIDDLETON. We have had nine abatement conferences which have been held on a different basis than the compliance format of the Clean Air Act, as amended. We have, if you wish to put it that way, slapped someone down. The first abatement case—Selbyville, Del.-Md.,—was called because of an unpleasant odor problem. This has been corrected.

With the help of the Department of Justice it has gone through the appropriate Federal court and the plant has been closed as a result of noncompliance.

In other instances, our abatement conferences have been other constructive things in pointing out what the problem is, making specific recommendations, and then through the review process seeing whether the recommendations have been met or not. We have held conferences in several places; paper pulp mills in two instances, and of course the New York-New Jersey conference for control of sulfur oxides and particulates.

Mr. FLOOD. It is a mountain moving after 6 years and bringing forth mice. Do you have that impression?

Dr. MIDDLETON. I see a tremendous job ahead of us. I cannot agree that we are just bringing out mice. We are making the first significant forward steps. We have to have a national plan; we have to put the building blocks together; and we have to do it systematically. That is what we are doing now. It has been a long time in evolution but I think with our systematic approach, the evolution of plans——

Mr. FLOOD. You are not off the ground after the sixth year. How many more will you need?

Dr. MIDDLETON. I think that we have made progress since the first Federal action in 1955 when Senator Kuchel introduced the bill which became Public Law 84–159 and provided research and technical assistance relating to air pollution control. That was the first time that the Federal Government took a role in seeing what air pollution was all about and what could be done about it.

The long early years, the first 10, perhaps, were primarily focused on "what is the problem"; "what is it doing to people and things"; "is the automobile important?"

Mr. FLOOD. Does anybody doubt this?

Dr. MIDDLETON. In 1955 there were many people who doubted that.

Mr. FLOOD. In the coalfields?

Dr. MIDDLETON. There are people in other parts of the country who may be less aware of the direct sources of pollution, Mr. Flood.

Mr. FLOOD. I am sure of that.

Dr. MIDDLETON. It is toward this area in the early part that the Division of Air Pollution was dedicated to focusing on what is air pollution; what are the casues; and what is the research and development program needed to do something about air pollution control.

BURNING CULM BANKS

Mr. FLOOD. We do not have any doubts about air pollution in the coalfields. Don't have any doubt, Mister.

Dr. MIDDLETON. I have no doubt. I have become aware of what the culm pile situation is. When I first met you I did not know.

Mr. FLOOD. You can stand on the front porch of my house and not only smell but almost feel the heat from those culm banks.

Dr. MIDDLETON. Through our demonstration grants, we are showing that a water monitoring program is an effective system in extinguishing the Huber bank. I am sure that you are aware of that program.

Mr. FLOOD. That is the one I am talking about. At 7 o'clock in the morning after a rainstorm in the middle of the summer that is something. Well, you know about it.

Dr. MIDDLETON. I know about it and I can tell you something about the activities that have been going on with the Huber bank, if you would like.

Mr. FLOOD. No. I know about them. Just don't go away and forget about it.

Dr. MIDDLETON. We are not, because we have learned through the Bureau of Mines that there are more than a billion cubic yards of culm piles. We know through our grant programs that there are a variety of ways of putting these fires out.

Mr. FLOOD. I do not mean just in my district but all over the soft coal area, too.

Dr. MIDDLETON. That is true.

Mr. FLOOD. There is nothing worse, period.

Dr. Middleton. There are more than 500 of these fires and we now have some techniques that can be used to extinguish them. The prices range considerably, but with a billion cubic yards to take care of, it takes a considerable amount of money to put these fires out. There are extinguishing techniques available and they can be used today. In addition, one of our sulfur oxides control projects devoted to providing clean coal provides at the same time a dirty fraction, which is high in sulfur content and ash. Through a special combustion process, the dirty fraction is used to derive energy and sulfur so that the debris thrown away is smaller in volume, thereby reducing the size of the culm pile and the likelihood of its burning.

Mr. FLOOD. Does it occur to you that sometimes in executing your program you may cause more trouble than you correct?

Dr. MIDDLETON. That is part of the problem. That is why we are trying to make a systems approach so that what we do to control sulfur oxides by limestone or dolomite injection does not create a solid waste problem or water pollution problem. We try to have an integrated closed system, not concerned with air pollution alone.

Mr. FLOOD. Big Brother is watching you—don't forget that.

Dr. MIDDLETON. I hope that Big Brother not only watches us but encourages us to proceed as we are trying to.

AIR QUALITY CONTROL REGIONS

Mr. FLOOD. Your justifications say that 20 air quality control regions will be designated by the end of 1969. You just mentioned that?

Dr. MIDDLETON. Yes, sir.

Mr. FLOOD. Are these nationwide?

Dr. MIDDLETON. Yes, sir.

Mr. FLOOD. These are not parochial; no politicians or Senators or somebody twisted your arm; these are nationwide?

Dr. MIDDLETON. Usually we have not had our arms twisted to do much about air pollution control.

Mr. FLOOD. You will, beginning with me.

Dr. MIDDLETON. In that case, I guess I should announce that we have two air quality control regions planned in the State of Pennsylvania. One, interstate metropolitan Philadelphia, is designated and the other, in Pittsburgh, is to be designated shortly.

Mr. FLOOD. Will the 20 be scattered around the Nation?

Dr. MIDDLETON. Yes, sir. They will be both interstate and intrastate in nature.

Mr. FLOOD. I suppose a classic example of the interstate is the New York-Newark area?

Dr. MIDDLETON. That is a good example.

I think we have another important one in the East St. Louis, Ill.-St. Louis, Mo., area and in the Metropolitan Chicago, Ind.-Ill., area.

Mr. FLOOD. Suppose you for the record give us a list together with the amount of funds that you expect to spend on each one of these in 1969 and 1970.

Dr. MIDDLETON. Yes, sir.

(The information follows:)

Estimated Federal Grant Support to
Designated and Proposed Air Quality Control Regions

Regions	1969 Funds: Estimated Amount of Grants to Local Agencies in the Region	1969 Funds: Estimated Amount of Grants to States Applied to the Region	Total
1 Washington, D.C.	$ 265,643	$ 12,788	$ 278,431
2 New York	1,197,363	802,007	1,999,370
3 Chicago	1,228,789	199,258	1,428,047
4 Philadelphia	650,604	502,390	1,152,994
5 Denver	249,674	59,400	309,074
6 Los Angeles	1,167,078	395,200	1,562,278
7 Saint Louis	338,664	102,266	440,930
8 Boston	156,000	103,600	259,600
9 Cincinnati	36,100	29,686	65,786
10 San Francisco	208,275	163,200	371,475
11 Cleveland	34,922	31,300	66,222
12 Pittsburgh	354,213	135,852	490,065
13 Buffalo	280,512	41,273	321,785
14 Kansas City	216,143	77,055	293,198
15 Detroit	1,047,795	35,042	1,082,837
16 Baltimore	188,366	--	188,366
17 Hartford	--	70,200	70,200
18 Indianapolis	16,307	18,086	34,393
19 Minneapolis-St. Paul	82,184	92,200	174,384
20 Milwaukee	33,211	40,357	73,568
21 Providence	--	114,284	114,284
22 Seattle-Tacoma	578,420	--	578,420
23 Louisville	179,999	61,543	241,542
24 Dayton	90,000	7,800	97,800
25 Phoenix	207,500	133,754	341,254
26 Houston-Galveston	265,701	47,256	312,957
27 Dallas-Fort Worth	157,642	49,632	207,274
28 San Antonio	107,952	20,328	128,280
29 Birmingham	--	--	--
30 Toledo	91,131	7,569	98,700
31 Steubenville	19,000	5,885	24,885
32 Chattanooga	--	10,920	10,920
33 Atlanta	98,618	28,200	126,818
34 Memphis	63,295	30,889	94,184
35 Portland, Oregon	301,214	10,665	311,879
36 Salt Lake City	--	110,005	110,005
37 New Orleans	--	35,640	35,640
38 Miami	270,000	35,103	305,103
39 Oklahoma City	11,412	7,350	18,762
40 Omaha	--	--	--
41 Honolulu	--	--	--
42 Beaumont-Port Arthur	77,758	12,216	89,974
43 Charlotte	69,593	13,951	83,544
44 Portland, Maine	--	5,328	5,328
45 Albuquerque	43,575	9,150	52,725
46 Lawrence-Lowell-Manchester	--	23,024	23,024
47 El Paso	33,532	10,578	44,110
48 Las Vegas	50,491	--	50,491
49 Fargo-Moorhead	--	4,050	4,050
50 Boise	--	3,777	3,777
51 Billings	--	7,819	7,819
52 Sioux Falls	--	600	600

Estimated Federal Grant Support to
Designated and Proposed Air Quality Control Regions
(Continued)

1969 Funds

Regions	Estimated Amount of Grants to Local Agencies in the Region	Estimated Amount of Grants to States Applied to the Region	Total
53 Cheyenne	$ --	$ 3,274	$ 3,274
54 Anchorage	41,138	--	41,138
55 Burlington, Vermont	--	3,932	3,932
56 San Juan	--	--	--
57 Virgin Islands	30,000	--	30,000
Totals	10,539,814	3,725,682	14,265,496

1970 Funds

Funds estimated to be available for Regions in 1970--$16,810,496. The distribution to these anticipated Regions will be determined after (a) specific amount of grant funds for 1970 is known, (b) specific designation of Regions has been made, and (c) program assessments, including knowledge of State and local matching funds, are completed.

Mr. FLOOD. We are going to follow up on this.

Dr. MIDDLETON. I will look forward to it with a great deal of pleasure.

AIR POLLUTION LEVELS

Mr. FLOOD. Are the levels of air pollution getting worse each year or have you made enough progress to reverse the trend?

Do you know how you are doing? Are you getting anyplace?

Dr. MIDDLETON. Let me give you some examples. First let me recite that the air quality measurement system that we have across the country which measure the quality of air in a variety of places is such that we do not have a good sense of what the distribution of air pollution is. This needs to be very greatly improved.

What we do know from this is that the——

Mr. FLOOD. Do the local people have a real concern about this thing?

Dr. MIDDLETON. Many do.

Mr. FLOOD. Many don't?

Dr. MIDDLETON. Many do and many don't.

Mr. FLOOD. Why don't they? Don't they care? Just lived with it so long they pretend it is not there?

Dr. MIDDLETON. I think, Mr. Chairman, that, by and large, people do care. I think the most recent Gallup Poll announced on the part of the National Wildlife Federation speaks precisely to that point. Even in their samples, 34 percent of which were in families of $5,000 and less income, 36 percent of those interviewed felt that more should be spent to control air pollution. Thirty-two percent thought that more should be done to correct water pollution. That is a very significant percent of the population concerned about improvement in the quality of our environment.

Mr. FLOOD. That is good to hear. Sometimes we get the impression that these programs we give birth to are operating in a vacuum; nobody seems to care much. They do in this one?

Dr. MIDDLETON. I think they do. I think that people, when they first bought 1968 model cars in States other than California—California having had the opportunity a few years earlier—first realized they could do something about air pollution by having an air pollution controlled car. The carbon monoxide levels, 91.5 million tons a year, 71.2 million tons of which come from transportation sources, are now in the process of being whittled away.

Mr. FLOOD. It looks as though you have made that point, much to my amazement. That point seems to have been made awfully fast.

Dr. MIDDLETON. I think we have to recognize that even though we have standards now for emission control for motor vehicles and we will have more stringent standards in 1970 models sold this fall, that only represents one-fifth of the total motor vehicle population. The motor vehicle usually lasts 10 years. We don't see any dramatic shift in reduction but rather a consistent dropping off.

Mr. FLOOD. I know how bad the air pollution problem is from motor exhaust. This is a universal problem in this country, but don't get carried away with the dramatics of the motor exhaust program and forget a dozen other sources of pollution that are local but very bad.

Dr. MIDDLETON. Mr. Chairman, in this regard I perhaps should point

out in addition to the smelter plan which I described to you, we have similar systematic plans being developed, such as that for the pulp and paper industry. We have, as you know, developed and made available a comprehensive Federal plan for control of sulfur oxides.

Mr. FLOOD. You do not work with the water pollution control people; it is a separate show? Is there any connection?

Dr. MIDDLETON. There is no direct connection with our Administration and that of water, although we have dealings with Mr. Moore and have learned what some of his problems are—how he approaches the States and some of his difficulties—so that we would profit from his experience.

ALTERNATIVE PROPULSION SYSTEM

Mr. FLOOD. Suppose you tell us a little bit more about your work on alternatives to the internal combustion engine. What kind of things are being explored? Are we getting near some kind of a breakthrough?

Dr. MIDDLETON. We are attempting to launch a nonconventional vehicle program. This meets with some difficulty primarily because——

Mr. FLOOD. Nonconventional vehicle program? What is that?

Dr. MIDDLETON. We want to change the nature of the propulsion system so that we may get away from the internal combustion engine, which is relatively inefficient; better use of fuels and much cleaner—a low-pollution vehicle. The words nonconventional perhaps are not too descriptive. It is a different power system. We are looking at the Rankine cycle engine, a liquid system in which you apply external heat; and with the Rankine cycle——

Mr. FLOOD. It seems obsolete, does it not?

Dr. MIDDLETON. No. The steam engine, while it is talked about is available right now for use, conversions will have to be made; but it is very likely to be a successful engine for many vehicles. One of the tricks is to take a large engine which is now highly effective and make it equally efficient at a small size. The problem is one of determining how to make something that is good for 750 or 1,000 horsepower perform equally well at 250 or less horsepower.

Mr. FLOOD. That is what defense people call miniaturization. Why is that a trick?

Dr. MIDDLETON. It is a fairly important trick to turn when one considers that the motor vehicle industry is a consolidated industry located more or less in one State and is practically the sole supplier of all the cars in this country. Competition from the innovator is sometimes difficult. Our program is to try and identify the innovative person or firm with a new idea.

Mr. FLOOD. Aren't you breathing down their necks? Don't they know that the hounds are after them?

Dr. MIDDLETON. I think they know that they must do something because now the petroleum industry as well as the motor vehicle industry have joined forces and are trying to match fuels with motor vehicles. There is a thrust on the part of the industry to clean up the present engine. We feel by 1978 to 1980 there will be a need for something more dramatic than just improvement of these present engines.

Mr. FLOOD. How much are you spending in 1969 and 1970?

Dr. MIDDLITON. In 1970 we propose $650,000 for the new power systems.

Mr. FLOOD. In 1970?

Dr. MIDDLETON. The same amount, $650,000.

Mr. FLOOD. Couldn't you get more from the powers that be on that?

Dr. MIDDLETON. My professional wishes were to ask for the full amount authorized with the Clean Air Act, but the various constraints——

Mr. FLOOD. How much was authorized?

Dr. MIDDLETON. $134.3 million.

Mr. FLOOD. Who turned you down?

Dr. MIDDLETON. I think the Department and the Executive Office and the Congress indicated their desire to have a reduced budget this year. So the Department budget is that which we present with the additional limitations of the Bureau of the Budget.

NEW POSITIONS REQUESTED

Mr. FLOOD. They are asking for 138 new jobs. Suppose you tell us specifically how you are going to use those jobs. What do you need them for? What will happen if you don't get them? Will the heavens fall if you don't get them?

Dr. MIDDLETON. There will be many difficulties. In the area of abatement and control, which is getting rid of air pollution, we are asking for 81 positions. These 81 positions will be largely directed toward giving assistance, direct help, to the States in doing——

Mr. FLOOD. What kind of people are these?

Dr. MIDDLETON. They range from highly skilled engineers to chemists, meteorologists—the kind of people who give assistance to control agencies to see that the standards that States adopt and implementation of plans they design for control of air pollution are actually met. In other words, it is the technical assistance, helpfulness the Federal Government gives to the States to mount their programs.

EDUCATION AND TRAINING PROGRAMS

Mr. FLOOD. Are the universities and technical engineering schools giving degrees in this sort of thing?

Dr. MIDDLETON. Through our training grants program, our fellowships program, we have assisted universities and gotten some of them interested in training people in the field of air pollution. As I believe, I discussed with this committee last year, air pollution is not a discipline in itself. It is a mixture of many disciplines. So in universities, in colleges, one finds a field of interest in air pollution which involves the biological field as well as the physical science engineering fields.

Mr. FLOOD. I don't get that feel. It is a very thin feeling. Shouldn't you put a rifle on these people? Shouldn't you get ahold of these long-haired jokers and sell them this package?

Dr. MIDDLETON. This year, Mr. Chairman, we expect to train 4,000 people. That is quite a lot. Last year we did slightly better than 2,000. We expect to bring these people, in part, to Durham, N.C., where our technical center is now being located, as well as take our direct operations training people to the States, counties, and cities and offer short courses. This provides the opportunity of upgrading those presently involved in air pollution control as well as affording a new opportunity for those who would like to enter the field.

We also do training through the 2-year college system. So rather than provide support solely for those who will graduate with a bachelor's degree, we hope through the 2-year colleges to have well-qualified technicians trained who get into the work through professional or associate degrees.

Mr. FLOOD. I think that is extremely important.

Dr. MIDDLETON. We are making an assessment——

Mr. FLOOD. Let them take a degree later on if they want to, or work at it, but if you can get them out in 2 years in this field doing technical work, that is a good trick.

Dr. MIDDLETON. We hope it pays off. We have every prospect it will.

INCREASE IN TRAVEL

Mr. FLOOD. You are requesting an increase of $401,000 for travel. That is a 25-percent increase. Why?

Mr. PERMAN. The travel is essentially associated with the activities that have a national impact. The designation of regions, as an example, Mr. Flood. The act requires that before a region is designated that there be consultations with these State and local people concerned, including Governors' representatives. This does require that the people in charge of getting the facts and determining which regions should be designated speak personally with the Governors and their representatives and in fact hold formal public consultations in the localities. This involves a lot of travel. That tempo will be increased. The entire technical assistance program involves a good deal of travel.

Dr. Middleton mentioned the training program. The reason we can train more people up to the 4,000 figure is because we are taking field teams out to where the people are. Many States, Mr. Chairman, prohibit by law their public employees from leaving the boundaries of the States. We offer free training in our laboratories in Durham. Many States cannot send their people there although they badly need the training. We are sending our people to give the training right in the States and localities. This does involve a fair amount of travel costs.

MOVE TO NORTH CAROLINA

Mr. FLOOD. You have rent, communications, and utilities, going up 45 percent and your total budget is just about stationary. With a stationary budget you are up 45 percent in those items.

Mr. PERMAN. The budget request shows an increase of $11,981,000.

Mr. FLOOD. You show how much?

Mr. PERMAN. The increase requested for 1970 is $11,981,000. The program overall is being expanded and these increases——

Mr. FLOOD. But these items I mentioned are up 45 percent.

Mr. JOHNSON. Pardon me, Mr. Chairman. Perhaps I could shed some light on this—and correct me if I am wrong, Mr Perman. We are moving the major portion of our field staff to the new facility in North Carolina. Until those facilities are constructed and built on a permanent basis, we will have a lease arrangement that we will have to carry out. I think that it perhaps reflects part of that cost.

Mr. PERMAN. With respect to rent and utilities—Mr. Johnson has stated the case on that. We are concentrating our people in the North Carolina area. This area is where the facilities will be leased in 1970.

Mr. FLOOD. Then you probably have the answer to the next question. You have 58-percent increase in transportation of things. Is that the same thing?

TRANSFER OF STAFF FROM CINCINNATI

Mr. JOHNSON. This is the cost of moving our staff to North Carolina.

Mr. SHRIVER. From where?

Mr. JOHNSON. From Cincinnati and Washington.

I might add this entire move is an expression of the will of the Congress when looking for a permanent site to locate our air pollution control operation.

Dr. MIDDLETON. May I suggest, Mr. Chairman, that we will have the advantage of a single focal point with the exception of the motor vehicle program which will remain in Michigan.

Mr. FLOOD. I know that.

Mr. MICHEL. Who are these people being transferred from Cincinnati? What are they doing in Cincinnati?

Dr. MIDDLETON. They were doing the various responsibilities we talked about earlier, Mr. Michel, with regards to air quality control region designation, engineering studies, the whole gamut of our research work. What they are doing there will be done now in North Carolina. We have part of our staff there already. About 300 in number, I would imagine. We have some people in Washington in our headquarters group that would be much better located with their colleagues in Durham since they deal with the control program grants.

Mr. MICHEL. Is this stripping that Environmental Center there of talent, what they thought we were providing for out there in Cincinnati?

Dr. MIDDLETON. Certainly not stripping it of talent. We have very few people in the Center as such. We are located in a number of buildings throughout the city. The Robert A. Taft Sanitary Engineering Center has been taken over by the Federal Water Pollution Control Administration and we had been displaced into a variety of rent facilities about the city. There are plans for other groups to assume growing postures, programs, and activities in the Cincinnati area. It is not a retreat but a consolidation for our purposes so that others can expand appropriately in the Cincinnati area.

Mr. MICHEL. Are you telling us that all of the activities in the air pollution study field will be centered down in North Carolina?

Dr. MIDDLETON. I would like to point out that North Carolina, Durham-Raleigh research triangle area will be the location of our Technical Center. That is our focal point. We have a developing regional program so that we will——

Mr. MICHEL. Is it confined to air down there or what?

Dr. MIDDLETON. Yes, that is correct.

One of the advantages to North Carolina is that it will be proximal to the new Institute of Environmental Health Sciences. Dr. Paul Kotin, director of the institute, and I are quite pleased about having the opportunity of relating our programs more intimately. Part of our group now in Ypsilanti will be relocated in the Ann Arbor, Mich., area, in order to be more usefully associated with the University of Michigan. That will be the motor vehicle research and development

program and compliance testing activities. It is the most economical and efficient location because of the proximity of the industry, testing divisions, and so forth.

Within the air quality control regions designated, and within the Department's regions, we will have a growing staff of people to service the needs of the States and localities in the air quality control regions. When we say that we are centering our people in North Carolina, I mean to say we are centering our technical backbone, research and development organizations, in North Carolina, with the exception of motor vehicles. Technical services, and some of the positions we requested would be in the air quality control regions, States, and in the departmental regional offices. We have no single geographical location but rather many.

Our Technical Center is in North Carolina.

Mr. MICHEL. How many people have been moved in the past year from Cincinnati down to North Carolina?

Mr. PERMAN. About 200.

Mr. MICHEL. How many more are going down?

Mr. PERMAN. This coming year we plan to move 164 more from Cincinnati to North Carolina.

Mr. MICHEL. Does that mean that the equipment that they have been working with also gets transported down there?

Mr. PERMAN. To the extent that it is feasible to crate and move the equipment it will be moved down there. To the extent that equipment cannot be efficiently moved, it will be made available to other programs which can use it—chemical equipment, laboratory equipment, and so on.

Mr. JOHNSON. Mr. Michel, might I add a note here?

Mr. MICHEL. Yes.

Mr. JOHNSON. In looking at our total field facilities and our operations in the three administrations, there is considerable advantage to having certain focal points for major operations.

In the Environmental Control Administration, that has not yet testified before this committee, we are planning to have a major facility in Cincinnati. Some 750 people will be engaged in the kinds of operations, research, investigations, activities in the Environmetal Control Administration facility there in Cincinnati.

Mr. MICHEL. Where do we stand on that? I know they are slated for a big urban renewal project. How far is it along?

Mr. CARDWELL. Planning money is appropriated. The 1971 budget will probably contain the construction money.

Mr. MICHEL. What is the figure so far as construction money is concerned?

Mr. CARDWELL. I think something around $20 million.

Mr. JOHNSON. It might be a little bit larger than that, sir.

AIR QUALITY CONTROL REGIONS

Mr. MICHEL. I note in your testimony you say the designation of air quality control regions by the Federal Government is an initial and fundamental step leading toward action by State government.

How does this really come about? Is this supposedly bringing the Federal Government closer to the State governments by having regional setups? Are we talking about different standards in different regions? Is it all one national standard we are talking about? Are there variables? What make this so attractive, such a wonderful thing?

Dr. MIDDLETON. The attraction of the Clean Air Act as amended is that air pollution varies from place to place. One can cope with its control best on a regional basis in an area in which there is a common air pollution problem. In some instances it would be within a single State, and Denver is an example. In other instances it will involve several States, as I recited earlier, Chicago, involving Indiana as well as northern Illinois is an example. The obligation is that once the area has been designated an air quality control region—and this is done in consultation with the State, county, and local officials; that within 90 days after the area has been officially designated, the Governor is to indicate his intent to adopt air quality standards for that State as part of that region.

Within 180 days after that, he will offer his air quality standards—outside air, ambient air quality standards—to the Secretary for his approval; 180 days after that there will be in implementation plan. That plan, Mr. Michel, is the emission reduction strategy. The plan assures that the air quality standards or goals are met.

This then begins once an area is designated an air-quality control region. We publish air quality criteria and control technology documents which indicate the Secretary of HEW's concern for particular pollutants. I have here as an example the air quality criteria for particulate matter. Here is the one for sulfur oxides. These documents, difficult of development, embrace all of the scientific knowledge that is available that speaks to the issue of what the effects of concentration and time of these pollutants are upon people and things.

These, then, provide the basis for the States involved in air quality control regions, with whatever political subdivisions they wish to involve with them, the determination of what their air quality standards should be. The control techniques documents are the companions of the criteria. The criteria document tells you what it does. The control techniques document tells you what you can do about reducing the pollution. These documents assist the States in the development of implementation plans. The standards and the plan of achieving those standards over a period of time is submitted for the Secretary's approval and then the State goes about its control program. It is the technical assistance. It is the financial aid. It is the meteorological diffusion modeling—the whole variety of these services that we expect to offer the States to assist them in achieving what is required through the Clean Air Act.

AIR POLLUTION CONTROL EFFORTS BY PRIVATE INDUSTRY

Mr. MICHEL. Do we have any round figures as to what private industry is spending in a given year, or this past year, on combating air pollution?

Dr. MIDDLETON. Mr. Michel, that is very difficult information to obtain. In a few instances it is available. The Manufacturing Chemists Association just recently distributed a rather extensive account of

what their interests and efforts were in both air and water pollution. This material could be made available for the record, if you wish.

In the case of the steel industry, there is very little information available except from particular companies perhaps.

In the case of the petroleum industry, there is better information because that industry has marshaled and has had an air conservation program and environmental quality committee for some time, so they are now able to make assessments within the organization of the industry, what their interests are and what they are doing and how much money is being spent. I think from public accounts you may have seen that the American Petroleum Institute spends a rather considerable amount on research in air pollution. I am not exactly sure of how much it is but it is in the $3 to $5 million range for air pollution control programs, and there is a growing and mounting interest. I think with time there will be a better stack of information available on what the various industries are doing. Now it is rather scattered and incomplete.

Mr. MICHEL. I come from peoria, Ill., home of Caterpillar Tractor Co. with its worldwide headquarters and several big manufacturing installations. Mrs. Reid has one plant in her district but in mine they built a new foundry, a fabulously big thing, a $100 million installation. You know what foundries used to be and how they used to pollute the air, but this installation is utilizing all of the modern equipment and machinery and should be a model for the rest of the country. Do you have any figures at all which indicate what the additional costs are to industry when they install his kind of new equipment to keep from polluting the air?

Dr. MIDDLETON. We are preparing a report in the final draft stages now. This is an economic status report that relates to the costs of air pollution, as well as the cost of doing something about it. This will be presented to the Congress as a report from the Secretary of HEW.

Mr. MICHEL. When will that be out?

Dr. MIDDLETON. There are always hazards involved in saying when it will arrive, but I expect very shortly, in the next few weeks, to see that it is given to Mr. Johnson for his transmittal to the Secretary. We may be talking about another month.

Mr. MICHEL. If we were to categorize industry by degrees as to those most responsible for polluting the air, please name a few. We talked about the steel industry as one, but how about some of the others?

Dr. MIDDLETON. I should add that it is not only the industries that cause air pollution. There are many commercial and domestic sources. The hot water heater, the oil-fired furnace in the home, a variety of things such as this are sources of pollutions.

Do you want me to rattle off some? I suppose that I could rattle them off. I would rather give you some idea of the categories of sources of pollution.

SOURCES OF AIR POLLUTION

Mr. MICHEL. Yes.

Dr. MIDDLETON. In the case of carbon monoxide as a principal pollutant, one that has obvious adverse health effects, transportation accounts for 71 million tons a year. Whereas industry processes account

for 5 percent of the carbon monoxide from the industrial processes—largely from the refining industry, and some possibly from improperly operated steelworks. Instead of using the carbon monoxide as a fuel sometimes it is lost and wasted. Carbon monoxide also comes from solid-waste disposal. So the municipal incinerator, the home incinerator, a variety of sources provide carbon monoxide. When it comes to particulate matter, we have an annual level of 21.6 million tons a year. Most of that comes from industrial processes such as the foundry, one of which you say has been recently constructed in Peoria, Caterpillar Tractor Co. A lot comes from powerplants. a stationary sources burning fuel. Particulate matter comes from solid waste and miscellaneous sources, including slash burning of timber to prevent forest fires. It also comes from the burning of wood waste. It comes from the beneficial forest practice of burning lands to protect trees from disease and other disasters.

In the case of sulfur oxides, which is one of our present particular concerns, of the 30.8 million tons a year, 23.1 comes from fuel burning, largely the powerplant, and other sources of energy and heat. Industrial processes, such as smelters, chemical industries, account for 6.6 tons of that total.

EFFECT OF TALL SMOKESTACKS

Mr. MICHEL. On that point of powerplants, I have a raging controversy out in my home community. They say one way of cleaning up the air is running up an 800-foot smokestack. This would be like the Gateway Arch is to St. Louis. It would be the smokestack of Peoria, I guess. Then they get to talking about whether or not they ought to paint it red, white, and blue. I don't know whether they have decided to go ahead with this or not, but the whole theory is that this local powerplant provides power for the central Illinois area, and they have in mind installing this 800-foot smokestack up there as a means of minimizing the pollution of the air.

What do you have to say about that proposition? The higher you run them up——

Dr. MIDDLETON. The more they cost. The further they distribute the air pollutants coming out of them.

Mr. MICHEL. Distribute it over a wider area?

Mr. FLOOD. Forget about that. I have 800-foot smokestacks that are a disgrace. They spread it farther. Everybody gets a little bit now.

Dr. MIDDLETON. I think the chairman perhaps answered your question. Basically, the tall stack—and the tall stack today is almost as high as the Empire State Building, 1,200 feet— is a way of changing the focal point of impact of the pollutant. It is also a way of perhaps changing the nature of the chemical compounds that come out because they have had more time to react. So that stack height, be it short or tall, is a factor in developing an emission-reduction strategy. One needs to know what it is that comes out by building a stack taller, understand who and what it is that it is going to be hit. I think it is quite improper to consider the tall stack as the solution for air pollution. It may be a useful tool distributing it and preventing some immediate close-in impact.

Also, the tall stack provides the opportunity of having bigger combustion systems. Very often a tall stack allows more pollutants to come out of a single stack. One needs to look at this problem very critically.

Mr. MICHEL. What is the answer for these power companies that still have an obligation to provide more and more kilowatts of power?

Dr. MIDDLETON. The answer is really quite simple. Getting there is going to be very complicated. The answer is we need to burn all the fuels we now have available and develop the heat and energy we need as a growing Nation, we need to burn it more efficiently. The problem today is the way we burn fuel, so inefficiently. Part of our research program and the funds listed here, particularly in the $21.9 million item, is dedicated in part to developing new boiler systems.

Mr. FLOOD. You know the best answer? Burn anthracite instead of bituminous or oil.

Dr. MIDDLETON. I will be glad to provide you that opportunity again; in having a better combustion system. We would also in our research program develop a variety of tools available to the power industries. Some of the established powerplants are to be retrofitted with pieces of equipment. However, a new plant may use a new design factor. So we have various kinds of research projects going to meet varying requirements. Whereas we may have been criticized for not having done all we should have done, we now have a research program that is developing ways of controlling sulfur oxides from old powerplants and conceptual designs that can be built into new powerplants.

Mr. MICHEL. How much research money is going for that?

Dr. MIDDLETON. Our research funds this year, Mr. Perman?

Mr. PERMAN. The total research budget for 1970 is $53.3 million. With respect to the sulfur oxides, if this is what you are referring to, that would be roughly about $19 million. It is the principal pollutant associated with powerplants.

Dr. MIDDLETON. A significant part of this budget is devoted to materials that can act as catalysts or sorbents for the flue gas emissions. It is this gamut of research that we are doing under section 104 which, as was pointed out in yesterday's hearing, section 104 authorization terminates this June 30th. Yet the work that we are now doing in this area is permitted under the general authorization of the act. Section 104 is not necessarily a limitation on doing this work. The $21.9 million that we ask for under section 104 can be equally well included within the general authorization. It is not contingent upon section 104 being continued. This money is used primarily as contract money to see that the various systems needed are developed to combat the problem of pollution from combustion. There are a series of things to be done. In some places it may be necessary to make interim shifts in the sulfur limitations of fuels used. Looking to the time that a control system could be put in, it maybe flue stack or coal cleaning—coal cleaning in some places may prove to be the best tool. It depends on the nature of the sulfur in the coal, whether it can be physically or chemically removed. This is the gamut of opportunities for removing sulfur; from fuel or from the stack after the sulfur-containing fuel has been burned. We are undertaking this significant program to assure that the coal and oil we need for developing heat and power can be used throughout the country.

UNOBLIGATED BALANCE

Mr. MICHEL. I see here you have an unobligated balance of $1 million. What is that for?

Dr. MIDDLETON. The $1 million is carryover money. One of the advantages of section 104 is the provision which allows this money to be carried forward. Also in the research and development field there are sometimes difficulties in having some particular project mature at a specific date. This money is being carried forward so that we can have it for use in a specific project when the project is at that ripe stage of pressing forward. It allows us, if we are short of money, to accumulate funds to put into a developing large project such as a pilot plant when it looks as though it is most expeditious to pursue. Very often the results from research and development occur quickly and sometimes they do not occur at all. It is to try and mount the best organized effort that this $1 million is being carried over into 1970. It is not that we can not use it, but we can use it very well at a particular time. For example, the limestone scrubbing process.

Mr. MICHEL. At this moment, could you tell me what that $1 million will be spent for?

Dr. MIDDLETON. The precise project, I cannot tell you explicitly today. I can give you a typical example. We think that the wet limestone scrubbing process represents the quickest, easiest approach to sulfur oxides control from existing powerplants. To put up a proper sized demonstration pilot plant—and I mean something in the 100-megawatt or bigger size range—usually takes big money—$2 million to $5 million. This $1 million would contribute to such a project; or perhaps to another that we believe will cost about $4.5 million in which to make a satisfactory demonstration. This is the nature of the $1 million carryover. It is money that is very much needed for a specific item—specific item in the maturation period and we put it to that when it is proper.

Mr. PERMAN. It is in the the sulfur oxide research field.

Mr. MICHEL. Would you expect to have any carryover from the 1970 budget to the 1971 budget?

Dr. MIDDLETON. At this time, our budget is prepared with the idea that it will be obligated during 1970. With severe restrictions we have in the first place on asking for money, we will make the best use of the funds made available to us for carrying these processes through. It is very unlikely there will be money carried over into 1971.

REQUEST FOR ADDITIONAL POSITIONS

Mr. MICHEL. How many people do you have currently onboard?

Mr. PERMAN. Approximately 1,000 people are aboard as of the end of February.

Mr. MICHEL. When were these acquired?

Mr. PERMAN. Actually that represents a reduction from a staff that had been built up to a figure of 1,070. The reduction is attributable entirely to the Revenue and Expenditure Control Act.

Mr. MICHEL. What is your reduction from July 1 of 1968?

Mr. PERMAN. Approximately 70.

Mr. MICHEL. What is your goal in June of 1969?

Mr. JOHNSON. We will have a loss under the Revenue and Expenditure Control Act of approximately 82 positions in total.

Mr. MICHEL. You are asking for an additional 138 in 1970?

Dr. MIDDLETON. Correct.

Mr. MICHEL. If there had been no Revenue and Expenditure Control Act that caused you to lose those 82, would I assume that you would be in here asking for only 56?

Mr. JOHNSON. Not necessarily, Mr. Michel. As Dr. Middleton pointed out, we attempt to move the air pollution program along at a certain pace and the whole pace of the program was slowed down because of the Revenue and Expenditure Act. Had there not been, we would have been at another point in our development and implementation of the program under that act.

Mr. MICHEL. You would be asking for just as many people? Is it a pyramiding thing? If you had not had that reduction you would have had a base of 1,100?

Mr. JOHNSON. I would put it this way: The actual efforts on the part of the Federal Government in controlling air pollution are somewhere maybe at about 25 percent of what they ought to be if we really were doing the job in total, in all of its measures. Let me give you one example.

Dr. MIDDLETON. It is possible that there could be that many.

Mr. JOHNSON. This gives you an idea.

Mr. MICHEL. Is that overdoing it?

Dr. MIDDLETON. I thought after Mr. Johnson completed his remarks I would comment on the new philosophy emerging and report on it.

Mr. JOHNSON. I would be glad to turn it back to the expert. I did want to get in that we are not pyramiding but building up in a systematic way to do the total job, the best that we can, and within the total development of our air quality regions, our need to give technical assistance to the States, our need to develop criteria and standards, our ability to actually meet the total problem of air pollution.

There are many standards we have not yet put out that will create an additional workload as we move down the pike in terms of the needs to do a program.

I will turn it back to John.

POLLUTANTS WHICH SHOULD BE CONTROLLED

Dr. MIDDLETON. I think, Mr. Michel, what we are saying is correct. We are at the base point and just beginning to spring. Here we have only two pollutants for which the States will be required to control. There are many other pollutants that need to be controlled. We need to have the research and development to better identify some of those. We know something about the toxic metals——

Mr. MICHEL. Have we spread out in the record those that ought to be controlled in the future?

Dr. MIDDLETON. We have identified some of these in the Air Quality Act of 1967 Senate hearings. For the record we would be pleased to submit a list of pollutants for which we plan criteria.

Mr. MICHEL. Put them in at this point so we have some idea of what we are shooting for.

Dr. MIDDLETON. Pleased to.

(The information follows:)

Pollutant for which Criteria will be Published in the Future

Fiscal Year (tentative):

	Pollutants
1969	Oxides of sulfur, particulates.
1970	Carbon monoxide, oxides of nitrogen, photoreactive organic compounds, oxidants.
1971	Lead, fluorides.

In addition, the following pollutants are being considered for priority ranking and possible criteria documentation after fiscal year 1971:

(Listed alphabetically by preliminary priority groups.)

A

Arsenic
Asbestos
Beryllium
Cadmium
Mercury
Nickel
Odorous compounds
Organic carcinogens
Pesticides
Pollens-Aeroallergens
Radioactive substances

B

Aldehydes (includes acrolein and formaldehyde)
Barium
Bilogical aerosols
Chlorine (includes hydrochloric acid)
Chromium (includes chromic acid)
Hydrogen sulfide
Vanadium

C

Ammonia
Boron
Ethylene
Iron
Manganese
Phosphorus
Selenium
Zinc

That is all, Mr. Chairman.

FUTURE EXPENDITURES

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. Thank you, Mr. Chairman.

Dr. Middleton, continuing this same discussion a little bit further, what are we looking forward to in connection with Federal expenditures?

Dr. MIDDLETON. The remarks of Mr. Johnson indicate, Mr. Shriver, that we are at a threshold of State and local government undertaking air pollution control in a better way. Quite a way to go. In some areas our progress is fairly good and in many areas it is poor. A very considerable part of our budget is in the abatement and control area. In the 1970 budget we propose $25,300,000 for grants. This is matching funds for State and local governments for the development of air pollution control programs. We would look forward to some leveling off as programs are established in the several air quality control regions designated. At that point, the Federal Government under its present legislation would provide 50–50 matching funds. At that time, some

years in the future, and based on State and local programs, it is quite likely that we would need a $50 million Federal base to support ongoing local and State air pollution control programs.

In addition, there would be the needed development of control technology and research and development programs for, just as one typical example, dealing with the sulfur oxides, nitrogen oxides; and beginning to look at the odor problems. While it is true that we will complete this work and will shift that money to other pollutants that need to be controlled, we need to extend the spectrum, the number of pollutants that we look at, and to look at them concurrently.

Mr. SHRIVER. Why? You are requesting an increase of 37 positions and $943,000 in part to initiate studies of eight new pollutants?

Dr. MIDDLETON. Yes, sir.

Mr. SHRIVER. Is there any danger here of spreading the efforts too thinly in view of our limited resources, in view of the many budgetary requests for increases and in view of our monetary situation?

Dr. MIDDLETON. I believe not, Mr. Shriver. When one considers that air polution is a growing and menacing problem and has very significant health effects, to say nothing of damage to property, there is a need to do something significant and promptly about it.

Mr. SHRIVER. Shouldn't we be concentrating on the already identified major pollutants?

Dr. MIDDLETON. Those eight pollutants that are being spoken to are such that they need to be attended to. Furthermore, it is very often best that the research project look at several pollutants at one time. For instance, the fluidized bed combustion system. It is a way of doing something about the control of not only particulate matter and sulfur oxides but nitrogen oxides as well. So that by having a systems analysis approach we are able to proceed with the several pollutants using both our own and outside efforts. Most of our men are used to monitor and see to it that the contracts we are in are properly carried out, that they are going forward in good fashion; that is, may I say, an expeditious way to use limited numbers of men and limited dollars. Further, some of the work done for us by industries and contractors are done on a cost-sharing basis. We are trying to spread the base of money that is being used for control purposes.

AIR POLLUTION CONTROL IN OTHER COUNTRIES

Mr. SHRIVER. How do our air pollution control programs compare with those of other industrialized nations?

Dr. MIDDLETON. I think that, with the Clear Air Act of 1967, and the way in which we are now obliging State response through the air quality control regions to be designated, the United States has the best air pollution control effort in the world.

In certain industrial countries, such as the Federal German Republic, Sweden, and Japan, there are very good research efforts and control programs in certain fields. Perhaps, with the possible exceptions of the city of Osaka, Japan, and the State of North Rhine, Westphalia, West Germany, what we are attempting to do here is outstanding among the industrialized nations. There are many countries that have critical air pollution problems, but they are not yet organized in a fashion to deal with them on a countrywide basis. Very often it

is disjointed in localities, counties, provinces. In Canada, for instance, the Province of Ontario has a rather aggressive air pollution control program, and yet there is no national program. We collaborate in air pollution control with our neighboring country, Canada, through the International Joint Commission.

In Mexico, with many air pollution problems, there is no concerted effort to deal with the problem on a national basis. Our program is said to be—and I must agree—inadequate, but it is designed to restore the quality of our national air resource. What we are attempting to do is among the best efforts in the world.

Mr. SHRIVER. You spoke of the Japanese program. Is that the government over there?

Dr. MIDDLETON. It is a very strong local government program.

Mr. SHRIVER. Local government?

Dr. MIDDLETON. Very often it is a city. It is rather difficult to describe how the several governments are brought together throughout the country of Japan, but there is a Federal Ministry of Health that gives guidelines on the implications of air pollution. The control processes take place typically in the city or in the prefecture. So the prefectures appear stronger than the national government in control. This allows them to do what our country is attempting to do, approach it on a regional basis.

Mr. SHRIVER. Japan is a highly industrialized nation. There are many, many millions of people living in concentrated areas such as around Tokyo. Industry is heavy. There are many automobiles emitting fuel gases and so forth.

I would think they would be having a terrific problem in that concentrated area.

Dr. MIDDLETON. Japan now has a regulation at the national level that limits the carbon monoxide emission from motor vehicles to 3 percent. In this country we presently regulate it at 1.5 percent. It is a beginning.

Mr. SHRIVER. That is a law?

Dr. MIDDLETON. Yes. In this country there are national emission standards for motor vehicles, because they are used in much the same fashion across the whole country; this is an example where a national emission standard has real merit.

Mr. SHRIVER. According to yesterday's paper and news reports, the President's Science Advisor has recommended the establishment of an environmental quality council made up of the Vice President and Secretary of Agriculture, HEW, HUD, Interior, and Transportation. One of the problems to be considered by this proposed council would be air pollution.

Do you see some advantages or disadvantages of such a coordinating body?

Dr. MIDDLETON. I see many advantages in having coordination of the Federal efforts. We in air pollution control through the Secretary of Health, Education, and Welfare have asked the other Secretaries and agency heads to identify a person in their organization who will be that Secretary's designee in air pollution matters of concern to the National Air Pollution Control Administration. We have 17 such people designated to assist us in a variety of air pollution matters.

The proposed council apparently would not only deal with perhaps the air quality, but with other environmental problems. It very well could be an asset. I have not yet seen its organization and cannot comment further.

Mr. SHRIVER. I just saw it in yesterday's paper.

Mr. JOHNSON. There is one other advantage, Mr. Shriver, in air pollution particularly. In a number of local situations the Federal Government is perhaps as big a polluter as any industry or other outfit, and it might be they could put this in the proper perspective in terms of their concern for air pollution through such a council.

POLLUTION FROM CAPITOL POWERPLANT

Mr. SHRIVER. Where does the Federal Government do its polluting? Here in Washington?

Mr. JOHNSON. As the chairman says, touché.

Mr. SHRIVER. I have heard complaints about our Capitol powerplant and ash emission.

Mr. FLOOD. Serious complaints over a period of years. It is just right down the street.

Mr. SHRIVER. Some of the people in my office have complained.

Dr. MIDDLETON. We have a rather significant Federal facilities control program and in fiscal year 1968 there were 442 remedial actions taken in a variety of Federal facilities across the country.

What we are attempting to do now, and what we shall bring into effect, is the controlling of Federal facilities in the air quality control regions designated so that they will be in compliance along with the other sources of pollution in the region. This is responsive to both the President's Executive order and is in keeping with the philosophy of the Clean Air Act as amended.

Mr. FLOOD. What about the question raised by Mr. Shriver vis-a-vis the plant down the street here. I have had Members of Congress and people around here complain to me for years. Their cars parked in the street for a few hours are covered with silt and dust from this monstrosity. This is exhibit A.

It is a disgrace. Have you not heard about it?

Dr. MIDDLETON. Yes, I have heard about the congressional powerplant, I have seen it, I used to live a few doors away from it.

Mr. FLOOD. Then why should I tell you?

Dr. MIDDLETON. I also recognize that the municipal incinerator not far away was probably accounting for a good bit of the odor and fly ash. So it is a community of things and not just the powerplant that is responsible.

Mr. FLOOD. It is in Washington and it is our responsibility.

Dr. MIDDLETON. I have been impressed with the efforts there to try and control particulate matter and I think a management program to be sure the personnel operate the equipment correctly might be a way of further improving this facilitiy.

I take it from your remarks that perhaps we should do something more specifically about it.

Mr. FLOOD. That is an understatement.

Mr. MIDDLETON. We really thought of that as being a congressional facility and not exactly within the framework of our Federal facilities program.

Mr. FLOOD. You what?

Dr. MIDDLETON. I think this is under the control of the Capitol Architect, is it not?

Mr. FLOOD. Yes, but so what?

Mr. JOHNSON. Mr. Flood, I believe that we can perhops make some specific recommendations through the air quality control region that has been established here in the District of Columbia and the metropolitan area, and certainly if they do their job, they have to take into consideration all sources of pollution, and I dare say that through that particular mechanism we can try to get on with the business and do something about that specific plant.

Mr. FLOOD. What a glowing exhibit that would be.

DIESEL ENGINES

Mr. SHRIVER. One of the most obvious of the pollutants is the diesel bus that runs around over the streets, particularly Washington. I am wondering why there has been a delay in initiating strong standards relative to buses.

Dr. MIDDLETON. We do have a program, Mr. Shriver, that deals with smoke from the diesel bus. There are Federal standards published and all new diesel engines will necessarily be in compliance with the standards. We do not have as yet a way of controlling the odor from buses—we have some research work on the nature of odor so we will know what the constituents are so we in turn can do something about it. When we know what they are, and when there are control techniques, we will see that Federal restrictions are published to prevent diesel odors.

Mr. FLOOD. Does this apply on over the highway diesel trucks?

Dr. MIDDLETON. All diesels, buses, trucks, transport vehicles, all diesels used on the highway road system will have to comply with the smoke standards, which will do much to clean up the smoke from the buses.

Mr. SHRIVER. Are these standards just applicable to the new vehicles and not to those in existence?

Dr. MIDDLETON. Unfortunately, the restrictions are solely for the new diesel engines; all standards are for new vehicles.

Mr. SHRIVER. It will take 10 years then?

Dr. MIDDLETON. Yes, it will take 10 years. Perhaps longer, for diesels last longer.

Mr. FLOOD. Does somebody raise a constitutional point of ex post facto law or what? Do you know why?

Dr. MIDDLETON. I would imagine the principal reason is the difficulty of retrofitting something that would work because engine configurations are so different by makes and models that to have a device that could be installed on all vehicles may be extremely complicated and difficult, and the cost of installing it may be varied and costly.

So to initiate the program, it was begun on new vehicles.

Mr. FLOOD. Are the Germans doing anything about that?

Dr. MIDDLETON. I am not aware of anything they are doing in that regard. We are developing a guide to good practice for the operation of diesel engines which we will offer to the Federal facilities, all Federal agencies and departments, which will tell them how to operate

a diesel vehicle in a clean and proper fashion. This will be one way to approach the problem of the used vehicle.

Mr. FLOOD. Would you urge the vocational training schools to set up vocational training courses for diesel motor mechanics throughout the country? There is a bad, bad lack of them.

Dr. MIDDLETON. It need not be limited solely to diesels I believe. We need many mechanics who can——

Mr. FLOOD. I am speaking expressly of diesels.

Dr. MIDDLETON. I think that would be a useful program because in those areas particularly in Los Angeles County where they have very stringent controls on smoking diesels, most of the diesels are brought into conformance and they operate cleanly and I am sure the technicians that do that simply have to know their business.

Mr. FLOOD. Have you ever written the Director of Vocational Education to ask about it? Have you suggested it?

Dr. MIDDLETON. No, I have not thought of that suggestion. I would be glad to do it.

Mr. FLOOD. Why do you not, and send me a copy of the letter?

Dr. MIDDLETON. I will be pleased to. Thank you for your suggestion.

Mr. MICHEL. One of the most eminent producers of diesel engines is in my district, Caterpillar Tractor Co. What would your shop do in conjunction with their research center in development of this kind of an engine that will not pollute the air.

Is there any dialog that goes on there? What are they going to do, just what you say ought to be done?

Dr. MIDDLETON. In the area of Caterpillar Tractor, I do not have specific information. As far as the motor vehicle industry at large, and gasoline fueled engines, we have an extensive dialog with the research groups of the petroleum and vehicle industries on what is being done and what needs to be in that area.

In the area of diesel engines, they normally operate so cleanly it is largly a maintenance and fuel problem rather than a basic design in the engine. So that basically the diesel engine is a clean and useful power source and it can be kept clean. But very often it is not operated well, it is not fueled well, not maintained properly, and therefore becomes a dirty engine.

Mr. MICHEL. I know that is true of a static diesel engine for power purposes, but it doesn't seem to be so clean whenever one of those engines is installed in trucks traveling the highways. Also as you say one of the problems is the fuel they are using that produces the black smoke.

Dr. MIDDLETON. This stems in part from the power demands. If one looks at a diesel engine pulling a freight load, you will notice that at the startup there is very often considerable smoking. This is an opportunity to perhaps change the way in which it is started up, or else be sure the horsepower ratings are adequate for the hauls. Particularly, one can reduce the pollution from diesels by being certain the engine is not overtaxed. So it is power rating to load performance that is also very important in seeing that a diesel engine operates cleanly.

Mr. MICHEL. Let me develop this a little further if I may, Mr. Shriver.

You say you have an office with some of this work being done up near the automobile industry. Do you work in conjunction with any one or all of them in developing these things in your research activity?

What about the competitive factor? Normally we would think of the earthmoving industry down our way as being used off the highway, but it is not solely limited to that, and there are big forces at work that would try to keep one or more industries to simply off-the-highway operation. I can see in the future that if the diesel engines that are used along the highways have to conform to certain standards, that those who heretofore have not been on the highway but simply been in tractors, but wanted to get into that business, would also want to conform to the kind of standards that would permit their engine to be used in trucks as well as tractors.

Question. Do any of these competing firms get any kind of advantage over another if they were to carry on research with your shop?

Dr. MIDDLETON. I do not think that they have a particular advantageous position because of collaboration.

Mr. MICHEL. What is known to one is known to all?

Dr. MIDDLETON. Under the present cross-license argeement, whatever patentable material is available within the motor vehicle industry is made available to any of the signees to the cross-license agreement.

This has been developed over the years by the Automobile Manufacturers Association. As you know now, the Department of Justice, has entered a civil suit against the cross-license agreement. So it is in a State of uncertainty at this time.

Typically, our research efforts in the motor vehicle field are outside the motor vehicle industry. They are outside for a number of interesting reasons.

Usually innovation shines forth more quickly and is more easily identified outside the motor vehicle industry than we are able to detect it within. The development of an oxides of nitrogen control system for motor vehicles is something that we participated in with the Esso Research & Engineering Co. through a contract. They have been able to develop an idea—a typical innovation from sources other than the motor vehicle industry.

Lockheed is interested in developing an inertial wheel as a power system to drive a vehicle, probably a bus. This comes from an industry that typically does not build motor vehicles. It is a very attractive new idea for it should be pollution and noise free. We stimulate these sort of things through our requests for bid system. Advertising these requests for bid through the Commerce Business Daily allows a wide spectrum of readers to make proposals. By this route we can use the contract to encourage someone who has an unusual idea and to give him the opportunity to develop it, and then to see what can be done with it.

We participate with the Coordinating Research Council, a nonprofit corporation in New York, with the Automobile Manufacturers Association, and with the American Petroleum Institute. We have

specific contracts that we work out cooperatively with them in the motor vehicle field. But these contracts are typically not for the development of proprietary systems, but rather motor vehicle research in general. So this is the way we deal directly with the motor vehicle industry, through the nonprofit Coordinating Research Council.

JET AIRCRAFT

Mr. SHRIVER. You mentioned Lockheed, and I notice in your justification you mentioned that the emission control efforts for airplanes has expanded. I read not too long ago about a new Boeing plane having a drop in pollution emission at least in initial flights. Has there been a development whereby they are using more efficient fuel? What happened?

Dr. MIDDLETON. There have been several very interesting developments and I would be pleased to provide you a copy of our report to Congress on the jet aircraft pollution problem.

In that report, I can briefly summarize it here, you will see that new engine design permits very great reduction in smoke from turbine engines. We will be working with the jet aircraft engine industry to see that those innovations they have found are generally applied to the jet aircraft that are being built and developed, and be certain to take advantage of their new technology on a scheduled compliance plan.

Mr. SHRIVER. Summarize that then for the record, the report, not the entire report.

Dr. MIDDLETON. Yes.

(The information follows:)

Summary of Report on Nature and Control
of Aircraft Engine Exhaust Emissions

A. Impact of Aircraft Emissions

1. Exhaust emissions from piston and jet aircraft include the same pollutants emitted by highway vehicles, as well as certain other pollution sources, and, consequently, participate in the same air pollution problems.

2. The present contribution of aircraft emissions to the total atmospheric pollution burden of the community is considered small. The magnitude of this relative contribution is expected to grow, largely as a result of effective emission control legislation applicable to highway vehicles. By 1980, for example, carbon monoxide from aircraft is expected to account for 3-5 percent of the carbon monoxide emission in Los Angeles County versus a present contribution of less than one percent.

3. Based on emission densities, the average level of atmospheric pollution at selected air terminals and their immediate vicinity is calculated to be of comparable magnitude to that in the communities in which the terminals are located.

4. Under conditions of heavy airport traffic, exposures to high concentrations of exhaust contaminants are likely to occur in aircraft loading areas and in the cabins of aircraft lined up awaiting take-off.

5. The public's reaction to air pollution in the form of smoke and odor from jet aircraft is evident from complaints and newspaper accounts. Response, both in the form of legislative action and attempts by industry to find a solution to the visible emissions problem, has been notable.

B. Control of Aircraft Emissions

1. Principles of combustion and engine operating conditions similar to those which account for emissions from highway vehicles are responsible for emissions from aircraft engines. Subject to special safety considerations, aircraft engine emissions are generally amenable to the same principles as applied to motor vehicle emission control technology.

2. Turbine-engine combustor technology for effectively eliminating the visible plume seems assured for application in the very near future, both to new engines and to replacement combustor components for existing engines. When applied to existing aircraft, according to regular replacement schedules of such engines and combustor units, the cost is not expected to be a significant factor. Safety, in terms of engine relight characteristics, is not expected to be degraded thereby.

3. Total particulates, hydrocarbons and carbon monoxide emissions reduction from turbine engines may be realized as a consequence of improved combustion design for improved performance and for the control of visible emissions.

4. Aircraft engine emissions in the lower atmosphere are primarily the result of ground operations, and the approach and take-off segments of an aircraft's flight pattern. Airport designs which minimize aircraft ground operations, plus the use of low-pollution aircraft-to-terminal transportation can produce meaningful results in all receptor areas.

5. Control measures applicable to aircraft piston engine emissions are dependent on developing definitive data on emission impact and the development of control technology.

6. The control of oxides of nitrogen from aircraft is not deemed to be feasible on the basis of current information.

7. Control of aircraft emissions by altering fuel composition is not indicated in the light of the control potential of other approaches considered.

C. Conclusions and Recommendation

1. Reduction of particulate emissions from jet aircraft is both desirable and feasible. Engine manufacturers and airlines have indicated that improvements in turbine engine combustor design can be built into new engines and retrofitted on engines already in use. Testing programs are already underway. Furthermore, they have indicated that application of this technology will be underway by the early 1970's. While there are no laws or regulations to compel the industry to follow through on this work, it appears that public pressures resulting primarily from the adverse effects of odors and visibility obscuration will lead industry to initiate the application of this technology as soon as possible and to complete it within the shortest possible time. Accordingly, it is the intention of this Department to encourage such action by engine manufacturers and airline operators and to keep close watch on their progress. If, at any time, it appears that progress is inadequate or that completion of the work will be unduly prolonged, or that the concern of the industry lags, the Department will recommend regulatory action to the Congress that statutory authority for such action be provided.

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2. Further research is needed to define more precisely the present and probable future nature and magnitude of all other air pollution problems associated with aircraft activity in the United States and to identify needs for control measures. Emphasis must be placed particularly on assessment of air pollutant levels in the air terminal environment and their effects on health and safety and on evaluation of possible long-term effects of upper atmospheric pollution resulting from aircraft flight activity. The Department will undertake research appropriate to the solution of this problem.

3. As further research results in identification of needs for additional measures to control air pollution from any type of aircraft, and as measures to achieve such control become available through research and development, it is the Department's expectation that engine manufacturers, airline operators, and other segments of the aviation community will take the initiative in the development and application of such control measures. If the private sector fails to provide adequate controls, the Department will not hesitate to recommend to the Congress that Federal regulatory action be authorized.

4. In light of the relatively small contributions of aircraft to community air pollution in all places for which adequate data are available, and in view of the practical problems that would result from State and local regulatory action in this field, it is the Department's conclusion that adoption and enforcement of State or local emission control regulations pertaining to aircraft cannot be adequately justified at this time. The Department recommends that,

if and when regulations become necessary, the rationale used to develop Federal rather than local emission standards for motor vehicles be applied to aircraft.

5. The Department recognizes that State and local agencies, in cooperation with the Federal Aviation Administration and other cognizant agencies, are the most appropriate groups to insure that control of airport pollution hazards will be given adequate consideration in the selection of airport sites, planning for expansion and reconstruction of airports, design of airports, and planning and conduct of ground operations.

6. The Department will include information on progress in the control of air pollution from aircraft in the annual report which must be submitted under Section 306 of the Air Quality Act.

STATE AND LOCAL MATCHING

Mr. SHRIVER. You are requesting an increase of $2,545,000 for control program grants to the State and local governments for a total of $25.3 million in fiscal 1970. How much are the recipient authorities spending on this program? Is it a 50–50 matching, or what kind is it?

Dr. MIDDLETON. The match depends upon the nature of the contribution and it goes this way: It is in the law, and it stipulates in the case of regional programs that we can offer up to three-quarters to one-quarter for the planning, development, establishment, and improvement, and up to three-fifths for maintenance. In the case of local, county, and State governments up to two-thirds of the cost. Maintenance in the case of State and local agencies would be a 50–50 match. So that all of the money we offer for air pollution control programs for control purposes is on a matching basis, and, its match ratio is somewhat varied.

In 1969, out of our appropriation of $22,755,000 for control program grants, the State government's allocation was $8.7 million, local government's was $4,355,000, and regional government's was $9.7 million.

So it varies depending on the nature of the problem, and whether a regional approach is used. We will be shifting our emphasis to more regional approaches because of the act of 1967.

RESEARCH BY OTHER FEDERAL AGENCIES

Mr. SHRIVER. On page 6 of your statement you say there are several agencies of the Federal Government participating in the research program. Which agencies are these?

Dr. MIDDLETON. We have a number of Federal agreements.

Mr. SHRIVER. Put them in the record.

Dr. MIDDLETON. All right.

(The information follows:)

FEDERAL AGREEMENTS, FISCAL YEAR 1969

Agency	Type or work performed	Amount
U.S. Department of Agriculture	Effects of pollutants on vegetation, livestock, and poultry	$414,000
Atomic Energy Commission	Studies of fluidized bed combustion process, atmospheric sulfur tracing techniques, and diffusion modeling.	475,000
U.S. Department of Commerce	Air pollution meteorology climatology, urban boundry layer studies and services; and effects of air pollution on metals and building materials.	1,424,000
Federal Power Commission	Consultative services on availability of clean fuels in urban areas, and economic model of natural gas supply and demand.	35,000
U.S. Department of the Interior	Vehicle emmissions, alkalized alumina process of removal and absorption of sulfur dioxide, removal of pyritic sulfur, use of manganese process for SO_x control, Appalachian low-sulfur coal availability; characterization and control of air pollutants from fluidized bed combustion unit.	1,780,000
Library of Congress	Compiling 3,000 copies of air pollution bibliography	6,188
National Aeronautics and Space Administration.	Interagency Advanced Power Group Membership; development of thermal heaters for control of hydrocarbon and carbon monoxide in motor vehicle exhaust.	350,000
Tennessee Valley Authority	Field study of inversion breakup at large powerplants, limestone injection trials on full scale boilers; effects of physical propertieis of limestone in reaction with SO_2 and economic value of SO_2 control processes.	1,520,600
U.S. Army Tank-Automotive Command	Evaluate exhaust emissions of a Ford combustion process engine.	57,000
Total Federal agreements		6,061,788

EXTENSION OF AUTHORIZATION UNDER SECTION 104 OF THE CLEAN AIR ACT

Mr. SHRIVER. What would be the effect on your budget request and your program if section 104 of the Clean Air Act is not extended past the expiration date of June 30, 1969?

Dr. MIDDLETON. As I indicated earlier, the work that we do within section 104 can be done under the general authorization of the Clean Air Act.

Mr. SHRIVER. I understand.

Dr. MIDDLETON. The advantages of section 104 is the no-year money we can carry forward for the purposes that I gave earlier. Section 104 also gives us something new that is very important, and that is the opportunity to do this work on private property, to actually involve the industry affected for the development of a pilot plant for demonstration purposes. We can award grants within the limit of $1.5 million for this purpose. These are some of the advantages of section 104.

But the extension of section 104 is not necessary to conduct the research. We simply have some—I consider adverse—complications by removing these two items.

Mr. SHRIVER. Thank you.

FLUORIDE POLLUTION

Mr. FLOOD. Mrs. Reid?

Mrs. REID. Thank you, Mr. Chairman.

Dr. Middleton, reading last year's record, I think there was quite a lengthy statement about fluoride air pollution and the fact that very little attention was being given to fluoride as a pollutant. Is this one of the pollutants you would include in your list?

Dr. MIDDLETON. Yes. It is an important pollutant. It is not only on our list, it is actively being pursued. We have a contract, for example, with the U.S. Department of Agriculture to assist us in bringing together the information that will be pertinent to the development of an air quality criterion for fluoride.

We had earlier thought we would be able to publish a criterion on this subject next year. For limitations of money and people, we will have to postpone the publication of that criterion for another year, and delay control of fluoride pollution.

Mrs. REID. But your studies will continue?

Dr. MIDDLETON. Our studies will continue. We have extended them by having a contract with the State of Oregon to make a study of the possible influence of fluoride on the production of fruit, cherries and peaches as an example.

We do have an active program learning the adverse effects of fluoride on vegetation and livestock.

Mrs. REID. Have you in the course of these studies so far discovered that fluoride is detrimental to a person's health through vegetables and fruit?

Dr. MIDDLETON. We have not made studies to determine the adverse effects of fluoride ingestion on man. The primary influence of fluorine to the industrial worker is identifiable as a surface problem. The principal adverse effect to the Nation appears to be to the agricultural interests, to the production of crops and to the production of livestock.

Mr. FLOOD. Is that where you first got your very distinguished reputation in California in dealing with agricultural products?

Dr. MIDDLETON. Yes, Mr. Chairman.

Mrs. REID. The studies will continue, but nothing will be done about it for a year; is that correct?

Dr. MIDDLETON. Unfortunately, our priorities are such that we will not be able to publish the criterion as we had originally hoped.

TRAINING COURSES

Mrs. REID. On page 68 of your justifications you mention a variety of training courses to be conducted by the National Air Pollution Control Administration for personnel both inside and outside Government. How extensive will these courses be and how many will participate?

Dr. MIDDLETON. They are very extensive, they cover a broad matter of subjects. We are arranging them so that they can be put, may I say, end on end. One can take one course, say another week take the second course so that one gets a group study. I think the best way to describe it would be to provide you with the literature on the subject which specifically identifies the courses, Mrs. Reid, and let you see the spectrum of them. There is a very considerable number and I am not able to recite them for you.

Mrs. REID. I would appreciate it.

(The material requested follows:)

Courses offered by the National Air Pollution Control Administration's Office of Manpower Development:

Field	Course No.	Title	Duration (days)
Introduction to air quality management	416	Orientation in air pollution	5
	422	Introduction to air quality management	1
Air quality management	425	Legal aspects of air pollution	5
	428	Public information and community relations	3–5
	411	Meteorological aspects of air pollution	5
	423	Diffusion of air pollution theory and application	5
	440	Speical topics in air quality management	2–5
	445	Management seminar for air pollution control officers	3
	446	Regional air quality management	3
Process evaluation and control	413	Control of particulate emissions	5
	415	Control of gaseous emissions	5
	427	Combustion evaluation—sources and control devices	5
	449	Basic source sampling	5
	450	Advanced source sampling	10
	431	Air pollution control technology	5
	441	Special topics in process evaluation and control	2–5
Atmospheric sampling and analysis	435	Atmospheric sampling	5
	408	Analysis of atmospheric organics	5
	409	Analysis of atmospheric inorganics	5
	429	Gas chromatographic analysis of air pollutants	5
	438	Paper, column, and thin-layer chromatographic analysis of air pollution.	4
	442	Special topics in atmospheric sampling and analysis	2–5
Field studies	424	Community air pollution	5
	426	Air pollution data evaluation	5
	420	Air pollution microscopy	5
	432	Special topics in air pollution microscopy	5
	405	Sampling and identification of aero-allergens	5
	439	Visible emissions evaluation	3
	444	Field enforcement aspects of air pollution	5
	443	Special topics in field studies	2–5
	401	Community survey design	10
	447	Meteorological instrumentation in air pollution	5
	407	Medical and biological aspects of air pollution	3

In addition, the following courses are given on request (duration, in general, 5 days):

403 Technical Orientation in Air Pollution
404 Source Sampling Techniques
406 Chlorinated Hydrocarbons and Pesticide Analysis
410 Microscopic Analysis of Atmospheric Particulates
412 Environmental Pollution
414 Atmospheric Particulate Sampling
417 Measurement of Airborne Radioactivity
418 Atmospheric Particulate Sampling Technique
419 Atmospheric Allergens Sampling
421 Design of Air Pollutant Trains
430 Community Air Pollution, Part II
432 Special Topics in Microscopy
433 Source Sampling for SO_x
434 Source Sampling for NO_x
436 Analysis of Atmospheric Models
437 Automated and Continuous Monitoring Methods
448 Air Pollution Effects on Vegetation

STATE CONTROL PLANS

Mrs. REID. Your request for 1970 includes the development of criteria which will provide the foundation for State control action. If I understand correctly, the States will then have at least 15 months to submit their plans for review. Just how much time will then elapse before implementation of these plans can be expected?

Dr. MIDDLETON. Mrs. Reid, the 15 months is the whole period that is available to the involved States in the air quality control region to be responsive to the Secretary. The control program actually would begin using the time schedule proposed on the part of the governments of the States involved. That is to say in the 16th month some action begins to meet the goals. We would expect the air quality standards to be developed over a several year period of time so that the standard becomes identical with the goals.

The States can set their goals at various lengths of time. The Secretary would, of course, be certain that the period of time was not overly long. Within that period of time, let's assume it is a 5-year period of time, the emission reduction strategy, the actual emission control that would be built into the program—probably on an annual basis so that certain things happen in 1 year, other things in another year—so that by the end of the 5-year period the emission reduction strategy would actually match up with the air quality standards the States adopted. This is the whole system. I can very briefly summarize it: The Governor has 90 days in which he says I intend or do not intend to adopt an air quality standard. Let's make the assumption that he is responsive to the public need and that all of our good help elicits his intention to develop standards. He then has 180 days to develop that standard, and he submits it to the Secretary of HEW for approval. He then has 180 additional days to develop the emission reduction strategy, again to be reviewed.

Obviously you cannot develop the standards well without knowing what the strategy is. So that beginning with the designation and publication of criteria, we are led to believe that the forward-looking States and the responsible air pollution control agencies are already beginning to develop the necessary mechanisms apart from the formality of response.

So we would expect to have the Governors of the States involved in interstate regions by the end of 15 months to have their standards for sulfur oxide and particulate matter and implementation plan and the

whole thing, in effect, beginning the 16th month. This is not to say those States and enlightened communities that would like to have a control program developed now should wait for this. They may very well proceed in the areas in which there are no air quality control regions and in those areas in which there are no air pollution control programs today.

So the national plan is not designed to forestall their action, but rather, give a format for compliance on a national basis. We are attempting to really bring forward those who have not done anything and those who have done it only medium well to doing it properly and on a timely scale.

Mrs. REID.This is certainly a problem all over the country. I live in Illinois, but we have gone to Michigan every summer to a beautiful lake, and you would think that in that area of northern Michigan there would be no air pollution, and yet certain days you can actually see it in the air even up there.

We always think of northern Michigan air as the purest air you can breathe, but I am sure this is universal. My daughter went for part of her college training to California near Claremont and there were days when she could scarcely breathe outside. I realize it is a very serious problem.

Dr. MIDDLETON. I am very glad to hear of your interest in it. So many people think of photochemical air pollution, or smog, as being a Los Angeles problem; it is not, it is a national problem focused upon more in California. It is a pity in this country today we are able to recognize most of our cities by the color of the smoke and smog over them.

Mrs. REID. Thank you, Mr. Chairman.

Mr. SHRIVER. Is there a difference in the color? Can you tell whether it is Pittsburgh or New York by the color?

Dr. MIDDLETON. If you can see, yes.

Mr. FLOOD. Thank you, gentlemen.

JUSTIFICATION MATERIAL

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Air Pollution Control

Amounts Available for Obligation

	1969	1970
Appropriation	$88,733,000	$95,800,000
Transfer to: "Operating expenses, Public Buildings Service," General Services Administration	-283,000	---
Comparative transfer to: "Salaries and expenses, Office of the Administrator"	-490,000	---
Unobligated balance brought forward	---	1,000,000
Unobligated balance carried forward	-1,000,000	---
Cutback required by PL 90-364	-2,694,000	---
Total currently authorized for obligation	84,266,000	96,800,000
Plus: proposed release of reserves for increased pay costs	553,000	---
Total obligations	84,819,000	96,800,000

Disposition of cutback:		
Increased pay costs in this account	553,000	---
To be returned to the Treasury	2,141,000	---
Total cutback	2,694,000	---

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
55	1. Abatement and control:						
55	a. Grants.....		$22,755,000		$25,300,000		+$2,545,000
56	b. Direct operations..	319	8,861,000	400	10,077,000	+81	+1,216,000
	Subtotal.....	319	31,616,000	400	35,377,000	+81	+3,761,000
60	2. Research, development, and demonstration:						
60	a. Grants and contracts...		24,701,000		31,300,000		+6,599,000
63	b. Direct operations..	548	20,943,000	585	22,033,000	+37	+1,090,000
	Subtotal.....	548	45,644,000	585	53,333,000	+37	+7,689,000
67	3. Manpower training:						
67	a. Grants.....		3,159,000		3,500,000		+341,000
68	b. Direct operations..	78	1,900,000	90	1,990,000	+12	+90,000
	Subtotal.....	78	5,059,000	90	5,490,000	+12	+431,000
69	4. Program direction and management services.....	120	2,500,000	128	2,600,000	+8	+100,000
	Total obligations.....	1,065	84,819,000	1,203	96,800,000	+138	+11,981,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions..	1,065	1,203	+138
Full-time equivalent of all other positions.....	74	78	+4
Average number of all employees.....	1,083	1,205	+122
Personnel compensation:			
Permanent positions.....$9,538,000		$10,800,000	+$1,262,000
Positions other than permanent....	370,000	400,000	+30,000
Other personnel compensation.....	150,000	200,000	+50,000
Total personnel compensation....10,058,000		11,400,000	+1,342,000
Personnel benefits.....	1,388,000	1,583,000	+195,000
Travel and transportation of persons.....	1,499,000	1,900,000	+401,000
Transportation of things.....	632,000	1,000,000	+368,000
Rent, communications, and utilities.	1,587,000	2,300,000	+713,000
Printing and reproduction.....	600,000	620,000	+20,000
Other services:			
Project contracts.....27,000,000		31,997,000	+4,997,000
Other.....	1,125,000	2,900,000	+1,775,000
Supplies and materials.....	1,555,000	1,900,000	+345,000
Equipment.....	2,680,000	2,000,000	-680,000
Lands and structures.....	2,350,000	400,000	-1,950,000
Grants, subsidies, and contributions.....34,345,000		38,800,000	+4,455,000
Total obligations by object.....84,819,000		96,800,000	+11,981,000

Summary of Changes

1969 estimated obligations	$84,819,000
1970 estimated obligations	96,800,000
Net change	+11,981,000

	1969 Base		1970 Change from Base	
	Positions	Amount	Positions	Amount
A. Increases:				
1. Built-in:				
(a) Annualization of 1969 pay raise costs	--	---	--	$18,000
(b) Within-grade and longevity costs	--	---	--	295,000
Subtotal	--	---	--	313,000
2. Program:				
(a) Abatement and control				
Grants	--	$22,755,000	--	2,545,000
Direct operations	319	8,861,000	81	1,097,000
(b) Research, development, and demonstration				
Grants and contracts	--	24,701,000	--	6,599,000
Direct operations	548	20,943,000	37	943,000
(c) Manpower training				
Grants	--	3,159,000	--	341,000
Direct operations	78	1,900,000	12	68,000
(d) Program direction and management services	120	2,500,000	8	75,000
Subtotal	--	---	138	11,668,000
Total increases	--	---	138	11,981,000
Net change	--	---	+138	+11,981,000

EXPLANATION OF CHANGES

Abatement and control

Grants

An increase of $2,545,000 is requested to fund 195 continuing grants and 30 new awards in 1970 as compared to 180 continuing grants and 30 new grants in 1969. Of the $2,545,000 increase, $2,000,000 is necessary to provide continued support to agencies within the 20 Air Quality Control Regions designated as of the end of 1969, and $545,000 will provide initial support for programs in approximately 30 Regions to be designated by the end of 1970.

Direct operations

An increase of $1,097,000 and 81 positions is requested to carry out an accelerated national abatement and control program which includes programs for direct Federal abatement, direct technical assistance to State and local government organizations, motor vehicle pollution control, and control of air pollution for Federal facilities. The increase provides for direct support to the establishment of air pollution control programs directed at continuing improvement in local control measures.

Research, development, and demonstration

Grants and contracts

An increase of $6,599,000 and 62 additional grants and contracts is requested to support the following: $1,000,000 for 11 additional survey and demonstration grants; $569,000 for 14 additional research grants; and $5,030,000 to fund 37 additional contracts under Section 104 of the Act, for research and development of control technologies related to fuels and vehicles. The latter amount includes $1,000,000 carry-over to 1970. Major efforts will continue to be directed at the control of sulfur oxide emissions, major problems of stationary sources, abatement of emission studies, and limited studies to develop unconventional power sources for low pollution type vehicles.

Direct operations

An increase of $943,000 and 37 positions is requested to increase air pollution network monitoring stations from the current 250 to 400 sites, increase the number of pollutants being monitored, and enable the gathering of additional emission source data. In addition, the increase will support limited studies on the chemistry, physics, and effects on health and materials of approximately 8 new pollutants.

Manpower training

Grants

An increase of $341,000 is requested to fund an increase of 4 fellowships and 5 training grants in 1970. This increase will provide additional financial support for continuing graduate training projects in the engineering, physical sciences, biomedical, socioeconomic, and biometeorological aspects of air pollution and its control.

Direct operations

An increase of $68,000 and 12 positions is requested to provide training for additional personnel to meet State, local, and regional program needs. It is estimated that in 1970 approximately 4,000 individuals will receive training in air pollution compared to 2,600 in 1969.

Program direction and management services

An increase of $75,000 and 8 positions is requested in 1970 to provide direction for the determination of the boundaries of Air Quality Control Regions and the coordination of the National Air Pollution Control Administration activities within these regions.

Authorizing Legislation

Existing Legislation	1970 Authorization
Clean Air Act	
Section 104(c)--Research Relating to Fuels and Vehicles	—
Section 309--Research, Investigations, Training, and Other Activities	$134,300,000
Proposed Legislation	
Clean Air Act Amendments of 1969	
Section 104(c)--Research Relating to Fuels and Vehicles--Separate authorization for this section repealed	—
Section 309--Research, Investigations, Training, and Other Activities--Combines authorization for appropriations, lapsing June 30, 1969, for section 104 with section 309	—

CLEAN AIR ACT

Research Related to Fuels and Vehicles

Limitation

Section 104. (a) The Secretary shall give special emphasis to research and development into new and improved methods, having industry-wide application, for the prevention and control of air pollution resulting from the combustion of fuels. In furtherance of such research and development he shall-

(1) conduct and accelerate research programs directed toward development of improved, low-cost techniques for control of combustion byproducts of fuels, for removal of potential pollutants from fuels, and for control of emissions from evaporation of fuels;

(2) provide for Federal grants to public or nonprofit agencies, institutions, and organizations and to individuals..... Provided further, that no grant may be made under this paragraph in excess of $1,500,000.

.....

Appropriation

(c) For the purposes of this section there are authorized to be appropriated for the fiscal year ending June 30, 1968, $35,000,000, and for the fiscal year ending June 30, 1969, $90,000,000. Amounts appropriated pursuant to this subsection shall remain available until expended.

Research, Investigations, Training, and Other Activities

Section 103. (a) The Secretary shall establish a national research and development program for the prevention and control of air pollution and as part of such program shall-

(1) conduct, and promote the coordination, and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, and control of air pollution;

.....

(b) In carrying out the provisions of the preceding subsection the Secretary is authorized to-

.....

(3) make grants to air pollution control agencies, to other public or nonprofit private agencies, institutions, and organizations, and to individuals, for purposes stated in subsection (a) (1) of this section;

.....

Grants for Support of Air Pollution Planning and Control Programs

Section 105. (a) The Secretary is authorized to make grants to air pollution control agencies in an amount up to two-thirds of the cost of planning, developing, establishing, or improving, and grants to such agencies in an amount up to one-half of the cost of maintaining, programs for the prevention and control of air pollution and programs for the implementation of air quality standards authorized by this Act: Provided, that the Secretary is authorized to make grants to air pollution control agencies..in an amount up to three-fourths of the cost of planning, developing, establishing, or improving and up to three-fifths of the cost of maintaining, regional air quality control programs.....

.....

Interstate Air Quality Agencies or Commissions

Section 106. (a) For the purpose of expediting the establishment of air quality standards in an interstate air quality control region designated pursuant to Section 107(a) (2), the Secretary is authorized to pay, for two years, up to 100 percentum of the air quality planning program costs of any agency designated by the Governors of the affected States, which agency shall be capable of recommending to the Governors standards of air quality and plans for implementation thereof and shall include representation from the States and appropriate political subdivisions within the air quality control regions. After the initial two-year period the Secretary is authorized to make grants to such agency in an amount up to three-fourths of the air quality planning program costs of such agency.

.....

Appropriation

Section 309. There are hereby authorized to be appropriated to carry out this Act, other than Sections 103(d) and 104, $74,000,000 for the fiscal year ending June 30, 1968, $95,000,000 for the fiscal year ending June 30, 1969, and $134,300,000 for the fiscal year ending June 30, 1970.

CLEAN AIR ACT AMENDMENTS OF 1969

Appropriation

Section 104 (c) -- Repealed

Section 309. There are hereby authorized to be appropriated to carry out this Act, other than section 103 (d), $74,000,000 for the fiscal year ending June 30, 1968, $95,000,000 for the fiscal year ending June 30, 1969, $134,300,000 for the fiscal year ending June 30, 1970, and such sums as may be necessary for each of the next 5 fiscal years. Sums so appropriated for any fiscal year for carrying out section 104 shall remain available until expended.

EXPLANATION OF TRANSFERS

	1969 Estimate	Purpose
Transfer to: "Operating Expenses, Public Buildings Service," General Services Administration.....	$283,000	Rental of space.
Comparative transfer to: "Salaries and expenses, Office of the Administrator".....	490,000	In accordance with the reorganization of health functions of DHEW, certain organizations, functions, and support were transferred to the Office of the Administrator.

Air Pollution Control

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1962	$8,100,000	$8,600,000	$8,900,000	$8,800,000
1963	10,069,000	11,069,000	11,069,000	11,069,000
1964	15,247,000	12,999,000	12,999,000	12,999,000
1965	23,030,000	20,995,000	20,995,000	20,995,000
1966	25,028,000	26,662,000	26,662,000	26,662,000
1967	39,481,000	39,225,000	46,000,000	40,061,000
1968	70,271,000	64,185,000	64,185,000	64,185,000
1969	106,733,000	86,733,000	94,033,000	88,733,000
1970	95,800,000			

Introduction

The program proposed for 1970 represents the second full year of activity under the Air Quality Act of 1967. The Act requires a closely coordinated series of activities on the part of the Federal, State, and local governments. There is a heavy emphasis on the regional approach for control of stationary sources. While the main thrust of regulatory controls will come from the State and local level, the requirements on the Federal Government, in order to set the control scheme in motion, are detailed and demanding. They include the designation of Air Quality Control Regions, the publication of air quality criteria and the documentation of complete information on control techniques, and the review and approval of State standards and plans.

Under Section 104 of the Act, special emphasis is directed at providing adequate control techniques for the critical pollution problems associated with the combustion of fuels. Section 104 authorization expires June 30, 1969 and proposed amendments are in process to extend this authorization. In addition, there are the authorities for direct Federal enforcement, a broad program of research and development, and the provision of personnel and technical assistance, all of which must be integrated into the emerging pattern of State and local control activity on a regional basis. The program provides for the preparation of a series of reports, called for in the Act, to be submitted to Congress.

The activities of the program include: Abatement and control; Research, development, and demonstration; Manpower training; and Program direction and management services. While these activities are separated for purposes of budgetary presentation, they are highly interdependent in terms of the operation of the Act and the functioning of the National Air Pollution Control Administration.

1. Abatement and control

	1969 Estimate	1970 Estimate	Increase or Decrease
a. Grants	$22,755,000	$25,300,000	+$2,545,000

Control program grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(1) Continuations	180	$19,000,000	195	$21,000,000	+15	+$2,000,000
(2) New grants	30	3,755,000	30	4,300,000	--	+545,000
Total	210	22,755,000	225	25,300,000	+15	+2,545,000

This activity implements the policy, initiated by the Clean Air Act of 1963, "that the prevention and control of air pollution at its source is the primary responsibility of State and local governments; and that Federal financial assistance and leadership is essential for the development of cooperative Federal, State, regional, and local programs to prevent and control air pollution...." This

basic policy has been retained in the expanded Air Quality Act of 1967 as a means for coping with widespread air pollution problems. Under the Act's requirements for the States to develop air quality standards and plans for implementation of such standards, their need for financial assistance can be expected to increase. The major objective of the activity is the development and strengthening of State, regional, and local air pollution control programs.

Since 1965, control program grants-in-aid have been awarded to approximately 182 different jurisdictions throughout the country. This has had the result of accelerating local and State efforts by about 300%. Grants are awarded for up to two-thirds of the cost of approved projects at the State and local level and up to three-fourths of the cost of regional programs; with the exception that maintenance grants provide for up to one-half of the support of State and local programs and up to three-fifths of the cost for regional programs.

State control programs partially supported by the Federal government now total 37 while regional and local programs number 136. More than 100 of these control programs were initiated with Federal support.

Six Air Quality Control Regions were officially designated as of January 31, 1969. These include Washington, D. C., New York, Chicago, Philadelphia, Denver, and Los Angeles. It is estimated that approximately 20 Regions will be designated by the end of 1969 and approximately 30 additional Regions will be designated by the end of 1970.

Of the $2,545,000 increase requested for control program grants, $2,000,000 is necessary to provide continued support to agencies within the 20 Air Quality Control Regions designated as of the end of 1969 and $545,000 will provide initial support for programs in approximately 30 Regions to be designated by the end of 1970.

b. Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	319	$3,401,000	400	$4,318,000	+81	+$917,000
Other expenses	--	5,460,000	--	5,759,000	--	+299,000
Total	319	8,861,000	400	10,077,000	+81	+1,216,000

Direct operations activities in the Abatement and Control program include: (a) direct Federal abatement activity in interstate and intrastate areas and the abatement of emergency pollution situations recently authorized under the 1967 Act; (b) direct technical assistance to State, local, and regional air pollution control agencies for the development of air quality standards and comprehensive air pollution control programs; (c) the enforcement of Federal motor vehicle pollution emission standards, and (d) conduct of a program to control air pollution from Federal facilities.

Direct Federal Abatement

Although State and local air pollution control programs have the primary responsibility for controlling pollutant emissions from stationary sources, this responsibility is supplemented by direct Federal regulatory authority. The 1967 Act authorizes Federal action to abate interstate air pollution problems, including intrastate problems upon request by the States; to initiate Federal action in emergency episode situations threatening imminent endangerment to the public health; and to provide DHEW leadership in the control of air pollution from Federal installations.

Since 1965, interstate and intrastate abatement actions have been carried out in areas in which more than 20 million people reside. They cover problems ranging from pollution from a single industrial plant to the atmospheric complexities of metropolitan New York. The type of abatement problem varies in each locality, from reduced visibility at airports in the Kansas City, Missouri area to industrial air pollution in Ironton, Ohio to pollutants emitted from motor vehicles in the National Capital metropolitan area.

Much practical value has resulted from this effort; for example, as a result of the metropolitan New York abatement action, New Jersey became the first State in the Nation to limit the sulfur content of fuel oil and coal that is burned within its borders. Public utilities, working in concert with fuel industries, have moved more expeditiously than scheduled to acquire and use low-sulfur fuels. Since then, more jurisdictions have enacted regulations limiting the amount of sulfur in fuel ofl and coal and increased quantities of low-sulfur fuel oil have been made available by suppliers.

During 1970, a significant element in the abatement activity will be Federal assistance to and collaborative effort with States on developing proposed air quality standards for about 45 air quality regions and on developing emission control plans for sulfur oxides and particulates in approximately 15 Regions.

Data collection and analysis activities are an essential prerequisite for this activity and will help to define the estimated 30 Regions to be designated in 1970. In addition, these efforts will be expanded to other pollutants with the planned publication of air quality criteria for carbon monoxide, organic compounds, and the photochemical oxidants including the oxides of nitrogen in 1970. Continued use will be made of the authority to initiate Federal enforcement actions in problem areas which do not fall within designated Regions and which are principally associated with large, single sources of pollution.

During 1970, as a prerequisite to State development of standards, the abatement activity will include preparation of state-of-the-art documents on control techniques, as called for in the Act. Such documents will be prepared for each of the pollutants for which criteria have been published.

The development and publication of protocols for preventing and abating air pollution episodes, a Federal responsibility under the Act, will be an important aspect of the program. During 1970, a program of detailed review of the extent and adequacy of local and State emergency plans in 20 urban areas will be completed and analyses will be initiated for 30 additional areas.

Direct Technical Assistance

Direct technical assistance is an important element of the total Federal effort for developing, upgrading and maintaining comprehensive State, local, and regional air pollution control programs. It complements the financial assistance program through the provision of technical expertise and administrative guidance. The program has provided consultation and assistance in many ways, such as making emission inventories and outlining the means for controls, recommending equipment and methods for air sampling; assisting in the establishment and improvement of laboratory facilities; and providing for the reduction and interpretation of meteorological data.

During 1970, as increased numbers of State and local control agencies are faced with the responsibility for standard setting and enforcement of these standards for the designated Air Quality Control Regions, the requirements for technical assistance can be expected to increase sharply. The rigorous standard setting-control protocol specified in the Act, the expanding number of pollutants to be considered, and the emphasis on costs-effectiveness analysis will all place increased demands and new requirements on these agencies. Accordingly, the program of direct technical assistance provided to public agencies will be expanded.

Emphasis will be on new, more sophisticated areas of support including economic analysis, meteorological dispersion models, aerial surveys and remote air monitoring equipment, systems analysis and evaluation of alternative control programs, vehicle emission inspection, and emergency episode planning.

Monitoring of the control program grants will require additional personnel to handle the increased workload and to insure prudent use of the grant funds in accordance with requirements. Integration of financial and technical assistance to control agencies will be emphasized.

Motor Vehicle Pollution Control

The motor vehicle is one of the most important sources of air pollution in the United States today. It is the prime source for two wide-spread pollutants, carbon monoxide and hydrocarbons. It produces nearly half of the total oxides of nitrogen emitted to the atmosphere. As a means of improving the control effort for this important source, Federal emission standards in effect since the 1968 model year have been revised and made more restrictive for the 1970 model vehicles. During 1970, certification and testing will be completed for the 1970 models covering the new emission standards for hydrocarbons, carbon monoxide, and diesel smoke.

The new standards limit emissions on a mass basis rather than in terms of pollutant concentrations independent of the volume of exhaust. The revised standards will go into effect on the 1971 motor vehicles and require approximately 90% control of hydrocarbons evaporating from gas tanks and carburetors. Certification and testing will begin on evaporative control systems for 1971 model vehicles.

Fleet tests of possible control devices will continue in order to demonstrate the feasibility of additional control of nitrogen oxide, carbon monoxide, and hydrocarbons in the future.

Efforts will continue to be directed at developing and improving techniques for inspecting vehicle control systems for carbon monoxide and hydrocarbons, and work will be initiated on the development of inspection methods for potential future control systems for diesel odor, oxides of nitrogen, and particulates.

Control of Air Pollution for Federal Facilities

During 1970, it is planned to continue development of additional regulations for the control of pollution from Federal facilities. Technical guidance and assistance will continue to be provided to Federal agencies to assist them in providing leadership as provided in Executive Order 11282.

In summary, an increase of $1,216,000 and 81 positions is requested to carry out an accelerated national program which includes programs for direct Federal abatement, direct technical assistance to State and local government organizations, motor vehicle pollution control, and control of air pollution for Federal facilities.

2. Research, development, and demonstration

	1969 Estimate	1970 Estimate	Increase or Decrease
a. Grants and contracts.....	$24,701,000	$31,300,000	+$6,599,000

Survey and demonstration grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(1) Continuations.....	5	$590,000	6	$650,000	+1	+$60,000
(2) New grants.....	5	410,000	15	1,350,000	+10	+940,000
Total.....	10	1,000,000	21	2,000,000	+11	+1,000,000

This activity provides for support for developing technological and operational innovations and demonstrating them for practicability and effectiveness. Survey and demonstration grants are awarded to a variety of organizations on a cost sharing basis; organizations other than air pollution control agencies, which have a potential contribution to air pollution control, are eligible for grants. Projects in 1970 will include demonstrations of cost-benefit models of pollution control in a selected urban area, of emergency episode control programs, of new and improved control techniques, and of control of sulfur and nitrogen oxides at intermediate size combustion units.

The $2,000,000 requested for 1970 provides for 15 new grants and 6 continuing grants compared to 5 new grants and 5 continuing grants in 1969.

Research grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(1) Non-competing continuations	121	$4,395,000	134	$5,814,000	+13	+$1,419,000
(2) New grants.....	64	2,786,000	60	1,886,000	- 4	-900,000
(3) Supplements.....	22	250,000	27	300,000	+ 5	+ 50,000
Total.....	207	7,431,000	221	8,000,000	+14	+569,000

Research grants support the fundamental research needed to explore new concepts and innovations in every aspect of air pollution control. They are a valuable tool in utilizing the scientific capabilities of researchers in universities and other non-profit research organizations. Research grants stimulate the scientific community to respond to the need for creative research in air pollution control.

In 1969 grants are being awarded for a broad range of scientific investigations, including studies in the following areas: (1) air pollution and respiratory

infections to determine the true pathogenesis of human air pollution disease and to see what actual respiratory changes occur from chronic and prolonged exposure to air pollutants at realistic concentrations; (2) the influence of pollutants on visibility for purposes of developing an understanding of and defining the factors which bring about reduced visibility in urban areas, even in the absence of fog and high humidity; and (3) the effect of air pollutants on lung clearance to determine the capability of the lungs in clearing themselves of different kinds of aerosols containing pollutants which might commonly exist in urban air.

In 1970 research efforts will concentrate on providing the background information and methodology for establishing better air quality standards, especially for air pollutants such as fuel additives and other heavy metals, and on theoretical and fundamental basis for new, more economical control technologies with emphasis on new combustion processes, mathematical models for existing control concepts such as scrubbers, electrostatic precipitators, afterburners, and energy exchanges in the atmosphere to allow better dispersion modeling. Also planned are studies on behavioral toxicology, the physical-chemical basis for gas-particulate synergism, socio-economic analysis, and the relationship between air quality and body build-up of cumulative pollutants. Grants to new young investigators in selected fields will be encouraged in order to stimulate new ideas and an interest in air pollution.

The $8,000,000 requested for 1970 provides for 60 new grants and 134 noncompeting continuations compared to 64 new grants and 121 noncompeting continuations in 1969.

Contracts (Section 104)

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Total	71	$16,270,000	108	$21,300,000	+37	+$5,030,000

Section 104 of the Air Quality Act of 1967 directs that special emphasis be placed on research and development into new and improved methods for the prevention and control of air pollution resulting from the combustion of fuels. Stationary and vehicular sources of pollution are included in this area of research activity, and contractual and cooperative research and development undertakings with industrial organizations are emphasized.

Control of pollutant emissions from stationary sources is an especially difficult problem because quantities emitted each year are steadily increasing and because of the great diversity and variety of sources. The approach that is being followed in conducting a research and development effort for dealing with stationary sources consists of: (1) the development of systems and processes to control specific pollutants such as sulfur oxides, nitrogen oxides and particulates; (2) systems surveys to define the pollution problems of specific industries and to cooperatively develop control approaches for these industries, such as primary smelters; and (3) the continuous development of new and improved air cleaning devices for use on a variety of sources. With this approach, the National Air Pollution Control Administration has elicited interest on the part of many industrial companies in the United States who have the capability of working on some phase of the problem. At present, the largest single research and development effort being carried out is in the area of sulfur oxides control.

During 1969, research and development projects will concentrate on pilot and prototype scale work on processes for the removal of sulfur from flue gasses, including dry limestone injection, wet lime scrubbing, alkalized alumina, and molten carbonate scrubbing, and coal desulfurization by pyrite-coal conversion. Also included are studies on the availability of low sulfur coals.

During 1970, the sulfur oxide control effort will continue to require and receive a substantial degree of support. The full-scale National Air Pollution Control Administration-Tennessee Valley Authority limestone injection demonstration project, begun in 1968, will be fully operational as will prototype units for pyrite coal cleaning and wet limestone scrubbing.

Work will continue on new combustion processes with emphasis on completion of the pilot work on fluid bed combustion being conducted jointly with the Office of Coal Research, Bureau of Mines. Comprehensive systems analysis of several important noncombustion sources of sulfur oxide emissions will be completed in 1969 and hardware development programs started in 1970 in cooperation with industry. Pollution from this source accounts for about 20% of sulfur oxide emissions and presents significant problems in many urban areas.

An analytical study on the control of nitrogen oxides will be completed in FY 1969 and a research and development program will be initiated which will lead to new design concepts for combustion equipment and flue gas cleaning processes for industrial sources of nitrogen oxide. Efforts also include initiating an accelerated nitrogen oxide control program and a comprehensive systems study of the stationary sources of this pollutant.

Other projects are directed at finding improved methods for the control of particulates and expanding studies on the feasibility of using fabric filters to control fly ash emissions from power plants. An intramural study, undertaken to develop improved wet scrubbing techniques, will be continued.

The three primary objectives of the automotive research program for control of vehicle emissions are: (1) to stimulate optimum activity by the private sector in developing control technologies; (2) to fill the research gap areas that are not receiving attention elsewhere; and (3) to develop a technical basis for establishing future Federal emission standards.

Since gasoline-powered vehicles are more numerous than any other kind of vehicle and emit more types and quantities of pollutants, they have been given the highest research and development priority. Work has concentrated on the control of exhaust emissions, with emphasis on carbon monoxide, hydrocarbons, and nitrogen oxides, the control of evaporative losses, and the development of measuring techniques. Efforts are also being directed at the control of exhaust emissions from diesel engines including smoke and odor control. A significant cooperative research program begun in 1968 and expanded during 1969, consists of projects funded jointly by the Automobile Manufacturer's Association, the American Petroleum Institute, and National Air Pollution Control Administration. Approximately 30 projects are to be carried out over a three-year period.

Three major work areas within the motor vehicle research and development program, initiated during 1969, will move into the hardware development and pilot evaluation stages during the year. Prototype devices for the control of particulate emissions from vehicles, including lead, will be designed, constructed, and tested in the laboratory. Work on nitrogen oxide control systems will move from the research laboratory to the field for fleet testing to observe their durability, economics and effect on vehicle operation. Hardware development studies will be undertaken on carburetors, electronic ignition systems, fuel injection,

and engine configurations, and fuel properties. Work will continue on emission control efforts for non-automotive transportation sources, especially aircraft.

Due to the inherent limitations of the internal combustion engine, with respect to emission control, it is important that its potential for a pollution-free automotive power source be explored. Feasibility studies of all possible power sources for motor vehicles and an outline of research and development gap areas have been prepared for the most promising unconventional power systems. Limited studies initiated in FY 1969 on external combustion burners, Rankine engine design, and evaluation of new power sources for buses will continue in FY 1970.

In summary, an increase of $5,030,000 which includes $1,000,000 carry-over to 1970 for Section 104 will provide for 37 additional contracts for research and development of control technologies relating to fuels and vehicles. Major efforts will continue to be directed at the control of sulfur oxide emissions, major problems of stationary sources, abatement of emission studies, and limited studies to develop unconventional power sources for low pollution type vehicles.

b. Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	548	$5,970,000	585	$6,585,000	+37	+$615,000
Other expenses	--	14,973,000	--	15,448,000	--	+475,000
Total	548	20,943,000	585	22,033,000	+37	+1,090,000

The National Air Pollution Control Administration's research and development program has two major thrusts: (1) the development of air quality criteria as a technical basis for standards and (2) development of technology to control the sources and emissions of pollutants.

The work is carried out by the National Air Pollution Control Administration through studies in its own laboratories, contracts with private research corporations and non-profit institutions, and interagency agreements supporting research in other Federal agencies.

Criteria and Standards

Air quality criteria are scientific statements which describe the known effects of pollutants on health and welfare. They are the basis for establishing legal standards for the emission and accumulation of pollutants. Both criteria and standards are critical ingredients in the process of abatement and control as established by the Air Quality Act of 1967. The air pollution research and development program geared toward their development includes health effects studies, economic effects studies, and the accumulation of data on pollution levels for purposes of correlation with observed ranges of effects.

The need for air quality places a heavy demand on biological research. As part of the program of expanding and refining air quality criteria in 1970, work will coninue on the effects of air pollution on the sensitive segments of the population, such as the aged, the very young, and those with heart, lung or other physical defects. Work will also include studies on the genetic and prenatal

influence of air pollutants, and on behavioral toxicology. Efforts will be made to define levels which can be classified as representative of an episode and to discover prophylactic measures to use on sensitive populations.

The limited clinical research program, established in 1969, will be accelerated with initial activities stressing combined effects of air pollution and respiratory infections, the identification of aero-allergens, prophylactic measures for use in episodes and the delineation of air concentration and body burdens for selected metals. Work will continue on the development of related health effect data necessary to establish air quality criteria for additional classes of pollutants. After completion of criteria on carbon monoxide organics and photochemical oxidants, intensive efforts will be directed at developing information for criteria on odors, organic carcinogens, aero-allergens, and the metallic components of fuel additives, including lead.

Additional support will be given to conducting epidemiological studies, since they are especially productive in identifying sensitive segments of the population. These studies will help to determine the cumulative effects of the types of pollutants which may present continuous or intermittent dangers to human health.

The results of earlier work have revealed that considerable economic damage is wrought by air pollution on vegetation, livestock, building materials, fabrics, and visibility. Such welfare effects will continue to receive attention since they represent important elements in the development of air quality criteria.

The 1970 program will emphasize the synergistic effects of sulfur oxides and oxidants on important crops along the East Coast; the socio-economic impact of odors; the effects of common pollutants on fabrics, agricultural crops, building materials, artworks, architectural coatings; and the cleaning costs associated with air pollution. A limited national monitoring network will be initiated to measure pollution effects and to allow calculation of the cost of pollution to industrial communities.

The costs inherent in achieving effective controls will be evaluated through a series of joint studies with industry. Emphasis in 1970 will be on control costs for sulfur oxides, odors, organics and selected particulate emissions. Available cost data will be evaluated with information on abatement and control programs in order to develop current and projected national costs for air pollution control. The impact on selected industries and distribution between capital and operating costs will be analyzed.

Air monitoring programs are important to verify air pollution episodes, to assess enforcement efforts, and to provide background data for problem identification and standard setting. During 1970, it is planned to increase the number of air pollution network monitoring stations from 250 to 400 sites. Sampling will be expanded to include fuel additives and other heavy metals, organic carcinogens, radioactive contaminants, hydrogen sulfide, and fluorides. Limited sampling will be initiated on aero-allergens, asbestos, and pesticides. Emission inventories will be compiled of the most important pollutants in all major urban areas and a close integration of this activity with developing State and local monitoring activities will be maintained.

Studies on air contamination and the degree of control needed in special situations will be continued, including indoor levels of carbon monoxide and lead in buildings over or close to major highways; pesticide levels in small communities and agricultural areas; and rocket exhaust contaminants in aerospace communities. Data from such studies will lead to quantitative parameters that will permit incorporation of air pollution control provisions in manuals for use by highway and urban planners.

Engineering and Physical Sciences

A variety of research programs on the chemical, meteorological and related physical science aspects of air pollution will be expanded to provide information needed to develop air quality criteria. Besides the intramural research effort carried out directly by the Administration, extensive use is made of the technical resources of other Federal agencies, through interagency contracts, educational institutions, and private industry. The combination of intramural and extramural efforts in the physical sciences provides essential background information, test methods and understanding of the physical-chemical, engineering and meteorological relationships essential in defining the extent and importance of potential new pollutants, setting standards, and devising means by which to control pollution.

In 1970, chemical and physical research efforts will be expanded to support limited studies of approximately 8 additional pollutants that require significant investigation before abatement and control activities can begin. Investigations will continue to seek a means for applying aero-space instrumentation techniques to air pollution control. Analytical studies initiated in 1969 will move into the more expensive development phases, including prototype field demonstration work. Projects will include remote source monitors for sulfur oxides, particulates, hydrocarbons and nitrogen oxide; aerial survey methods for oxidants, sulfur oxides, and particulates; long-path ambient air monitors; remote instruments for measuring wind speed and temperature changes with altitude; and improved integrated air sampling stations for a variety of important gases.

Other research will be directed at developing analytical techniques for detecting organic carcinogens, sulfuric acid, aero-allergens, asbestos, and heavy metals with emphasis on simplification of existing laboratory methods for use in routine air monitoring. Field studies will be initiated to define current levels of these pollutants in selected urban communities. A high priority will be given to field studies investigating the various photochemical reactions in the atmosphere, including initiation of an investigation of East Coast photochemical smog reactions. A long-range program to define the geophysical and some of the ecological impacts of air pollution will be begun.

As standards are established and enforcement activities accelerate under the processes of the Act, increased emphasis will be placed on promulgation of standard methods for air analysis and source sampling. Early in 1970 a manual of recommended methods for the analysis of most of the important pollutants will be published and standard methods for air analysis will be published for the pollutants for which criteria will have been issued.

Several new programs in combustion research, catalytic chemistry and electrochemistry will be initiated during the year to support the applied research studies on stationary and vehicle emissions. This effort will also assist in providing a technical base for studies on unconventional power sources for vehicles with low pollution potential.

Meteorological activities will continue with developmental work proceeding on new and improved varieties of computer models for prediction of the diffusion and transport of pollutants in the atmosphere. These models are becoming increasingly important factors in translating air quality needs into emission standards for control purposes and they are one of the important cornerstones used to define Air Quality Control Regions. Emphasis will be given to the development of better prediction models for episodes, micro-models for highway design and urban planning purposes, long-range intercity pollution transport models, and the simplification of existing mathematical models so that they may be used more routinely by control agencies.

Also during 1970, work will be completed on the evaluation of the effectiveness of tall stacks in hilly terrain. Similarly, an investigation will be conducted jointly with industry in areas where flat terrain exists and land-sea breezes prevail. Other research activities which will continue during the year will include air pollution potential climatology studies, and studies of intercity transport. To provide increased understanding of transport pollutants over long distances, investigations are currently being conducted on long-range tracer experiments using isotope tracer systems.

A summary table for research related to Section 104 of the Act is provided below.

In summary, an increase of $1,090,000 and 37 positions is requested to expand research, development, and demonstration activities. This will include expanded criteria and standards, and engineering and physical sciences programs.

Research Related to Section 104

	1969 Estimate	1970 Estimate	Increase or Decrease
Research, development, and demonstration:			
(a) Grants and contracts.....	$16,270,000[a/]	$21,300,000[b/]	+$5,030,000
(b) Direct operations.....	1,430,000	1,600,000	+170,000
Total.....	17,700,000	22,900,000	+5,200,000

a/ Excludes $1,000,000 carried forward to 1970.
b/ Includes $1,000,000 brought forward from 1969.

3. Manpower training

	1969 Estimate	1970 Estimate	Increase or Decrease
(a) Grants.....	$3,159,000	$3,500,000	+$341,000

Fellowships

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(1) Continuations.....	42	$314,000	35	$266,000	-7	-$48,000
(2) New grants.....	22	154,000	33	234,000	+11	+80,000
Total.....	64	468,000	68	500,000	+4	+32,000

The fellowship program provides direct stipends and tuition costs for the training of graduate-level students interested in pursuing a professional career in the field of air pollution. The demand for experienced, qualified personnel continues to grow, and, with the development of State and local air pollution control programs, the demand is expected to reach critical proportions. Personnel accepted for graduate training are enrolled in a recognized university that has a suitable curriculum enabling them to develop a high degree of competency in air pollution. Graduates are eagerly sought by Federal, State, local and industrial employers; research or teaching careers, in addition to control activity, are of potential value to the national control effort.

In 1970 the fellowship program will increase by a net of 4 awards and $32,000. In general, preference will be given to training in chemical engineering, meteorology, economics, and related specialty disciplines.

Training Grants

	1969 Estimate		1969 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(1) Continuations.....	24	$2,079,000	22	$1,726,000	-2	-$353,000
(2) New grants.....	18	612,000	25	1,274,000	+7	+662,000
Total.....	42	2,691,000	47	3,000,000	+5	+309,000

The purpose of the training grant program is to upgrade and expand the curricula and teaching resources at colleges and universities offering air pollution training. This program is essential in view of the large manpower shortages of States, localities, and industry. The two types of training grants awarded are the graduate and specialist training grant. The graduate grant provides financial assistance to educational institutions for the development of full-time graduate training programs in engineering, physical science, and the biomedical, socio-economic, and bio-meteorological aspects of air pollution. The specialist grants provide support for the development and improvement of training programs, other than full-time graduate training, which are directed at the development of both professional and subprofessional manpower.

Although no substantial increase is reflected in the 1970 estimate, it is estimated that 7 new awards will be made. These are offset by a decrease of 2 continuation training grants to some past recipients offering a limited curriculum in air pollution; namely, graduate schools of engineering.

In 1970, the training grant program will increase by a net of 5 awards and $309,000 to graduate schools offering courses of study in the areas of meteorology, air pollution control engineering, economics, and technician training.

b. Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	78	$820,000	90	$920,000	+12	+$100,000
Other expenses	--	1,080,000	--	1,070,000	--	-10,000
Total	78	1,900,000	90	1,990,000	+12	+90,000

The direct training program develops and conducts air pollution training programs, administers the training grant and fellowship programs, provides a continual assessment of the Nation's manpower requirements and educational resources for air pollution training, and recommends programs to meet these needs. The objective of the 1970 efffort in this area is to assist in meeting current and upcoming demands for State, local and industrial air pollution control personnel resulting from increased control programs.

During 1970 a variety of training courses will be conducted by the National Air Pollution Control Administration personnel to train people from public and private organizations within and outside the Government. Work will continue on the development and improvement of State, regional, and local air pollution control programs through the design of curricula and training aids, including specialized methods and techniques of presentation for use with training courses and information programs. Continual evaluation of the need for air pollution technical training will be made and recommendations for new courses and training techniques will be evaluated and incorporated into existing programs. Emphasis will be on the integration of university, fellowship, and intramural training in order to provide maximum subject coverage and to avoid needless duplication of valuable training efforts. Field activities will be expanded in order to meet the increasing demand by State and regional agencies for a cooperative effort. Demonstrations will be given in the use of new or unique training aids such as computer assisted and situation learning techniques.

As part of a more comprehensive analysis of the total manpower development efforts for increasing the supply of air pollution personnel, surveys will be made of both private and public needs.

During the year, nearly 4,000 individuals will receive technical short course training in air pollution as compared with 2,600 persons in 1969. At the present time 50 courses are available which represent the widest curricula offering on the subject of air pollution anywhere in the country.

In summary, an increase of $90,000 and 12 positions is requested to provide training for additional personnel to meet State, local and regional program needs for the manpower training program.

4. Program direction and management services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	120	$1,050,000	128	$1,160,000	+8	+$110,000
Other expenses	--	1,450,000	--	1,440,000	--	-10,000
Total	120	2,500,000	128	2,600,000	+8	+100,000

The activities conducted under this title provide for the overall direction of programs in the National Air Pollution Control Administration. This Administration serves as the Department's principal operating arm to implement the provisions of the Air Quality Act of 1967, and to render advisory service to the Consumer Protection and Environmental Health Service and the Department of Health, Education and Welfare. This activity supports the Office of the Commissioner of the National Air Pollution Control Administration including such services as program planning, regional designations, international air pollution matters, and a broad range of administrative management support services.

An increase of 8 positions and $100,000 is requested for 1970 and is limited to the important area of designation of Air Quality Control Regions. Designation of such regions, potentially numbering over 200, is an essential and initial ingredient in implementing the State regulatory activities under the Act. Designation of regions must be soundly based on physical and socioeconomic factors, and required consultation with local officials.

New Positions Requested
Fiscal Year 1970

Abatement and control	Grade		Annual Salary
Engineer	GS-17		$26,264
(2) Engineer	GS-16		45,670
(4) Engineer	GS-15		79,120
Administrative staff assistant	GS-14		16,946
(4) Engineer	GS-14		67,784
(6) Scientist	GS-14		101,676
(2) Physical science administrator	GS-14		33,892
(5) Engineer	GS-13		72,045
(4) Scientist	GS-13		57,636
(2) Scientist	GS-12		25,160
Engineer	GS-12		12,580
(2) Staff assistant	GS-12		24,348
(3) Scientist	GS-11		34,689
(2) Engineer	GS-11		23,126
Economist	GS-11		10,203
(3) Scientist	GS- 9		30,462
(3) Engineer	GS- 9		30,462
(4) Administrative assistant	GS- 9		33,848
(4) Scientist	GS- 7		36,312
(4) Engineer	GS- 7		36,312
Secretary	GS- 7		6,981
(2) Secretary	GS- 6		12,642
(2) Scientist	GS- 5		14,912
(3) Administrative assistant	GS- 5		17,196
(4) Clerk-typist	GS- 4		20,580
(2) Clerk-typist	GS- 3		9,200
Commissioned Officers:			
Director grade			13,367
Senior grade			10,367
Full grade			8,503
(3) Senior assistant			17,940
Wage Board:			
Machinist	WB-11		9,028
Machinist helper	WB- 4		5,345
Laborer	WB- 1		4,326
		(81)	948,922

Research, development, and demonstration			
(3) Scientist	GS-17		78,792
(3) Scientist	GS-16		68,505
Statistician	GS-15		19,780
Engineer	GS-15		19,780
(3) Scientist	GS-15		59,340
(2) Engineer	GS-14		33,892
(4) Scientist	GS-14		67,784
Physical science administrator	GS-14		16,946
Economist	GS-13		14,409
Statistician	GS-13		14,409
Physical sciences administrator	GS-13		14,409
Scientist	GS-12		12,580
Engineer	GS-12		12,580
Scientist	GS-11		11,563
Economist	GS-11		10,203

New Positions Requested - continued

	Grade		Annual Salary
(2) Research technician	GS- 9		$16,924
Administrative assistant	GS- 9		8,462
(2) Laboratory technician	GS- 7		13,962
(2) Secretary	GS- 7		13,962
(2) Scientist	GS- 5		14,912
Commissioned Officers:			
Director grade			13,367
Senior grade			10,367
Full grade			8,503
		(37)	555,431
Manpower training			
Chief, Office of Manpower Development	GS-15		19,780
Administrative staff assistant	GS-14		16,946
Scientist	GS-13		14,409
Scientist	GS-12		12,580
Engineer	GS-12		12,580
Scientist	GS-11		11,563
Engineer	GS-11		11,563
Scientist	GS- 9		10,154
Engineer	GS- 9		10,154
Secretary	GS- 6		6,321
Clerical assistant	GS- 3		4,600
Commissioned Officer:			
Full grade			8,503
		(12)	139,153
Program direction and management services			
Coordinator, Air Quality Regions	GS-17		26,264
Special assistant for inter-State abatement activities	GS-17		26,264
Intergovernmental relations specialist	GS-17		26,264
Assistant coordinator, Air Quality Regions	GS-16		22,835
Associate commissioner	GS-16		22,835
(2) Secretary	GS- 7		13,962
Commissioned Officer:			
Senior grade			10,367
		(8)	148,791
Total new positions, all activities		(138)	1,792,297

TUESDAY, MARCH 18, 1969.

ENVIRONMENTAL CONTROL

WITNESSES

CHRIS A. HANSEN, COMMISSIONER
PETER J. BERSANO, EXECUTIVE OFFICER
DR. RICHARD E. MARLAND, ASSISTANT COMMISSIONER FOR PROGRAM DEVELOPMENT
DR. RAYMOND T. MOORE, DEPUTY DIRECTOR OF RADIOLOGICAL HEALTH
CHARLES C. JOHNSON, JR., ADMINISTRATOR
E. R. LANNON, ASSISTANT ADMINISTRATOR FOR ADMINISTRATION
THOMAS J. LAWLER, DIRECTOR, DIVISION OF BUDGET
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	17,328	18,962	19,600
Positions other than permanent	1,043	960	960
Other personnel compensation	181	197	197
Total personnel compensation	18,552	20,119	20,757
Personnel benefits: Civilian employees	2,610	2,837	2,867
Travel and transportation of persons	1,705	1,612	1,561
Transportation of things	1,313	1,029	715
Rent, communications, and utilities	1,719	1,439	1,705
Printing and reproduction	321	310	210
Other services	15,364	6,797	5,260
Supplies and materials	2,219	1,804	1,268
Equipment	1,689	1,538	1,161
Lands and structures	15	140	140
Grants, subsidies, and contributions	23,142	23,931	22,050
Insurance claims and indemnities	2	4	4
Total obligations	68,651	61,560	57,698

Personnel Summary

Total number of permanent positions	2,206	2,085	2,098
Full-time equiva'ent of other positions	124	102	102
Average number of all employees	2,198	2,152	2,135
Average GS grade	7.5	7.7	7.9
Average GS salary	$8,561	$9,181	$9,554
Average salary of ungraded positions	$7,633	$7,782	$7,782

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Program by activities:			
1. Solid wastes:			
(a) Grants	7,831	10,084	9,584
(b) Direct operations	3,517	5,191	5,588
2. Occupational safety and health:			
(a) Grants	2,430	3,443	3,443
(b) Direct operations	2,949	4,020	4,590
3. Radiological health:			
(a) Grants	4,294	4,296	4,296
(b) Direct operations	12,887	11,887	13,057
4. Community environmental management:			
(a) Grants	4,735	5,750	4,369
(b) Direct operations	20,289	11,627	6,848
5. Water hygiene:			
(a) Grants	420	358	358
(b) Direct operations	1,735	1,824	2,435
6. Program direction and management services	2,862	3,080	3,130
Total program costs, funded [1]	63,949	61,560	57,698
Change in selected resources [2]	4,702		
Total obligations	68,651	61,560	57,698
Financing:			
Comparative transfers to other accounts	4,033	3,566	
Comparative transfers from other accounts	−33,459	−23,567	
Unobligated balance lapsing	2,511	1,271	
Budget authority	41,736	42,830	57,698
Budget authority:			
Appropriation	41,750	42,995	57,698
Transferred to other accounts	−14	−165	
Appropriation (adjusted)	41,736	42,830	57,698
Relation of obligations to outlays:			
Obligations incurred, net	39,225	41,559	57,698
Obligated balance, start of year	11,625	22,537	26,924
Obligated balance, end of year	−22,537	−26,924	−31,812
Adjustments in expired accounts	−286		
Outlays	28,027	37,172	52,810

[1] Includes capital outlay as follows: 1968, $1,704,000; 1969, $1,678,000; 1970, $1,301,000.
[2] Selected resources as of June 30, are as follows: Unpaid undelivered orders, 1967, $4,737,000 (1968 adjustments, −$286,000); 1968, $9,153,000; 1969, $9,153,000; 1970, $9,153,000.

Mr. FLOOD. We now have the Consumer Protection and Environmental Health Service, Environmental Control, and the Commissioner is Mr. Chris Hansen.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

We will place in the record your biographical sketch, Mr. Hansen. (Biographical sketch follows:)

CHRIS A. HANSEN, COMMISSIONER OF THE ENVIRONMENTAL CONTROL, ADMINISTRATION OF THE CONSUMER PROTECTION, AND ENVIRONMENTAL HEALTH SERVICE

Mr. Hansen had for 12 years directed a program of centralized scientific, technical, and engineering services to medical research programs as Director, Division of Research Services, at the National Institutes of Health. He was awarded the public health service meritorious service medal for his services at the National Institutes of Health.

Mr. Hansen was born in Guelph, N. Dak., in 1915. He received a B.S. degree in civil engineering in 1937 from North Dakota State University, and an M.S. in sanitary engineering in 1942 from the University of North Carolina.

Mr. Hansen has served in the past as: a public health engineer in the Georgia State Health Department; district malaria control engineer in the PHS program of malaria control in war areas; and executive officer and assistant chief at the Communicable Disease Center in Atlanta, Ga.

He is a member of the U.S. Public Health Service Commissioned Officers Association, the American Association for the Advancement of Sciences, American Society of Civil Engineers, National Society of Professional Engineers, Scientific Research Society of America, Sigma Xi, Tau Beta Pi, Tau Delta Pi, and is a diplomat in the American Academy of Sanitary Engineering.

Mr. FLOOD. How do you wish to proceed?

Mr. HANSEN. I would like to read my statement, if that would be satisfactory. I would first like to introduce my staff here.

On my left is Dr. Marland; he is the Assistant Commissioner for Program Development.

Mr. FLOOD. Where are you from, Dr. Marland?

Dr. MARLAND. I have been in the Public Health Service for some 4 years now in environmental control work.

Mr. FLOOD. I have seen you here before. Where were you born?

Dr. MARLAND. I was born in Connecticut.

Mr. FLOOD. Doctor of what?

Dr. MARLAND. Doctor of philosophy in environmental health.

Mr. FLOOD. A degree in environmental health?

Dr. MARLAND. Yes.

Mr. FLOOD. From what school?

Dr. MARLAND. University of North Carolina.

Mr. HANSEN. Mr. Bersano, our executive officer, and behind him Dr. Raymond Moore, who is the Acting Director of the Bureau of Radiological Health.

Mr. FLOOD. Acting?

Mr. HANSEN. Yes.

Mr. FLOOD. How long?

Mr. HANSEN. He was deputy until very recently and is now Acting Director.

Mr. FLOOD. And you are a doctor of science?

Dr. MOORE. Doctor of medicine. My specialty is occupational medicine.

Mr. FLOOD. How do you get the specialty.

Dr. MOORE. By passing the required professional examination.

Mr. FLOOD. Mr. Hansen, you must feel ill at ease with all of these doctors around, but go ahead.

Mr. HANSEN. We will try to survive.

GENERAL STATEMENT

Mr. Chairman and members of the committee, we appreciate the privilege of meeting with you to discuss some steps by which the Environmental Control Administration is improving the health and well-being of all Americans. Although, this is the first time we have appeared before you as the Environmental Control Administration, the programs included in our organization are well known, having been a part of the Public Health Service activities for some time.

The Consumer Protection and Environmental Health Service is concerned with the entire spectrum of environmental and consumer hazards. The Environmental Control Administration is the focal point within this organization for an accelerated national effort on such problems as management of the solid wastes produced by our society, health problems induced or aggravated by urban living, the quality of our drinking water, occupational diseases, and exposure to radiation.

SOLID WASTE DISPOSAL

A most serious aspect of the quality of man's environment is the mounting problem of solid wastes. We are confronted annually with the problem of handling 360 million tons from domestic and industrial sources. Our methods for waste handling and disposal are generally inadequate. Yet, poor as it is, what is done costs an estimated $4.5 billion.

The principle responsiblity for solid waste management is at the local level. Our role is to assist local agencies through research, technical advice, recommended codes and ordinances, and financial assistance We provide financial assistance to State and interstate authorities for planning solid waste management systems. There are 39 active State grants and four interstate grants. We also provide funds to communities for demonstration of new techniques which may be helpful to other communities. We currently support some 50 demonstration grant projects.

Research is being conducted both with inhouse staff and through grant support to eligible institutions. One research project which is showing great promise is using solid wastes as fuel to produce hot, clean gases for jet engines which in turn power an electric generator. Other research projects to be undertaken will deal with collection practices, improved incineration, and conversion of waste to usable materials.

Although technical assistance and consultation has been provided to many States and local communities (more than 550 such requests will be met this year), much more remains to be done. For instance, preliminary data on some 6,200 solid waste disposal systems shows that more than 94 percent of the land disposal sites being used are in reality open dumps. Incineration which does not create an air pollution problem is rare.

The requested 1970 increase for solid waste management will go to increased activities by our field staff to stimulate local communities to apply that which is already known and expand research efforts.

OCCUPATIONAL HEALTH

In another major program area of the Environmental Control Administration, we are developing various measures to protect the health and safety of men and women who work in hazardous environments.

One such environment is the Nation's coal mines. A great stride toward the eventual control of coal miner's pneumoconiosis or "black lung" was made last December with the publication of a recommended interim standard for respirable coal dust. Maintaining dust levels in the mines at or below the recommended level is expected to significantly reduce the incidence of this disease. Exposure of miners to these lower levels of dust will be evaluated over the next few years in a joint epidemiological study with the Bureau of Mines.

Mr. FLOOD. Can you do it under present law?

Mr. HANSEN. Yes.

Mr. FLOOD. You do not need law?

Mr. JOHNSON. I am not sure we understood that question, Mr. Chairman.

Mr. FLOOD. Regarding silicosis or pneumoconiosis, do you want new legislation or does present law provide for enforcement?

Mr. JOHNSON. We do not, really, have the legislation required to set the standards and enforce them under present law. We need law. I believe they are having hearings at this point on the other side of the Congress in the Senate, and the Surgeon General happens to be testifying this morning on the very situation.

Mr. HANSEN. Another hazardous environment is uranium mines. The incidence of lung cancer among uranium miners is more than seven times greater than in the general population. About 18 months ago an interim standard to control the environment in these mines was promulgated and a more stringent review was recommended within the past month. An increase of $570,000 is requested to expand work in controlling hazardous exposures of uranium miners by continuing to evaluate the effectiveness of the interim standard and by seeking to develop early diagnostic techniques for lung diseases.

COMMUNITY ENVIRONMENTAL MANAGEMENT

Another area of emphasis in the administration deals with community environmental management. Included here are programs of general sanitation, housing hygiene, injury control, vector control, recreational sanitation, and milk and food sanitation. These programs operate in a coordinated way to improve man's home, neighborhood, community, and regional environment and emphasize the individual and his response to these environments. The budget request shows a $6,160,000 reduction in the level of these programs. This is due primarily to the discontinuance of the large-scale field control activities to eradicate the *Aedes aegypti* mosquito. Also a $1,381,000 decrease is reflected in reduced amounts for research and training grants in injury control, milk and food sanitation, and urban health planning.

Another aspect of the community environment with which we are concerned is its water. The people of this Nation must be assured of safe supplies of water for drinking, recreation, and production of shellfish.

For some 40 years we have maintained surveillance over the water supplies used on interstate carriers. In the past this surveillance disclosed microbiological disease hazards and the Public Health Service moved effectively to reduce such hazards. Current surveillance of these same supplies shows that many people in our country are drinking water which contains significant chemical pollutants. A survey of the Nation's drinking water, to measure the amounts of various chemicals and the seriousness of this health problem, was started in 1969 and will be expanded in 1970. The survey will be followed by recommendations to Federal, State, local, and private agencies on the extent of the problem and how the hazards can be controlled.

In 1970 we also will expand our cooperative work with other Federal agencies through the Water Resources Council. This Council is responsible for recommending to Congress long-range plans for the development of our Nation's water resources, and our responsibility is to assure that such plans provide safe supplies of water for the use of future generations.

An increase of $611,000 is requested to expand these water hygiene activities.

RADIATION HAZARDS

During the past year radiation hazards from certain electronic products such as color television attracted widespread attention. The electronic products industry produces more than 30,000 different types of products ranging from tiny components to whole computer systems. The industry's 1968 sales volume is estimated at $23.6 billion and is expected to rise in the future.

In Public Law 90–602, the Radiation Control for Health and Safety Act of 1968, Congress charged DHEW with the responsibility of assuring the people of this country the use and enjoyment of such products without undue risk of radiation injury. The initial implementing regulations required by this act are soon to be published; the Technical Electronic Products Radiation Safety Standards Committee is being selected; and we will announce our first standard within the next several months. The increase of $1,170,000 requested for radiological health activities will be applied to increasing our research efforts and control procedures needed for the implementation of this act.

This brief summary may have suggested questions to you. If so, I will be happy to answer them.

Thank you.

OPERATION OF AIRCRAFT

Mr. FLOOD. The first two pages of your justifications are the appropriation language you are requesting and the explanation of the changes from last year's language. The strictly routine matters you have taken care of, but here is the one most likely to raise questions, the addition of the phrase "including hire, maintenance, and operation of aircraft." There is not a word of explanation about that.

Do you want to explain that now and tell us how much money is involved, and why do you need aircraft?

Mr. HANSEN. We have four aircraft used in connection with the joint work with the AEC at Las Vegas surveillance activities related to the testing of nuclear devices.

Mr. FLOOD. What kind of aircraft are they and how long have you had them?

Mr. HANSEN. I will have to ask Dr. Moore to give that information. I have not been out there.

Dr. MOORE. We have four aircraft, three are C–45 Beechcraft, one is converted to a turboprop, and these are primarily for aerial collection of samples. There is one small two-seater trainer type used for flying in samples for early analysis.

This appropriation language is necessary as I understand it to allow us to carry out this function.

Mr. JOHNSON. Could I clarify that just a little bit, Mr. Chairman?

This is not a request for new authority. This authority was always carried in the previous National Center for Radiological Health appropriation, and in the reorganization——

Mr. FLOOD. How much is involved?

Mr. JOHNSON. The cost of operation of those aircraft is about $64,000 annually.

Mr. FLOOD. We find these Beechcraft and trainers stuck away in the most curious places all through the budget.

You are asking $544,000 and 10 employees for more studies in the health hazards of uranium mines.

Mr. HANSEN. Yes.

Mr. FLOOD. How much is the total budget in people and dollars for this purpose? How long have you been at this?

Mr. BERSANO. In 1969 we had 13 people and $387,000 for this activity.

Mr. FLOOD. How long have you been at it?

Mr. JOHNSON. This has been a rather continuing study, Mr. Chairman, in our cooperative work with the Atomic Energy Commission ever since we started mining uranium and we knew there were hazards out there.

I might say that this particular effort results from recommendations from the Federal Radiation Council with respect to the interim standards for uranium miners in the mines out there. And the interim standard that is due to go into effect in 1971, January 1971, has a proviso with it that this could be modified depending upon resultant interim studies which would be carried out by the Public Health Service.

Mr. FLOOD. Those studies are now going on?

Mr. JOHNSON. These studies will be expanded and amplified.

Mr. FLOOD. Anybody else in HEW doing this?

Mr. JOHNSON. No. Essentially the work in the uranium mines is work being carried out through our Bureau of Occupational Safety and Health.

Mr. HANSEN. The Institute of Environmental Health Science is working with us, and they have one person assigned to us. The program was started in 1963. Cooperative efforts with other agencies date back to 1949.

Mr. FLOOD. Now you have the Bureau of Mines, you have the Atomic Energy Commission, you have the Department of Labor, you have a dozen States. Is there anybody else in this act?

Mr. HANSEN. We are concerned strictly with the health problems, and the studies that we expand here will be involved with studying mines with lower concentrations of radon daughters which cause the cancer; to determine at what level the risk of cancer will be minimized or eliminated.

Mr. FLOOD. You are groping for the work level ratio, are you not?

Mr. HANSEN. The level that is a safe working level is what we are looking for.

Mr. FLOOD. WLM's?

Mr. HANSEN. Right.

As it is now, this is indicated as an interim standard. The work we have scheduled would permit us to study mines with practically zero working levels. And from this we hope to develop assurances on the proper levels for the standards. Also, we are working on techniques for early diagnosis of cancer from this cause.

Mr. FLOOD. There is some serious dispute on very high scientific levels about the WLM ratios. I suppose you know that.

Mr. HANSEN. Yes, indeed.

Mr. JOHNSON. We feel very comfortable, however, Mr. Chairman, in terms of the recommendations that have been issued by the Federal Radiation Council at this time.

We do recognize that we need for statistical purposes to further refine, if possible, the basis against which this recommendation was made, or to alter it if subsequent examination and study would suggest that they should be altered.

Mr. FLOOD. Mrs. Reid?

Mrs. REID. Could you tell me how many uranium miners there are compared to coal miners?

Mr. HANSEN. It is estimated there are approximately 3,200 active uranium miners and something like 7,500 to 10,000 inactive miners.

Mrs. REID. What about coal miners?

Mr. HANSEN. Approximately 125,000. Depending on whose statistics you are reading, 125,000 up to 145,000.

Mr. FLOOD. Suppose you place in the record, since there will be some discussion about this in the next few years, what each Federal and State agency is doing, how much each one spent last year, is spending this year, and how much is budgeted for next year. I do not want you to make a murder case out of getting those figures together, just a reasonable estimate will do because we are going to have this one around a while.

Mr. HANSEN. We will be glad to do that.

(The information follows:)

FEDERAL AND STATE AGENCY ACTIVITY URANIUM MINERS

State agency	1968 (estimated)	1969 (estimated)	1970 (estimated)
Colorado Department of Mines	$48,000	$48,000	$48,000
New Mexico Department of Mines	25,000	25,000	25,000
New Mexico Department of Health	5,000	5,000	5,000
Utah Department of Mines	15,000	15,000	15,000
Wyoming Department of Mines	7,500	7,500	7,500
Arizona Department of Mines	5,000	5,000	5,000

State activities consist of inspections of uranium mines for control of radon daughters.

Federal agency

U.S. Department of Labor:

1968	$50,000
1969	50,000
1970	50,000

The U.S. Department of Labor carries out inspections of appropriate uranium mines for determining compliance with regulations under the Walsh-Healy Public Contracts Act. A small amount of laboratory work is carried out as necessary. With the cessation of uranium purchase by the Federal Government at the end of 1970, the U.S. Department of Labor will terminate this activity.

U.S. Department of Interior, Bureau of Mines:

1968	$72,000
1969	72,000
1970	228,000

The Bureau of Mines makes inspections for radon daughter measurements, safety evaluations and control authority of the Metallic and Non-Metallic Mines Safety Act; performs studies on ventilation of respiratory protection and carries out education programs.

U.S. Department of Health, Education, and Welfare, Environmental Control Administration:

1968	$116,000
1969	387,000
1970	957,000

The working environment of underground uranium mines has revealed potentially hazardous inhalation of radon and its decay products. Excess lung cancer rates have been demonstrated among uranium miners. The goal of the study is to enable this strategically and economically important mineral to be mined without affecting the health of the miner. The objective is to eliminate completely or at least reduce to the absolute minimum the risk of lung cancer to the uranium miner.

Mr. FLOOD. Frankly, from this side of the table it looks like perpetual motion. When are we going to get some answers? This has been, and is, a serious health problem but it is getting to be a serious fiscal problem, too. You come in every year for increases, but nothing happens to reduce the problem—you're in for another increase for 1970.

Mr. HANSEN. But we have an interim standard which is operating to protect the miners.

Mr. FLOOD. Twelve WML?

Mr. HANSEN. Twelve working level months per year. There is evidence that the amount of radiation in the mines is steadily decreasing. I believe, Dr. Moore, our records support that, do they not?

Dr. MOORE. In many mines.

Mr. FLOOD. In direct ratio to the increase of production, you are lowering your hazards. Is that not what you said?

There is evidence that the radiation is decreasing as production is increasing.

Mr. HANSEN. We are stimulating the mine owners to improve the mechanisms of operations.

Mr. FLOOD. Stimulating. Stimulate a mine owner? It is quite a trick.

Mr. HANSEN. The better ventilation systems in the mines are contributing to the reduction in the level of radiation.

Mr. FLOOD. I have my doubts, but we will see.

RELATION TO AEC

What is your relationship with the Atomic Energy Commission with regard to your whole field of radiological work?

Mr. HANSEN. We have very close working relationships with the Atomic Energy Commission. They participate in review of grants. We participate in the review of their programs in the health field so they know what we are doing and we know what they are doing.

We have, of course, the program at Las Vegas which is a joint venture with AEC in the evaluation of the health hazards in connection with testing nuclear devices. Dr. Moore, do you have additional information?

Dr. MOORE. In general we look at population exposures from the standpoint of lower doses, and the Atomic Energy Commission has taken the role of looking at higher exposures to smaller numbers of people.

Mr. FLOOD. Why are you out there in Las Vegas?

Dr. MOORE. We operate the surveillance program for the Nevada operations office of AEC wherein we document, measure, and recom-

mend countermeasures, if needed, for protection of the populace who live adjacent to the test site.

Mr. FLOOD. This project was born as a result of the tests then?

ACTIVITIES UNDER RADIATION CONTROL AND SAFETY ACT

Dr. MOORE. Yes. And it was done through a contract with them.

Mr. FLOOD. Your largest requested increase is $1,024,000, and 41 people to carry out the provisions of the Radiation Control and Safety Act of 1968. You mentioned that in your opening statement a few minutes ago. This is a pretty big increase. I think you had better give us some more details. What do you have to do to carry out this act and why can you not do it with less money?

Mr. HANSEN. This is a very large job, Mr. Chairman.

As I indicated, the industry is operating at a level of $23 billion, and the production of radiation-producing equipment is extensive.

Our initial request here is for the establishment of enforcement capabilities—$430,000 and 22 positions. This is to develop capability for evaluation of industry reports and for quality control validation for products requiring the Secretary's certification. Products that come on the market that produce radiation have to be inspected and reviewed, and this is going to require a tremendous effort.

We are also requesting $90,000 and five positions for expansion of the health effects research on nonionizing radiation. The health effects problems associated with microwaves, lasers, and ultrasonic generators must be studied. We have done very little work in this area in the past.

Mr. FLOOD. What would be the radiological danger from a laser beam?

Mr. HANSEN. It is nonionizing radiation and the problem of nonionizing radiation is not very well known. It is rather clearly evident that it causes damage. The extent of damage is not known. There is a need for further research in this area.

Mr. JOHNSON. Could I amplify that just a little bit, Mr. Chairman?

Mr. FLOOD. Yes.

Mr. JOHNSON. Lasers can burn. As a matter of fact, can burn through steel, and when you begin to use them in any degree of use around humans, they can also burn humans but the people that have developed this and are beginning to use this do not always recognize this harmful effect. As a matter of fact, when I was in New York City as assistant commissioner of health there a few months back, we had to go down to one of the local art museums and request that they remove an exhibit that had a laser on a pedestal that revolved around the room and played very pretty pictures around different motifs on the wall. It just so happened that this laser beam was about the same level as the eyes of the people that would look at this and every time it made a sweep it would also sweep across the eyes. It would not take very long to be in there before there would be some very definite damage to the sight of the individuals.

Mr. FLOOD. Are dentists considering using this beam for drilling?

Mr. HANSEN. I have not heard of it being used for that purpose.

Mr. JOHNSON. Could I interrupt once again, Mr. Chairman, to make sure there is not a misapprehension that the slightly over a million

dollars being requested for electronic product work is either large or will do the job completely. This is a very modest sum of money requested just to start this program. When the law was first passed, there were no funds made available at that time to even implement the act.

We would think this represents ultimately, and this depends on how fast the Congress would want us to go with this program, somewhere between 10 and 15 percent of the dollars that might ultimately be needed to control this.

SOLID WASTE DISPOSAL

Mr. FLOOD. Let's take a look at the solid waste research grant program; $2,444,000 in 1969, and 1970, and you say:

> The majority of the supported research has been under way for 3 years or less and results are now beginning to emerge from these efforts.

What results do you have that you think are well worth bragging about or even talking about?

Mr. HANSEN. Let me speak of a few examples of what we consider improvements in the solid waste disposal program.

We have now a contract underway with one of the jet aircraft companies for burning of solid wastes in an effective way to avoid pollution and to reduce the ultimate cost of the waste disposal.

This study is well along, they have reached the point of effective incineration. Their main problem at the present time is one of cleaning up the gases used in the turbine engines. We feel this is a very worthwhile and effective program.

USE OF JET ENGINE TECHNOLOGY

Mr. FLOOD. At last year's hearings there was a presentation on solid waste which indicated the potential of a new concept in incineration in taking advantage of jet engine technology.

Mr. HANSEN. That is right.

Mr. FLOOD. To transfer the heat from burning the waste into electricity using a gas turbine. What is the status of it?

Mr. HANSEN. It has moved along.

Last year they were working on the fluid bed incineration process. They have carried that far enough along now so they are reasonably well satisfied with the burning technique.

The problem they are working on now is cleaning up the gases for use in the engine.

Mr. FLOOD. Does the financial base you ask this year include sufficient funds to develop this project?

Mr. HANSEN. No, it does not.

Mr. FLOOD. Or others like it?

Mr. HANSEN. We do not have adequate funds.

Mr. FLOOD. That sounds very interesting.

Mr. HANSEN. The cost is estimated at something like $1.8 million. Somewhat less than one-half of this amount is included in the 1970 budget.

Mr. FLOOD. What do you think about it yourself?

Mr. HANSEN. I think it is an excellent approach.

As I mentioned earlier, the incineration process of solid waste is generally unsatisfactory. We have not found a good incineration system that really works without creating some problems of air pollution or other related problems.

We feel this is one of the most optimistic approaches from an incineration standpoint that we have.

Mr. MICHEL. What is the projected cost?

You are talking about a jet engine. Are we talking in terms of what a community would be able to purchase or an industry?

Mr. HANSEN. Over-all cost estimates for production of the prototype would be $20 million. The estimated cost for disposal of solid waste by this mechanism is in the range of slightly over a dollar a ton.

Mr. FLOOD. Is that much?

Mr. HANSEN. That is very little. An inexpensive land fill would run $1 to $3 per ton depending on many factors, such as hauling, distance and other related problems. If we can clean up the gases so there is not an air pollution problem, it is the sort of thing that could be built near a city without causing other pollution problems. You would not have to haul the waste far out and, as a result, you could reduce the problem and cost.

As you know the collection and hauling is the most expensive part of the whole process of solid waste disposal.

Mr. JOHNSON. Mr. Chairman, again in terms of the comparative costs, if you consider that today incineration costs you $7 to $8 a ton, even if this process comes out at two or three times the projected cost, you have a savings here. Then when you add into the benefits that Mr. Hansen speaks about in terms of a lack of air pollution, you have another cost that ultimately is borne by the community that you do not have to bear at this particular time.

USE OF MINES FOR WASTE DISPOSAL

Mr. FLOOD. Will you also stop the bright boys in New York and Philadelphia and the metropolitan seaboard from hauling all of this trash out of the cities into my coalfield strippings?

Mr. JOHNSON. This is true, but maybe you have a blessing in disguise. I see out in California they are hauling some of their waste materials 300 miles up into the canyons.

Mr. FLOOD. The only problem, these strippings are not in canyons, they are in the middle of extensive populated areas.

Mr. JOHNSON. Properly operated land fill I think you will agree can be an asset to a community, it does not have to be a burden.

Mr. FLOOD. It wouldn't be so bad if it were our own material. We don't mind taking care of our own problems, but why should we take yours?

Mr. JOHNSON. That is one of the things I think we in the United States have to begin to think about, that we live as a community of one and it is very difficult to draw boundaries around these communities and say, what happens in one does not affect what happens in another or does not benefit what happens in another.

Mr. FLOOD. You mean continue our tradition of supporting railroads and transport this from New York and Philadelphia to the coal fields?

Mr. JOHNSON. On that part I would have to agree, and that part of the economics we have not gotten into yet. We are trying to look at the technology of the disposal effort.

Mr. HANSEN. Actually we have a study underway——

Mr. FLOOD. Keep studying.

Mr. HANSEN (Continuing). On the economics of the rail haul.

Mr. FLOOD. Just keep the study going, as many of your studies do, for a long, long time.

Mr. HANSEN. We want to end the study as early as possible.

Mr. FLOOD. Providing you and I agree upon the conclusion.

Mr. HANSEN. In Western Maryland, in strip mines, we have a project going on that worked out very successfully for the local community in disposal of their wastes in an abandoned mine.

Mr. FLOOD. Disposal of their own wastes?

Mr. HANSEN. You are right, Mr. Chairman, it is the waste from Frostburg, Md. and the adjacent community.

One of the questions that came up was the problem of operating effectively in a 40-foot cut situation. They were able, with the machinery they had, to do a very effective job.

Mr. FLOOD. No water pollution problems?

Mr. HANSEN. They are checking on those now as the work progresses. There is no evidence of a problem there at this time.

Mr. FLOOD. Spontaneous combustion

Mr. HANSEN. We have not heard of any.

Mr. FLOOD. You will.

We obviously can't finish this item in less than another 30 minutes to an hour; so we will recess for lunch.

AFTERNOON SESSION

WDAU–TV EDITORIAL

Mr. FLOOD. Going back for a minute to what we were discussing when we recessed, I was making some remarks about the dumping of garbage in the strippings of hardcoal fields in northern Pennsylvania. I have here an editorial from one of the local stations, WDAU–TV, of March 6. Just to give you an idea of the attitude in our area. This has to do with the appearance in our area of a State legislative committee, the House Conservation Committee.

The editorial says:

> The amazing thing about the field trip of the House Conservation Committee to this area is that the outrageous idea of filling antracite mines with garbage has advanced to the point where it can attract sober legislative attention.

I am not sure whether his tongue is in his cheek or not.

> Members of the Committee today toured some of the proposed dumping grounds and tomorrow in Hazleton will hold a public hearing on a bill that would set up conditions under which refuse from Philadelphia and other large cities could be hauled to the anthracite area for disposal.
>
> The angry reaction of Sheppton area residents to a short-lived Mines Department proposal to set up a pilot refuse—

Sheppton is a small town adjacent and contiguous to Hazleton and much of that area looks like Mars must have looked from that vehicle two weeks ago.

* * * proposal to set up a pilot refuse dumping project there should provide ample notice that people here have too much pride to stand by and see their communities turned into garbage dumps.

You would be surprised to see the extent to which it has gone. Simply extraordinary. Rather carefully arranged by certain powers that be, if you know what I mean.

This ugly scheme would be bad enough if the damage to a community was limited to image, but the stuffing of mine cavities with garbage could create serious health problems.

Underground fires * * * we have some acquaintance with underground fires caused any of a number of ways. We know quite a good deal about them, "* * * explosions * * *." We know a good deal about explosions and what causes them and what does not, "* * * pollution of water supply are among the known possibilities."

We are very pleased with our water supply. We have one of the best in the world in that area, "* * * Rodents and insects are certain to be free-loading passengers on the garbage express from Philadelphia."

If all this seems like a bad dream, we had better wake up quickly to reality. A multimillion-dollar contract has already been signed in Philadelphia under which 260,000 tons of refuse would be transported here annually for burial.

This whole sick joke has been carried far enough. We would hope that the visiting legislators would go back to Harrisburg with the clear message that this area simply will not countenance the dumping scheme.

Vigilantes have been known to our area for a couple of hundred years. We go back a long way before coal. That is just for the purpose of emphasis.

WBRE–TV EDITORIAL

I have another editorial from station WBRE–TV which I will not take the time of the committee to read but will just place in the record.

(The editorial follows:)

[WBRE–TV Editorial, Mar. 3, 1969]

AN IMPOSSIBILITY

A justly famous prayer begs an ability to see the difference between the possible and the impossible. It appears to us that the proposal for large-scale disposal of solid waste in abandoned strip-mine pits is among the impossibles. People living in the strip-mine area do not want it, no matter what.

It makes little difference that solid-waste disposal is one of the major problems facing the Nation. It makes little difference that most of the communities opposing the proposal do and will continue to use sanitary landfill to dispose of their own solid wastes in these same pits. Nor does it make any difference that local disposal nowhere contemplates the same separation of garbage from trash and the shredding and treatment of what is baled for disposal. Nor does it matter that of the 37 sanitary landfills in the region nine cause air pollution, five cause water pollution but that 22 causes no discernible pollution. Nor does it seem to matter that we apparently know very little about the peculiar problems that may stem from using coal pits for sanitary landfill and that there is a lack of solid technical information here that urgently demands attention.

The overriding fact is that it is unpolitic. The prospect of becoming the dumping ground of the East is more than the people living in this already horribly abused land can accept. And they've found many eager to seize upon this rising emotion to fan its drive and ride it for personal benefit. The people of this region are aroused to a pitch where the only thing that counts is their feeling—and they don't want it—bitterly, loudly, and angrily don't want it, and it would be folly now to try to "sell" let alone impose it.

We agree that the proposal of the Eastern Land Reclamation Co. ought to be abandoned. At this time and place, it'll never get into the ground.

Mr. FLOOD. Are we making any progress or are we falling further behind in regard to this overall solid waste disposal problem.

Mr. HANSEN. Mr. Chairman, we are moving ahead.

JET ENGINE TECHNOLOGY

Mr. FLOOD. I am impressed by your story on that jet thing.

Mr. HANSEN. Incidentally, we have——

Mr. FLOOD. That is the most impressive thing I have heard so far, if it is not prohibitive in cost.

Mr. HANSEN. We have detailed information here on the project, current report, and the timing and the estimated cost which we would be glad to supply for the record, if you would like it.

Mr. FLOOD. I think you should supply it because a lot of people are going to read this.

(The information follows:)

COMBUSTION POWER UNIT CONTRACT

This research and development contract with the Combustion Power Company, Inc., Palo Alto, California, is designed to use waste heat resulting from the incineration of municipal solid wastesfor power generation. The contract, which originated in 1968, is expected to extend through 1973.

The various phases of the contract are scheduled for completion at the times indicated below:

Phases	Year
1. Preliminary design	1968
2. Key subscale experiments	1969
3. Program management and systems engineering	1969
4. Subscale experiments	1969
5. Turbine compatability	1970
6. Component development	1972
7. Prototype development	1972
8. Prototype test	1973

The contract has progressed satisfactorily during the initial phases. Phase 1 is complete; Phase 2 will be completed in June 1969; and Phase 3 is expected to be completed in the late summer of 1969. Phase 4 will start after complete evaluation of the above phases - currently projected for October 1969. Details of this contract are contained in the attached technical abstract "Combustion Power Unit - 400 CPU - 400" prepared by the Combustion Power Company for the Bureau of Solid Waste Management of the Public Health Service.

SUMMARY OF ESTIMATED PERFORMANCE

CAPITAL COST[1]

	MUNICIPAL OWNERSHIP		UTILITY OWNERSHIP
Site preparation and foundations	$ 116,690		
Building and facilities	33,500		
Equipment	3,488,328		
Installation	45,000		
		$3,683,518	
Engineering (7%)		257,486	
		$3,941,004	
Interest during construction		66,997	
Total		$4,008,001	$4,008,001

ANNUAL OPERATING COST[2] (Assuming no income from electric power, steam or residue)

	MUNICIPAL OWNERSHIP[3]		UTILITY OWNERSHIP
Amortization	$260,400		
Insurance	10,000		
Total fixed charges on capital		$270,400	$520,000
Operating labor	$107,000		
Maintenance labor	8,000		
Overhaul	4,500		
Payroll extras	17,900		
G & A	20,600		
Fuel cost	700		
Station power	13,000		
Maintenance supplies	6,000		
Interest on working capital	1,500		
Total plant operating cost		179,200	179,200
Contract maintenance			
Gas turbine	$ 39,000		
Combustor assembly	90,000		
Solid waste subsystem	40,000		
Control system	6,000		
Total contract maintenance		175,000	175,000
Total		$624,600	$874,200
Cost per ton of refuse consumed		$4.27	$5.99

ANNUAL INCOME

	ANNUAL	$/TON
Electric power only (82% load factor)[4]	$485,000	3.32
Steam only (120 days per year)	$ 68,202	0.47
Combined cycle (120 days of heating, plus 240 days additional electric power from steam)	$693,800	4.75
Residue (saleable ash by-products)[5]	$120,600	.83

NET OPERATING COST OR PROFIT ($/TON)

PLANT CONFIGURATION	MUNICIPAL OWNERSHIP DISPOSAL COST	UTILITY OWNERSHIP DISPOSAL COST[6]
Electric power only	0.95	2.67
Electric power plus steam	0.48	2.20
Combined cycle *	-0.13	1.85
Electric power plus residue	0.12	1.84
Electric power plus steam plus residue	-0.35	1.37
Combined cycle plus residue *	-1.16	0.56

In addition to the low disposal costs shown, the CPU-400 will provide indirect cost savings in refuse hauling through modular dispersement.

*adjusted for increased capital costs

NOTES:

1. Generous allowances have been included in the performance estimates for those components whose final configuration is not now known but will be determined by the results of early experiments. The cost of the turboelectric generator, the single most expensive component of the CPU-400, is well known.

2. The CPU-400 is designed to be fully automatic, controlled from a single station, such that it can be operated by three men on day shift and two men on swing and midnight shifts. Four crews are required for continuous plant operation.

3. For investor owned utilities, the fixed charges on capital investments are approximately 13 percent as compared to 6.8 percent for municipal ownership. Utilities must pay higher interest rates, pay taxes, and provide a return for their stockholders.

4. A representative, yet conservative estimate for the average value of the electric power produced by the CPU-400 is assumed to be 4.5 mils per kilowatt hour.

5. The CPU-400 will produce 80 tons per day of clean, sterile and completely oxidized residue in two or three separated particle sizes. Income from the sale of this residue is based on an estimated average value of $2.00 per ton for medium and fine and $3.00 per ton for coarse.

6. For utility ownership, the cost per ton for disposal of the refuse would be paid by the city.

Mr. HANSEN. We have a goodly number of projects moving, some of which are right at the stage of completion.

Mr. FLOOD. That is what we are worried about. We have been talking about this now with you for several years. Where are you?

Mr. HANSEN. Solid-waste compacting is a technique that is being developed and is now far enough along so it is at a successful stage. It involves, for example, the compaction of waste from an apartment building, so it can be handled and carted away more economically and effectively than by present methods.

Mr. FLOOD. Have you eliminated the rattling of tin cans in the morning at 5:30? That is not your department?

Mr. HANSEN. Such methods will certainly reduce the numbers of garbage trucks moving on the streets if we are able to compact it rather than hauling it in loose form in trucks. We have done a number of studies which resulted in negative information. We feel this is worthwhile, too. The open-trench incineration method has been studied at some length. We conducted a study on it because we were not sure it was feasible.

Mr. FLOOD. You have to be very careful of the terrain. Northeastern Pennsylvania is glacial in derivation and the subsurface is very porous. You foul the water supply with this sort of nonsense and you will have a very serious problem.

Mr. HANSEN. Mr. Chairman, that is a very good point.

Mr. FLOOD. It may not be true in some areas I am no engineer.

Mr. HANSEN. It clearly indicates the need for us to become involved in studies in various parts of the country. What is effective in one area may not be effective in another area.

Mr. FLOOD. You can go to an area where it is all clay and you probably have no problem.

Mr. HANSEN. That is precisely the point. For instance, down in Virginia Beach we have a project going there on waste disposal but instead of a regular sanitary landfill, the garbage is piled on top of the land. They use borrowed dirt from nearby and as a result they have created an amphitheater situation which is a very useful part of their community development. The resulting excavation is being developed into a recreation lake.

Mr. FLOOD. I want to tell you something about clay covers. We have had great experience with subsurface fires in hard coal, big ones and little ones. In my district we have the biggest one in the world, burning for years. We can not put out the fire. We have to seal it off and let it die out. We had to move an entire community out of there because of gaseous discharges, and so on.

In another area we dug trenches to outflank the fire and then we filled the trenches with clay. The technicians told us that this would take care of that. The clay, they said, would smother the fire. Of course, this is not what happened. The fire overheated the clay and there you were. The fire went all through the clay.

Be careful if you are going to use clay in covering combustible material or material in which there may be spontaneous combustion. Clay has the funniest habit of not acting like clay at all.

Mr. HANSEN. The cover is a very important component.

Mr. FLOOD. I just told you that.

Mr. HANSEN. Indeed, you did, and I agree.

Another important project that we have underway is the use of a rotary incinerator that has been installed in the small community of Shippensburg, Pa. It has just recently been completed and put into operation. It is operating quite successfully. It is a different type of approach in incineration.

Mr. FLOOD. How did you get to Shippensburg?

Mr. HANSEN. This was started well before I became associated with the project. It was, as I understand it, a small community that was suitable for installation of a rotary incinerator. We understand now that the incineration has sufficient capacity to take on the waste disposal of an adjacent area.

Mr. FLOOD. It is curious how these things take place.

Mr. HANSEN. The area has a bit of a problem. Geological conditions there prevent adequate disposal by sanitary landfill, and this approach in that area was particularly effective.

Mr. FLOOD. You might list one or two others there.

Mr. HANSEN. All right.

(The information follows:)

REPRESENTATIVE SOLID-WASTES DEMONSTRATION GRANTS COMPLETED IN 1968

1. Gully reclamation method-landfill demonstration, Washington, Douglas, and Sarpy Counties, Nebr., June 1966–September 1968.

Purpose: To demonstrate and promote acceptance of landfills for county-wide solid-wastes disposal by utilizing the gully reclamation method.

2. California integrated solid-waste management system, State Department of Public Health, California, June 1966–May 1968.

Purpose: To investigate, plan, and design a regional solid-waste management system which can efficiently and economically handle all solid wastes of the area, and to implement, construct, test, and evaluate the designed system.

OCCUPATIONAL SAFETY AND HEALTH

Mr. FLOOD. You have about $8 million budgeted for occupational safety and health.

The Department of Labor spent some time here a week ago telling us how good they were. They have an activity they call improving safety and other working conditions of wage earners. They are asking for $4,752,000 for that.

What is the difference between what you do and what they do? Just a question of semantics, or what?

Mr. HANSEN. Our activity in occupational safety and health is concentrated in strictly health programs, and our main efforts at the present time are in the black lung disease, uranium mining, asbestos, and beryllium. We are doing some work on plastics and——

Mr. FLOOD. Even if there is no duplication—and I am certainly giving you the benefit of the doubt—why couldn't these two activities be consolidated? I wouldn't care where, but why couldn't they be?

What is the distinction?

Mr. HANSEN. The answer is certainly they could be. The program responsibilities have been divided in a manner that gives the safety aspects of the occupational setting to the Department of Labor and

the health aspects of these settings to the Department of Health, Education, and Welfare.

Mr. FLOOD. In connection with black lung, we have two separate bills: one on safety and one on health.

Mr. HANSEN. That is true in one respect, Mr. Chairman.

Mr. FLOOD. That is true in all respects. I introduced them both.

Mr. HANSEN. In that respect, yes. The administration's bill keeps safety and health together as one bill. In actuality, we do work very closely with the Department of Labor. Certainly, if we have research that should be shared with them in terms of its effect on safety, this is shared, and vice versa. If through their operations they find that there are areas of health consequences that we should be aware of, this is shared. I think that you are familiar with the fact that last year the outgoing administration did introduce an occupational safety and health bill. In that bill, it very clearly delineated the responsibilities of both the Labor Department and the Health Department, and once again they gave the responsibility to the Secretary of HEW to develop the health criteria and do the research necessary to develop those criteria so that the standards that would be enforced——

Mr. FLOOD. I know that. I put in a copy of the bill. I want to know from you fellows why couldn't this thing be consolidated.

Mr. HANSEN. As I pointed out, I believe that it is tradition more than any particular reason. The Department of Labor being one of the major institutions of the Federal Government, has certain areas of responsibility. The Department of Health has, too. In many respects, I guess in dealing with the labor forces on a day-to-day basis, and safety being one of the primary responsibilities in terms of the safety of the labor force, they have carried out this aspect of the responsibilities.

QUALITY OF PUBLIC DRINKING WATER SUPPLIES

Mr. FLOOD. You are asking for $353,000 and six jobs to make what you call a national survey of the quality of public drinking water supplies. Why haven't we done this before?

Mr. HANSEN. Drinking water has not received much attention in the last 20 or 30 years.

Mr. FLOOD. Why?

Mr. HANSEN. I think primarily because beginning 40 or more years ago there were a significant number of outbreaks of disease caused by water. At that time drinking-water standards were developed and implemented through a rather effective program stimulated by the Public Health Service and carried out by the State and local units and other water distribution organizations.

Mr. FLOOD. When I was a kid many people were supposed to be getting typhoid fever from drinking water.

Mr. HANSEN. Right.

Mr. FLOOD. Did they?

Mr. HANSEN. There were significant outbreaks as recent as the time that I worked with the Georgia State Health Department in 1938.

Mr. FLOOD. Clearly water?

Mr. HANSEN. Clearly water, indeed. Since that time the affluence of the American people has increased significantly and there are fewer and fewer people drinking from wells with——

Mr. FLOOD. I know. I was talking about when I was a kid. That was not last week. What is the matter all these years; what has been going on?

Mr. HANSEN. People have been taking good water quality for granted. As the Nation has grown and as we have more and more pollution from industry, there have been significant quantities of chemicals getting into the system, pesticides of various kinds, and there has not been adequate attention paid to these, particularly as they relate to health. We have had a few major outbreaks of disease in the past several years. We had outbreaks on the average of once a month over the last 3 or 4 years. This is a significant item.

In addition to that, the health effect of the chemicals that we find in water today is not clearly understood, and furthermore the evaluation of water supplies comes primarily——

Mr. FLOOD. You mean some of the things that you are doing and your friends, you are doing more harm than good?

Mr. HANSEN. No. What we are doing is checking the water supplies.

Mr. FLOOD. Where do the chemicals come from?

Mr. HANSEN. The chemicals come from the industries of the Nation that are discharging waste into streams and runoff from the surface.

Mr. FLOOD. You are not speaking of the water purification?

Mr. HANSEN. No. These are the waste chemicals that get into the streams and other water sources. For the current year we have underway a study of the water supplies of nine metropolitan areas to do a rather complete check of water quality——

Mr. FLOOD. Different kinds of water?

Mr. HANSEN. Different kinds of water, different kinds of terrain, but a limited area. We have nine areas, New York City being one.

Do you recall the names of some of the others?

Dr. MARLAND. Yes. One is New Orleans; another is Cincinnati, Ohio; another represents a small area in the Rocky Mountain region. One other is in California.

Mr. FLOOD. What is the difference between hard water and soft water?

Mr. HANSEN. Hard water has minerals in it. Calcium carbonate and many others, a variety of chemicals in the water.

AEDES AEGYPTI MOSQUITO ERADICATION

Mr. FLOOD. You have a relatively large decrease of $4,877,000 and 68 jobs for the Aedes aegypti mosquito eradication program.

I would like to be a Monday morning quarterback. You know perfectly well this committee has been opposed to this thing from the very first day it was mentioned. We refused to appropriate for it when it was first requested. That you know all about.

You know that the Surgeon General gave Dr. Watt special orders, primary assignment for months to run around here selling this program to members of this committee and other influential Members of Congress.

How long has that program been in operation?

Mr. HANSEN. It was in operation from 1964 through 1968.

Mr. FLOOD. You have closed it down?

Mr. HANSEN. It is not closed down entirely. We are still operating a research program to develop better techniques of vector control.

Mr. FLOOD. How much money did you waste on this show?

Mr. HANSEN. There was approximately $54 million spent on the eradication program through 1968.

Mr. FLOOD. $54 million. Did you eradicate the mosquito in one State for $54 million?

Mr. HANSEN. We eradicated mosquitoes from quite a few areas, including parts of Puerto Rico and Texas.

Mr. FLOOD. You did not hear the question. I wanted to know, Did you eradicate the mosquito in one State for $54 million? Not the panhandle of one State. Not the upper part of one island, but did you clear out the mosquitoes in one State for $54 million since you took the curtain up on this act?

Mr. JOHNSON. Mr. Chairman.

Mr. FLOOD. Let this guy talk. You are pretty new here.

Mr. HANSEN. We were concerned with *Aedes aegypti* mosquitoes. We accomplished eradication of *Aedes aegypti* mosquitoes in 21 out of 60 counties in Florida.

Mr. FLOOD. Did you eradicate them in one State?

Mr. HANSEN. Not in one State.

Mr. FLOOD. Mister, did you want to volunteer?

Mr. JOHNSON. Yes.

Mr. FLOOD. You were a marine when?

Mr. JOHNSON. I was in the Marine Corps for 5 years. I have worked with mosquito-control programs for a number of years, during the first 3 years of my PHS career in Liberia.

Mr. FLOOD. In Liberia?

Mr. JOHNSON. Yes, sir.

Mr. FLOOD. They are like Mig fighters there, aren't they?

Mr. JOHNSON. They get pretty big over there, that is for sure, and you know when you get bitten.

While we did not actually achieve the goal that we set out to do in the *Aedes aegypti* eradication program, it was not a total loss. For instance, in the Virgin Islands, I believe that is where they are actually going to carry on the program that we started.

The advantage in the States where we did make some progress was perhaps as much in the side spinoff as it was in the *Aedes* program itself. We were able to undertake and get started a number of solid waste disposal or management efforts with the——

Mr. FLOOD. We are talking about *Aedes aegypti* for $54 million.

Mr. JOHNSON. You have to relate the habitat of the *Aedes aegypti* to the indiscriminate disposal of solid waste materials. It is the nature of the mosquito.

Mr. FLOOD. So far it has had a mighty low benefit-to-cost ratio.

Mr. JOHNSON. This is one of the reasons it got such a low priority when we had to have a cutback under the Federal Revenue and Expenditure Control Act of 1968.

Mr. FLOOD. I can imagine.

TECHNIQUE FOR COMPRESSING SOLID WASTES

Mr. FLOOD. Have the Japanese got some sort of a mechanical gimmick for solid waste?

Mr. HANSEN. Yes. They have a machine for compressing large bundles of waste and we had one of our grantees go over and study it and bring information on it back to us.

Mr. FLOOD. Was not some community in California going to buy one of those?

Mr. HANSEN. I have not heard that. The data we got was a little disappointing. It may be due in part—I have a full report right here—to the translation. But we are not overly enthusiastic in what we have seen and we are going to try to get some additional information.

It compresses waste into large blocks and the inventor would suggest that you might use these for disposal in a fill or cover them with tar or similar material for retaining walls or building blocks. He has all kinds of ideas along those lines. The machine has a complex compression system which provides for enclosing the compressed block of waste in chicken wire to hold it together.

Mr. FLOOD. Are any of these machines operational any place but Japan?

Mr. HANSEN. This is a prototype, we understand, and they still have some difficulties with it.

Again I repeat that our information is sketchy because there are inconsistencies in the translation that bother us in reviewing the report.

Mr. FLOOD. Mr. Michel?

COST OF DISPOSING OF SOLID WASTES

Mr. MICHEL. On the first page of your testimony, where you have an estimated $4.5 billion cost for solid waste disposal, how did you ever arrive at that figure? Is that all garbage collection?

Mr. HANSEN. Collection and disposal is included in the total figure.

Mr. MICHEL. Has it been determined that if we were in a position to separate paper and soft waste from the insoluble waste, it would be a cost-cutting factor in waste disposal? I am thinking in terms of what applies to the private home. You have bottles and cans, and burnable garbage, and you throw it into one disposal can. I suppose in effect you could burn a good part of it if there were not too much of a residue or you did not make too many people uncomfortable and cut down considerably on having to separate out bottles and the solid things.

When you talk about these experiments of a jet engine or whatever it is, there is a limit to what this will burn, is there not?

Mr. HANSEN. The garbage will have to be shredded for this purpose, and prior to shredding there will have to be some separation of nonburnables. The plan is to make it as automatic as possible. Of course all the manpower you put into it increases the cost fantastically, but the shredding is an important part of the process.

The degree of separation is one that is somewhat indefinite in that some miscellaneous nonburnables can be in there. It does not have to be absolutely pure, but there must be some degree of separation.

With respect to separation at the home, that has been tried many times; separate garbage cans for burnables and nonburnables. The process has never to my knowledge been found to be successful. It is not that reliable.

We are greatly concerned about the fact that the economics of solid waste disposal depend so much on some mechanism of recovery of

usable materials such as paper from the garbage, and we have a couple of studies going, relatively small, making a thorough evaluation of the contents in studying the feasibility of some alternate way of separation that would make it economically feasible.

SANITARY LANDFILLS

Mr. MICHEL. When you talk in terms of landfill for solid waste, this would be an area where you would have to be talking about real solids, would you not, to avoid the danger of some of the things the chairman has been concerned about?

Mr. HANSEN. One of the basic parts of operating a sanitary landfill is reliance on thorough compaction, and various types of equipment are used for that.

Originally they used equipment that happened to be available, like a bulldozer, and it was found effective for use in garbage compaction and cover. Over a period of time they developed other new equipment, especially for compaction. You are very right; the compaction of this material is important.

And of course there is the layering of earth in between, so there are cells to minimize the possibility of the problems that the chairman has mentioned. Layering permits the fill to be covered every night to avoid the problems of rodents.

Mr. MICHEL. What would happen, for example, if you had bales of glass? What would happen to those glass particles? Would they just remain glass particles until the end of time?

Mr. HANSEN. It is silica, and it would stay there from here on.

Mr. MICHEL. I spoke to a fellow who is interested in producing shredding machines. He has been talking to me about the possibility of using some solid waste disposals for roadbeds, for example, as a practical means of getting rid of some of this material. We are building more and more roads all the time, and there has to be a certain footing and a base. There are different kinds that are acceptable now, but I think this sounds like an area of use.

Mr. HANSEN. If the solids could be separated so that you would not have the degradeable material like paper and other things that would result in settling, it would probably have some feasibility. The compaction is, of course, a very important part of the total project.

We have another project in Sarpy County, Nebr., where they have significant erosion in farmlands, and they tried a sanitary landfill project out there for gully reclamation and found it to work very successfully. The project has been completed and the county is now using this technique to continue their waste disposal after the demonstration.

SOLID WASTE DISPOSAL STATE GRANTS

Mr. MICHEL. You speak about the 39 active State grants and four interstate grants. Where are these and what are they?

Mr. HANSEN. These grants are made to States and interstate areas for the purposes of identifying the solid waste problem and developing an organizational structure to deal with it. One of the requirements we have is that they hire professional people and develop adequate personnel strength in the States so that they can carry on solid

waste management planning. We hope that this will lead toward bringing communities together so they can have an economical scale of waste disposal operations, for instance, as a sanitary landfill or any other mechanism.

One small community can rarely support a major activity.

With a strong State program we would like to see them develop interest and concern in the communities.

One important point here on solid waste is the fact that even though we know well how to dispose of solid waste in a landfill, it has not been adopted and much of the reason for this, we feel, is the need for better distribution of information and operation of demonstration projects. And that is why we are working all over the United States in all 50 States in this and stimulating the States to take an interest, to supply money. They provide 50 percent of the cost of the planning grants.

Mr. MICHEL. Are these all on a 50–50 basis?

Mr. HANSEN. Yes.

Mr. MICHEL. Does this figure 39 mean 39 States, or more than one to any State?

Mr. HANSEN. 39 States, and the four areas are interstate areas. One is Missouri-Kansas. Another one is the Nebraska and Iowa area where a grant has been made to the Omaha-Council Bluffs Metropolitan Planning Agency.

Mr. MICHEL. Is that one?

Mr. HANSEN. That is one, an interstate area.

Another is Tennessee and Georgia in the Chattanooga area. A regional council of governments is involved. The Missouri-Kansas project is the Kansas City Metropolitan Planning Commission where we are giving them support in the development of the program.

Mr. MICHEL. Please supply for the record those 39 individual State grants and the four interstate grants and how much each one is for.

Mr. HANSEN. We will be happy to supply that for the record.

(The information follows:)

SOLID WASTE PLANNING GRANTS TO STATE AND INTERSTATE AGENCIES
ACTIVE PROJECTS

State	Location	Total Federal Funds
Arkansas	Little Rock	$ 52,458
California	Berkeley	188,385
Colorado	Denver	65,946
Connecticut	Hartford	134,583
Delaware	Dover	53,718
Florida	Jacksonville	65,137
Georgia	Atlanta	57,570
Hawaii	Honolulu	61,324
Idaho	Boise	49,597
Kansas	Topeka	61,300
Kentucky	Frankfort	55,663
Louisiana	New Orleans	96,837
Maine	Augusta	25,986
Maryland	Baltimore	121,844
Massachusetts	Boston	89,035
Michigan	Lansing	101,911
Minnesota	Minneapolis	60,211
Mississippi	Jackson	31,029
Missouri	Jefferson City	113,831
Montana	Helena	54,828
New Jersey	Trenton	152,545
New Mexico	Santa Fe	56,044
New York	Albany	425,000
North Carolina	Raleigh	31,049
North Dakota	Bismarck	43,455
Oklahoma	Oklahoma City	73,712
Ohio	Columbus	143,265
Oregon	Portland	48,495
Pennsylvania	Harrisburg	358,754
Rhode Island	Providence	17,483
South Carolina	Columbia	136,888
South Dakota	Pierre	46,754
Tennessee	Nashville	74,366
Texas	Austin	62,125
Utah	Salt Lake City	23,014
Virginia	Norfolk	72,076
Washington	Olympia	44,332
West Virginia	Charleston	60,144
Wyoming	Cheyenne	14,224

Interstate

Missouri - Kansas	
Kansas City Metropolitan Planning Commission	125,000
Nebraska - Iowa	
Omaha Council Bluffs Metro Area Planning Agency	60,405
Tennessee - Georgia	
Chattanooga Area Regional Council of Governments	28,287
District of Columbia - Maryland - Virginia	
District of Columbia Council of Governments	40,000

In addition, planning grants have been awarded to the District of Columbia and Puerto Rico.

Mr. MICHEL. How far do these date back?

Mr. HANSEN. I do not have the exact figure on the time of the first one. I would say during the past 2 years. Within the past month or two we have gotten two additional States, as I recall. So it is a developing process.

Mr. MICHEL. And your ultimate goal is to have all 50 States?

Mr. HANSEN. To have all 50 States take an interest and participate.

Mr. MICHEL. And probably some more interstate groups.

Mr. HANSEN. Where appropriate.

Mr. MICHEL. How much money are you talking about?

Mr. BERSANO. There is $1.5 million in the 1970 request for planning grants.

Mr. MICHEL. Give me an idea. Out of that amount, what is the smallest kind of a grant any State gets?

Mr. HANSEN. One for $31,000 to North Carolina and $152,000 for New Jersey.

Mr. MICHEL. This means that the State comes up with as much?

Mr. HANSEN. An equal amount of money.

Mr. MICHEL. And this is just for planning?

Mr. HANSEN. This is for planning and developing the necessary staff so it is a going organization. The next step is to work with the local communities to develop effective solid waste disposal systems.

Mr. MICHEL. They could not do much for a total of some $60,000?

Mr. HANSEN. No. There are others that are larger. Oregon, $48,000; Pennsylvania, $358,000; District of Columbia, $131,000. They range in that area.

Mr. MICHEL. District of Columbia $131,000?

Mr. HANSEN. $131,000; yes.

Mr. MICHEL. Is the District of Columbia required to match like the States are, or is that just a total grant?

Mr. HANSEN. It is a matching arrangement. This is a standard procedure for this type of grant.

Mr. MICHEL. And that includes the District of Columbia?

Mr. HANSEN. Yes.

SOLID WASTE DISPOSAL DEMONSTRATION GRANTS

Mr. MICHEL. I see that you are currently supporting 50 demonstration grant projects. Do we have these laid out in the record? We should have those listed, the amounts for each one, and what we are supposed to expect from each one of them so we know what we are talking about.

Mr. HANSEN. Yes. It is three pages for titles and amounts.

Mr. MICHEL. That will not be any big problem. If we do not take a look at these things once in a while they could be a hundred or 200 or more and we would not be getting any benefit at all out of them except the fact we had some demonstration grants.

(The information follows:)

SOLID WASTE DEMONSTRATION GRANTS -- 1969 FUNDING

Title, Location, and Purpose	Amount
Evaluation of Alternatives in Refuse Disposal - Raleigh, North Carolina Application of existing mathematic simulations model to city refuse collection system, landfill site selection, and evaluation of regional solid wastes management. Also to develop methods to maximize salvage benefits by proper choice of disposal methods.	$ 8,719
Solid Waste Disposal Incinerator Prototypes for Specialized Operations - Bridgeport Connecticut - Demonstrate the feasibility of using two improved types of incinerators to combust materials which cannot be burned in conventional incinerators.	11,671
Incinerator Waste Water Treatment System and Air Pollution Scrubber Test - Lafayette Hill, Pennsylvania - To test the effectiveness of the waste water treatment system of clarifying and reusing waste water in incinerators and to test the air pollution control effectiveness of the flooded baffle scrubber.	12,940
Demonstration of Improved Incinerator Technology for a Small Community - Shippensburg, Pennsylvania - To demonstrate that a mechanically stoked rotary grate incinerator is economically feasible for solid waste disposal in a small community where sanitary landfill methods cannot be adapted.	13,400
Maricopa County-Wide Solid Waste Disposal - Phoenix, Arizona Develop a comprehensive solid wastes disposal plan for Maricopa County.	14,000
Demonstration of Compact Incineration System Meeting all Anti-Pollution Requirements of Record in the U.S. - Windsor, Connecticut To demonstrate that a small community can economically install and use a factory assembled incinerator at about one-half cost of conventional incinerator.	15,575
Bulk Refuse Crusher Facility - Buffalo, New York To demonstrate the feasibility of presizing bulky municipal refuse prior to disposal by incineration.	23,400
Sanitary Landfill and Reclamation Project - Big Spring, Texas Demonstrate that by means of properly operated sanitary landfills eroded land can be reclaimed for agricultural, further erosion damage can be prevented and an effective soil erosion control program can be sucessfully implemented.	23,575
Demonstration of Disposal of Waste Wood and Bulky Burnable Objects by a Large City - St. Louis, Missouri - To demonstrate (1) the feasibility of preparing waste wood for sale as pulpwood and (2) the feasibility of effecting size reduction of bulky burnable objects for incineration, at a site not adjacent to the incinerator. To develop detailed information concerning the quantities of waste wood and bulky burnable objects generated in a major city.	29,000
Containerization of Family Refuse - Scottsdale, Arizona To develop standard cans that can be mechanized and reduce cost of refuse collection.	30,671

Clean and Green-Chilton County Alabama - Clanton, Alabama — 32,260
To demonstrate county wide collection of municipal and rural solid wastes for disposal at a single centrally located sanitary landfill with a study of existing procedures. To improve the landfill and to initiate local and state wide education.

Building an Amphitheater and Coasting Ramp with Municipal Refuse - Virginia Beach, Virginia - Demonstrate the feasibility of building an amphitheater and coasting ramp with compacted municipal refuse. — 36,949

Regional Solid Waste Study-Design and Implementation Program - Augusta, Georgia - To provide a regional study program to expand the area commission staff to include a waste disposal engineer. To start an education program including a demonstration sanitary landfill in Sylvania, Georgia and a one week school for solid waste disposal employees and others. — 40,000

Maximum Utilization of Sanitary Landfills Through Intergrated Regional Planning - Santa Ana, California - Develop unique, long term regional solid waste disposal program involving novel concepts for reuse of sanitary landfills to obtain maximum efficiency of use and reuse of publicly owned lands. — 40,018

Engineering Evaluation of Plastic/Paper Sacks for Increased Efficiency of Refuse Collection - Inglewood, California - To evaluate available plastic and paper sacks to determine overall suitability as solid waste containers. Results will be presented in a form useable by collection agencies nationwide. — 40,405

Demonstration of Development of a Solid Waste Disposal Plan and Program Integrated with Comprehensive Regional Planning Process - Baltimore, Maryland - To develop a solid waste disposal plan and program and management advisory procedures for the Baltimore region integrated with the regional planning processes and with state and local activities. To demonstrate mathematical models to indicate low costs. — 42,683

Use of Abandoned Strip Mines for Solid Wastes Disposal in Maryland - Baltimore, Maryland - Determine the feasibility of using abandoned strip mines for landfills. — 43,800

System for total refuse disposal by Fluid Mechanical Separation of Solid Waste & Fluid Bed Oxidation - Franklin, Ohio - Program includes engineering, construction, operation and evaluation of solid waste disposal system which separates noncombustible and combustible solids by a fluid mechanical process. — 46,667

Solid Waste Disposal by Underground Incineration - Santa Clara, Calif. — 51,560
To conduct a study of the economic feasibility of Underground Incineration.

Solid Waste Handling and Disposal in Multi-Story Buildings and Hospitals - Los Angeles, California - To determine present and future types and quantities of solid waste in multi-story buildings to study solid waste handling and equipment and the application to these buildings and recommend projects to be constructed. — 54,955

Investigate the Potential Benefits of Rail Haul as an Intergral Part of Waste Disposal Systems - Chicago, Illinois - 58,867
Determine the technical-economic feasibility of using rail haul equipment and methods currently available for solid wastes operations. Arrange for an implementation of the waste-rail haul concept with one or more selected communities.

Refuse Crusher - Tacoma, Washington - 60,386
To demonstrate the feasibility of disposing demolition wastes by shredding and compacting into a sanitary landfill.

Development of Construction and Use Criteria for Sanitary Landfills - 62,600
County of Los Angeles, California - Concerning the design and operation of sanitary landfills to develop methods to control gas movement from existing and new landfills, to develop methods to control leachate discharge from existing and new landfills, and the development of a "code" for use in controlling building construction on completed sanitary landfills.

Demonstration of Solid Waste Disposal Machine and Consolidation of Several Separate Disposal Operations into one County Operated Project - 65,696
Lockport, New York - To demonstrate the feasibility of using the D&J Press Company refuse disposal machine and the feasibility of centralizing all solid waste disposal operations under one county agency.

Systems Analysis Study of the Container-Train Method of Solid Waste Collection and Disposal - Wichita Falls, Texas - 70,442
To develop a comprehensive management model of a solid waste collection and disposal system utilizing the container train system of collection.

Dairy Manure Management Methods - Pullman, Washington - 75,814
To demonstrate facilities and techniques that will reduce the possibility of stream pollution and increase the fertilizer values actually realized from dairy manure.

Eriez Refuse Conversion System - Greensburg, Pennsylvania - 77,267
Investigate the feasibility of producing usable products out of household refuse especially from ferrous metallic components.

Pipeline Transportation of Solid Wastes - Menlo Park, California - 80,000
Study of pipeline transportation of solid waste from central stations to remote landfill or other disposal locations.

Evaluation of Multi-functional Machine for use in Sanitary Landfill Operations for Sparsely Populated Areas - Richland, Washington - 95,570
Study of multi-function machines to reduce costs in low population density areas.

Upgrading a Small Municipality's existing Incinerator Plant to Handle Bulk Refuse to meet new Government Air Quality Standards - Rye, New York 106,968
Demonstrate feasibility of disposing of bulky municipal refuse in a specially designed incinerator equipped with an advanced Air Pollution Control System.

Ambos Nogales International Solid Waste Disposal - Nogales, Arizona 128,046
International cooperation of the two cities in the operation of a sanitary landfill.

Agricultural Benefits and Environmental Changes Resulting from the Use of Digested Sewage Sludges on Field Crops, and Development of Economic and Physical Characteristic Criteria for Use in Selecting Disposal Sites - Chicago, Illinois - Determine the practicality of disposing of digested sewage solids on land. 142,000

Solid Waste Disposal by Incineration: Using an Incinerator with Operating Characteristics Requiring Minimum Control Equipment - San Francisco, California - Design, develop, and construct a municipal refuse incinerator with operating characteristics satisfactory to the Pacific Coastal area air pollution control agencies with a minimum of control equipment. 155,527

Demonstration of Two Approaches to Wood Removal from Retired Railroad Boxcars for Scrap and Salvage Operations - Chicago, Illinois The objectives are to generate information of (1) Hooded incinerator portable or fixed (2) Water jet removal of wood from railroad cars. In connection with further dismantling in scrap and salvage operation. 192,700

Investigate & Evaluate Feasibility of Refuse Bailing as a Means of Conserving Sanitary Fill Space.- San Diego, California - To construct and operate a pilot bailing transfer station to test technical and economic feasibility of bailing municipal refuse. 205,633

In addition, approximately sixteen new Solid Waste Demonstration Grants are currently under review for Award in 1969.

RESULTS FROM DEMONSTRATION GRANTS

Mr. MICHEL. In trying to get this point across to sell these programs, we have to be able to come up with some tangible results. What are you getting from all of this?

Mr. HANSEN. We had prepared a brochure on grant projects that shows the detail, the summary of the type of activity, and in some cases where the project has moved far enough along, the progress that is being made. We are getting this out each year for all projects.

Mr. MICHEL. Who applies for these grants?

Mr. HANSEN. Cities.

Mr. MICHEL. What are the guidelines; what are the criteria? Can an individual apply for it? If a professor thinks he knows something about this, can he apply for a grant under this program?

Mr. HANSEN. Any nonprofit agency may apply for the grant. The important point here is that these are solid waste demonstration grants and not construction grants.

We have many proposals, which come in that we have to turn down because it is an out-and-out request for funds for construction. We have a group that reviews all of these proposals in fine detail and if it does not provide an opportunity for demonstrating some innovative—some new approach, we do not go along with the grant.

Mr. MICHEL. Who is on the review board and who makes the determination?

Mr. HANSEN. We have a group which includes our own staff.

Dr. MARLAND. We also have outside representation, but I do not believe there is a specific number of outside Federal Government advisers. Sometimes there is one, sometimes there are more, depending on our feeling as to whether or not we can assess the value of a demonstration proposal.

Again, each of these proposals must be responded to in a given period of time. It is a short time, I think 60 days, maybe less than that. We have to respond quickly.

Mr. MICHEL. Usually, how long is the life of the grant?

Mr. HANSEN. Two to three years, I would say.

Mr. MICHEL. I assume you will supply in the record the names and amounts and whoever the applicant or successful awardee is.

Right off the top of your head, what is the dollar range in these grants?

Mr. HANSEN. The largest one we have is $1,451,000, and they are in the range——

Mr. MICHEL. That is for what and to whom?

Mr. HANSEN. This is to Gainesville, Fla. It is for a composting plant. This was one of the early projects that was approved, I believe, about 3 years ago, and they have a garbage-grinding, composting facility there. The work is nearing completion; that is the demonstration. They are having some difficulty with this project. The difficulties have been primarily associated with the grinding mechanism of the waste, but the composting has been successful. That is the largest one.

Mr. MICHEL. What happens when that demonstration is over?

Mr. HANSEN. We will write a full report on it. One of the major needs in the solid waste field is to get the information out, distribute it to the people that need to know. We do this on a very widespread basis

through professional magazines, through publications of our own which we distribute. We will evaluate that demonstration proposal, pointing out the strong points and the weak points of the system.

If it is not an effective demonstration, we will say so, thus others need not invest in this type of operation which we have found to be unsuccessful.

Mr. MICHEL. This is the oldest one and you say it has run about 3 years?

Mr. HANSEN. That is right.

Mr. MICHEL. You don't yet have a formal report on a final conclusion?

Mr. HANSEN. That is correct.

Mr. MICHEL. Do we have anything preliminary to tell people about it?

Mr. HANSEN. On composting, generally speaking, it is not strikingly effective. It appears to be a marginal system of waste disposal. Again this is preliminary information.

Mr. MICHEL. If we are talking about research, then it is quite conceivable at the end or termination of a number of these grants, we are going to find "I am sorry we thought it would work but it did not pan out that way." So we are going to end up with a loss, but that is research, I guess, is it not?

Mr. HANSEN. This is negative information. If we find this out and prevent someone else from spending the money, I think we have done our job on it. The study of pit type incinerators, which we consider rather unsuccessful, is an example and we are distributing information accordingly to prevent others from investing in it and suffering the loss again.

Mr. MICHEL. Who initiated this grant? Is that to a city or municipality?

Dr. MARLAND. The composting plant grant was made to the Gainesville Municipal Waste Conversion Authority, and it involves Alachua County, the City of Gainesville and the University of Florida.

Mr. MICHEL. Does the University of Florida have any specialists in this particular field? Was that any part of the consideration in awarding the grant in the first place?

Mr. HANSEN. They have a sanitary engineering program there. I know they are interested and concerned in the solid waste field.

Mr. MICHEL. What is the total amount of money involved in the 50 grants?

Mr. BERSANO. $5,150,000.

Mr. MICHEL. You say we are currently supporting 50 demonstration grants. Obviously if you obligate yourself to something that runs 2 or 3 years, it is fully funded or provision is made for full funding at the time of entering into the grant agreement, is it not?

Mr. HANSEN. But on a two-thirds, one-third basis, the Federal Government providing two-thirds, the local area providing one-third of the cost in all of these demonstration grants.

Mr. BERSANO. Generally speaking, a grant is funded on a 12-month basis. A 3-year project is not obligated totally in the year it is awarded.

Mr. MICHEL. Do you anticipate then entering into any new additional ones in 1970?

Mr. BERSANO. Yes.

Mr. MICHEL. About how many?

Mr. BERSANO. Twenty-five projects.

Mr. MICHEL. It is a 50-percent increase numerically. Is it moneywise too?

Mr. BERSANO. No. The total amount of money for demonstration grants in 1970 is the same as in 1969.

Mr. MICHEL. Are you not talking about the same level of new activity?

Mr. JOHNSON. Mr. Michel, it is this way: Of the 51 grants, there are 26 continuing grants in that sum you were talking about to go over the 1-year period, and 25 new grants. That means there are some grants that we are finishing up during this same period.

Mr. MICHEL. Do you recall last year at this particular time what we would have been talking about? Fifty-two?

Dr. MARLAND. The same number within one or two or three.

Mr. CARDWELL. This is characteristic of many of HEW's grant programs where you would be starting roughly with the same amount of mony—holding the appropriation constant within this framework you would be finishing some grant and starting up some new grants—over a period of years this would even out.

Mr. MICHEL. This one we are talking about, which was initiated about 3 years ago, has just about come to completion and the report given. I would expect then next year at this time we should be at that juncture where surely those that had a duration of 3 years would be showing some results, either negative or positive. I hope next year when we ask these same questions about those that have been completed and a report given, we would find that the positive results would outweigh those of a negative consequence.

Am I being too optimistic?

Mr. HANSEN. We hope the positive results outnumber the negative.

Mr. MICHEL. We hope so too.

Mr. HANSEN. A negative position, I must mention again if we save three people from getting involved——

Mr. MICHEL. Yes, but I tell you the question arises when, in the first place, these people were determining that we ought to try this out, were there not enough good minds on that selection group to say well, we just cannot see any possibility of this panning out.

Mr. HANSEN. Your point is well taken and I am sure it would be on the positive side.

One of the ways we work to accomplish that is where there is a significant uncertainty, we do systems studies prior to initiating studies of this kind. As a matter of fact, the high temperature incineration proposal for Brockton, Mass., was studied on that basis with the recommendation that it not be implemented as a demonstration grant without additional research and development.

We have many studies going on of that type.

Mr. MICHEL. I am reminded a few years ago some people from agricultural communities, particularly where there were wheat surpluses, were so sure if we did what we had to do research wise to convert the wheat surplus into industrial alcohol, we could get rid of the surplus wheat by making industrial alcohol and burning it in automobiles, et cetera. It was not feasible to bring it down to a cost near to that of gasoline, so obviously you know you cannot make it pay. If it does not

pay off in dollars and cents in the final analysis in our private enterprise system, why we just cannot afford to do it.

PROCEDURES FOR REVIEW OF DEMONSTRATION PROJECT PROPOSALS

Mr. SHRIVER. Have you had more applications for those grants than you had money to put out on grants each year? Do you have a waiting list?

Mr. HANSEN. Yes.

Mr. SHRIVER. How is it determined which city is going to get it or which applicant?

Mr. HANSEN. The group that reviews the overall proposals evaluates it on the basis of the——

Mr. SHRIVER. Who is the group?

Mr. HANSEN. For demonstration grants it is our in-house staff with consultants from the outside.

Mr. SHRIVER. Is there a set rule on who makes the determination?

Mr. MICHEL. Is it a formalized group?

Mr. HANSEN. The group changes, depending of course on who is available and the type of project and who has the capability in the area. But there are formalized mechanisms of review and records of those meetings are retained on all of the projects that are reviewed with the full information on the rationale for decision.

Mr. MICHEL. Does anyone in that group have a veto power? I think what Mr. Shriver and I are somewhat concerned about, are these people who review these applications a lot of times in a very sensitive spot. They have the power of life and death. Somebody carries a personal prejudice one way or another against a firm or an individual, and then you find over a period of time that the only way you get in here and get a green light is by knowing so-and-so or framing your whole application to conform with the whims of one particular person, and sometimes that can be a pretty lowly bureaucrat downtown and it rankles you no end to find out somebody is always giving you the business.

Do I express your feeling?

Mr. SHRIVER. Yes.

Mr. HANSEN. In this case the lowly bureaucrat is me.

Mr. JOHNSON. Mr. Michel, I might shed just a little light on this.

We talked earlier in my original testimony of the need to have an organized approach to R. & D. and demonstrations, and I spoke of my Assistant Administrator, Dr. Joseph Lieberman, and one of his jobs is to evaluate these types of mechanisms to provide for my office some surveillance of the manner and the method by which they operate, and to assure that we do have both a balanced approach and an objective approach in terms of the needs of our programs. So there is a balance and check system.

Mr. MICHEL. But when you testify in behalf of your shop, the line of command says you are responsible and of course at times we confuse that responsibility and other times we just wish maybe we did not have to face the music like we have to in that position.

Mr. HANSEN. In the short time I have been there, I have had several opportunities to face the music already.

Mr. MICHEL. The chairman did a good job on his questions on the problems of uranium miners and what we are doing to improve that situation, and I think I am just as frustrated as the chairman is to really put our finger on some tangible results here.

You mentioned stimulating the mining companies. We know there are about 3,200 uranium miners. How many uranium mines do we have in this country? Do you know that specifically?

Mr. HANSEN. We do not have that information.

Dr. MOORE. It varies, several hundred. We can provide that in the record.

Mr. MICHEL. All right.

(The information follows:)

Total number of mines in the United States, 583.

Mr. MICHEL. You stimulate a mine to the extent of putting in better ventilating systems. Could you cite for the record any specific mine that put in one fan to do this?

We are still waiting for some tangible results on what has been accomplished and the rate of seven times the normal incidence of lung cancer among uranium miners is a shocking figure.

Mr. JOHNSON. A great deal has been done, Mr. Michel.

As a matter of fact, just within the last few days I have come across information—which I would like to submit for the record—that in the mines that are surveyed by the Department of Labor under the Walsh-Healey Act, they have found about 1,445 miners and of these, 937 or 56 percent were under four WLM's and 99 percent or 1,440 were under 12 WLM's, the current standard. It was believed that it would not be feasible to establish the lower standard, four WLM's, until 1971, and people said it could not be done but these statistics tend to disprove this. The fact of the matter is that as they go through each change of an interim standard and they do improve the conditions, the results are often better than what we actually expect.

At the time we put in the 12 working level months as an interim standard certain kinds of ventilating procedures were required in order to come down to that level. But the actual effect in these mines that I just spoke of, and the information is available and we will try to get it to this committee, is that more than 50 percent of the miners are exposed at levels that are approximating only four working levels per month. The fact is, it can be done.

I think all we need is the determination and the concern for the miners to make it possible to provide this protection.

(The following additional material was provided:)

STATEMENT OF THE HONORABLE JAMES D. HODGSON
UNDER SECRETARY OF LABOR
BEFORE THE SUBCOMMITTEE ON RESEARCH, DEVELOPMENT,
AND RADIATION OF THE JOINT COMMITTEE
ON ATOMIC ENERGY
ON
URANIUM MINE RADIATION STANDARDS

MONDAY, MARCH 17, 1969

Mr. Chairman and Members of the Subcommittee:

It is with pleasure that I appear before you to discuss the Labor Department's activities in enforcing radiation standards in uranium mines subject to the Walsh-Healey Public Contracts Act.

In reviewing the extensive record made at the hearings held before this Subcommittee in 11 days of testimony, between May and August 1967, I was impressed with the detailed information and analysis of the scope and nature of the health problem facing uranium miners. Therefore, I will not take the time of the Subcommittee today to recount what was covered so well a year and a half ago. Rather, let me take my time this afternoon to address myself to the specific questions you asked the Department of Labor in your letter of invitation to appear before this Subcommittee.

The Scientific Basis for the 4WLM Standard:

As you know, the Department of Labor first issued a proposed standard to control radon and radon daughters on May 5, 1967. That standard would have established, immediately, a 3.6 WLM standard in the uranium mines. A revised standard was issued on June 12, 1967, which, in effect, postponed the effective date of the 3.6 WLM standard until January 1, 1969, and established, instead, a 12WLM standard

until January 1, 1969. In issuing the revised standard in June 1967, the then Secretary of Labor made it clear that a major--if not the major--consideration was to allow time for a re-examination and re-evaluation of the Public Health Service Data on which the standard was based.

The scientific data on which the standard was based was indeed reviewed, while at the same time additional data was accumulated and analyzed. This afternoon you heard from Secretary Finch and his associates in some detail the results of the review.

The general effect of the review was that the basis for the standard was affirmed.

As you know, a blue-ribbon Advisory Committee from the Division of Medical Sciences: National Academy of Sciences - National Research Council - National Academy of Engineering (NAS-NRC-NAE) concluded in its August 1968 report:

> "7.8 Recognizing the unreliability of present data on uranium miners, but accepting them at face value with a realization that decisions must be taken before completely adequate scientific evidence is available, the committee draws the following conclusions:
>
> (a) There appears to be a causal association between lung cancer and exposures of approximately 1,000 CWLM and higher.
>
> (b) There is a statistically significant increase in the lung cancer risk for miners with approximately 100-400 CWLM exposure that cannot be explained by any known artifact of the data.
>
> (c) The hypothesis is favored, pending more definitive data, that radiation exposure at least contributed to the excess lung cancer observed in the miners in the 100-400 CWLM category."

As you also know, the Department of Health, Education, and Welfare (HEW) filed a statement with the Department of Labor on November 21, 1968, when our Department held a public hearing on the uranium mining radiation standard. In interpreting the NAS-NRC-NAE Advisory Committee Report, HEW stated:

> "We believe that these conclusions support the view that the existing occupational exposure standard to radon daughters in underground uranium mines should be reduced, particularly if a reasonable radiation protection philosophy which should embody a 'factor of safety or reduction factor in the absence of precise information is considered,'"

It was on this basis, Mr. Chairman, that the Department of Labor revised its standard, on December 28, 1968.

The December 28, 1968 Standard

As you know, the December 28, 1968 revision of the radiation standard for uranium miners:

1 - established a 4WLM per year standard for each miner;

2 - allowed any mine operator unable to achieve the 4WLM standard in his mine to apply to the Department for a variation. Basically, the requirements are that (1) the mine be operating at no higher than a 12WLM standard, and (2) that mine management have a bona fide plan to get down to 4WLM by January 1971.

This is the standard currently in effect.

This brings me to the fourth issue raised in your letter of invitation to appear at this hearing, namely, an explanation of the relationship between the December 28, 1968 Walsh-Healey standard

and the Federal Radiation Council (FRC) guidance issued by President Johnson on January 11, 1969.

We believe the Walsh-Healey standard to be consistent with the latest FRC guidance.

Consider, if you will, the two documents side by side, recognizing that it is the responsibility of the Department of Labor to translate the guidance of the FRC into an operating standard.

Recommendation (1) of the current FRC guidance sets 12WLM as the amount of radon daughters above which no individual should be exposed.

It further states that actual exposures should be kept as far below these values as practicable.

Still further, Recommendation (4) states that "as a policy measure of prudence the agencies having responsibility for regulating the uranium mining industry be advised that the FRC recommends an annual exposure level of 4WLM as of January 1, 1971."

Mr. Chairman, I submit that the Department's December 28, 1968 standard is fully consistent with the above guidance.

-- The Department's standard does indeed prohibit exposures above 12WLM;

-- The Department's standard, through the variation procedure, does indeed encourage that actual exposures be kept as far below 12WLM as practicable;

-- The Department's standard, like the FRC guidance, sets a target date of January 1, 1971, for a universal 4WLM standard.

We are aware of the fact that paragraph 6 of the current FRC guidance provides that prior to January 1, 1971,

> "the Council will consider all pertinent information including epidemiological data, miner exposure records, health considerations, mining practices and costs thereof, and applicable research and development results, to determine whether or not to modify this recommendation."

We welcome these studies, and will most certainly participate in them and be guided by their results. It is only common sense to state that should these studies indicate the need to modify the Walsh-Healey standard, then modified they will be.

The Variation Process

Mr. Chairman, I view the variation procedure as a type of affirmative action program, whereby the individual mine operators, who have the know-how and the responsibility, come to us with their plans for reaching the 4WLM target by January 1, 1971. As I mentioned earlier but will repeat again now, only those mines already at the 12WLM standard are eligible to take advantage of this variation procedure.

I can assure you the Department will be reasonable in the administration of the variation provision. What we will be looking for is a working plan from affected mines to get the levels down. We will utilize the expertise of the Bureau of Mines, the AEC, and HEW in evaluating the reasonableness of the plans. Where they are bona fide, they will be approved. To me, this is government regulation at its best--valid in objective, reasonably administered. It has a built-in flexibility that allows the regulatory agency to take into account both the particular problems of a mine and the know-how of the mine operator in solving these particular problems. Judiciously

administered, I am convinced that the variation procedure will be an effective method of reducing working levels in the mines, which, after all, is the prime objective of us all.

The Feasibility of Achieving a 4WLM Standard

In looking at the record of performance itself, I am struck by how much can be and has been done. There can be no doubt in anyone's mind that tremendous progress has been made in reducing the working levels. It is a record of progress about which all concerned can and should be proud.

As you know, the Federal Radiation Council contracted for a cost-benefit study with the Resource Management Corporation (RMC) last summer. In its November 1968 report, entitled "Control of Radiation Exposure in Uranium Mines: A Cost and Economic Analysis," RMC concluded:

> "1. It does not appear technically feasible at this time--or even for some time to come--to take steps that will immediately reduce and control concentrations of radon and its daughters in uranium mines such that no underground miner is exposed at a level above 3.6WLM per year. Rather, it appears that the historical reduction trends must be continued, although at decreasing returns per unit of effort, if that goal is to be reached at some point in the future.
>
> "2. In continuing along the reduction trend, further (although presently unquantifiable) improvements can be made through a conscientious effort on the part of mine operators and employees to increase the efficiency with which present control systems are being utilized and maintained. Particular emphasis should be placed in making reductions in the stopes--areas where concentrations are presently highest and most man-hours are expended. A greater awareness of good ventilation practices and new control techniques is needed by many miners, ventilation technicians, and mine operators. (Emphasis added.)

"3. Further analysis of the cost and effectiveness of radon control techniques and economic consequences of uranium ore cost increases is needed . . .."

In plain language, that says to us that while it is true that every mine cannot today reduce levels of exposure to reach a level of exposure whereby every miner would receive no more than 4WLM's of exposure, more can be done.

Mr. Chairman and members of the Subcommittee, it is our belief that the current Walsh-Healey standard, administered in the manner I have described to you today, will help assure that more will be done!

I have stated I was impressed with the facts of our recent progress. Let me cite some of the more relevant statistics.

-- Recent Federal Bureau of Mines reports show a relatively appreciable lessening of miners' exposure to radiation. Whereas between April 1 and June 30, 1967, 59% of exposures were less than 1.0 WLM this had increased to 85.6% for the same quarter in 1968. (This includes all mines selling and not selling to AEC.)

-- For the same periods the data show that in the mines selling to AEC on the initial survey, 61.5% of the miners were exposed to 1.0 WLM or less for the quarter.

    -- Based on resurveys, those miners exposed to less than 1.0 WLM increased to 85.0%.

-- Perhaps most significant is the latest data presented in Attachment 1. It contains a summary of individual exposure records for 1968 kept by mining companies subject to the Walsh-Healey regulation. The 1445 individual exposure records cover miners in large as well as the small mines.

and represent what we estimate to be approximately 80% of all miners covered by the Walsh-Healey regulation in 1968. The record shows that:

-- 65% of the miners did indeed receive less than 4WLM of exposure.

-- an additional 34% of the miners received exposures of between 4WLM and 12WLM.

-- only five employees received exposures of more than 12WLM.

That record, I submit, speaks for itself.

In conclusion, Mr. Chairman, I submit that the existing Walsh-Healey regulation, administered in the manner I have tried to describe to you today, is fair, is feasible and is consistent with FRC guidance.

Thank you.

ATTACHMENT 1
TO
STATEMENT OF UNDER SECRETARY OF LABOR HODGSON
JOINT ATOMIC ENERGY COMMITTEE, MARCH 17, 1969

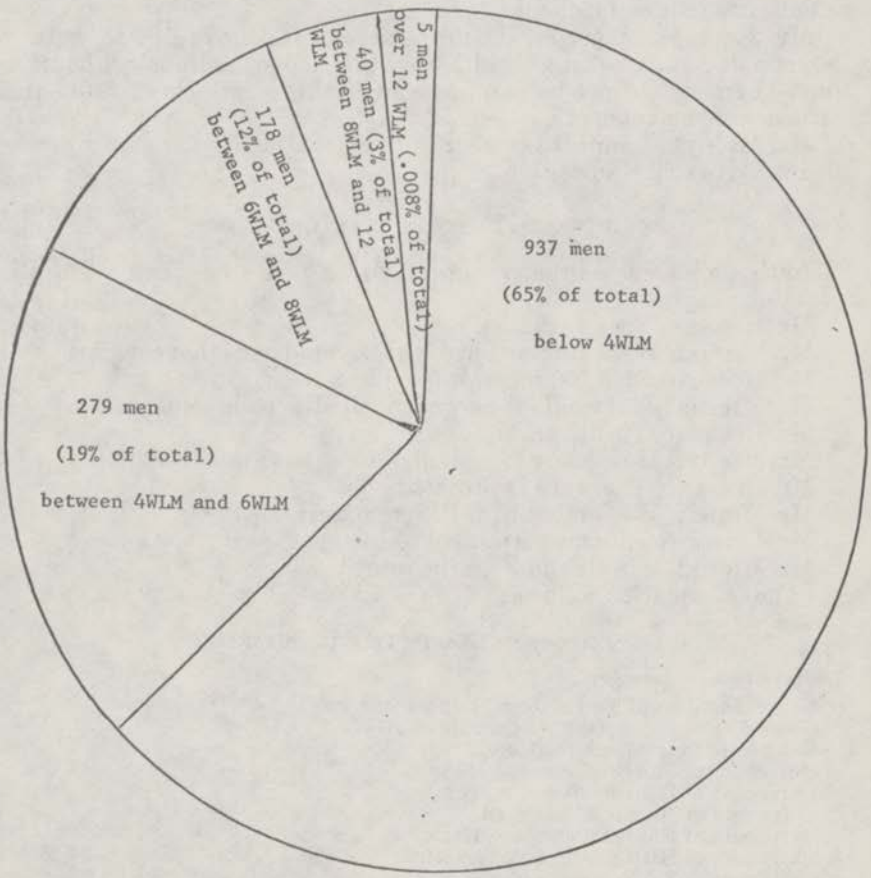
SURVEY OF INDIVIDUAL EXPOSURE RECORDS

Recently we reviewed a cross section of the individual exposure records kept by the mining companies. These records included 691 individuals in New Mexico, 564 in Colorado, and 190 in Utah. The survey, after tabulation, reflected that of the 1445 surveyed, 937 or 65% were under the 4 WLM for the 1968 period; 1216 or 84% were under 6WLM; 1394 or 96% were under 8WLM; and 1440 or 99% were under the 12 WLM in accordance with the old Secretary's Order for mine radiation. Only five employees were over the 12WLM and they were just slightly over.

Further breakdown is as follows:

	Below	4WLM	6WLM	8WLM	12WLM	over 12WLM	Total
Total	Miners	937	279	178	46	5	1445
	%	65%	19%	12%	3%	.008%	
Utah	Miners	149	22	14	5		
	%	78.4%	11.6%	7.4%	2.6%		
Colorado	Miners	300	120	107	32	5	
	%	53.2%	21.3%	19%	5.7%	.008%	
New Mexico	Miners	488	137	57	9		
	%	70.6%	19.8%	8.2%	1.4%		

This would be fairly indicative of the industry as a whole since nearly 80% of total employees performing on Federal Contracts are covered. This is from actual company records made available to us by the companies for calendar year 1968.


5 men
over 12 WLM (.008% of total)
40 men (3% of total)
between 8WLM and 12
WLM
178 men
(12% of total)
between 6WLM and 8WLM
279 men
(19% of total)
between 4WLM and 6WLM
937 men
(65% of total)
below 4WLM

Mr. MICHEL. I do not think we can satisfy ourselves that we have done everything we can until the incidences of lung cancer are the same in miners as in the general public. Maybe that is being too optimistic, but I think that has to be a goal to strive for and we must push you to get it done in a minimum amount of time.

Mr. JOHNSON. A person should be able to feel he can go to work 8 hours a day and be just as healthy as if he had stayed home 8 hours a day. There should not be two levels of health on which we build the affluence of this country.

Mr. MICHEL. I am glad to hear you say that and I am sure you are dedicated to that proposition.

SOLID WASTE DISPOSAL TRAINING GRANTS

In this solid waste grant program, do we have any grantee actually training people?

Mr. HANSEN. Yes; we do.

Mr. MICHEL. What proportion of those would be in that category?

Mr. BERSANO. $490,000 for training grants.

Mr. MICHEL. And would those go principally to universities?

Mr. BERSANO. To universities; yes.

Mr. MICHEL. How many universities do we have involved in this?

Mr. BERSANO. There are 11 projects.

Mr. MICHEL. Would that be 11 different universities?

Mr. BERSANO. I am not certain, but I can get the information.

Mr. MICHEL. Supply those for the record.

(The information follows:)

ACTIVE SOLID WASTE TRAINING GRANTS

University and location

Drexel Institute of Technology, Philadelphia, Pa.
Georgia Institute of Technology, Atlanta, Ga.
Rensselaer Polytechnic Institute, Troy, N.Y.
University of Florida, Gainesville, Fla.
University of Houston, Houston, Tex.
University of Illinois, Urbana, Ill.
University of Kansas, Lawrence, Kans.
University of Michigan, Ann Arbor, Mich.
University of Texas, Austin, Tex.
West Virginia University, Morgantown, W. Va.
Consideration is being given to an additional training grant to another university in 1969.

Mr. MICHEL. Also, have you any figures as to how many trainees are involved in these programs?

Mr. BERSANO. In the grant program there are 66 students.

Mr. MICHEL. They are being trained to do what, or to become what?

Mr. HANSEN. They are being trained specifically in the problems of solid waste management. Until this program was started, there was little interest and little concern in the universities.

We had to go out and sell the program to universities to develop some interest in training people in this general area.

Mr. MICHEL. To qualify as one of these 66 students, would one have to have an undergraduate degree in some chosen field?

Mr. HANSEN. I am not certain on that.

Dr. MARLAND. A bachelor's degree is required.

Mr. MICHEL. In other words, an underclassman in college would not qualify to be in one of these 66?

Dr. MARLAND. Without exception, to my knowledge the graduate programs are in bioengineering or engineering schools. There are 11 different universities involved in the grants.

Mr. MICHEL. Would this be the original first group that have benefited from this infusion from your shop?

Mr. HANSEN. One of the requirements in receiving a planning grant is that they must have a professional man on their staff who knows something about solid waste, and many of the graduates of these courses are going into this work. That is why it is so important that the two programs go hand in hand.

Mr. MICHEL. With all of the education that is required, would any of those remain in education do you think, or would the attraction in private industry or the need for this type of people particularly in the bigger metropolitan centers drain them off right away.

Mr. HANSEN. We always lose a few to private industry, but we do know there is a significant number of them going to the agencies.

FOOD HEALTH HAZARDS

Mr. MICHEL. How much is budgeted in 1970 for food health hazards?

Mr. BERSANO. I do not have the specific figures.

Mr. MICHEL. Supply that for the record.

(The information follows:)

Food health hazards, 1970 budget, $3,917,000.

RECREATIONAL AND SPORTS INJURIES

Mr. MICHEL. I notice in the justifications on page 113 you state that:

Leg injuries to skiers will be considerably reduced by widespread adoption of the breakaway ski binding developed under grants and recently improved by research at the University of Vermont.

Have you any idea of what the expense on improving a breakaway ski binding was?

Dr. MARLAND. I do not know the size of the grant. There have been two grants in ski binding development. I will provide for the record the cost of these two grants. They were both small ones.

(The information follows:)

Research grants on improvement of breakaway ski binding

Grantee and title:	*Amount*
Mayo Foundation, Rochester, Minn.: Epidemiology of ski injuries	$112,385
University of Vermont, Burlington, Vt.: Leg overload protection in skiing	65,138
Total	177,523

Mr. MICHEL. Was that prompted by the high rate of accidents among skiers?

Dr. MARLAND. It is a very risky business.

Mr. MICHEL. It is a very risky recreation, we should say, should we not?

You know this is the kind of a thing that can get kicked around by those who read these records carefully and have a fetish about bringing up something amusing. They can usually weave quite a story around them if they want to make a frontal assault on this whole research area. And it is often done.

Mr. JOHNSON. That is true, but you know if you stop to think that a large number, and I am talking about thousands of people, are injured in recreational pursuits and that this then also has a direct drain on the hospital beds, medical manpower, and we do not want to say do not do it, but we would like to be able to say do it, be healthy but do it safely and there has to be some research into various kinds of athletic equipment or recreational equipment in order to allow this to go on. So it is a very serious business, although I think under some circumstances you could make a little bit of a facetious comment on it.

Mr. MICHEL. Would your shop on that point be doing anything on knee injuries to football players or the kind of equipment that is best to use to minimize that?

Mr. JOHNSON. While we have not been doing it, I would certainly say it would be very appropriate for us because we cannot separate injuries, the person that is hurt, and once they go into the hospital, the reason and the cause for that then becomes a medical cost problem, taking up the surgeon, the bed, the nurse, all of those things that have caused our medical bills to skyrocket.

I think you read during the recent hearings of the Product Safety Commission there was some discussion of design of a football helmet, and I think there have been some that have been designed that are a lot safer than others. Then you have to educate both the public and the schools to using the safer equipment.

Remember, I said that accidents are the No. 4 cause of death, and 52 million people a year are injured through accidents of some kind. And wherever we can get a handle on this, we are not only making it better for the person that was injured or could be injured, but we have the side benefit of reducing the number of hospital beds that actually are used because of the injury in the first place.

Mr. MICHEL. I am reminded on page 111 of the justification "7,000 deaths and 4 million injuries in outdoor recreation areas alone." I would be curious to know how many of those occurred in national parks which are, of course, under Federal jurisdiction under the Department of the Interior.

Dr. MARLAND. Our data would not break it down that way.

Mr. MICHEL. How much did you spend on educational programs designed to prevent injuries in the home in this last year?

Supply that for the record if you will.

Dr. MARLAND. All right.

Mr. MICHEL. If there were no programs, say so. I am interested in the facts only.

(The information follows:)

Amount spent on educational programs, fiscal year 1968, $350,000.

RAT CONTROL

Mr. MICHEL. On the subject of rat control, I notice there is reference made to it in the justifications as to the number of people being bitten by rats. Any idea of what you have spent in that area?

Mr. HANSEN. Our rat control program this year is $15 million.

Mr. MICHEL. That would go principally for what?

Mr. JOHNSON. Actually, this program is part of the comprehensive health planning program. The funds are appropriated to the Health Services and Mental Health Administration. Because it falls in the environmental health area, it is carried out through the Environmental Control Administration.

This $15 million has been allocated to 15 projects, and these projects are located primarily in model cities areas to complement the model cities program. They are largely developed and requested by the local communities. They have a program plan that is again reviewed through a study group session, and these are then put into a priority order and the funds are dispatched as far as they will go.

Mr. MICHEL. You mention a figure of $15 million. From the Secretary or Surgeon General, we got a figure of $20 million.

Mr. JOHNSON. That was the ceiling in the authorization. Actually, it was not authorization legislation, but in the will of the Congress they said you could spend up to $20 million for this purpose.

Mr. MICHEL. Apparently you are not planning to spend it.

Mr. SHRIVER. We appropriated $20 million.

Mr. JOHNSON. I would have to check the record on that, Mr. Shriver. We did look at this rather carefully, and I am not sure whether that was the appropriation or authorization.

Mr. MICHEL. We increased the amount that much. It was in this area. Did we not, Bob?

Mr. MOYER. I think the language was "up to $20 million."

Mr. JOHNSON. I think they read that as an authorization level, and not a mandatory requirement.

Mr. SHRIVER. No, you will not have to spend it. You do not have to spend any sum in these areas, do you?

Mr. JOHNSON. If you are not talking in terms of a legal requirement, but in terms of need, I think there is a great deal of difference.

Mr. SHRIVER. I have just been handed last year's conference report, and the language was "Up to $20 million will be available for projects for the rat control programs."

Mr. CARDWELL. I must say in all fairness to the committee, I do believe that testimony given to the committee from time to time, both last year and this year, has led them to believe $20 million was being spent on special rat control projects this year.

Mr. MICHEL. Do those requests come in from the States for assistance in this area?

Mr. HANSEN. States, cities, and smaller community areas.

Mr. MICHEL. Do you know what, if any, backlog you would have of applications from cities or States for the express purpose of rat control?

Mr. HANSEN. Thirty-two were not funded.

Mr. MICHEL. Thirty-two what?

Mr. HANSEN. Proposals.

Mr. MICHEL. Requesting assistance in the amount of what?

Mr. HANSEN. $6,198,132.

Mr. MICHEL. That is the extent of it?

Mr. HANSEN. Yes.

Mr. MICHEL. What is the matching arrangement under that program; what is the formula? What do the cities or States do other than asking for Federal money to do the job? Do they have to put anything into it?

Can it be 100 percent federally funded?

Mr. JOHNSON. They do not have to, Mr. Michel, but in practically all instances there are services in kind that are contributed by the States, and this will vary depending upon the State and the locality.

I would say it would vary anywhere from perhaps a 10 percent in kind contribution up to perhaps a 50 percent in kind contribution.

Mr. HANSEN. The local support is $5,923,000 and the Federal, as we indicate, was $15 million.

Mr. MICHEL. Do you have any general broad guidelines to give direction to a city or State of what is expected of them?

Mr. HANSEN. Yes, we do.

Mr. MICHEL. How long is it?

Mr. HANSEN. It is about four pages long. It gives detailed information to the city on how to apply, how the grant is handled, and the objectives of the program, and all the essentials.

(The information follows:)

GUIDELINES TO LOCAL COMMUNITIES ON APPLICATION FOR RAT CONTROL PROGRAMS

In order to assist city, county, and state agencies and community non-profit organizations with the preparation of applications for rat control grant funds, the following guidelines have been prepared by the Environmental Control Administration.

General

1. Project proposals should be directed to the problem of rats in the urban situation, with strong emphasis on control activities in impoverished areas of cities.

2. Grants should be used to establish new programs, or expand existing programs for rat control. They should not be used simply as a new source of funds for on-going activities.

3. To the greatest extent possible, rat control projects should be related to priority areas for other Federally-assisted programs, including model cities, and neighborhood service centers, and comprehensive health service projects.

4. Project proposals should reflect multiple agency funding whenever possible, e.g., HUD for code enforcement activities and demolition of structures; local tax base or fee-for-service for solid waste collection and disposal.

5. Project proposals should involve the utilization of disadvantaged persons in the program.

PROGRAM GOAL:

Reduction of the rodent population and conditions conducive to rodent infestation within the project area to a level where they no longer exert a public health and economic effect upon the community.

PROGRAM OBJECTIVES:

The program objectives must be clear and measurable.

a. Immediate and long-term reduction of the rat population.
b. Reduction of incidence of confirmed rat bites.
c. Elimination of rat harborages and food supplies.
d. Eliminate rat infestation of buildings.
e. Education and motivation of citizens in the principles of environmental sanitation to reduce and prevent rat infestation and to improve the livability of the disadvantaged areas.
f. Provision for maximum involvement and employment, training and new career opportunities for residents of impoverished areas.
g. Provision for making rat control projects relevant to other environmental health related community health programs.

PROGRAM ELEMENTS:

A comprehensive rat control program focused on permanent, long-range solutions should include most or all of the following program elements. Funding for certain of these elements may come appropriately from other sources than 314(e) health services development project grants.

1. Program Definition and Plan:

   a. Survey to identify rat-infested areas and contributing factors--substandard buildings, improper solid waste management, inadequately maintained sewers, etc.

   b. Describe priorities and methodology for control.

   c. Determine specific actions needed for each area, including measurable objectives for evaluation purposes.

2. Citizen Participation:

   Develop procedures for involvement of residents and property owners in planning and programming activities to help bring about citizens' understanding, participation, and support.

3. Community Information, Education, Motivation:

   a. Develop informational material for distribution to officials, schools, advertising media, civic and business organizations. Emphasize the importance of the program to the residents by direct contact, presentations, and other mass media.

   b. Encourage residents to participate in block or neighborhood association for the purpose of improving community sanitation through their own efforts. Gain resident cooperation in rat control in each structure, yard, and alley.

4. Effective Local Administration Organization and Inter-agency Coordination:

   a. Establish high level responsibility for program direction and coordination.

   b. Define responsibility and program activities of each city, state agency and community organization (e.g., health, streets, sanitation, buildings).

   c. Achieve close coordination amoung all governmental and community units and officials responsible for various phases of the program. Project proposals must show affirmative support by city, state and community elements involved.

d. Provide adequate personnel, facilities, equipment, and materials for all program elements.

5. Training and Employment of Residents of Rat-Infested Areas:

Provide maximum opportunities for employment, training, and career development of residents of target areas in all phases of the program.

6. Development and Enforcement of Adequate Codes:

a. Develop and improve appropriate ordinances and codes.

b. Inspect buildings on a house-by-house basis, block-by-block, area-by-area and bring properties into code compliance with provisions of housing, rodent control, municipal waste ordinances and related codes.

c. Provide an adequate number of trained inspectors.

d. Establish an effective notice, permit, and records system.

e. Develop or improve administrative and legal procedures for the prompt and equitable handling of noncompliance and appeal cases.

In certain areas, code enforcement activities may be supported by funds from DHUD concentrated code enforcement programs.

7. Spot Clearance of Principal and Accessory Buildings:

Demolition of buildings, streets, garages, etc. which are deteriorated and provide rat harborage. When possible, this activity should by coordinated with DHUD programs.

8. Refuse Storage and Premises Sanitation:

a. Provide for insect and ratproof storage of garbage and other refuse on all private and public premises.

b. Remove or eliminate rat harborage from all private and public premises.

9. Municipal Services:

Provide adequate collection and disposal of garbage and other refuse from residences, commercial and industrial buildings. Provide for special periodic clean-up for accumulation of garbage and other refuse from all buildings, vacant lots, alleys and other public ways.

10. Rat Killing:

    As appropriate, supplement permanent control measures with rat killing procedures (poisoning, fumigation, and trapping.)

11. Evaluation:

    a. Percentage of premises and blocks with rat infestation.

    b. Incidence of rat bites and complaint of infestation.

    c. Percentage of premises having conditions conducive to rat infestation.

    d. Training and employment opportunities provided for low-income residents.

    e. Relationship of rat project to other environmental and community health projects.

    f. Extent of change in trash disposal habits of residents within the project's service area which will permanently decrease the rat population.

Mr. MICHEL. There is no set formula at all so far as a requirement by the State or local community putting up any arbitrary percentage of the money.

Mr. HANSEN. Not a specific amount.

Mr. MICHEL. So then that is left pretty much to your discretion, is it not.

Mr. HANSEN. These proposals come into the regional offices of the Department of HEW, not into the Washington office. There are committees established in the Regional Offices to review all of the rat control projects with the guidelines that we have prepared and furnished to them. This review group at the regional office level establishes the priority of the projects.

Mr. MICHEL. Have we gotten to that point where we can tell a community the best way to get rid of rats is——

Mr. HANSEN. We have a good bit of information on rat control, the problems of rat control, the approaches that they should take for rat control. When a city receives the rat control grant—I should preface that by saying we did not receive funds for implementation of these projects—as a result we have used our limited staff in the regional office to work with the city, providing them with information on rat control and providing training.

We have an excellent training program. We bring trainers into the city to provide detailed information on the control techniques, and we review their progress as they move along with their project and give them technical guidance, technical support.

Mr. MICHEL. Is that funded by the Federal Government?

In my home community of Peoria we have people bugging us that we have rats in the sewers, and the summer mice are bad, and we ought to do something about it. We have been dropping down poison in dry times. Some of the bait they dont't eat, some is better than others.

What do we do? Do we call Chicago and say, send us down a couple rat specialists to help us out?

Mr. HANSEN. This would bring results. I should emphasize that although this is called rat control, this is not a rat killing job. To control rats you have to get at some pretty basic elements of environmental problems in the community, and they are real tough to handle.

The attitudes of the people in the community, the waste disposal methods, the collection of garbage, the condition of the dwellings, the access of the rats to the buildings, are all extremely important. I could go on and on.

The important point is that good rat control includes more than rat poisoning. It upgrades the community, if it is effectively done, and that is why we have been so meticulous in weaving it into the total community effort and not simply a rat killing project which in my opinion is really a waste of money.

Mr. MICHEL. I am glad to have that kind of response. This is a good note on which to conclude my line of questioning, Mr. Chairman.

Thank you very much.

SURVEY OF DRINKING WATER

Mr. FLOOD. Mr. Shriver.

Mr. SHRIVER. On page 4 of your statement, in connection with the survey of the Nation's drinking water, you say it will be expanded in 1970. This is an ongoing survey. You will have something in 1971 and 1972 and so forth.

Mr. HANSEN. Yes, but to a more limited extent. It is going to take us a number of years to cover the approximately 20,000 water supplies in the United States, so it is going to take some time. But after we make a thorough survey, this information is to be provided to the State and local community for their guidance and help, but we intend to continue. We feel it is terribly important to know on a continuing basis what the quality of the drinking water is in the United States. So our total effort after several years would probably taper down as far as this type of activity does.

Mr. SHRIVER. It is not to be concluded in 1970?

Mr. HANSEN. No.

Mr. SHRIVER. On page 2 of your statement you point out that the incineration of solid waste creates an air pollution problem. We heard all morning about air pollution. What is the line of communication and cooperation with the Air Pollution Control Administration?

Mr. HANSEN. It is a very close one. As a matter of fact, within the past week Dr. Middleton and his technical staff came over to spend some time with us in developing a joint approach on this matter of incineration, a total program, not just for the environmental control program on air pollution, but for the Consumer Protection and Environmental Health Service, and from this we hope we will identify specific areas that air pollution will work on and specific areas that we are working on. We could not have closer communication really.

COAL DUST STANDARDS

Mr. SHRIVER. On page 3 you mention the interim standards for coal dust published last December. How does that standard compare with the mine safety recommendations of the administration, or is coal dust included in that?

Mr. HANSEN. Coal dust was included. The administration bill provides eventually for 3 milligrams of coal dust per cubic meter. Our recommended interim standard proposed last December was 3 milligrams. The administration bill provides a period of time for meeting that standard. I don't recall exactly what the time factor was.

Mr. JOHNSON. I would like to point out that the administration bill has a 4.5 milligram per cubic meter standard. This would go into effect 6 months after passage of the act. They do have as a target goal the recommended interim standard that we have of 3 milligrams per cubic meter of respirable dust. The administration bill does not put a time limit on this attainment but it is recognized it would be attained as quickly as technological feasibility would permit.

TRAINING PROGRAM

Mr. SHRIVER. In your justifications you say that you will provide training for the representatives of 41,000 persons engaged as operators,

technicians, truck drivers, and common laborers in solid waste handling. Sort of a manpower training program?

Mr. HANSEN. We would approach this by providing training tools to the cities and they would do their own training. We would do some training in this. For instance, a city has a problem and we would probably train a cadre of people in the city and then provide them with the tools to carry on the training at the local level. We like to see this decentralized as much as possible to the local level to maintain their interest and concern for improving their capability and operation and management of their own activities.

Mr. SHRIVER. I have received some letters from medical authorities in my State of Kansas concerned over the proposed cutback in the number of students to be assisted under the radiological health training grants. That is listed on page 104.

Mr. HANSEN. The radiological training grants were a part of the Comprehensive Health Planning and Services appropriation. They have been transferred to our Administration now. In previous years we spent at the level of $2.5 million. As a part of the overall reduction in Government spending the amount was reduced to $2 million. We are carrying on with that amount.

Mr. SHRIVER. You think we will be able to supply an adequate number of qualified people in view of the act we passed last year?

Mr. HANSEN. I would say no. We cannot train the number we need.

RADIATION STANDARDS

Mr. SHRIVER. On page 106, you say that your investigations have determined that X-rays from color television sets are more penetrating and harmful than previously estimated. Have new standards for color sets been issued since this finding was revealed?

Mr. HANSEN. Mr. Shriver, I would like to ask Dr. Moore to respond to that.

Dr. MOORE. The statement is correct. They are more penetrating than we thought previously. The standards have not as yet been promulgated. Under the authority of the Radiation Control of Health and Safety Act of 1968, the Secretary has authority to set performance standards. This act was signed and passed October 18. We are moving as rapidly as we can toward implementing this act. The provisions in the act specify that the first standards will be set January 1, 1970. We intend to meet that date.

The color television standard is of the highest priority in our minds and as soon as we can get the mechanics of working under this act, then we intend to move with it.

Mr. SHRIVER. Why do you need an ophthalmologist in your radiologocial health program?

Dr. MOORE. The effects of microwaves upon the eye and the initiation and formation of cataracts requires us to have an ophthamologist to help us with the program of delineating and sorting out this type of exposure and its medical effects. It is quite difficult to pick out cataracts and it is not something that we ordinary medics do. We need an ophthalmologist here to help us in this.

WATER QUALITY WORK

Mrs. REID. Thank you, Mr. Chairman.

Mr. Hansen, as I am sure you know, people from my State of Illinois are deeply concerned about the conditions in Lake Michigan. I realize that this is more properly a matter for the Federal Water Pollution Control Administration. In fact, they did hold extensive hearings in Chicago last year; but does the Environmental Control Administration also become involved in this type of problem directly or on an advisory basis?

Mr. HANSEN. Indirectly we do because of our concern for drinking water, bathing water, body contact water, any involvement that could produce illness in the person, and so we are deeply concerned with the quality of the water. We do not have the responsibility for specific action in connection with cleaning up Lake Michigan.

Mrs. REID. Do you know of the hearings which were held?

Mr. HANSEN. We have very close contact with the Federal Water Pollution Control people at the regional office and at the headquarters office. As a matter of fact, we are in the process of discussions now for the assignment of one of our technical staff to the Federal Water Pollution Control Administration to assure even closer coordination of their efforts and our interests.

QUANTITY OF SOLID WASTES

Mrs. REID. You have pointed out that certainly one of the most serious aspects of the quality of man's environment is the mounting problem of solid wastes.

I have seen tabulations from time to time that would show the amount of trash which must be disposed of on a per capita basis. Do you have any statistics on this to show how it has increased in recent years? If you would like, supply that for the record.

Mr. HANSEN. We will supply it for the record.

Mrs. REID. Thank you.

Mr. HANSEN. At the present time, it is about 5 pounds per person per day. It has been going up.

(The information follows:)

TRENDS IN THE GENERATION OF SOLID WASTES

The report, "Waste Management and Control," published in 1966 by the National Academy of Sciences-National Research Council states:

"In the United States the per capita production of refuse (that is, of solid wastes usually collected routinely) grew from 2.75 pounds per day in 1920 to 4.5 pounds per day in 1965."

The 1968 National Survey of Community Solid Waste Practices determined that on an average, approximately 5.32 pounds of solid wastes are collected each day for each person in the Nation. Household, commercial, industrial, demolition, agricultural, and other wastes that are transported or disposed of by the individual generator are not included. The increase from 4.5 to 5.3 pounds per person per day equals 17.7 percent in only 3 years.

PROGRAMS ON HOUSING AND HYGIENE

Mrs. REID. Under the category of "Community environmental management," you list programs on housing and hygiene. What do you include in housing and hygiene?

Mr. HANSEN. We are concerned in housing hygiene with our efforts in training community workers in evaluating housing, working with the cities in determining the quality of housing, and making recommendations for improvement of housing conditions in the community.

Mrs. REID. You are talking about the actual houses?

Mr. HANSEN. The houses proper. We assist the local government. As I pointed out earlier, our efforts are primarily to assist the local people, health department or the housing authorities, in accomplishing their mission. We do this by providing training of their staff, technical support, criteria and standards for housing which they can use at the local level. We have been particularly effective in providing the training of the local health department or the local housing staff in techniques of evaluation of housing and approaches to improvement.

The basic housing inspection training course is one that we developed, tested, and it is being used extensively to assist the local communities in their problems.

NOISE STUDIES

Mrs. REID. I think more people, too, are becoming concerned about noise levels in our environment. Is your agency currently involved in research of this?

Mr. HANSEN. Yes, ma'am, we are.

We are concerned with noise in a number of areas: one is the industrial area. The noise in the industrial area, which may reach the level of actually destroying or seriously affecting the hearing of workers. We are also concerned about noise in the community because it is a major factor in the livability of a community.

Mrs. REID. Does this involve planes, too, that kind of noise?

Mr. HANSEN. The planes are a primary concern of the Department of Transportation but here again we work closely with the folks in the Department of Transportation. Our noise program at the present time is not adequate. We are not satisfied with what we have in process right now, and as a part of our moving forward during the current year we hope to significantly improve it within our limitations.

We have good technical staff but it is quite limited.

Mr. JOHNSON. In actuality, Mrs. Reid, our noise program is almost entirely limited to occupational noise. There has not been any budgetary support of any size given to either occupational or community noise. Only are we beginning to recognize that community noise can have some very significant effects on our behavioral patterns as citizens throughout the country.

Mrs. REID. What do you mean when you say community noise?

Mr. JOHNSON. That kind of noise over which we, as individuals, have no direct control—traffic, airplanes, air hammers out in front of your door. The Chairman spoke earlier this morning of the garbage truck that comes around at 5 o'clock in the morning and disturbs your sleep. These are perhaps new things in our environment; as we begin to live closer together in larger and larger metropolitan areas we have to begin to take cognizance of this. There was just recently submitted during the last administration a report on noise that was developed by the Office of Science and Technology for President Johnson. That has been submitted and perhaps is at this par-

ticular point in time the one thing that culminates our thinking in terms of what noise really is to our community and gives some ideas as to what approaches might be given to begin to deal with this problem.

There is a great deal of research at this point in time that has to be undertaken before we would know. What is noise to one person is music to someone else. You have to be very careful when you begin to invade people's privacy in terms of this problem of noise. There is a lot that can be done in terms of maybe scheduling certain kinds of activities, setting certain kinds of noise levels we know are harmful in terms of airport noise and maybe other types of things, putting suppressors on air hammers and the like. There is a lot that can be done. There is very little that has been done because there have not been the kinds of moneys that you would need to undertake studies of this kind.

BEHAVIORAL STUDIES

Mrs. REID. I have just one more question.

In talking about community environmental health, you commented about your study of high school students in Pittsburgh and Santa Barbara, and the link between social behavior and the level of personal injury. It seems to me that behavioral studies of this type may possibly overlap with the responsibilities of NIH. Is there any duplication of effort here with work being done in other agencies?

Mr. HANSEN. Here again, there is contact with the staff at the National Institutes of Health. Dr. Marland was responsible for this program.

Would you like to comment more specifically?

Dr. MARLAND. That particular study was done by a Dr. Suchman, who was also a consultant to the National Institute of Mental Health. The report has been sent to the National Institute of Mental Health and this was not done under a grant, but had it been done under a grant it would have been reviewed by the National Institute of Mental Health prior to our having awarded it. This was a contract of less than $2,000, so that Dr. Suchman, the scientist who performed it, knew that it had not been done by NIH but the report has gone to them.

Mrs. REID. There is a coordination?

Dr. MARLAND. Yes, ma'am. We both use the same scientists in many of our behavioral research projects. The coordination is simple in many cases. Again, on behavioral research, the grants which we receive are reviewed by the NIH and vice versa. We have in fact funded one that arrived at the National Institutes for them to fund. They thought it was more appropriate we should do it and they sent it to us a year ago. It would be quite the normal thing to share on this.

Mrs. REID. That is all. Thank you.

Mr. FLOOD. Ten o'clock tomorrow morning.

JUSTIFICATION MATERIAL

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Environmental Control

Amounts Available for Obligation

	1969	1970
Appropriation	$42,995,000	$57,698,000
Transfers to:		
"Operating expenses, Public Building Services," General Services Administration	-165,000	---
Comparative transfers to:		
"Salaries and expenses, Office of the Administrator"	-189,000	---
"Food and drug control"	-3,377,000	---
Comparative transfers from:		
"Communicable diseases"	6,446,000	---
"Salaries and expenses, Office of the Administrator" (radiological health)	15,121,000	---
"Comprehensive health planning and services"	2,000,000	---
Cutback required by PL 90-364	-1,763,000	---
Total currently authorized for obligation	61,068,000	57,698,000
Plus: proposed release of reserves for increased pay costs	492,000	---
Total obligations	61,560,000	57,698,000

Disposition of cutback:		
Increased pay costs in this account	492,000	---
To be returned to Treasury	1,271,000	---
Total cutback	1,763,000	---

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
89	1. Solid Wastes:						
89	a. Research grants..		$ 2,444,000		$ 2,444,000		---
90	b. Training grants..		490,000		490,000		---
91	c. Demonstration grants..		5,150,000		5,150,000		---
92	d. Planning grants..		2,000,000		1,500,000		-$500,000
93	e. Direct operations..	206	5,191,000	216	5,588,000	+10	+397,000
	Subtotal..	206	15,275,000	216	15,172,000	+10	-103,000
97	2. Occupational safety and health:						
97	a. Research grants..		2,966,000		2,966,000		---
98	b. Training grants..		477,000		477,000		---
99	c. Direct operations..	274	4,020,000	284	4,590,000	+10	+570,000
	Subtotal..	274	7,463,000	284	8,033,000	+10	+570,000
103	3. Radiological health:						
103	a. Research grants..		2,296,000		2,296,000		---
104	b. Training grants..		2,000,000		2,000,000		---
105	c. Direct operations..	711	11,887,000	752	13,057,000	+41	+1,170,000
	Subtotal..	711	16,183,000	752	17,353,000	+41	+1,170,000

Obligations by Activity--continued

Page Ref.			1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
111	4.	Community environmental management:						
112		a. Research grants..		$4,263,000		$3,127,000		-$1,136,000
113		b. Training grants..		1,364,000		1,192,000		-172,000
113		c. Fellowships..		123,000		50,000		-73,000
114		d. Direct operations..	514	11,627,000	446	6,848,000	-68	-4,779,000
		Subtotal..	514	17,377,000	446	11,217,000	-68	-6,160,000
119	5.	Water hygiene:						
119		a. Research grants..		158,000		158,000		---
120		b. Training grants..		200,000		200,000		---
120		c. Direct operations..	160	1,824,000	180	2,435,000	+20	+611,000
		Subtotal..	160	2,182,000	180	2,793,000	+20	+611,000
123	6.	Program direction and management services.....	220	3,080,000	220	3,130,000	--	+50,000
		Total obligations..	2,085	61,560,000	2,098	57,698,000	+13	-3,862,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions	2,085	2,098	+13
Full-time equivalent of all other positions	102	102	---
Average number of all employees	2,152	2,135	-17
Personnel compensation:			
Permanent positions	$18,962,000	$19,600,000	+$638,000
Positions other than permanent	960,000	960,000	---
Other personnel compensation	197,000	197,000	---
Total, personnel compensation	20,119,000	20,757,000	+638,000
Personnel benefits	2,837,000	2,867,000	+30,000
Travel and transportation of persons	1,612,000	1,561,000	-51,000
Transportation of things	1,029,000	715,000	-314,000
Rent, communications, and utilities	1,439,000	1,705,000	+266,000
Printing and reproduction	310,000	210,000	-100,000
Other services:			
Project contracts	4,910,000	3,836,000	-1,074,000
Other	1,887,000	1,424,000	-463,000
Supplies and materials	1,804,000	1,268,000	-536,000
Equipment	1,538,000	1,161,000	-377,000
Lands and structures	140,000	140,000	---
Grants, subsidies, and contributions	23,931,000	22,050,000	-1,881,000
Insurance claims and indemnities	4,000	4,000	---
Total obligations by object	61,560,000	57,698,000	-3,862,000

Summary of Changes

1969 estimated obligations	$61,560,000
1970 estimated obligations	57,698,000
Net change	-3,862,000

	1969 Base		1970 Change from Base	
	Positions	Amount	Positions	Amount
A. Increases:				
1. Built-in:				
(a) Annualization of 1969 pay raise costs	--	---	--	$17,000
(b) Within-grade and longevity costs	--	---	--	469,000
Subtotal	--	---	--	486,000
2. Program:				
(a) Solid wastes Direct operations	206	$5,191,000	10	471,000
(b) Occupational safety and health Direct operations	274	4,020,000	10	544,000
(c) Radiological health Direct operations	711	11,887,000	41	1,024,000
(d) Water hygiene Direct operations	160	1,824,000	20	577,000
Subtotal	--	---	81	2,616,000
Total increases	--	---	81	3,102,000

Summary of Changes--continued

	1969 Base Positions	1969 Base Amount	1970 Change from Base Positions	1970 Change from Base Amount
B. Decreases:				
1. Built-in: Non-recurring items of equipment.....	--	---	--	-$206,000
2. Program:				
(a) Solid wastes Grants.....	--	$10,084,000	--	-500,000
(b) Community environmental management Grants.....	--	5,750,000	--	-1,381,000
Direct operations	514	11,627,000	-68	-4,877,000
Subtotal.....	--	---	-68	-6,758,000
Total decreases..	--	---	-68	-6,964,000
Net change..	--	---	+13	-3,862,000

EXPLANATION OF CHANGES

Solid Wastes

Direct Operations

An increase of $471,000 and 10 positions is requested for the purposes of research and development of improved methods for managing solid waste problems and for increased technical assistance to local governments and private organizations in applying new, improved techniques. Research emphasis will be directed toward accelerated studies concerning reuse of waste materials, and to design and test systems for improved storage, handling, and collection. In addition to continuing projects now underway, the technical assistance program will be expanded to accommodate the increasing demand from state and local jurisdictions and industry. It is estimated that such requests will reach 550 in 1969 and in excess of 750 in 1970.

Occupational Safety and Health

Direct Operations

An increase of $544,000 and 10 positions is requested to extend and enlarge current epidemiologic and medical studies on the health hazards to uranium miners. Basic knowledge needed for effective controls, will be developed to establish criteria for upgrading Federal standards. Attempts will be made to develop early diagnostic techniques in order to identify, sufficiently early, those miners who have been exposed to radon decay products.

EXPLANATION OF CHANGES--continued

Radiological Health

Direct Operations

An increase of $1,024,000 and 41 positions is requested for expansion of the electronic products radiation control program in compliance with the provisions of the Radiation Control and Safety Act of 1968, PL 90-602. The increase will provide for the establishment of an enforcement capability, for research on health effects resulting from exposure to non-ionizing radiation, for development of instrumentation needed for measurement of microwave emissions and for development of standards on a product-by-product basis.

Water Hygiene

Direct Operations

Of the total requested increase of $577,000 and 20 positions, $353,000 and 6 positions will provide resources for a national survey of the quality of public drinking water supplies. This will expand the study initiated in 1969 to survey on a national basis community water supplies. The work will be carried out in conjunction with State and local authorities to provide a representative national profile of the purity and safety of our drinking water supplies. The balance of the increase of $224,000 and 14 positions will enable DHEW to carry out its responsibility in regard to comprehensive river basin planning studies as approved by the Water Resources Council.

Solid Wastes

Grants

The decrease of $500,000 in solid wastes planning grants is attributable to the lower average cost per grant in the latter stages of the completed projects. Development of plans have been completed in many States and the necessary updating and review requires a minimal expenditure of funds. The $1,500,000 requested in 1970 for planning grants will continue to support a total of 41 projects, the same number as in 1969.

Community Environmental Management

Grants

The decrease of $1,381,000 in base will allow for the funding of 87 ongoing projects on a non-competing continuation basis. No new grants or renewals of existing grants will be funded.

EXPLANATION OF CHANGES--continued

Direct Operations

The decrease of $4,877,000 and 68 positions resulted from the elimination of field activities of the Aedes Aegypti mosquito eradication program in the Southeastern United States, Hawaii, Puerto Rico, Virgin Islands, and along the Mexican Border in Texas. This reduction was in response to the Revenue and Expenditure Act of 1968. The program will now be limited to research, development and demonstration activities to find less costly and more efficient methods of eradication in expectation that field operations may later be resumed.

Significant Items in House and Senate Appropriations Committee Reports

Item	Action taken or to be taken
1969 House Report	
1. The Committee desired an allocation of $390,000 for the milk certification program. (Page 15 of the House Report)	1. The program is being maintained at the $390,000 level in 1970.
1969 Senate Report	
1. The Committee recommended an increase of $500,000 more than the House to permit increased activities in preventive and clinical medicine in the Arctic community by the Arctic Health Research Center, College, Alaska. The Committee stated that the Research Laboratory can fill an important role in aiding the adjustment of Alaskan native people to modern safety. Final Congressional action allowed for an increase of $120,000. (Page 31 of the Senate Report)	1. The Arctic Health Research Center is pursuing stepped up programs in the fields of preventive and clinical medicine and community planning for healthful living under severe climatic conditions of the arctic environment. Areas of emphasis will include water supply and solid waste disposal systems and studies of special housing problems associated with the artic climate.

Authorizing Legislation

Public Health Service Act, Title III, Part A

Legislative authority for the award of grants for research, research training, and fellowships is contained in Section 301 of the Public Health Service Act.

Solid Waste Disposal Act, as amended, Title II, Sec. 204(b), (3)

"Make grants-in-aid to public or private agencies and institutions and to individuals for research, training projects, surveys, and demonstrations..."

Solid Waste Disposal Act, as amended, Title II, Sec. 206(a)

"The Secretary may from time to time, upon such terms and conditions consistent with this section as he finds appropriate to carry out the purposes of this Act, make grants to State and interstate agencies of not to exceed 50 per centum of the cost of making surveys of solid waste disposal practices and problems within the jurisdictional areas of such States or agencies, and of developing solid waste disposal plans for such areas."

Solid Waste Disposal Act, as amended, Title II, Sec. 210(a)

"There is hereby authorized to be appropriated to the Secretary of Health, Education, and Welfare, to carry out this Act, not to exceed $7,000,000 for the fiscal year ending June 30, 1966, not to exceed $14,000,000 for the fiscal year ending June 30, 1967, not to exceed $19,200,000 for the fiscal year ending June 30, 1968, not to exceed $20,000,000 for the fiscal year ending June 30, 1969, and not to exceed $19,750,000 for the fiscal year ending June 30, 1970."

Radiation Control for Health and Safety Act, Title III, Sec. 354-360

To amend the Public Health Service Act to provide for the protection of the public health from radiation emissions from electronic products.

Explanation of Transfers

	1969 Estimate	Purpose
Transfer to:		
"Operating Expenses, Public Buildings Services," General Services Administration.....	$165,000	Rental of space.
Comparative transfer to:		
"Salaries and expenses, Office of the Administrator".....	189,000	To provide a coordinated presentation of administrative activities to reflect the reorganization of certain health functions within the department.
"Food and drug control" (shellfish certification and injury control).....	3,377,000	These functions were transferred to the Food and Drug Administration as part of the reorganization of the Public Health Service.
Comparative transfer from:		
"Communicable diseases" (Aedes aegypti).....	6,446,000	This program was transferred to the Environmental Control Administration as part of the reorganization of the Public Health Service.
"Salaries and expenses, Office of the Administrator" (radiological health).....	15,121,000	This program was transferred to the Environmental Control Administration as part of the reorganization of the Public Health Service.
"Comprehensive health planning and services".....	2,000,000	To continue a Radiological Health Training Grant Program that is more closely allied with the Environmental Control Administration as a result of the "Radiation Control for Health and Safety Act of 1968."

Environmental Control

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1962	$ 5,604,000	$ 7,424,000	$ 7,424,000	$ 7,424,000
1963	7,502,000	7,502,000	8,536,000	8,536,000
1964	9,153,000	9,073,000	9,073,000	9,073,000
1965	9,240,000	9,170,000	9,170,000	9,170,000
1966	15,818,000	9,842,000	13,842,000	13,842,000
1967	21,971,000	21,963,000	21,963,000	21,963,000
1968	42,594,000	41,594,000	42,194,000	41,750,000
1969	45,611,000	42,875,000	43,375,000	42,995,000
1970	57,698,000			

Introduction

The Environmental Control Administration combines in one organization major environmental health programs which separately and in combination serve to protect man's health and safety from an increasingly hazardous environment. While dealing with the problems inherent in today's environment, the Administration is also mounting programs designed to reverse the deterioration in our environment thus averting even greater hazards to the health of future generations.

It has now become clear that the ultimate solution of one pollution problem often rests in control of pollutants present in another media. An example of this is the Solid Wastes activity which is finding solutions to a costly and unhealthy situation in the nation's mounting and far-reaching problem of disposing of the unwanted wastes of our society--agricultural, industrial, commercial and domestic. The rapidly increasing burden of economic and safe disposal of these waste materials must be met before the inadequacies and deficiences of current methods reinforce difficulties connected with other environmental contaminants, particularly the highly interrelated environmental problems now present in our inner cities.

Contending with these interrelationships in one organization utilizing one appropriation enables the Environmental Control Administration to focus the best available talent and the latest technology on the research and the control programs necessary to protect the public health.

Additional examples of some of the more pressing problems facing this Administration are:

1. Programs dealing with mechanisms to reduce the health hazards encountered in the mining of uranium ore have been within the province of the Occupational Safety and Health activities. The effectiveness of these programs is being improved by sharing the knowledge and skills of personnel assigned to Radiological Health.

2. The Radiological Health program designed to reduce the exposure of people to the hazards of radiation from electronic products benefits from the expertise of Occupational Safety and Health personnel when contending with the problem of exposures suffered by employees of electronics manufacturers or repair services.

3. Programs which prevent or control accidental injuries to man are normally a function of Community Environmental Management, however their skills can now be applied to the control of injuries occurring in our occupational environments.

4. Community Environmental Management activities cope with the interactions between man and his home, neighborhood, community and regional environments. All program areas within the Administration are brought to bear through this focus.

5. The safety and healthfulness of our drinking water is a function not only of the Water Hygiene activities, but is greatly dependant on the control of solid wastes disposal practices. The quality of interior plumbing in our homes and the opportunities for radioactive materials to contaminate our water supplies complicate the problem of assuring the public of a safe supply of drinking water. The interdependency of these environmental hazards is matched by the Administration's ability to apply technologies contained within Community Environmental Management, Solid Waste Management and Radiological Health operations.

The legislation enacted by Congress in recent years is a measure of the public concern for each of the programs described in the narrative that follows. The relationships of the programs to each other within the Environmental Control Administration provide the potential to speed up the action necessary at Federal, State and local levels to combat these environmental health problems.

1. Solid Wastes

Solid wastes are a major emerging environmental pollution problem. More than 3.5 billion tons of solid wastes are discarded per year. Relatively little effort has been directed in the past toward reducing the amount of wastes generated, the bulk of effort being aimed at managing the wastes after they are produced. Current solid waste management practices are generally unsatisfactory and contribute to environmental pollution. An estimated $7 billion per year are currently being spent on solid waste management, with approximately two-thirds of this amount being spent on waste storage and collection. The deplorable conditions in certain low-income residential areas are due in a large measure to unsatisfactory management of solid wastes in these areas. Long-range and even medium-range projections show that serious conditions of land pollution (including ground water) and pollution of the seas from industrial and municipal waste will constitute problems of national and international significance unless alternative disposal methods are soon implemented.

The goals in the area of solid wastes are: 1) to achieve nationwide, solid waste management practices which assure that man's health and the environmental quality are not endangered; and 2) to minimize the amounts of ultimate wastes being generated, and to maximize the salvage of useful waste material.

	1969 Estimate	1970 Estimate	Increase or Decrease
a. Grants.....	$10,084,000	$9,584,000	-$500,000

(1) Research Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.....	38	$1,430,000	39	$1,374,000	+1	-$56,000
(b) New grants.....	21	914,000	20	970,000	-1	+56,000
(c) Supplementals.....	(3)	100,000	(3)	100,000	--	---
Total.....	59	2,444,000	59	2,444,000	--	---

The Solid Wastes Research Grant program will continue to support the Solid Waste Disposal Act as amended in 1968, with respect to: (a) Achieving nationwide solid waste management practices which assure that man's health and the environmental quality are not endangered; and (b) minimizing the amounts of ultimate wastes being generated, and maximizing the salvage of useful waste material. The majority of the supported research has been under way for 3 years or less and results are now beginning to emerge from these efforts. Research grants in progress are currently providing, through interim reports, needed technical information on the degradation of solid wastes in sanitary landfills, the improvement of incinerator performance, the feasibility of pipeline transport of municipal solid wastes and methods of safe disposal of solid wastes generated in

hospitals. Of particular importance this year, through a research grant to New York University, is the development of the basic data necessary for designing an incinerator for bulky wastes. These data have been used to design a special incinerator for Stamford, Connecticut, that will burn junk cars, volatile industrial waste, brush, furniture, and other bulky items. The construction of this incinerator, through a demonstration grant, should be completed by April 1969. Similarly, results of a research grant to Northwestern University produced a mathematical simulation of a refuse collection and disposal system which is being applied through a demonstration grant by the city of Raleigh, North Carolina, to increase the efficiency of municipal refuse collection and to minimize collection costs.

In 1970, projects will be supported to develop new and improved methods of collection and to find economical ways to reprocess wastes into usable materials, thus reducing the amount of waste requiring disposal.

(2) Training Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.....	11	$490,000	11	$490,000	--	---
(b) New grants.....	--	---	--	---	--	---
(c) Supplementals.....	--	---	--	---	--	---
Total.....	11	490,000	11	490,000	--	---

A purpose of the Solid Wastes Training Grant program is to develop personnel with advanced professional skills in solid wastes management. Graduate level training is offered to qualified students in science, engineering, planning, and management programs. Another objective of the program is to motivate professional workers in the solid wastes field, qualified through the training program, to apply the methods and techniques accruing from the research effort.

The need for professionally trained personnel was recognized in the Solid Waste Disposal Act. Solid Wastes training grants emphasize the technology aspects of collection, refuse, and disposal of municipal, industrial, and agricultural solid wastes. A total of 66 students will be trained in 1970, the same number as in 1969.

(3) Demonstration Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.....	25	$1,402,000	26	$2,500,000	+1	+$1,098,000
(b) New grants.....	26	3,220,000	25	2,050,000	-1	-1,170,000
(c) Supplementals.....	(9)	528,000	(9)	600,000	--	+72,000
Total.....	51	5,150,000	51	5,150,000	--	---

The Demonstration Grants program encourages the application of new methods, techniques and equipment for solid wastes management; provides sound and reliable performance data on full-scale application of new and innovative techniques developed through research; and demonstrates the practicability and effectiveness of new techniques, equipment and methods for solid wastes management. The stimulation of public interest in, and acceptance of, proven solid wastes management practices is an additional benefit resulting from the projects supported through this program. Grant projects may receive up to two-thirds Federal support and may include the construction of disposal and waste reduction facilities. The funds made available through this program increase the speed with which new and improved solid wastes management systems are adopted by communities.

Many innovative concepts are being tested and demonstrated in this program. One project, for example, has been initiated in Chicago, Illinois, to prove the efficiency of baling of municipal refuse and to develop guidelines for the construction and operation of refuse transfer stations. Many communities have need to know more about baling because of the potential benefits it could have in solid wastes handling and disposal. Another project in Virginia Beach, Virginia, is demonstrating the practicability of using proper sanitary landfill methods to construct an amphitheater and coasting ramp. The hill will be 60 feet high, made of well-compacted municipal solid waste and covered with fill material from the site. The hole left by removal of cover material will be allowed to fill with water to form a lake. Another project will demonstrate the feasibility and potential advantages of applying the principles of the fluidized bed method of heat transfer, a system used in industry, to the incineration of municipal wastes.

Part of the requested funds for new grants for 1970 will provide for the demonstration of some projects now being evaluated as to feasibility of application. Examples of projects which may be proven feasible are: the pulping of refuse with subsequent incineration of the end product; the transportation of solid wastes in encapsulated form; and the use in small communities of a new low-cost piece of equipment capable of doing all the necessary placement, compaction or covering of refuse in a sanitary landfill. The total of $5,150,000 for this activity will assure the funding of approximately 51 demonstrations throughout the nation.

(4) Planning Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.....	21	$556,582	21	$650,000	--	+$93,418
(b) New grants.....	20	1,343,418	20	750,000	--	-593,418
(c) Supplementals.....	(2)	100,000	(2)	100,000	--	---
Total.....	41	2,000,000	41	1,500,000	--	-500,000

Planning grants are designed to encourage sound State solid wastes management planning programs, create and stimulate interstate and regional planning programs, develop understanding of the nature and magnitude of solid waste management problems, and develop the expertise necessary for effective programs throughout the country. The planning grants are made to State and interstate agencies and pro vide up to one-half of the total project costs. The initial phase of a planning grants project requires the collection of basic data on the extent of the solid wastes problem and on the effectiveness of current programs. The grantee agency then develops comprehensive long-range plans for meeting the solid wastes problems. The plans will include not only appropriate consideration of the existing and projected solid wastes disposal needs, but also take into consideration such related factors as the potential control of air and water pollution resulting from inadequate disposal operations, protection of the public health, meaningful land-use planning, and trends in population and industrial growth. These plans encourage intergovernmental cooperation.

The $1,500,000 requested in 1970, $500,000 less than the 1969 request, will not result in a reduction of the number of active grants. Plans have been completed in many States and grants for necessary updating and review requirements involve a lower average cost per grant than that for the initial planning grants.

b. Direct Operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	206	$2,116,000	216	$2,257,000	+10	+$141,000
Other expenses.....		3,075,000		3,331,000		+256,000
Total.....	206	5,191,000	216	5,588,000	+10	+397,000

In more than fifty locations in the United States, field demonstrations of advanced solid waste management practices, funded primarily by demonstration grants, are being carried out at the municipal level. Visits to these sites by public officials of local, county and State governments, as well as representatives from the private sector of the economy, are encouraged. The purpose of these demonstrations is to provide locales where the best solid waste management practices may be observed and to prove the efficacy of new solid waste management tools.

The management of a demonstration grants program requires a professional staff to conduct systematic technical and engineering reviews of proposed demonstration grants; to make feasibility studies, site visits and evaluations before such grants are initiated; to review construction; to provide the necessary liaison with grantees or contractors after the demonstrations are under way; and to evaluate the final reports.

In these demonstrations, one may see the start of a recreational facility as in Virginia Beach, Virginia; a new type of incinerator for bulky wastes in Stamford, Connecticut; or a new, efficient incinerator which employs a unique rotary grate principle. This latter demonstration in Shippensburg, Pennsylvania, has sufficient capacity so that it serves neighboring communities as well. The goal in developing this activity is to stimulate rapid application of new practices developed through research. The program personnel administer demonstration projects which encourage the application of new methods, techniques, and equipment for solid wastes disposal. They stimulate wide-spread public and private agency participation in those types of demonstration grant projects which meet carefully defined needs of the solid wastes field. They prepare analyses and evaluations of the knowledge gained from such projects and make this information available to agencies and organizations which can profitably use it.

A primary mission of the Solid Wastes program is to accelerate a national research and development program as identified in the Solid Waste Disposal Act. This is essential to developing new and improved methods of effective and economical solid wastes disposal.

The Solid Wastes program has selected three objectives from the research goals for particular emphasis in 1970. These objectives are: to continue the development of standard techniques to define solid wastes components; to accelerate studies leading to possible reuse of waste materials having intrinsic value by reprocessing into usable energy or useful materials; and to design and test various systems for the purpose of improved storage, more effective volume reduction and applying systems analysis and other techniques to improve current collection practices. This work will be done at the solid wastes research and

technical development facility at Cincinnati, Ohio, and through use of contractual arrangements with research institutions, other Federal agencies and private industry.

One of the research projects has made comparisons of the various types of soil used to cover refuse at sanitary landfills. When completed, this study will provide estimates for the processes required and the cost of operating sanitary landfills with various types of cover materials. Another research project has determined basic parameters for the design of mechanical solid waste handling equipment. Historically, solid waste has been handled by equipment adapted from other uses - equipment deficiencies have been attributed to this process. This information will be of great assistance to designers of solid waste handling facilities as well as local communities. Until these efforts were started, there were no basic criteria on which to base the design of equipment used exclusively for solid waste handling.

There has been a great deal of interest in the use of trench incinerators for the disposal of solid waste in the last few years. The research activity of the Solid Wastes program built and tested such a facility. Results of the research indicated that the trench incinerator is not an acceptable method of volume reduction for municipal waste because of resulting environmental pollution. Modifications are being developed and tested which may make use of open pit incinerators compatible with environmental standards.

Another objective of the Solid Wastes program is to provide and stimulate specialized training for personnel of Federal, State, local governmental agencies who have solid wastes engineering and management responsibilities, and to assist State and local health and health-related organizations to plan, conduct and assess their own solid wastes training activities. In carrying out these general objectives, provision of technical training to an estimated 7,000 professional personnel throughout the country, now having solid wastes engineering and management responsibilities, is necessary to fill the need for trained manpower in this area. In addition to professional manpower requirements, it is estimated that approximately 400,000 persons are engaged in solid wastes handling in this country, employed as operators, technicians, truck drivers, and common laborers. An additional objective, therefore, is to provide operator and technician, and managerial training to representatives of the above groups providing a progressive fulfillment of these manpower training requirements. The staff will develop operator level courses and provide assistance to other agencies developing such courses.

Specific goals are to provide training so that every urban area will have a professionally trained staff or one with specialized short-course training in solid wastes engineering and management. Seminar type training should be provided for administrative management personnel of urban areas of over 25,000 population to assure a general knowledge of solid wastes problems, activities and programs.

Current training activities include: (1) assessment and evaluation of the training needs of State and local agencies; (2) design of short courses based on needs surveys, research findings, and demonstration projects; (3) provision of consultation and assistance to State and local agencies in the development of their solid wastes training efforts; (4) conduct of specialized short courses in solid wastes engineering and management; and (5) conduct of one-day orientation seminar-type courses for State and local administrative management personnel,

elected and appointed officials and civic leaders. The funds budgeted for these activities in 1970 will provide for conduct of the projects currently under way in pursuit of the outlined goals and development of pilot training courses for operators and technicians in the field. Additional courses also will be planned for management and governmental official orientation.

The demand for increased Federal technical assistance from individuals, State, local and industrial groups is growing as a result of the rising national awareness of shortcomings in solid waste management; the increasingly complex problems related to solid waste management systems; and increasing activities at the State and local level.

The general objective of the technical assistance activity is to provide technical resources and services to State, regional, and local agencies; private organizations; industrial and agricultural groups; and individuals to help eliminate unacceptable and/or inefficient solid waste management systems that are a threat to public health and welfare and a drain on the economic resources of the nation.

To carry out this general objective, a number of specific goals have been established for accomplishment this year and in 1970: (1) to improve 950 of the currently estimated 6,600 solid wastes management systems in urban areas by direct consultation, the conduct of studies and surveys on specific problems, and the development of technical guidelines, manuals, and standards of acceptable solid wastes practices; (2) to improve and update legislation at State and local levels, and to assist in its implementation; (3) to develop manuals, standards, and guides for use by industries having special solid wastes management problems; and (4) to develop similar materials for special agricultural solid wastes problems.

There are popular misconceptions, even among persons responsible for local solid waste management operations, that tend to over-simplify the methods of disposal which they use. A sanitary landfill is a great deal more complex than just an open dump covered over with dirt. Guidelines for the proper design, location, and operation of sanitary landfills and incinerators will be published this year. They were prepared with the aid of consultants who are nationally recognized experts in solid waste management. "Sanitary Landfill Facts," a new publication to improve existing inefficient practices, has been widely distributed in the past six months.

During 1968, State and local agencies and other groups made 285 requests for and were provided specific technical assistance. It is expected that such requests will approximate 550 in 1969 and in excess of 750 in 1970. The answers to these requests range from technical discussions of solid waste problems to the conduct of extensive tests on solid waste disposal facilities.

Comprehensive State and Federal programs in solid wastes management need uniform and reliable basic data to function effectively. In 1967, the national survey of solid wastes management practices was initiated in order to provide an inventory of facilities, volumes and types of solid wastes involved, and to establish a method of rapid storage and retrieval of the basic data provided from State planning grants. The pressing needs for a report of this survey prior to completion has prompted the reporting of survey results representing a statistically sound sample of 40% of the population. These needs have resulted in the

publication of "Preliminary Data Analysis" in January 1969. The national survey will continue in 1970 to include other portions of the population, and increased emphasis will be directed to providing the States with more detailed analyses of data necessary for detailed planning and implementation of State programs. Annual statistical summary reports will be published for public distribution.

A solid wastes information retrieval system has been designed and is now in operation within the Environmental Control Administration. The goal of the information retrieval activity is to establish and operate an adequate national technical information system. Such a system will provide researchers, planners, and administrators with recent data on technical advances at an accelerated rate. This operation will be extended to include the translation and abstraction of foreign language publications and annual supplemental reports covering on-going Federal and non-Federal solid wastes activities.

The total increase for this program is $397,000 and 10 positions, which is requested for: research and development of improved methods for managing solid waste problems; increased technical assistance to local governments and private agencies for applying improved and new techniques; and net built-in increases.

2. Occupational Safety and Health

The work environment of our Nation's 80 million workers continues to cause excessive rates of sickness and death from disease and injury. New industrial processes and techniques create new threats of occupational disease at increasing rates. Exposures to new natural and synthetic chemical agents pose a continuing challenge. At the same time, not all of the older occupational health problems are being effectively controlled. Death rates from accidental injury in industry as a whole have shown little improvement in the past decade. Workmen's Compensation claims are at record high levels, over $2.2 billion a year.

The goal in this area is to insure elimination or control of those conditions in the work environment which cause or contribute to disease and injury.

	1969 Estimate	1970 Estimate	Increase or Decrease
a. Grants	$3,443,000	$3,443,000	---

(1) Research Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations	39	$1,600,000	52	$2,231,000	+13	+$631,000
(b) New grants	30	1,266,000	16	635,000	-14	-631,000
(c) Supplementals	(4)	100,000	(4)	100,000	--	---
Total	69	2,966,000	68	2,966,000	-1	---

Research grants are used to complement the total research effort of the Occupational Safety and Health Program. They provide research competencies from qualified institutions which are particularly adept in certain fields and not available in the intramural research program. The projects funded are in support of major ongoing studies related to the problems associated with asbestos, beryllium, coal mining, uranium mining, and commercial solvents. The major objective of these grants is to provide additional scientific criteria for the development of standards for control.

Research findings from grant supported projects in the fields of biochemistry, physiopathology, clinical toxicology, and epidemiology, have contributed to a better understanding of occupational hazards associated in metal toxicosis, pneumoconiosis and other pulmonary trauma, dermatosis, and physical and psychological stresses.

The following are examples of the findings from currently active research grants contributing to improving and controlling potential occupational hazards. These studies are all in their initial phases, and have been undertaken to develop criteria for standards to be promulgated by the appropriate agency.

(a) In the area of hazardous chemicals, three diagnostic methods for determining the degree of sub-acute intoxication and for administering therapy have been developed. Another grant has developed a test for phenol in urine as an index to benzene exposure and is investigating analytical procedures for the metabolites excreted as a result of exposure to industrial poisons. The basic mechanisms in chromium poisoning are being investigated so that control may be established.

(b) The occupational environment has definitive consequences for respiratory diseases in man. One of the missions of Occupational Safety and Health is the establishment of criteria and standards leading to the control of environmental hazards by determining Threshold Limit Values (TLV) of hazardous materials. TLV refers to the airborne concentration of substances and represents conditions under which it is believed that nearly all workers may be repeatedly exposed. Research grant projects have investigated pulmonary function changes due to toluene diisocyanates (a solvent used in making plastics) and shows that the TLV need further study. Further, it has been shown that pulmonary function tests are of value as a predictive device.

(c) Silicosis has been investigated as to mechanisms and causation leading to an experimental model for the study of this disease immunologically.

(d) Investigators have indicated that byssinosis is more prevalent in the United States than previously assumed and have developed analytical procedures for determining metabolites associated with the disease.

(e) By studying asbestos workers it has been shown that definitive X-ray film changes are consistent with asbestosis. Exposure patterns of asbestos workers have been defined. It has been further shown that in asbestos insulation workers, mesothelioma (cancer of the pleura and peritoneum) must be added to the neoplastic risks from asbestos inhalation.

During 1970 an estimated 16 new projects will be funded. These will expand work related to hazards in uranium mining, beryllium, asbestos, and coal workers pneumoconiosis. Research grants will also be awarded aimed at producing data for development of criteria for standards in occupational health and safety and for the development of engineering control techniques necessary to reduce hazards to allowable levels.

(2) Training Grants

		1969 Estimate		1970 Estimate		Increase or Decrease	
		No.	Amount	No.	Amount	No.	Amount
(a)	Non-competing continuations.....	7	$441,392	8	$477,000	+1	+$35,608
(b)	New grants.....	1	35,608	--	---	-1	-35,608
(c)	Supplementals.....	-	---	--	---	--	---
	Total.....	8	477,000	8	477,000	--	---

The Occupational Safety and Health Program supports advanced graduate training in engineering, physical, biological and medical sciences in specialty areas relevant to occupational health. In recent years, environmental health specialists, researchers and teachers have received graduate training in industrial ventilation, heat stress control, public health administration, occupational and aerospace medicine, industrial hygiene and toxicology. Training in professional areas such as these, and in ergonomics, acoustics and occupational noise. is a valuable means of correcting at least a portion of the critical shortage of professional manpower in this field. During 1970 it is estimated that 44 persons will be trained as compared to 41 during 1969.

b. Direct Operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	274	$2,687,000	284	$2,942,000	+10	+$255,000
Other expenses	--	1,333,000	--	1,648,000	--	+315,000
Total	274	4,020,000	284	4,590,000	+10	+570,000

The Occupational Safety and Health program is a balanced research and technical service operation designed to reduce the staggering economic and social costs of worker illness and injury. These costs are based on the National Health Survey estimates that reflect an average of 5.4 lost work days per man per year for illness. Present efforts are being directed toward the following objectives: (1) the determination of the effects of industry and industrial hazards on the health of workers, (2) the identification of new or potential worker health hazards, (3) the establishment, through research, of criteria for standards to protect this Nation's eighty million workers, and (4) the development, through research, and the dissemination, through technical assistance, of methods to prevent and control occupational health and safety problems.

Uranium Miners Study

Study of the working environment of underground uranium mines has revealed potentially hazardous exposure levels from internal radiation due to the inhalation of radon and its decay products. The most deleterious effect found to date has been in the lungs, and excess lung cancer rates are seven times the rate of the total population.

The goal of the study of health hazards to underground uranium miners is to enable this strategically and economically important mineral to be mined without adversely affecting the health of the miner. Research carried out to date has led to the establishment of standards which will reduce the number of cases of lung cancer due to exposure of miners to uranium decay products. The objective of the present efforts is to eliminate the risk of cancer to uranium miners due to their occupational environment.

In 1968 intensive efforts were made to control atmospheric concentrations of radon decay products and to reduce the exposure of miners to these materials. Major mining areas were visited to ascertain: whether reliable sampling methods were being used; the availability and knowledge on the use of properly calibrated equipment; and the availability of procedures for field checking equipment. In insuring that radon decay product measurements are made by standard and consistent techniques, the use of properly calibrated equipment is extremely essential to establishing profiles and control efforts. Representatives from several groups assisted in conducting a workshop held at Grand Junction, Colorado to instruct technicians in standard techniques. In 1969, calibration seminars are planned for Colorado, Utah, Wyoming, and New Mexico and will be held in cooperation with the Bureau of Mines, Department of Labor, and the States.

In 1969, research contracts will be funded for the study of environmental measurements and evaluation of radon control efforts within the State of New Mexico, and a controlled experimental mine will be made available for research by competent organizations and agencies for field testing of respirators, dosimeters, sealants, etc. In cooperation with the Atomic Energy Commission's Los Alamos, New Mexico Laboratory, research and evaluation will be done on respirators and dosimeters. A lung pathology contract will be continued with St. Mary's Hospital, Grand Junction, Colorado in the medical and pathological area. It is planned to transport 20 to 40 miners with respiratory symptoms to the Appalachian Laboratory for Occupational Respiratory Diseases in Morgantown, West Virginia for evaluation of occupational pulmonary impairment as a result of radon exposure and other possible etiologic factors.

In 1970, research will concentrate on epidemiologic and environmental studies of mines (both uranium and non-uranium) to determine the level of alpha-radiation to which exposure has not lead to increased cancer. Attempts will be made to develop early diagnostic techniques in order to identify, sufficiently early, those miners who have been exposed and who are likely to develop lung cancer, so that methods of palliating or definitely intervening in the course of their disease may be developed and applied. Continuing evaluation of the effectiveness of current and newly developed control measures will be applied in uranium mines.

Coal Worker's Pneumoconiosis

It is estimated that at least 100,000 bituminous coal miners are afflicted with coal worker's pneumoconiosis. Preliminary prevalence studies have also indicated that 10% of the active miners and nearly 20% of all inactive miners are disabled by this "black lung" disease.

In December, 1968, criteria was recommended to support the first standard for the control of respirable coal dust in the history of this country. This criteria is under constant review by: (1) continuation of the joint medical (Department of Health, Education, and Welfare) and environmental (Department of Interior) evaluations to determine the relationship of dust levels to the incidence of coal worker's pneumoconiosis, and (2) constant evaluation of the effectiveness of this criteria in preventing disease. This process will require long-term surveillance of conditions in the mines coupled with medical evaluation of the miners themselves.

In early 1969, in cooperation with the Department of Interior, a long-term medical environmental study of approximately 5,000 coal miners in 36 mines throughout the country was started. The study will attempt to more accurately determine the number of coal miners who have pneumoconiosis. It is hoped that adequate clinical methods of recognition and treatment, safe working standards and engineering methods of coal dust control will be developed.

The Department of Health, Education, and Welfare will collect X-ray, pulmonary function, and work history data from the volunteer miners. The tests will be repeated at regular intervals. The Bureau of Mines will determine the type and amount of coal dust exposure. Measurements should be more reflective of actual occupational exposures than before because the method being used measured only respirable dust (i.e., dust that can be inhaled and deposited in the lungs). The 36 mines are located, for the most part, in the Appalachian region (West Virginia, Pennsylvania, Kentucky, Virginia and Alabama). A few mines in Utah will also be surveyed.

Beryllium Disease

More than 500,000 workers are known to have been exposed to beryllium. Over 700 cases of beryllium disease have been documented by a single researcher. This group represents an unknown fraction of the cases which may have actually developed as it is recognized that undiagnosed and unreported cases exist. Beryllium disease can take a number of forms, such as dermatitis (skin disease), conjunctivitis (eye disease), and acute pneumonitis (lung disease) and chronic pulmonary berylliosis, the latter two of which can be fatal.

Beryllium, a material of long-known toxicity, is of increasing national importance, related not only to the economy, but to national defense. Information that will enable its safe handling is under study to permit the revision of interim criteria for occupational exposure. This process will relate engineering data on exposures to respirable beryllium with the occurrence of beryllium disease.

A comprehensive study will be conducted in major American industrial plants producing and using beryllium to give an indication of the incidence and prevalence of chronic pulmonary beryllium disease and identify factors that may contribute to its development. The initial part of the survey, joint medical-environmental studies in plants of the major producers in Ohio and Pennsylvania, has been completed and the data are now being analyzed to determine the health status of the 1,600 employees who were tested. Examinations included medical and occupational histories of the workers, chest X-rays, and pulmonary function tests. In addition, known cases of beryllium disease are being studied at the Appalachian Laboratory for Occupational Respiratory Diseases in Morgantown, West Virginia.

Asbestos

It has been reasonably well demonstrated that there is a direct correlation between exposure to respirable asbestos dust and the incidence of asbestosis, lung cancer, and mesothelioma.

A study is now in its fourth year and is primarily designed to establish safe working exposure levels for the estimated 3.5 million workers directly exposed to asbestos each year. Emphasis in past years has been primarily limited to environmental sampling. Medical evaluation of asbestos workers was begun during 1969 to determine the physical status of the asbestos worker population. This study will be continued in 1970 and will provide us with our first real indication of the prevalence of this disease. Preliminary findings indicate that mortality rates among asbestos workers may be as much as 25% higher than the total population, and lung cancer rates are seven times as high. To date, sampling techniques, characterization of the types of asbestos, evaluation of trace metals and other materials, and the development of an X-ray classification system have been accomplished.

Evaluation of the environmental exposures of 10,000 asbestos workers has been completed in the friction, textile, cement and building products industries. The analysis of disability data on 30,000 asbestos workers to determine morbidity and mortality trends has also been initiated.

Other areas of activity aimed at the development of criteria for standards include its toxicologic investigations, which have recently produced a small battery of tests to determine worker hypersusceptibility to various toxic agents, investigations of ozone exposure, polyurethane and isocyanate studies.

Control Program Development

Technical consultation and direct cooperative assistance is provided to the States as well as to industry, labor and local governments upon request. State and local agencies are becoming increasingly aware of their responsibilities in occupational health and numerous requests have been received for medical, administrative, and engineering assistance. The volume of these requests have more than doubled in recent years. This demand stems from the following factors:

a. The increased industrialization of the nation as a whole has had a disproportionate impact upon the scope and number of the occupational health hazards faced by State and local health departments.

b. Every 20 minutes a new substance or a new process is introduced into industrial use. This has stimulated demand from local agencies for teams of skilled specialists to serve on an immediate or "task force" basis to prevent or at least minimize the effect of occupational disease outbreaks.

Requests for assistance coming from State and local agencies reflect the scope and number of problems requiring help from this program. Examples include lead exposure to workers at missile sites in Montana, evaluation of zinc smelters in Oklahoma, the preliminary phase of a comprehensive environmental survey in metropolitan Chicago, Illinois, and a field study of occupational carbon monoxide exposure in aircraft. Studies started during 1969 and continued in 1970 will include a study of occupational diseases associated with the construction industry and a complete industrial hygiene survey in the State of Rhode Island relating hazards in the workplace to the temporary disability insurance claims.

The requested increase of $544,000 and 10 positions will be used to conduct uranium miners studies and to fund net built-in increases.

3. Radiological Health

Ionizing and non-ionizing radiation poses an increasing health threat to our future. The U.S. population currently receives its greatest exposure to ionizing radiation from the extensive and growing use of X-Rays and radionuclides in the healing arts. The continual growth in the use of these sources for diagnostic and therapeutic purposes requires continued effort to assure maximum benefit to the patient at the lowest possible exposure. The increasing use of nuclear power will necessitate expansion of programs to protect the environment from contamination from this source. Although laser and microwave technology are in their infancy, adverse effects from exposure have already been identified. Little or no information is available on the magnitude of exposure of the population to these sources of non-ionizing radiation. Not enough is known about the health effects of long-term exposure to low levels of both ionizing and non-ionizing radiation. Control over the needless exposure of man to radiation is necessary in order that the benefits to be gained, both in industry and medicine, can be realized. The conservative health position of no radiation exposure without benefit imposes the responsibility of developing new techniques and methods to optimize use at low user exposure. Otherwise the benefits to be gained in new uses of radiation will be deterred. Thus, the primary goal in the area of radiological health is to optimize the use of radiation and still protect man from the direct and indirect adverse health effects resulting from the exposure to ionizing and non-ionizing radiation.

	1969 Estimate	1970 Estimate	Increase or Decrease
a. Grants.....	$4,296,000	$4,296,000	---

(1) Research Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuation.....	60	$1,626,000	58	$1,710,000	-2	+$84,000
New grants.....	27	640,000	19	556,000	-8	-84,000
Supplements.....	(4)	30,000	(5)	30,000	(+1)	---
Total.....	87	2,296,000	77	2,296,000	-10	---

Increasing uses of radiation in the fields of medicine, industry and defense as well as in the home are creating many new and diverse problems affecting the public health. Continuing efforts are directed to the identification of new problem areas and the development of methods for their timely resolution. These efforts are aided significantly by research grants which support the work of outstanding radiological health scientists at leading universities and research centers, who provide skills and talents complementary or supplementary to those available in the government.

Areas of emphasis under the research grants program include studies in electronic product radiation, nuclear medicine, dose reduction, and improvements in radiological health methodology. An example of positive benefit derived from this program is the publication by the Medical Internal Dose Committee of the Society of Nuclear Medicine concerning radiation dose from diagnostic isotope procedures. This publication has become accepted as the reference book in this field.

An investigation of neoplasms in children treated with X-Rays (at the University of Rochester), exemplifies studies being supported relative to human epidemiology and population exposure. The findings are a major step in establishing that the latent effects of radiation may extend to over 15 years and that the thyroid is not radiation resistant, as previously believed. This knowledge is relevant to the problem of setting standards for environmental Iodine-131 so as to limit exposures to the population at large.

There are a number of other areas of investigation which promise findings that will enhance the capability to better control radiological health hazards. These studies cover environmental pathways, protective actions in environmental contamination, radiation bio-effects, mechanisms of radiation damage, and studies in basic radiation physics and chemistry.

With the advent of the Radiation Control for Health and Safety Act for 1968, the 19 new projects scheduled for funding in 1970 will expand efforts related to the development of criteria for standards needed for exposures from electronic products. There is growing concern over possible non-thermal effects of microwave radiation exposure. Additional research efforts will be undertaken relative to an evaluation both quantitatively and qualitatively of non-ionizing radiation exposure to man and their effects.

(2) Training Grants

1969 Estimate		1970 Estimate		Increase or Decrease	
No.	Amount	No.	Amount	No.	Amount
33	$2,000,000	33	$2,000,000	--	---

The Training Grants Program is designed to support the training of radiological health specialists and technicians to carry out the wide range of radiological health programs of official health agencies as well as a number of non-governmental health programs. Grants are made to educational institutions to support development of radiological health courses and to give financial help to selected students. These programs are helping to reduce the shortage of radiation protection and control specialists; for example, more than 500 graduate degrees have been awarded as a result of the specialist program.

Training programs now being supported will be modified to place additional emphasis on courses dealing with the health aspects of non-ionizing radiation. Selected projects will be increased to provide for modification of curricula and support for additional teaching staff and equipment. This initial step will provide student support to selected individuals to receive the broad training needed for providing leadership in this rapidly developing technical field encompassing the entire electromagnetic spectrum. The estimates provide for the training of 180 specialists and 110 technicians in 1970 as compared with 225 specialists and 175 technicians in 1969.

In 1969 $2,000,000 for these training grants were included in the appropriation, "Comprehensive Health Planning and Services", and in 1970 these funds are being requested in the Environmental Control appropriation.

b. Direct Operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	711	$ 7,641,000	752	$ 8,286,000	+41	+$645,000
Other expenses	--	4,246,000	--	4,771,000	--	+525,000
Total	711	11,887,000	752	13,057,000	+41	+1,170,000

Health Effects

The growing number of radiation sources and the increasing diversity and frequency of their uses in the United States emphasized the need for precise knowledge of long-term effects of low level radiation exposure. The total population is still confronted with the potential for significant increases in exposure levels in the future. Epidemiological studies and animal experimentations are underway to document population exposure and dose from selected sources of ionizing radiation to provide a better understanding of the dose-effect relationship.

Until further information is available all levels of radiation exposure must be considered potentially harmful, particularly when the fetus or child is exposed. Further, little is known on how other environmental insults may reinforce the damage potential of ionizing radiation. Parallel information is urgently needed to assess the public health significance of non-ionizing radiations such as microwaves and lasers. The relationship of exposure and effects from the various sources to specific population groups must be delineated. In the area of medical X-ray exposure, for example, a study was completed to provide estimates of population exposure, by type of examination or procedure, for a variety of demographic and X-ray facility characteristics. The information produced in this study is being used to guide the development of programs aimed at promoting more efficient use of X-ray, to formulate hypotheses for further research, and to establish a baseline for evaluating program effectiveness. This study also provided a basis for estimating specific organ and genetic dose from X-ray exposure. Studies are being conducted on human population groups that receive unique and identifiable radiation exposure to quantify long-term biological effects and to elucidate the major dose-effect phenomena. Biological data on the relative radio-sensitivity of various systems and organs provide additional information needed to establish public health exposure guides.

Experimental findings from animal studies, conducted in our laboratories and elsewhere, provide evidence to support the hypothesis that prenatal and young age groups may be uniquely sensitive to the deleterious effects of radiation. Using a variety of mammalian species, it has been shown that sublethal doses to animals result in changes to certain enzyme systems, the stress response of the physiological functions, the ultrastructure of the eye, and chromosomes of various types of cells. Efforts are underway to relate these changes to the long-term effects associated with radiation both in the adult and young animal. The following are examples of specific studies recently completed or in progress.

(1) The Collaborative Radiological Health Laboratory at Colorado State University is conducting studies using beagle dogs to evaluate the long-term effects from low level external exposure to radiation. Emphasis is being given to the effect upon young animals from irradiation during pregnancy and in young pups. These studies are essential to an understanding of the factors that should be considered in establishing exposure standards related to various age groupings.

(2) Studies of whole body X-radiation combined with ethionine, an analog of an essential amino acid, indicate a marked increase in the incidence of both mammary tumors and liver tumors in rats, with tumors appearing earlier in the ones receiving combined exposures. In addition, cultured cells pretreated with Virus (SV-40), followed by radiation were found to have a malignant potential higher than cells treated with virus or radiation only.

(3) An intramural project on the induction of leukemia in cats has made a major contribution in this critical area during 1968. Heretofore, the critical isotope from the standpoint of bone marrow irradiation has been considered to be Strontium-90 due to its long half-life. New data indicates that the shorter-lived radionuclide Strontium-89 could be the controlling isotope for prenatal exposures. The data indicate that the higher dose rate from Strontium-89 to a sensitive organism may be more critical than the lower dose rate from Strontium-90, even when the total dose from Strontium-90 is greater. This fact could be very significant for the review and revision of standards applicable to the fission products release from weapons and accidents involving nuclear reactors.

(4) Investigations concerned with the emission of X-ray from color television receivers have demonstrated such X-rays to be more penetrating in body tissues than previously estimated.

As findings are obtained from studies and experiments, progress reports and scientific papers are issued and seminars and symposia are conducted to establish baselines of reference in order to provide continuous updating and revision of radiological health practices.

Control Program Development

The principal public health mission in the radiological field is the evaluation and control of exposures to individuals or population groups from radiation sources used in the healing arts and in industry and from environmental radioactivity. Control program development activities include ongoing programs which have been highly successful in control of population exposures despite the fact that the exposure potential has been increasing rapidly. These include programs concerned with medical and dental X-rays, nuclear medicine, environmental radioactivity and short-course training.

Progress is being made in the medical X-ray field in three areas: (a) creation of an image production system which will provide the necessary information for proper diagnostic use with a minimum of X-ray exposure; (b) establishment of criteria and recommendations for acceptable levels of paramedical training; and (c) research directed toward reduction equipment. There has been an active effort on the part of X-ray equipment manufacturers to develop and market an automatic collimator device for diagnostic X-ray units following the initial patent obtained by the Department on such a unit. Emory University has developed a prototype system that provides stop-action X-ray pictures on a television screen during fluoroscopy while permitting an exposure reduction to one-five hundreth of that which would be required to produce an

image of film. Another contractor, Johns Hopkins University, has developed a system to improve the efficiency with which (a) diagnostic X-ray reporting and (b) X-ray film handling and filing are carried out in a large hospital radiology department thus reducing the number of repeat X-rays.

The "Radiation Control for Health and Safety Act of 1968" requires the development and administration of performance standards to control the emission of electronic product radiation. Development and evaluation of automatic collimators and filtration continues to be an important activity in equipment improvement for exposure control because performance standards for X-ray equipment will be developed in 1970 and these standards will require the use of improved methods of collimation and filtration.

The diagnostic and therapeutic uses of radioisotopes continue to expand. It is vital that exposure to the organs directly involved be known so that benefit-risk criteria can be applied effectively. Authoritative estimates indicate that the use of radioisotopes in medicine was growing at the rate of fifteen percent per year. Current trends indicate that over 800,000 radioiostope administrations were performed during 1967.

The clinical aspects of nuclear medicine are being investigated at the University of Cincinnati pursuing three major areas for dose reduction: (a) investigation of clinical applications of new and promising pharmaceutical procedures; (b) radiopharmaceutical and instrumentation development for improved diagnoses using a minimal dose; and (c) development of techniques to accurately assess the dosimetry of pharmaceuticals.

National surveillance networks that measure environmental radioactivity (including releases from Federal test sites and ranges) are currently in operation. These networks provide a continuing record of levels and trends in environmental radioactivity and alert emergency protective agencies, as required. Data provided by these networks are published monthly in Radiological Health Data and Reports and other appropriate publications. In the event of contaminating incidents requiring action under Federal Radiation Council recommendations, data are made available immediately.

Changes in the relative significance of the several sources of environmental contamination have dictated a realignment of our surveillance capabilities. Some existing programs were developed primarily to measure radioactivity associated with fall-out from nuclear weapons testing. While surveillance activities and other programs related to fall-out will continue, additional programs are being developed to consider health hazards from all sources of environmental radiation. This is particularly true with respect to nuclear reactors and fuel reprocessing plants. Currently Atomic Energy Commission estimates for power reactor and fuel reprocessing plant construction indicate that 25 to 30 new construction applications will be initiated each year. Design safety analyses performed, thus far, have related mainly to the applications for construction permits. Additional effort will be required in 1970 and thereafter for the performance of follow-up analyses of newly constructed facilities prior to their initial operation, usually 3 to 4 years after the start of construction. In 1970 current studies will be expanded into a comprehensive study of contamination from nuclear reactors. This project will cover a representative portion of 53 operating reactors and a fuel reprocessing plant and will aid in the evaluation of individual plants as well as regional and national radioactive pollution trends associated with the nuclear power industry.

The radiological health training programs are establishing a major base from which permanent progress is emerging. Curricula development for use in both Schools of Medicine and Schools of Public Health, together with updating the training provided to personnel already in the field of radiological health through short-courses, are proving to be effective tools in dealing with radiological problems. Approximately 2,200 personnel from Federal, State, and local programs will be trained in 1970. New courses will be developed which will provide training for the control of electronic product radiation and carry out the new responsibilities under the "Radiation Control for Health and Safety Act of 1968."

Guidelines and procedures for utilization and control of radiation are being provided to radiological health and other public officials. Similarly, direct technical assistance and specialized consultant services are provided to States and other agencies in development, maintenance and updating of their radiological health programs.

Electronic Products

The "Radiation Control for Health and Safety Act of 1968" directs the Secretary of Health, Education, and Welfare to establish an electronic product radiation control program which would include the development and administration of performance standards on a product by product basis to control the emission of radiation from electronic products and the undertaking by public and private organizations of research and investigation into the effects and control of such radiation emissions. The legislation covers all electronic products which may purposely or incidentally emit radiation, and which are a source of human exposure at work, in the home, or during medical treatment. In carrying out this program, the Secretary is directed to maintain liaison and consult with industry, professional organizations, and appropriate Federal and State agencies.

The requirements of the Act provide that the Secretary:

(1) establish and carry out an electronic product radiation control program designed to protect the public health and safety from electronic product radiation;

(2) conduct specific studies and make a report of the results of such studies to the Congress on or before January 1, 1970, and from time to time thereafter as he may deem appropriate; and

(3) shall by regulation prescribe performance standards for electronic products to control the emission of electronic product radiation from such products, if he determines that such standards are necessary for the protection of the public health and safety.

The Act also provides that:

(4) Every manufacturer of electronic products who discovers that an electronic product produced, assembled, or imported by him has a defect which relates to the safe use of such product by reason of the emission of electronic product radiation as defined in performance standards, shall immediately notify the Secretary of such defects.

(5) Any electronic product offered for importation into the United States which fails to meet applicable standards shall be denied entry.

(6) The District Courts of the United States shall have jurisdiction, for cause shown, to restrain dealers and distributors of electronic products from selling or otherwise disposing of electronic products which do not conform to an applicable standard.

Excessive radiation can be an unwanted by-product of the operation of some electronic products, and persons exposed to such radiation may suffer somatic or genetic health effects and even death. Each exposure to radiation by an individual is retained, thus making its effect cumulative.

To effectively evaluate the public health significance of any radiation emissions from electronic products, it is necessary to accelerate and broaden research on the biological effects of these radiations. New research on the biological effects of microwaves, lasers, and ultrasonic generators will be initiated through contracts and collaborative agreements with universities, research institutes, and other governmental agencies, such as the National Bureau of Standards and various laboratories within the Department of Defense. Current radiological health research activities in the area of biological effects which focus on low energy X-rays and microwaves will be intensified.

The energy emission from devices such as lasers, radar, X-ray equipment, superconducting magnets, ultrasonic devices, etc. may be electromagnetic, mechanical, corpuscular, or a combination of these. Instrumentation to respond to the appropriate form, wave-length, rate of exposure and spatial distribution with known response characteristics is essential. The exact physical nature must be determined to aid in understanding the effect and to develop control measures. Instrumentation for measuring the characteristics of emission from microwave ovens must be developed in order to obtain meaningful dose-effect data. Practical instrumentation for this purpose does not now exist for this source.

The instrument developed by Radiological Health personnel to measure low energy X-rays from high voltage tubes in color television receivers will be adapted for use in industrial quality control procedures. Additional emphasis will be placed on the development of methods for the rapid screening of TV components and for surveying microwave ovens. An agreement has been negotiated with the National Bureau of Standards for assistance in developing reference instrumentation suitable for intercomparative measurement of microwave emissions. Meanwhile, evaluations will continue to be made with available instrumentation of interlock systems on microwave cooking ovens and estimates of leakage from these ovens during home use to establish health criteria.

Within the first year, in accordance with the requirements of the legislation, the following standards will be under development:

(1) X-ray emissions from color television receivers.
(2) Microwave emissions from electronic cooking ovens.
(3) Medical and dental X-ray equipment.
(4) Non-medical equipment such as accelerators and X-ray defraction units.

The establishment of priorities for setting the preceding standards will require not only a thorough review of the health implication of radiation for population exposure, but must also consider the available methods of measurement and detection for compliance and technical feasibility. Final determinations on all aspects of a standard will be made after consultation with the Technical Electronic Product Radiation Safety Standards Committee as prescribed in the Act.

The initial step in administering import controls as specified by law will be the establishment of a working relationship between the Treasury Department and DHEW. Through the Treasury Department, the Commerce Department and through industry channels, those manufacturers offering or utilizing applicable imported electronic products and components will be identified.

Procedures have been established to coordinate the preparation of technical specifications used in the purchase of Federal equipment to require the inclusion of automatic collimation of medical X-ray machines as a part of the purchasing specifications.

The following reports by the Secretary to the Congress are required by the Act on or before January 1, 1970:

(1) Control of health hazards from radioactive materials other than materials regulated under the Atomic Energy Act of 1954.
   (a) A report on the existing recommendations relative to radium and its daughter products.
   (b) A report dealing with radioactive materials produced by accelerators. Some of the radioactive material is identical to that produced in reactors, and is not controlled. A review of this problem and appropriate recommendations will be made.

(2) A review and analysis of the radiation exposure situation surrounding use of accelerators.

(3) An analysis of the resale of used electronic products equipment. This report will differentiate between consumer products and medical and dental X-ray equipment. It is anticipated that recommendations concerning the resale of high voltage X-ray equipment, including industrial and medical units, will be presented. The resale or donation of medical X-ray equipment from Government surplus or used equipment from updated medical facilities will be reviewed and appropriate recommendations concerning such equipment will be made. An analysis of the possible population exposure resulting from the resale of consumer products will be made on a product by product basis with appropriate recommendations.

(4) A review of the status of State radiological health programs with appropriate recommendations on mechanisms to increase the capability of State organizations. Recommendations for the establishment of State-Federal agreements for the control of radiation emitting electronic products will be prepared.

An increase of $1,170,000 and 41 positions is requested for radiological health. $1,024,000 and the 41 positions will be used for electronic products activities as follows: $430,000 and 22 positions to establish enforcement capabilities; $90,000 and 5 positions for expansion of research to more clearly define health effects from non-ionizing radiation; $504,000 and 14 positions to expand development of better instrumentation and for establishment of standards as prescribed in the Act. The remaining $146,000 is for built-in requirements.

4. Community Environmental Management

Urban core health problems are excessive. Disease and disability rates among the poorly educated and underemployed elements of our society--particularly in urban areas--reach levels of five to eight fold over the rates of disease and disability among the more affluent elements. No single Federal or local agency can effectively cope with this problem unless the environmental stresses and behavioral features which impinge on man's health and well-being are integrated into a total effort. Rodents, noise, unsafe housing, dangerous streets, crowded dwellings, uncollected garbage and rubbish, poorly ventilated, heated and lighted homes, poor nutrition, tenant and landlord irresponsbility in maintenance, inaccessible community facilities, lack of recreation space and facilities, and the inability to bridge the communications gap between our technology and the people we seek to benefit all contribute to the problems of the environment which affect health. In addition, rapidly swelling urban areas which include a variety of potentially hazardous by-products of pollution growth, industrial expansion, and technological changes are continuing to be developed and are compounding and magnifying the urban health problems of the future.

The number of persons traveling is increasing dramatically. Intercity travel is up to over one trillion intercity passenger miles per year. Travel for commuting, business, or pleasure, occupies an increasing portion of man's time and represents an increasingly significant environmental exposure which may affect his health and well being. Standards are lacking for the environmental sanitation of crowded air and bus terminals, for facilities serving travelers on interstate highways, for facilities to serve the large groups of people on the new jumbo jets.

Some indices of the scope of community environmental problems are:

---Each year there are 24,000 accidental deaths and 20 million injuries in and around the home; 7,000 deaths and 4 million injuries in outdoor recreation areas; and 50,000 deaths and 2 million injuries involving motor vehicles.

---Food Health Hazards--A continuing technical revolution in the food industries and a drastic change in the social pattern of living in this country have led to centralized processing and interstate distribution of non-sterile foods which require the exercise of new systems of control to assure consumer protection.

---Inadequate community planning in the past has resulted in homes with fire hazards, injury hazards, inadequate sanitary plumbing and communities with haphazard systems of sewerage and solid waste disposal. Each of these features has been identified with deleterious effects to health.

---An estimated 14,000 persons are bitten by rats annually. Rats destroy property, contaminate food, carry communicable diseases and cause an estimated economic loss of one billion dollars annually.

The goal in community environmental management is to raise the level of environmental health and well-being of all Americans in the home, neighborhood, community and regional environments.

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	1969 Estimate	1970 Estimate	Increase or Decrease
a. Grants.....	$5,750,000	$4,369,000	-$1,381,000

Community Environmental Management research grants, training grants, and fellowships support the acquisition of new information and methodology through research and through development of trained personnel.

The specific areas of concern are: housing; control of injuries caused by environmental hazards; community sanitation; disease vector control; community environmental planning; milk, food, and interstate travel sanitation. The reduction will not allow for the funding of any new research grants. Provision is made for the non-competing, continuation research grants and most of the training grants.

(1) Research Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.....	83	$2,605,000	87	$3,027,000	+4	+$422,000
(b) New grants.....	48	1,558,000	--	---	-48	-1,558,000
(c) Supplementals.....	(3)	100,000	(3)	100,000	--	---
Total.....	131	4,263,000	87	3,127,000	-44	-1,136,000

Recent studies at the University of Wisconsin and the University of Montana have definitely confirmed that the Clostridium perfringens organism is a cause of some of the food poisoning episodes in the United States. This bacteria is found more commonly in fresh meats, poultry and fish and less so in fruits, vegetables, frozen or canned foods.

The Type E Clostridium botulinum bacteria was responsible for the well known outbreak of food poisoning among persons who ate part of a shipment of Great Lakes whitefish several years ago. Research now in progress at the University of Wisconsin strongly suggests that this organism lives and multiplies in the Great Lakes, especially in Green Bay. This information, when confirmed, will have great significance to the fishing and packing industry, because until now it was believed that these bacteria reached the lakes through run-off from land, and did not long survive in the lake.

A research group at Brandeis University is developing a series of workable standards which will describe the features of home which will better protect the health and safety of older people. Another research team at the University of California, Los Angeles, is developing the features of housing which various minority groups and classes require for the maintenance of optimum health and safety and still are acceptable to them.

Studies at Tulane University are aimed at describing the exact mechanism of cervical injuries--known as whiplash. Preliminary results from this continuing study have already been provided to the Department of Transportation and the automobile industry for their use in designing head rests for cars.

Leg injuries to skiers will be considerably reduced by widespread adoption of the break-away ski binding developed under grants and recently improved by researchers at the University of Vermont. The University of North Dakota research into accidental shootings among hunters shows that wearing clothing of "electric orange" provides greater safety than "bright red." Brown hunting clothes are the most hazardous of all tested.

The reduction of $1,136,000 will not allow any new research grants to be funded. The remaining funds will permit continuation of non-competing commitments along with necessary supplements.

(2) Training Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.....	20	$1,364,000	14	$1,006,000	-6	-$358,000
(b) New grants.....	--	---	3	186,000	+3	+186,000
(c) Supplementals.....	--	---	--	---	--	---
Total.....	20	1,364,000	17	1,192,000	-3	-172,000

There are shortages of professionally-trained persons in the fields of injury control, housing hygiene, and urban planning to the extent that health agencies in more than 40 states and most municipalities do not have any such personnel on their staffs. The 168 persons now studying at 20 colleges and universities will bring much-needed new talent and new research capability to these critical problems as well as the field of milk and food research.

Under the 1970 request it is expected that the number of graduate students receiving support will decrease to approximately 145.

(3) Fellowships

1969 Estimate		1970 Estimate		Increase or Decrease	
No.	Amount	No.	Amount	No.	Amount
17	$123,000	7	$50,000	-10	-$73,000

In addition to training grants, fellowships are used to meet the need for trained and experienced investigators interested in undertaking research. They provide support to students for graduate or postgraduate training in order to increase research manpower in the program areas of responsibility.

There are now programs for training of students in specialties related to the functional community environmental management areas at a few universities such as UCLA, Cornell, Pittsburgh, and the Ohio State University.

A total of seven fellowships will be supported in 1970 compared to 17 in 1969.

b. Direct Operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	514	$6,687,000	446	$5,943,000	-68	-$744,000
Other expenses.....	--	4,940,000	--	905,000	--	-4,035,000
Total.....	514	11,627,000	446	6,848,000	-68	-4,779,000

Community Environmental Health

Accidental injuries still rank as the fourth leading cause of death in the United States, and the primary cause of death between ages 1 and 35. Of the more than 100,000 annual fatal injuries, 50% involve motor vehicles and nearly 35% occur in the home or recreational environments. More than half of the lost-time injuries or medically treated injuries occur in the home. Research during the past year and a half shows that residents of the inner city or ghettos of metropolitan areas suffer five to eight times as many burns, suffocations, accidental poisonings and pedestrian injuries when compared with the balance of the cities' population.

More intensive study of the high school age residents of Pittsburgh, Pa., and Santa Barbara, Calif., show that the preponderance of inner city residents who sustain accidental injury also display anti-social attitudes such as teenage drinking and participation in gang activities. The same students also admit to "thrill-seeking" and "chance-taking" pastimes including minor law-breaking offenses. This relationship between social behavior and injury seems to be confirmed by findings which show that those students whose behavior patterns are more conventional sustain significantly fewer injuries.

The research plan calls for intensive epidemiological followup to establish specific cause-effect relationships among the behavior, residence location, and injury experience of these high risk populations. Very limited epidemiology has been started, but, as yet, results are insufficient to determine what types of injury control techniques could be effective.

In order to extend the limited epidemiological capability within this activity, an injury reporting system is being developed which will be used by a representative sample of hospitals, clinics and physicians on either a voluntary or contract basis. This system will provide sufficiently detailed descriptions of the victim's actions, what happened, how it happened, etc., so that the more intensive epidemiological investigations can be minimized. This system should be in effect on a limited basis this year.

In the continuing laboratory investigation of the behavioral aspects of injury causation, preliminary findings indicate that among persons who are intoxicated, the single index of blood alcohol level is not a good predicator of that person's risk-taking actions. The relationship between a person's blood levels and his reactions to an accident situation are more complex than has been thought until now. These studies are continuing.

In support of activities directed at preventing traffic injuries being carried on by the Department of Transportation, educational programs are being conducted to (a) inform drivers and pedestrians about the increased risks involved when the use of alcohol and drugs are combined with the performance of task such as driving an automobile, (b) increase the use of restraining systems by motor vehicle occupants, (c) increase the use of protective equipment by motorcyclists, (d) reduce pedestrian exposure to accident situations such as by increasing their visibility at night through the use of retro-reflective materials. Efforts to increase the number and the effectiveness of State medical advisory boards on driver licensure will continue to receive emphasis.

Educational programs designed to prevent injuries in the home utilize pamphlets, magazine and newspaper articles, radio and television announcements and presentations to civic clubs, youth groups, and schools. These presentations utilize films and specially designed training aids which show how to prevent such injuries as: carbon monoxide poisoning, electric shock, burns from fire and hot substances, and pedestrians and cyclists being struck by automobiles at night. During 1969 an estimated 6,000 persons participated in the electric shock prevention program, and another 2,000 viewed demonstrations in pedestrian and cyclist safety.

Residents of our inner cities or ghettos not only suffer from high rates of accidental injury, they also account for higher than expected morbidity from rat bites, lead poisoning, tuberculosis, gastroenteritis, nutritional diseases and mental illness. Each of these disease problems has a complex etiology involving the environment, social behavioral patterns, economic status and the quality of housing. To the extent possible, these relationships are being studied to find out what effective counter measures can be taken. Although a great deal more research is needed, the controls developed up to now have been published in the "APHA-PHS Recommended Housing and Maintenance Ordinance-1968." This document, which is being updated during 1969 provides minimum health standards for such features as space per person, lighting, ventilation, noise levels, and heat.

State, local and other Federal agencies are being encouraged to adopt and implement these recommended standards.

A method of predicting neighborhood deterioration before it reaches the stage of "blighted" or "slum" has been developed. This technique, called Neighborhood Analysis, makes use of easily measured indices which have been identified as valid indicators of declining quality in a neighborhood, and can be determined in time to take effective preventive action. When fully perfected, these indices can be measured by semi-skilled personnel who will be trained for it.

The use of semi-skilled and even unskilled persons to assist in community environmental management programs has been successfully tested. In a cooperative program with the Chicago Health Department, 20 such unskilled persons were trained to conduct general sanitation activities in core city areas. Following the training period, these people were employed by the city as Health Educator Aides.

These Aides, selected and employed by the local health department are generally indigenous to the ghetto area where they will work. Following their period of training they work both as motivating influences and communication links between the residents and the city agencies. They stimulate the slum dwellers to improve their personal hygiene and the safety and livability of their dwellings and neighborhoods. Further, they are able to direct residents to appropriate city agencies when specific help is needed.

The success of this pilot program in Chicago was acclaimed by the Aides, the ghetto residents, the Health Department and political leaders alike. At the request of the Office of Economic Opportunity an additional 500 persons were provided with this training. Currently 25 Health Educator Aides are being trained in Hunters Point, N.Y. During the balance of 1969 it is planned to provide this training for an additional 200 persons from Norfolk, Virginia, Tulsa, Oklahoma, and Kansas City, Missouri.

Current and future training will develop Aides for use not only in general sanitation programs but also in injury control, neighborhood analysis, rat control, and neighborhood solid waste problems.

Insect and Rodent Control

The program to eradicate the Aedes aegypti mosquito (the carrier of yellow fever and dengue fever) has been curtailed. This curtailment has resulted in the elimination of field eradication activities in 1969 in Alabama, Florida, Georgia, Louisiana, Texas, South Carolina, Hawaii, Virgin Islands and Puerto Rico. This program has been reoriented to a research effort to develop more efficient techniques for eradicating Aedes aegypti mosquitos. While this country has not had a case of yellow fever in 44 years, eradication was originally undertaken as a cooperative effort with other nations to eliminate the vector of yellow fever from the western hemisphere.

To assure success of comprehensive rat control programs, limited local competency in most areas of the United States requires support by expert technicians and consultants. Emphasis will be given activities relating to the development, operation, and evaluation of grant supported rat control projects under the Public Health Service Act as amended, Section 314(e). Training and technical assistance competency in the Aedes aegypti program also will be used for providing support to rodent control activities.

Arctic Health

The Arctic Health Research Center, representing an approach to regional environmental management, is placing emphasis on an environmental health program which relates the effect of cold weather climates to human health. The Center seeks solutions to environmental problems such as safe disposal of solid wastes, procurement of year-round water supplies, protection of food and water, and the development of low-cost hygienic housing. These environmental problems relate to certain disease problems which are unique to the Alaskan climate. These include otitis media which affects 62% of the native children under age 4; respiratory diseases which occur at up to 4 times the rate of other climates; parasitic diseases contracted from eating raw fish which affects 30% of the natives living in the southwest part of the State as well as diseases which are associated with the animals of that region; hydatid disease, rabies and tularemia.

Efforts are being made to determine factors affecting man's ability to adapt to the arctic and subarctic environment and attempt to determine the cultural factors in non-acceptance of public health education and health practices among Alaskan natives.

Operations will continue at the present level.

Mexico Border Demonstration Project

The United States government works with the government of Mexico to provide training, technical assistance and demonstrations in sanitation to correct and prevent public health hazards along the border. This activity utilizes professionals from both the United States and Mexico to demonstrate various sanitation practices, train local personnel and develop joint improvement programs. The results of this project are reflected in the practical absence of sanitation-related health problems among persons who regularly cross the border.

Milk, Food & Interstate Travel Sanitation

The Food Protection program will continue during 1970 its role of providing assistance to other Federal agencies, States, communities and the food industry in the development of effective, uniform programs for the control and prevention of foodborne illnesses. These groups rely heavily on guidance from this activity in updating their methods and on its resources and cooperation to cope with the public health problems that continually emerge from the rapid technological advances characteristic of today's food industries. Activities undertaken include (a) conduct of research and investigation, (b) development of model ordinances and codes and related program guides, (c) technical and consultative assistance to State and local programs, (d) food hazards surveillance over market foods, (e) training, (f) development of food equipment standards, and (g) interstate program activities.

The Interstate Milk Shipper Program, a voluntary cooperative State-PHS program is widely used and provides valid information to milk-receiving States on the quality of milk at its source. It is also used by the Veteran's Administration, the Department of Defense, interstate carriers, and the Indian Health Service, in purchasing high quality milk and milk products. Ratings of interstate milk shippers are published quarterly and widely distributed to State and local agencies, the milk industry, and the above Federal agencies to identify milk sources meeting acceptable standards.

During 1969 approximately 150 check ratings will be conducted along with State officials on some of the 1582 milk shippers now listed. It is significant that since this program's inception, there have been no outbreaks of disease traced to supplies of either fluid or dried milk shipped by producers included in this program.

A total of 32 positions and $390,000 will be devoted to this activity, the current level.

Interstate Carrier activities will be continued in 1970 at the same levels as in 1969. Interstate Carrier sanitation activities include implementation of the Interstate Quarantine Regulations including investigations of health and

sanitation hazards associated with interstate travel and maintenance of adequate standards for the shipping of etiologic agents. Among the 3,754 reviews and inspections during the past 18 months there were 34 adverse actions taken: 4 unfavorable equipment reviews and 30 serving facilities were classified "Use Prohibited." During this same period there were 2 confirmed food-borne disease outbreaks traced to interstate carriers: one was a ship with 300 persons involved, the other an airplane with 14 cases reported. There were also 5 unconfirmed reports which involved a total of 8 cases.

The great increase in mobility of our citizens coupled with constantly changing methods of food handling by the carriers makes this activity an important safeguard to health.

Specific activities that will be carried out in 1970 include continued review of design and construction of the food, water, and waste systems of new passenger conveyances and conveyance servicing facilities, including the new "sky bus" and supersonic jets; implementation of sanitation standards developed for conveyance and conveyance service equipment, including those for aircraft food and beverage service equipment now being developed; conducting sanitary surveys and inspections of interstate conveyances; review and certification of sources of water, food, milk, and frozen desserts for use by interstate carrier companies, utilizing cooperating State and local health agency (and other ECA) personnel when possible; consultation and training with carrier company personnel on improved sanitary operation practices; and training and standardizing of cooperating surveillance personnel.

5. Water Hygiene

Substandard drinking water continues to pose a national threat to health. The quality of drinking water available to more than 6,000 of the Nation's communities fails to meet U.S. Public Health Service standards. This problem is aggravated by the fact that existing standards need broadening and updating. Drinking water quality is still measured largely by indicator microbiological tests, which may not accurately reflect the presence of disease causing organisms. In addition, cumulative and long-term health effects from trace chemical contaminants are virtually unknown and urgently need to be evaluated. Insufficient resources have been devoted to developing water treatment processes and facilities. The relationship between drinking water quality and chronic diseases is poorly understood. Increasing use of water for recreation has resulted in greater exposure to threats to health and well-being because of the unsafe quality of many such waters.

The main goal in the water hygiene program is to insure that water may be used from any public drinking water supply in the nation without fear of illness or poor quality and to assure the Nation's waters pose no health threat when used for recreation and other beneficial purposes.

	1969 Estimate	1970 Estimate	Increase or Decrease
a. Grants.....	$358,000	$358,000	---

(1) Research Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.....	4	$158,000	4	$158,000	--	---
(b) New grants.....	--	---	--	---	--	---
(c) Supplementals.....	--	---	--	---	--	---
Total.....	4	158,000	4	158,000	--	---

Research grants focus on the production of safe potable water, safety of human recreational waters and the development of criteria and standards for shellfish growing waters. Investigations emphasize the relationship between drinking water quality and the health and well being of consumers.

(2) Training Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations	4	$200,000	4	$200,000	--	---
(b) New grants	--	---	--	---	--	---
(c) Supplementals	--	---	--	---	--	---
Total	4	200,000	4	200,000	--	---

Training grants provide funds for the development of qualified specialists in water hygiene and related fields. Existing grants to four universities will be continued in 1970. Twenty-eight students received graduate level training in water chemistry and biology, sanitary engineering, and environmental biology in 1969, and the same number will be trained in 1970.

b. Direct Operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	160	$1,471,000	180	$1,792,000	+20	+$321,000
Other expenses	--	353,000	--	643,000	--	+290,000
Total	160	1,824,000	180	2,435,000	+20	+611,000

The goal of the program is to assure that the quality of the Nation's waters intended for drinking, recreation, growing shellfish, or other human contact is maintained at safe levels which will assure that man's health and well-being are not endangered. Of particular interest are the community water supplies of our nation which should be brought to a high level of health protection.

Achievement of this goal involves development of new information pertaining to the effects of water quality on health, including refinement of the Public Health Service quality standards for potable water. Program activities include: (1) development of improved methods for the identification and measurement of organic materials and trace elements occurring in drinking water supplies; (2) epidemiological and toxicological studies to determine the significance of organic material and trace elements in relation to human health; (3) development of suitable methods for removal of harmful contaminants; (4) development of standards that will assure the protection of human health where water must be used that has been renovated from polluted sources; and (5) the development of rapid and precise field laboratory tests to measure the quality of public drinking water supplies.

Significant advances have been made in research and control activities. Of particular importance is the recent development of a rapid (7-hour) test to determine the presence of fecal coliform bacteria in water supplies. Use of this

test can speed up by at least one full day the institution of corrective procedures in the event of contamination of water from human excreta. Publication and distribution of the new, authoritative "Manual for Evaluation of Public Water Supplies" is in print. This volume will be used by State and local health departments. Current research projects of special importance deal with the physiologic effects of organic chemical substances which are being identified in increasing amounts in our drinking water supplies. Information coming from research studies are being incorporated into recommendations for improved versions of the PHS Drinking Water Standards. The most recent criteria to be developed deal with pesticides, boron and uranyl ions.

In addition to its efforts with respect to protection of community water supplies and technical consultation on private water supplies, the program acts as the principal coordinator for DHEW efforts in the national development of water resources. The principal goal here is to insure protection and enhancement of health and well-being in relation to the development and use of water resources which will be needed by future generations of Americans.

Research on Health Effects

In 1970, the principal new focus will be in making a national survey of the quality of public drinking water supplies. The survey was initiated in 1969 in conjunction with activities relating to the certification of water supplies used by interstate carriers. In 1968, the Service conducted 80 surveys of carrier supplies-51 were "approved" (65%), 27 were "provisional" (33%), and 2 were "prohibited" (2%). This is an increase in the provisional and prohibited classes over the previous year and indicates an increase in the number of systems containing significant health hazards. The national survey will include the water supplies of several Standard Metropolitan Statistical Areas (SMSA) and will be expanded in 1970 to cover additional supplies including smaller communities. The survey will evaluate health hazards with respect to raw water, purification facilities, distribution systems, and the adequacy of health protection surveillance and control methods. Finished drinking water will be characterized as to physical, chemical, radiochemical, and microbiological qualities. This work carried on in conjunction with State and local authorities will provide a represensative national profile of the purity and safety of our drinking water supplies.

Statistical studies will be undertaken, also, using existing morbidity and mortality data selected from standard metropolitan statistical areas to further define observed correlations between drinking water quality and illness and death from various causes.

The survey, as described, is being conducted because no information is now available which fully characterizes the real or potential health hazards associated with water supplies not subject to Federal certification. Information gained from evaluating the supplies currently under Federal surveillance shows that new chemical and biological compounds being introduced into our environment are being observed in our water supplies. The extent to which this is happening, the health significance and the means to correct the situation, if necessary, will be learned during this survey.

The data so obtained will form the basis of a new National Water Quality Register. This proposed publication will provide all interested parties with full and authoritative information on the quality of water supplies, in all localities where such data can be obtained. Future studies will supplement the initial list of communities until the Register describes all public water supplies of the Nation.

Other continuing activities during 1970 will include evaluation of the Drinking Water Standards from the standpoint of reassessment of levels for certain toxicants and pathogens in the light of new knowledge. Modest efforts related to the development of new analytical methods for health protection will be continued, more meaningful indicators of swimming water quality will be sought, and epidemiological investigations of water-borne disease outbreaks will be continued.

Water Resources Studies

The protection of health and enhancement of the well-being of people, is a DHEW goal as stated in Senate Document No. 97, "POLICIES, STANDARDS, AND PROCEDURES IN THE FORMULATION, EVALUATION, AND REVIEW OF PLANS FOR USE AND DEVELOPMENT OF WATER AND RELATED LAND RESOURCES." Program efforts in 1969 were devoted to developing health guidelines for utilization of the water and related land resources, investigating and reviewing proposals for water resource developments or actions from various agencies, participating in the work of River Basin Commissions and field committees, and participating in the work of the Water Resources Council.

The Water Resources Council has been coordinating the conduct of a national program for comprehensive river basin planning by involved Federal and State agencies. DHEW responsibilities in these studies include (1) epidemiological assessment; (2) disease vector control; and (3) environmental control practices.

Certification and Regulatory Activities and Technical Assistance

Enforcement of standards and certification of Interstate Carrier Water Supplies required under the provision of the Interstate Quarantine Regulations will be continued at 1969 levels but will receive benefit in many localities from the conduct of the national public drinking water supply review. Technical assistance to local jurisdictions and training activities will be maintained at current levels.

The total requested increase of $611,000 and 20 positions will provide for the conduct of the National Water Quality surveys, DHEW responsibilities to the Water Resources Council for planned studies, and net built-in requirements.

6. Program Direction and Management Services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	220	$2,354,000	220	$2,404,000	--	+$50,000
Other expenses.....	--	726,000	--	726,000	--	---
Total.....	220	3,080,000	220	3,130,000	--	+50,000

The Secretary's reorganization order of July 1, 1968, established the Consumer Protection and Environmental Health Service of which the Environmental Control Administration is a constituent organization. Within the Administration, five Bureaus are concerned with the administration of various environmental health programs. These are the Bureau of Radiological Health, Bureau of Solid Waste Management, Bureau of Water Hygiene, Bureau of Community Environmental Management, and Bureau of Occupational Safety and Health. The goal of ECA is to enhance the health and welfare of man by improving the quality of the environment in which he lives through better management of solid wastes, control of exposure to hazardous radiation, reduction of occupational injuries and disease, improvement of the quality of water used for drinking and recreation, and improvement of the living environment of the homes, neighborhoods, and communities.

The Office of the Commissioner of the Environmental Control Administration has responsibility for direction and coordination of all Administration programs. This responsibility is accomplished through the immediate Office of the Commissioner and four support offices--The Office of Program Development, Office of Administration, Office of Research and Development, and the Office of Public Information and Education.

Immediate Office of the Commissioner--The Commissioner, assisted by the Deputy Commissioner and the Associate Commissioner, has responsibility for overall program direction and coordination. More specifically, the Associate Commissioner provides leadership for several functions relating to program coordination and the implementation of uniform policies and procedures for the Administration's grant programs. A liaison officer is assigned the responsibility for maintaining relationship with other government agencies, both within and outside the Department, which conduct environmental activities having a bearing on the Administration's programs. The development, promulgation and adoption of these standards and criteria as they relate to the Administration's activities and which are essential aspects of environmental control programs are coordinated in this office.

Program Development--Program Development, Legislative and Governmental Affairs, and Planning and Evaluation comprise the threefold thrust of the Administration's Office of Program Development. It operates to identify areas of ECA concern and to promote the development of new programs for and approaches to the solutions of environmental health problems. It is the principal ECA source of information and assistance on new legislation, legislative developments in other agencies, and the promulgation of new Federal, State, or local legislative proposals developed by the Administration, and coordinates ECA responses to Congressional inquiries concerning proposed legislation. This office assesses overall progress of ECA toward stated goals, expresses long and short-term ECA

objectives, implements the Administration's PPB efforts, assists in the development and assignment of program priorities and budget review, and conducts continuing review and evaluation of program operations for validation of accomplishments.

Management Services--The establishment of the Administration brought with it the need for developing a capability for providing administrative management services. The Office of Administration within the immediate Office of the Commissioner will be responsible for providing these services. Administrative management services will be provided through the three Divisions and a branch comprising the Office of Administration. These are the Division of Administrative Operations, Financial Management, and Personnel Management, and the Management Systems Branch. Staff advice and assistance on the management implications of proposed plans and operations will be provided by the Office of Administration to all of the constituent organizations within the Administration. Central servicing to all of the Bureaus will be provided by the three Divisions in the areas of financial management, personnel management, procurement, general supply management, and office services. A Management Systems Branch within the immediate Office of the Executive Officer will provide management systems services and coordinate computer services.

Research and Development--In an organization of the size and complexity of this Administration there must be a staff capability for formulation of basic policies in this area and for the coordination of research and development efforts. Staff support must be available to plan and develop across-the-board research programs which will provide the greatest advancement of the control mission of the Administration. This group also has the responsibility for evaluating the adequacy of environmental surveillance programs and serves as the central repository for epidemiological data pertaining to the Administration's activities. Staff functions related to research and development activities will be conducted by an Office of Research and Development.

Public Information and Education--The scope of ECA's programs, which can affect everyone in our society, requires that the Commissioner's office have a strong staff cabability for directing ECA's public information program. The Office of Public Information and Education which has been established for this purpose will coordinate the Administration's public information program, produce information and public education materials, provide liaison and public relations with higher echelons, and report to the Commissioner on public responses and attitudes toward ECA activities. It also is responsible for the interpretation of Administration efforts to the public.

The same level of effort is projected in fiscal year 1970 for program direction and administrative management activities.

New Positions Requested
Fiscal Year 1970

	Grade	Annual Salary
Solid Waste Management		
Epidemiologist	GS-15	$ 19,780
Ecologist	GS-14	16,946
Information specialist	GS-12	12,174
Biologist	GS-12	12,174
Engineering technician	GS-7	6,981
Technician	GS-7	6,981
Secretary	GS-5	5,732
Commissioned officers:		
(2) Senior grade		22,184
Senior assistant grade		8,276
		(10) 111,228
Occupational Safety and Health		
Medical officer	GS-15	19,780
Epidemiologist	GS-14	16,946
Bioengineer	GS-13	14,409
System engineer	GS-13	14,409
Statistician	GS-7	6,981
Administrative assistant	GS-7	6,981
Secretary	GS-5	5,732
Physical science aide	GS-5	5,732
Commissioned officers:		
Senior grade		11,092
Full grade		9,490
		(10) 111,552
Radiological Health		
Opthalmologist	GS-16	22,835
Research physicist	GS-15	19,780
Biomedical engineer	GS-15	19,780
(2) Research engineer	GS-14	33,892
Electrical engineer	GS-14	16,946
(4) Electrical engineer	GS-13	57,636
(3) Electronic supervisor	GS-12	36,522
(2) Engineering technician	GS-11	20,406
(2) Electronic technician	GS-9	16,924
(3) Electronic technician	GS-7	20,943
(3) Secretary	GS-5	17,196
Commissioned officers:		
(3) Director grade		43,071
(6) Senior grade		66,552
(6) Full grade		56,940
(3) Senior assistant grade		24,828
		(41) 474,251

New Positions Requested - continued

	Grade		Annual Salary
Water Hygiene			
Physiologist	GS-14		16,946
Economist	GS-14		16,946
Epidemiologist	GS-13		14,409
Engineer	GS-13		14,409
Engineer	GS-12		12,174
Statistician	GS-12		12,174
Engineer	GS-11		10,203
(2) Biological laboratory technician	GS-9		16,924
Chemist	GS-9		8,462
Engineer	GS-9		8,462
Microbiologist	GS-9		8,462
Physical science technician	GS-5		5,732
Secretary	GS-5		5,732
Statistician	GS-5		5,732
Commissioned officers:			
(2) Director grade			28,714
Senior grade			11,092
Full grade			9,490
Senior assistant grade			8,276
		(20)	214,339
Community Environmental Management			
Aedes aegypti		(-68)	-604,804
Total new positions, all activities		(+13)	306,566

WEDNESDAY, MARCH 19, 1969.

BUILDINGS AND FACILITIES

WITNESSES

CHARLES C. JOHNSON, JR., ADMINISTRATOR
E. R. LANNON, ASSISTANT ADMINISTRATOR FOR ADMINISTRATION
THOMAS J. LAWLER, DIRECTOR, DIVISION OF BUDGET
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

Consumer Protection and Environmental Health Service:			
Transportation of things	4	5	5
Other services	357	2,645	1,756
Supplies and materials	15	47	582
Equipment	109	162	200
Lands and structures	209	472	575
Total obligations, Consumer Protection and Environental Health Service	694	3,331	3,118
Allocation to General Services Administration:			
Services of other agencies		131	61
Lands and structures	211	18,613	7,130
Total obligations, General Services Administration	211	18,744	7,191
Total obligations	905	22,075	10,309

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	Costs to this appropriation					Analysis of 1970 financing			
	Total estimate	To June 30, 1967	1968 actual	1969 estimate	1970 estimate	Deduct selected resources and unobligated balance, start of year	Add selected resources and unobligated balance, end of year	Appropriation required, 1970	Appropriation required to complete
Program by activities:									
1. Appalachian health field station	5,660		198	4,600	862	862			
2. Northeast marine health sciences laboratory	1,394	21	38	1,125					210
3. Northwest marine health sciences laboratory	1,288	58	1	1,059					170
4. Air pollution facility	26,815			200	1,615	1,615			25,000
5. Solid waste research facility	765	763		2					
6. Laboratory facility, Cincinnati, Ohio	22,715	37	18	330	1,000	1,000			21,330
7. Arctic health research center animal facility	1,173	40	84	1,049					
8. Arctic health research center	4,588	4,386	150	52					
9. National center for drug analysis	5,281	550	−53	260	3,541	4,524	983		
10. Research laboratory No. 1	4,775	157	25	4,593					
11. Research laboratory No. 2	18,600			700	250	250			17,650
12. FB-8 conversion	375	145	142	88					
13. Special pharmacological animal laboratory	1,962	1,961				1	1		
14. FDA district offices	13,254	1,123	245	7,573	2,341	4,313	1,972		
15. Repairs and improvements	1,423	177	102	444	700	370		400	
Total program costs, funded	110,068	9,418	950	22,075	10,309	12,935	2,956	400	64,360
Change in selected resources [1]			−45						
Total obligations	110,068	9,418	905	22,075	10,309	12,935	2,956	400	64,360
Financing:									
Comparative transfers from other accounts			−591	−8,661					
Unobligated balance available, start of year			−21,149	−21,985	−8,571				
Unobligated balance transferred from other accounts					−3,777				
Unobligated balance available, end of year			21,985	8,571	2,439				
Budget authority (appropriation)			1,150		400				
Relation of obligations to outlays:									
Obligations incurred, net			314	13,414	10,309				
Obligated balance, start of year			517	154	10,441				
Obligated balance, transferred					7,000				
Obligated balance, end of year			−154	−10,441	−18,466				
Outlays			677	3,127	9,284				

[1] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $934,000; 1968, $517,000; 1969, $517,000; 179, $517,000.

Mr. FLOOD. The committee will come to order.

We are still with Consumer Protection and Environmental Health Service. We will now take up buildings and facilities, and the Administrator, Mr. Charles Johnson, will take over.

I see you have a rather brief statement, Mr. Johnson. Do you want to read it?

GENERAL STATEMENT

Mr. JOHNSON. No, sir. I would merely want to point out, Mr. Chairman, that the buildings and facilities portion of the Consumer Protection and Environment Health Services request is quite modest. There are no requests for new construction facilities and $400,000 request for maintenance and repair of existing facilities.

(Prepared statement follows:)

STATEMENT OF THE ADMINISTRATOR, CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Mr. Chairman and members of the committee, the appropriation before you is for all the proposed direct construction projects for the Consumer Protection and Environmental Health Service, including those projects formerly in the Food and Drug Administration's "Buildings and facilities" appropriation.

The 1970 request of $400,000 is entirely for repairs and improvements to existing facilities. The major continuing "Buildings and facilities" projects will be funded from prior year appropriations.

UNOBLIGATED BALANCES

Mr. FLOOD. Your budget shows an unobligated balance carried forward from 1969 to 1970 of $8,571,000.

Mr. JOHNSON. That is correct.

Mr. FLOOD. It is still a good estimate, is it?

Mr. JOHNSON. That is a fair estimate of the facilities that have not yet been approved for construction. Most of the reason for carrying this forward relates to the Administration's desire not to initiate new construction because of the Federal Revenue and Expenditure Act.

Mr. FLOOD. The budget also shows the balance carried forward from 1970 to 1971, $2,439,000. If that is a fact, why in the world do you need any appropriation at all in 1970?

Mr. JOHNSON. With the permission of the committee, we perhaps could reprogram funds to cover the $400,000 expenditures out of these, but we would have to come back at a future date to be sure these were replenished in terms of anticipated and proposed new construction facility needs.

Mr. FLOOD. You really will not need any new money in 1970.

Mr. JOHNSON. That is correct, Mr. Chairman.

Mr. FLOOD. You are an honest citizen.

AIR POLLUTION RESEARCH FACILITY

Now you have $1,615,000 budgeted for 1970, for the air pollution research facility. How much has been spent on this up to now? Would you know that?

Mr. JOHNSON. Why do we not ask Mr. Lannon to respond because he is familiar with the figures.

Mr. LANNON. In 1968, $1,815,000 was appropriated for planning and design. A contract for the master site plan was awarded in June of 1968, and completion is expected in June of 1969. We propose to award on design in September of 1969. Completion of the design phase is scheduled for December of 1971. Construction would not occur until April of 1972, with a completion date schedule of 1974.

Mr. FLOOD. How much money up until now?

Mr. LANNON. Up until now it is only the planning and design money for the master site plan.

Mr. FLOOD. What is it?

Mr. LANNON. $215,000.

Mr. FLOOD. Why could this not be constructed as part of the National Environmental Health Science Center?

Mr. JOHNSON. As a matter of fact, Mr. Chairman, the master site planning contract was awarded through the NIH, as part of a total project and there is coordination of this effort at this site. We are talking of funds, but not necessarily the funds——

Mr. FLOOD. You do not even show the National Center in the budget this year. Do you have it under a rug someplace?

Mr. JOHNSON. No, sir; that would be shown in the National Institutes of Health budget, Mr. Chairman.

Mr. FLOOD. NIH?

Mr. JOHNSON. That is correct.

NATIONAL CENTER FOR DRUG ANALYSIS

Mr. FLOOD. The largest item you have in this budget is $3,541,000 for the National Center for Drug Analysis. We discussed this earlier. What would happen to anybody or anything if we postponed this until things are a little better financially?

Mr. JOHNSON. If you recall, Mr. Chairman, we are not requesting that $3.9 million for the 1970 appropriation. We are only requesting $400,000 for maintenance and repair operations.

Mr. FLOOD. No; but you have $3,541,000 budgeted for 1970—of course, you will be using carryover funds. How close will this come to finishing the financing of the construction? It will not do it, but how close?

Mr. JOHNSON. The $3.9 million should be sufficient to finance the construction of the National Center for Drug Analysis and these are funds that are reprogramed from two lesser priority projects, the New Orleans District Office and the St. Louis District Office.

Mr. FLOOD. The 1970 estimate shows $3,541,000?

Mr. JOHNSON. That is correct.

Mr. FLOOD. The chairman of the full committee has instructed all of the subcommittee chairmen to be concerned about this carryover balance business. That is exactly what this is.

Mr. JOHNSON That is correct. We had anticipated that we would be going out with these construction items. The Revenue and Expenditure Control Act caused us to defer a number of projects that ordinarily we would have tried to have initiated. Because of that act, we have postponed and are giving reconsideration as to construction at a future date.

PESTICIDES RESEARCH LABORATORY

Mr. FLOOD. You have $21,000 for the Pesticide Research Laboratory at Perrine, Fla. I was raised in St. Augustine, I have been on this committee for years, and I never heard of this thing. How big is it and what in the world do you do down there?

Mr. JOHNSON. As you recall, most of our pesticides or insecticides and pest control activities were in the Communicable Disease Center.

Mr. FLOOD. Where is Perrine?

Mr. JOHNSON. It is in the tropical zone of Florida.

Mr. FLOOD. Near what? Okeechobee?

Mr. JOHNSON. No, sir.

Mr. FLOOD. South of that?

Mr. JOHNSON. I believe it is. I have not been there, I am sorry to say. It is one of our major research facilities for insect and pesticide control. They produce some of the information that allows us to deal with these problems throughout the country, Mr. Chairman, and it is one of the small but very important aspects of our research operation.

Mr. FLOOD. How long has it been there?

Mr. JOHNSON. They have been in existence for quite a number of years. I would have to supply it for the record—the exact date of the initiation.

(The information follows:)

The Perrine Laboratory, which is located about 15 miles south of Miami, Fla., was originally built as a Navy facility in 1943. The Laboratory commenced operation as a PHS facility in September 1965.

MADISON, WIS., FOOD AND DRUG LABORATORY

Mr. FLOOD. What is the status of the famous Madison, Wis., Food and Drug Laboratory?

Mr. JOHNSON. That particular laboratory has been deferred and we hope to develop a program of requirements and do the planning—we are hoping to award our design contract in 1969, November, with completion of the design by May of 1971, and if we are on schedule to award a construction contract in September 1971 with ultimate completion by March of 1974.

FACILITIES IN CINCINNATI

Mr. FLOOD. I had a meeting last month with Mr. Eugene Ruehlmann, the mayor of Cincinnati. The arrangements for that meeting were made by Congressman Don Clancy and Congressman Bob Taft, of Ohio, to discuss with me their concern about the laboratory to be built in Cincinnati.

I see you have a million for this for 1970 and $330,000 for the current year 1969.

Mr. JOHNSON. That is correct, sir.

Mr. FLOOD. I will place in the record several letters regarding this matter.

(The letters follow:)

CITY OF CINCINNATI,
OFFICE OF THE MAYOR,
February 26, 1969.

Congressman DANIEL FLOOD,
Cannon Building,
Washington, D.C.

DEAR CONGRESSMAN FLOOD: It was wonderful of you to take time to meet with Don Clancy, Bob Taft, and myself yesterday to discuss our concern about the Environmental Health Center to be built in Cincinnati. Needless to say, Cincinnatians are most anxious to have this matter brought to a conclusion since it has been under consideration for some time. We are anxious to proceed with the clearance of the site and to have the new building construction underway. I assure you we will be most grateful for your assistance in helping to insure that the appropriation will be approved for the fiscal year 1971 if the request for the funds is included in the budget message of the President. We will be proceeding promptly with the acquisition of the land for the site in the anticipation of this funding of this new building by the Congress.

Enclosed, herewith, please find a copy of the correspondence which I've had with Secretary Finch concerning the construction of this building. I believe it indicates a clear intent as to the timetable to be pursued and we shall immediately proceed to fulfill our commitment. Again, thanks so much for your words of encouragement and for your service in helping us to make this Environmental Health Center a reality in our city. If there are any further steps which you feel we should take at any time, please do not hesitate to call me collect in Cincinnati and we will do whatever is necessary to accomplish this worthy goal.

Sincerely,

EUGENE P. RUEHLMANN, *Mayor.*

FEBRUARY 18, 1969.

HON. ROBERT H. FINCH,
Secretary of Health, Education, and Welfare,
Washington, D.C.

MY DEAR MR. FINCH: Reference is made to your letter of February 3, directed to Mayor Ruehlmann concerning the Environmental Health Center.

Instructions have been issued to proceed with the acquisition of the properties required for assembly of this site in order that it may be available for construction in the spring of 1971.

Your concern and interest in following the city's commitment with an item in the President's budget for fiscal year 1971 is appreciated.

Sincerely,

RICHARD L. KRABACH, *City Manager.*

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., February 3, 1969.

HON. EUGENE P. RUEHLMANN,
Mayor of Cincinnati,
Cincinnati, Ohio.

DEAR MAYOR RUEHLMANN: I just wanted to confirm our recent discussion concerning the Department's construction of an environmental health facility on the 20-acre site being made available by the city of Cincinnati.

The Department is proceeding with this project essentially as outlined in Dr. Lee's letter to you last September, except that some delays have occurred in the development of the program of requirements. Because of the fact that land acquisition will not be completed until January 1971, we will not be able to consider issuing the invitations to bid for construction until 1971, rather than in December 1970 as previously planned. Assuming that the condemnation and land acquisition by the city proceeds as outlined in our meeting we will be able to follow fairly closely the schedule outlined in Dr. Lee's letter. To meet our commitments, I will do everything possible to assure the incorporation of the necessary construction funds in the President's fiscal year 1971 budget request.

I appreciate the opportunity to have met with you and I am hopeful that we can continue to work together to bring the new facility into being.

Sincerely,

ROBERT FINCH, *Secretary.*

JANUARY 27, 1969.

Mr. ROBERT FINCH,
Secretary, Department of Health, Education, and Welfare,
Washington, D.C.

DEAR MR. SECRETARY: Our Cincinnati delegation was most grateful for the opportunity to talk with you and to clarify our procedure in connection with the new Environmental Health Center to be constructed in Cincinnati. This project has great significance to our city because of the furtherance of the establishment of the research facilities in the vicinity of our university and medical school, because of the additional employment which this Environmental Health Center will provide, and because of the stimulation of activity in the area in which the Health Center will be located.

As indicated to you at our conference on January 24, the city of Cincinnati is prepared to proceed immediately to acquire the balance of the 20-acre tract which the Public Health Service has selected for the location of the Environmental Health Center. We have already acquired some $200,000 worth of property and funds to purchase the remaining 200 parcels at a cost of some $4 million which have been set aside and are immediately available for this purpose. As we indicated in our conference, our concern has been that we do not proceed with the acquisition and clearance of the residential properties in this site only to have this large 20-acre tract remain vacant for a substantial period of time. Such would not only be most embarrassing to city officials, but it would also be highly detrimental to an area which is already under urban renewal treatment and which has a tremendous rehabilitation project over 50-percent completed.

We can deliver the site to the Public Health Service by the first part of 1971 which would meet the construction timetable projected by the Public Health Service for spring of 1971.

I appreciate tremendously your confirmation of the Department of Health, Education, and Welfare's intention that construction funds for this project will be included in the President's budget for the fiscal year 1971. This would then give us the basis upon which to have further discussions with proper Members of Congress in order to set up the groundwork for the appropriation of the funds for an environmental health center.

Thank you so much for your prompt attention to this matter and for enabling us to proceed in this partnership with the Federal Government for a very necessary public project.

Sincerely,

EUGENE P. RUEHLMANN, *Mayor.*

Mr. FLOOD. Mr. Michel?

NORTH CAROLINA FACILITIES

Mr. MICHEL. Thank you, Mr. Chairman.

First, I would like to get firmly in my mind where all of these laboratories are ultimately going to be and what function they are going to be performing. I know it may be inappropriate to ask the question, but what is the table of organization by buildings? I am somewhat confused because some would appear to be funded through an NIH budget, and some here, and if we are striving for more efficiency and economy in this whole area of consumer protection and environmental health, why is it not all right here so we can see it more properly laid out?

No. 1, this facility down in the triangle area of North Carolina is called what?

Mr. JOHNSON. There are two facilities there, Mr. Michel. One is a facility that is being planned and will be constructed to house the National Institute of Environmental Health Sciences. That facility is a National Institutes of Health facility and as we explained earlier in my original testimony this is a basic research facility.

Mr. MICHEL. Strictly basic research?

Mr. JOHNSON. Strictly a basic research facility that works under the auspices of the National Institutes of Health. The kind of information and data that they develop serves all of the other institutes as well as the Consumer Protection and Environmental Health Service and our other sister agency, the Health Services and Mental Health Administration insofar as basic research for environmental health is concerned, molecular structure, the biological phenomenon, the toxic interaction of the environment on the cells and the real basic scientific studies that we require.

One reason for choosing the triangle to locate the National Air Pollution Control Administration, which also has an applied research component as well as demonstration activities, as well as actual program implementation activities and responsibilities, was because a lot of their work is associated with and correlated with and collaborative with the National Institute of Environmental Health Sciences. So they will be on the same triangle, what we call the research triangle there near Chapel Hill and they will have a facility that will belong to the Consumer Protection and Environmental Health Service. There is a great deal of coordination in the development and the design and the planning for these facilities. As a matter of fact, the master site plan was through a cooperative venture with the National Institutes of Health, so we would assure ourselves of this coordination, so that we would not be going one direction and NIH going another direction.

I think Dr. Middleton pointed out one reason why both of these units wanted to be there was the close support they would get from the medical schools also in this facility, and because of our need to have a very close tie in terms of cause-effect relationship, back up medical support, and so forth. This was an ideal arrangement.

CINCINNATI FACILITIES

Mr. MICHEL. From that point on, what is the most significant laboratory we would talk about in your shop?

Mr. JOHNSON. The next most significant construction effort for a laboratory would be in the Cincinnati area.

The Environmental Control Administration does not have one of these major types of facilities.

The Environmental Control Administration at one time way back several reorganizations ago had its essential operation in the Taft Environmental Health Center. When they moved the Water Pollution Control Administration activities over into the Department of Interior, part of that move carried with it the laboratory facilities that were largely housing these kind of activities. During the interim period they have condescended to allow us to carry on certain laboratory operations. We have had to lease space for others.

We are spread pretty thin around the city of Cincinnati, and in dislocated buildings, and this is our effort to consolidate to as large a degree as possible the laboratory effort that we need to produce out of this particular location.

As I pointed out earlier, we are planning a facility near the ground of the Cincinnati University so we can have a tie-in with this academic setting; the city has made this possible by donation of the site and

they will take care of the clearing of the site. It is in an urban renewal area.

We would plan then on——

Mr. MICHEL. Is not that site already cleared as a matter of fact?

Mr. JOHNSON. I certainly believe it is in the process of being cleared. I do not think it is actually cleared at this time.

Mr. FLOOD. I think their concern is because it is mostly cleared and they do not want it to deteriorate like sections of cities have and become infested with rodents, brush, and weeds. They want some assurance this thing is going ahead and this would not be a blight out there.

Mr. MICHEL. As a matter of fact, what was the date of the commitment to Cincinnati for this?

Mr. JOHNSON. Let's say there was a commitment during the Johnson administration to the mayor and the congressional delegation of Cincinnati, and there has been a renewal of that commitment during the Nixon administration by Secretary Finch and the Assistant Secretary of Health, Education, and Welfare. The latest commitment was during the month of January. I believe there was a delegation in from Cincinnati, the mayor and some of the congressional delegation.

Mr. FLOOD. That is correct.

Mr. JOHNSON. And we have reassured them that we are moving ahead with our plans for the construction. We have completed our program of requirements. We are hoping to go out very soon, within the next month, to award a contract for the design of the facility.

Mr. CARDWELLL. Could I make one point?

I would go so far as to say that Secretary Finch promised that if the planning could proceed far enough along fast enough, they would make this a construction item in the 1971 budget. I do not think we sitting at this table today can tell you for sure that is what will happen.

Mr. FLOOD. These people are certainly not being unreasonable.

Mr. MICHEL. No.

Mr. JOHNSON. I think there is very good understanding on all sides. We are committed to and desirous of having the facility in Cincinnati. The city of Cincinnati has certainly shown its willingness and desire to have us there and I think we are working on a mutually agreeable basis to bring this to a successful fruition.

Mr. MICHEL. You say you are prepared within the next month to let contracts for what?

Mr. JOHNSON. This is for design. This design period will take pretty close to a year. These are scientific facilities. It is not something you can get a design on in 30, 60, or 90 days. We hope that perhaps by November of 1970 we would have all of these things completed so that early in 1971 we could go out for a construction contract. Early would be sometime during the first 6 months of 1971.

Mr. MICHEL. And the projected cost of this facility is in the neighborhood, is it not, of $20 million?

Mr. JOHNSON. $20 million plus approximately $2 million for equipment.

Mr. MICHEL. In the interim period what happens to the people that are currently performing duties in the Cincinnati area?

I think the record showed earlier that some 200 people this past year went from the Cincinnati area down to the triangle and this coming year 160 or 170 more.

Mr. JOHNSON. You have to understand, Mr. Michel, there is a movement of people depending upon program activities, and that we should not confuse the movement of National Air Pollution Control Administration people with the movement of Environmental Control Administration people.

The one thing that I can guarantee is that we will over this period of time even during the course of construction maintain a staff of approximately 750 people out there. There will be additional movement of people to the triangle in North Carolina because that is where the basic operation of the Air Pollution Control Administration programs will be housed. At the same time, we will be moving in and out people of environmental control but we will always have a complement of approximately 750 people in the Cincinnati facility.

FOUNTAIN COMMITTEE QUESTIONS CONCERNING SITE SELECTION

Mr. CARDWELL. Could I interject at this point?

Mr. MICHEL. Yes.

Mr. CARDWELL. I want to make this known to the chairman before he turns the questioning over to you.

Chairman Fountain of the House Committee on Intergovernmental Operations has written Secretary Finch, wrote to him shortly after the Secretary took office, and raised anew the question of site selection in HEW, including, for example, the FDA building now proposed for Madison, Wis. And the Secretary did promise him that he would go back as a part of his administration and reexamine the various Fountain recommendations, including those having to do with this particular site selection.

Mr. FLOOD. What particular site selection?

Mr. CARDWELL. The issue of whether that was a proper site selection. I was not present when the Secretary reviewed the chairman's letter, but I have been led to understand he did make that commitment in writing back to the chairman. I do not know that it will change any circumstance, but I do think he, is at this point, pledged at least himself as Secretary, to familiarize himself with the facts and to take another look at it. I would hope it would not result in any particular delay.

Mr. MICHEL. In view of the observation of Mr. Cardwell with respect to the apparent exchange of correspondence that has taken place between the chairman of the Intergovernmental Operations Subcommittee of the Government Operations Committee and the Secretary of HEW on reopening site selections, maybe we ought to go into the whole proposition of whether the National Environmental Health Center site was correct when that determination was made.

Mr. CARDWELL. I want to be careful not to overdraw this. I am not certain the Secretary said he would "reopen" all of the site selections. I think what he said was that he would himself reexamine the various Fountain Committee observations about HEW, and there are a whole range of those. They do not deal just with site selection.

Mr. MICHEL. Of course you recall the very means by which the Center was located in North Carolina came about as a result of the limitation that this committee wrote into a particular bill to foreclose it being built in the immediate District of Columbia area.

Mr. FLOOD. I think Mr. Michel is making the point that it is a two-edged sword.

Mr. CARDWELL. I understand it is both two edged and it is pointed. I think the point here is, I cannot tell you how Chairman Fountain may be reading the Secretary's response. He may read it as a commitment to reopen all the site selections, I do not know. But I am trying to point out that literally he said he would reexamine and familiarize himself with the various Fountain Committee observations about HEW.

There are a number of reports and a number of active subjects, and this is but one.

FOOD AND DRUG FACILITIES

Mr. MICHEL. Going one step further, I would suspect your next most significant construction or facility in the budget has to do with food and drug; does it not?

Mr. JOHNSON. Are we saying one step after the Cincinnati facility?

Mr. MICHEL. Yes.

Mr. JOHNSON. Certainly, there are facility construction needs in the Food and Drug Administration, and certainly the National Center for Drug Analysis has to be placed high on the list if we are going to carry out the program objectives we have for that Center.

Mr. MICHEL. Anything else that you know of in the works that has been thought about?

Mr. JOHNSON. Do you want to talk a little about our total construction aims in terms of the $8 million?

Mr. LANNON. In terms of Mr. Michel's question, two FDA facilities will be the most critical: (1) whether or not we construct at Madison for research laboratory No. 2, and (2) the particular site chosen for the National Center for Drug Analysis. The other locations are pretty well determined by the facility themselves. For example, we are going to have a district office facility in Philadelphia. The district office has to be in Philadelphia. Most of the other construction projects are specific to a city in terms of service provided to that geographic area. The two FDA laboratory facilities are most prone to this reconsideration of site selection.

Mr. MICHEL. That is all, Mr. Chairman.

Mr. FLOOD. Are there other questions?

JUSTIFICATION MATERIAL

Buildings and Facilities

Amounts Available for Obligation

	1969	1970
Appropriation	---	$400,000
Unobligated balance brought forward	$21,985,000	8,571,000
Comparative transfer from: "Buildings and facilities," National Institutes of Health	8,661,000	---
Unobligated balance transferred from: "Buildings and facilities," National Institutes of Health	---	3,777,000
Unobligated balance carried forward	-8,571,000	-2,439,000
Total obligations	22,075,000	10,309,000

Obligations by Activity

Page Ref.		Description	1969 Estimate	1970 Estimate	Increase or Decrease
-	1.	Appalachian health field station	$4,600,000	$862,000	-$3,738,000
-	2.	Northeast marine health sciences laboratory	1,125,000	---	-1,125,000
-	3.	Northwest marine health sciences laboratory	1,059,000	---	-1,059,000
-	4.	Air pollution research facility	200,000	1,615,000	+1,415,000
-	5.	Solid waste research facility	2,000	---	-2,000
-	6.	Laboratory facility, Cincinnati, Ohio	330,000	1,000,000	+670,000
-	7.	Arctic health animal facility	1,049,000	---	-1,049,000
-	8.	Arctic health research laboratory	52,000	---	-52,000
-	9.	National center for drug analysis	260,000	3,541,000	+3,281,000
-	10.	FDA research laboratory #1	4,593,000	---	-4,593,000
-	11.	FDA research laboratory #2	700,000	250,000	-450,000
-	12.	FB 8 conversion	88,000	---	-88,000
-	13.	FDA district offices	7,573,000	2,341,000	-5,232,000
136	14.	Repairs and improvements	444,000	700,000	+256,000
		Total obligations	22,075,000	10,309,000	-11,766,000

Obligations by Object

Description	1969 Estimate	1970 Estimate	Increase or Decrease
CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE			
Transportation of things	$5,000	$5,000	---
Other services	2,645,000	1,756,000	-$889,000
Supplies and materials	47,000	582,000	+535,000
Equipment	162,000	200,000	+38,000
Lands and structures	472,000	575,000	+103,000
Total, Consumer Protection and Environmental Health Service	3,331,000	3,118,000	-213,000
ALLOCATION TO GENERAL SERVICES ADMINISTRATION			
Other services	131,000	61,000	-70,000
Lands and structures	18,613,000	7,130,000	-11,483,000
Total, General Services Administration	18,744,000	7,191,000	-11,553,000
Total obligations by object	22,075,000	10,309,000	-11,766,000

Summary of Changes

1969 appropriation	0
1970 appropriation	$400,000
Net change	+400,000

Increases

1. Repairs and improvements:	
(a) Food and drug control	$100,000
(b) Environmental control	300,000
Net change	400,000

EXPLANATION OF CHANGES

Repairs and improvements

The 1970 request provides for the continuation of a program of major alterations, repairs, and improvements to existing buildings and facilities.

Significant Items in House and Senate Appropriations Committee Reports

Item	Action taken or to be taken
1969 House Report	
Buildings and Facilities	
1. The Committee will have no objection to reprogramming unobligated balances to provide for the repairs and improvements included in the request for 1969. (Page 9 of the House Report)	1. No reprogramming action has been initiated to date.
2. The Committee will have no objection to reprogramming of balances in this account to provide for projects included in the 1969 budget request. (Page 31 of the House Report)	2. $5,310,000 was reprogrammed to fund the construction of the Appalachian Health Field Station. Advertisement for bid proposals made December 16, 1968.
1969 Senate Report	
Buildings and Facilities	
1. The Committee will have no objection to reprogramming unobligated balances, contingent upon Congressional approval. (Page 10 of the Senate Report)	1. See item 1. above.
2. The Senate concurred with the House provided it receives advance notice of any intended reprogramming. (Page 65 of the Senate Report)	2. See item 2. above.

Explanation of Transfers

	1969 Estimate	Purpose
Comparative transfer from: "Buildings and facilities," National Institutes of Health	$8,661,000	Transfer of unobligated balance of funds related to projects administered by Consumer Protection and Environmental Health Service.

Buildings and Facilities

Year	Estimate to Bureau of the Budget	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1970	$1,800,000	$400,000			

Introduction

This appropriation includes all proposed direct construction projects for the Consumer Protection and Environmental Health Service, including those projects formerly under the Food and Drug Administration "Buildings and Facilities" appropriation. The major continuing projects will be funded from prior year appropriations.

The request for 1970 of $400,000 is for repairs and improvements to existing facilities.

Repairs and Improvements

Food and Drug Administration..... $100,000

1. Pesticides Research Laboratory, Perrine, Florida--$21,000

   Repair and modification of existing plumbing, carpentry, electrical service, and installed equipment; interior painting for Buildings 9 and 22; interior modifications, interior and exterior painting and new roofing for Building 21; and maintenance and upkeep of plumbing, and electrical service.

2. Pesticides Research Laboratory, Wenatchee, Washington--$2,000

   Repaint interior and exterior of laboratory.

3. Food and Drug facilities--$77,000

   Sterile-room facilities at the New York district office; increased microbiological capabilities at the Seattle district office, and conversion of the incinerator and boiler to reduce air pollution at the Special Pharmacological Animal Laboratory at Beltsville, Maryland.

Environmental Control Administration..... $300,000

1. Arctic Health Research Laboratory--$115,000

   Construction of a water cooling system for the central plant distillation and refrigeration room equipment; installation of an air filtration system in the bacteriology and virology laboratories; installation of a drainage system to eliminate hazardous icy conditions on sidewalks and parking lots; and construction of a covered loading dock.

2. Northwest Marine Health Sciences Laboratory--$10,000

   Site improvements, including grading, surfacing, removal of debris, and exterior lighting; rip-rap approximately 1,000 feet of shore front; repair wooden pier, replacing pilings, flooring and eroded cross-members as required.

3. Gulfcoast Marine Health Sciences Laboratory--$50,000

   Make necessary safety corrections to provide acceptable laboratory exhaust systems; rewiring and grounding of wet laboratory electrical services and fixtures; necessary repairs to building exterior and interior, including painting, weatherstripping and replacement of doors and windows; and reflooring of chemistry laboratory and media preparation room.

4. Northeast Marine Health Sciences Laboratory--$70,000

   Miscellaneous mechanical work, including back flow preventor, salt water heat exchanger, centralized distilled water system, sea water storage tank; replace worn floor covering; construct storage areas; relocate refrigeration compressors; convert building heating system from oil to gas firing; provide boiler room escape hatch and fire detection system.

5. Northeastern Radiological Health Laboratory--$30,000

   Inspection, replacement, and regraveling of roof; and extension of fire alarm system.

6. Southeastern Radiological Health Laboratory--$25,000

   Reroofing of three buildings and interior renovation of three buildings.

Salaries and Expenses, Office of the Administrator

WITNESSES

CHARLES C. JOHNSON, JR., ADMINISTRATOR
E. R. LANNON, ASSISTANT ADMINISTRATOR FOR ADMINISTRATION
THOMAS J. LAWLER, DIRECTOR, DIVISION OF BUDGET
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimated	1970 estimated
Personnel compensation:			
Permanent positions	3,675	3,910	4,118
Positions other than permanent	71	70	70
Other personnel compensation	14	25	25
Total personnel compensation	3,760	4,005	4,213
Personnel benefits: Civilian employees	347	373	393
Travel and transportation of persons	154	159	162
Transportation of things	18	34	34
Rent, communications, and utilities	541	532	805
Printing and reproduction	60	62	65
Other services	365	396	241
Supplies and materials	184	190	200
Equipment	75	79	90
Total obligations	5,504	5,830	6,203

PERSONNEL SUMMARY

	1968 actual	1969 estimated	1970 estimated
Total number of permanent positions	387	381	383
Full-time equivalent of other positions	11	10	10
Average number of all employees	363	352	384
Average GS grade	9.2	9.5	9.5
Average GS salary	$10,024	$11,017	$11,212
Average salary of ungraded positions	$5,803	$5,803	$5,830

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Program by activities: Management and central services (costs, funded—obligations)	5,504	5,830	6,203
Financing:			
Comparative transfers to other accounts	14,760	15,254	
Comparative transfers from other accounts	−4,986	−3,107	
Unobligated balance lapsing	408		
Budget authority	15,686	17,977	6,203
Budget authority:			
Appropriation	15,687	17,743	6,203
Transferred to other accounts	−1	−173	
Appropriation (adjusted)	15,686	17,570	6,203
Proposed transfer from other accounts for pay increases		407	
Relation of obligations to outlays:			
Obligations incurred, net	15,278	17,977	6,203
Obligated balance, start of year	7,869	6,128	5,542
Obligated balance, end of year	−6,128	−5,542	−1,955
Adjustments in expired accounts	212		
Outlays	17,231	18,563	9,790

GENERAL STATEMENT

Mr. FLOOD. Now, we will take up the last item in your shop, Mr. Johnson. Please proceed with your statement on "Salaries and expenses, Office of the Administrator."

Mr. JOHNSON. Mr. Chairman and members of the committee, the budget proposal before you is for support of activities required to direct and administer the new Consumer Protection and Environmental Health Service.

The emphasis of this request is on implementation of the responsibilities placed with the Service during the past year. The Office of the Administrator of the Consumer Protection and Environmental Health Service was formed from the Office of the Director, Bureau of Disease Prevention and Environmental Control and, where economies could be made, through transfer of functions from the operating Administrations.

We are requesting 387 positions and $6,203,000 in 1970 for the Office of the Administrator. The request represents an increase of six positions and $304,000 for administrative management services and $69,000 for annualization of pay raise costs and within-grade increases. The increase in management services will permit expansion of the data processing activities and provide additional accounting staff. Upgrading and replacement of data processing equipment in order to meet additional computer service demands resulting from expanded Service programs and the increased workload resulting from the centralization and upgrading of the accounting function are the basis for the requested increase.

I will be pleased to answer any questions you may have on this request.

DATA PROCESSING

Mr. FLOOD. You are requesting three more jobs and additional funds for data processing.

Mr. JOHNSON. That is correct, sir.

Mr. FLOOD. How much are you spending on data processing in 1969, and what do you propose in total for 1970?

Mr. JOHNSON. I would like to ask Mr. Lannon to respond to this.

Mr. LANNON. Mr. Chairman, the data processing activity was originally established solely to meet the requirements of the Food and Drug Administration. We have expanded its area of application to not only Food and Drug, but also to Air Pollution and Environmental Control. This is the principal reason for the requested increase.

Mr. FLOOD. How much are you spending in 1969, the current year?

Mr. LANNON. Approximately $1.1 million to support the facility itself.

Mr. FLOOD. How much altogether in 1970?

Mr. LANNON. Close to $1.3 million.

ACCOUNTING

Mr. FLOOD. You are asking for three more jobs because the accounting function is being centralized. Why would there be a increase necessary there? Should not centralization produce a saving?

When we first put this hardware in the Pentagon, we were told this centralization will produce savings. Of course, it did not at the Pentagon. Nothing does there. But what about here?

Mr. LANNON. It is a poor choice of words, Mr. Chairman.

Mr. FLOOD. Mine?

Mr. LANNON. No; our language in the justification. It is true we have centralized our accounting system and I think it is also true, if we had not centralized it, our total position investment would be greater than shown.

Actually, the reason for the increase is that effective July 1 we are obliged to implement an accrual accounting system where we will treat costs in a manner differently than we have before. We are actually projecting a 25-percent increase in the workload of the facility and we are projecting, we can accomplish it with a 5-percent increase in the personal services required to process the work.

Mr. FLOOD. Has the function been centralized but not the jobs?

Mr. LANNON. The function is in process of centralization.

Mr. FLOOD. But not the jobs that go with it?

Mr. LANNON. They will be, also.

Mr. FLOOD. They will?

Mr. LANNON. Yes, sir; in Washington.

Food and Drug always had a centralized accounting system. We used that as our base.

Mr. FLOOD. That is one of the first ones we had?

Mr. LANNON. Yes.

Mr. JOHNSON. Mr. Lannon is sort of recognized as a national authority in this area.

COMPUTER SYSTEM

Mr. FLOOD. What accounts for the increase of $273,000 in rent, communications, and utilities?

Mr. LANNON. I am glad you asked the question, Mr. Chairman.

Essentially, this is all involved with the upgrading of the computer system.

Mr. FLOOD. Upgrading of the computer system?

Mr. LANNON. Yes. It is changing the central processor. We now have a model 360–40 to meet the——

Mr. FLOOD. In the Department of Defense, whenever we produce a weapons system, there is an old saying in the Pentagon that if it works it is obsolete.

Mr. LANNON. We figure we have a few more years out of this one. We are only upgrading the central processor to take care of the new workloads coming in, and one of the workloads will be the accrual accounting system. We have a commitment to the World Health Organization for processing an international adverse drug reaction file. For air pollution control, we will be processing technical information——

Mr. FLOOD. What does that mean, adverse reaction file?

Mr. LANNON. Some 12 nations are participating in a program essential to preventing a thalidomide-type disaster by pooling the intelligence about use of drugs, and we are, under international agreement, processing that data here on our system. The workload has started to pile up.

We are committed to providing some 300 to 400 hours of computer time a year for this one purpose. I think it is a system that will give

advance knowledge of what is developing in terms of a potentially dangerous drug.

Mr. FLOOD. Does Dr. Kelsey still work for you?

Mr. LANNON. Yes, sir. She does.

Mr. FLOOD. Mrs. Reid?

Mrs. REID. I have no questions.

Mr. FLOOD. Mr. Hull?

Mr. HULL. No questions.

Mr. FLOOD. Mr. Casey?

Mr. CASEY. No questions.

Mr. FLOOD. Thank you, gentlemen.

JUSTIFICATION MATERIAL

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Salaries and Expenses, Office of the Administrator

Amounts Available for Obligation

	1969	1970
Appropriation	$17,743,000	$6,203,000
Transfers to:		
"Operating expenses, Public Buildings Service," General Services Administration	-173,000	---
Comparative transfers to:		
"Environmental control"	-15,120,000	---
"Salaries and expenses, Office of the Administrator," Health Services and Mental Health Administration	-134,000	---
Comparative transfers from:		
"Food and drug control"	2,380,000	---
"Environmental control"	189,000	---
"Air pollution control"	490,000	---
"Communicable diseases"	48,000	---
Total currently authorized for obligation	5,423,000	6,203,000
Plus: proposed transfer of reserves from "Community mental health resource support" for increased pay costs	407,000	---
Total obligations	5,830,000	6,203,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
148	1. Management and central services:						
148	a. Program direction	145	$2,074,000	145	$2,090,000	--	+$16,000
148	b. Administrative management	236	3,756,000	242	4,113,000	+6	+357,000
	Total obligations	381	5,830,000	387	6,203,000	+6	+373,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions.....	381	387	+6
Full-time equivalent of all other positions.....	10	10	--
Average number of all employees.....	352	384	+32
Personnel compensation:			
Permanent positions.....	$3,910,000	$4,118,000	+$208,000
Positions other than permanent.....	70,000	70,000	---
Other personnel compensation.....	25,000	25,000	---
Total personnel compensation.....	4,005,000	4,213,000	+208,000
Personnel benefits.....	373,000	393,000	+20,000
Travel and transportation of persons.....	159,000	162,000	+3,000
Transportation of things.....	34,000	34,000	---
Rent, communications, and utilities.....	532,000	805,000	+273,000
Printing and reproduction.....	62,000	65,000	+3,000
Other services:			
Project contracts.....	100,000	---	-100,000
Other.....	296,000	241,000	-55,000
Supplies and materials.....	190,000	200,000	+10,000
Equipment.....	79,000	90,000	+11,000
Total obligations by object.....	5,830,000	6,203,000	+373,000

Summary of Changes

1969 estimated obligations	$5,830,000
1970 estimated obligations	6,203,000
Net change	+373,000

	1969 Base		1970 Change from base	
	Positions	Amount	Positions	Amount
A. Increases:				
1. Built-in:				
(a) Annualization of 1969 pay raise costs	---	---	---	$6,000
(b) Within-grade and longevity costs	---	---	---	63,000
Subtotal	---	---	---	69,000
2. Program:				
(a) Management and central services	381	5,830,000	6	304,000
Net change	---	---	6	373,000

EXPLANATION OF CHANGES

Management and central services

A total increase of 6 positions and $304,000 is requested. This increase includes 3 positions and related costs for expansion of data processing staffing needed for expanding workload, replacement of data processing equipment, and support for outside contractual processing costs.

The other 3 new positions are for additional accounting staff requirements due to increased workload resulting from the establishment of a Service accounting system.

Explanation of Transfers

	1969 Estimate	Purpose
Transfer to:		
"Operating expenses, Public Buildings Service," General Services Administration....	-$173,000	Rental of space.
Comparative transfers from:		
"Food and drug control".....	2,380,000	Transfer results from setting up the Office of the Administrator, Consumer Protection and Environmental Health Service, a result of the health reorganization within the Department.
"Environmental control".....	189,000	Same as above.
"Air pollution control".....	490,000	Same as above.
"Communicable diseases".....	48,000	Same as above.
Comparative transfers to:		
"Environmental control".....	-15,120,000	These functions for the Radiological Health activities have been transferred to the Environmental Control Administration.
"Salaries and expenses, Office of the Administrator," Health Services and Mental Health Administration.....	-134,000	Transfer results from setting up the Office of the Administrator, Consumer Protection and Environmental Health Service, a result of the health reorganization within the Department.

Salaries and Expenses, Office of the Administrator

Year	Estimate to Bureau of the Budget	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1970	$6,749,000	$6,203,000			

Introduction

The Consumer Protection and Environmental Health Service was established on July 1, 1968, upon reorganization of certain health functions of the Department. This organization provides a single agency with the responsibility for identifying consumer and environmental hazards to health, developing and promulgating criteria and standards for the control of such hazards, and for mounting programs that will promote compliance therewith. The new organization includes the Food and Drug Administration, the National Air Pollution Control Administration, the Environmental Control Administration, and the Office of the Administrator.

This appropriation will support activities of the Administrator required to direct and administer the new organization effectively. These activities include: (1) the establishment of basic policies, goals and objectives of the Service; (2) guidance, coordination and evaluation of the progress of the Administrations in meeting Service objectives; (3) coordination with the Office of the Secretary and other Department agencies, Federal executive departments and agencies, Congressional committees, and non-Federal organizations; and (4) the provision of management services to the constituent program.

The Office of the Administrator of the Consumer Protection and Environmental Health Service was formed from the Office of the Director of the Bureau of Disease Prevention and Environmental Control and, where economies could be made by so doing, through the transfer of functions from the operating Administrations. The Office of the Administrator provides staff and resources for the Administrator, Deputy Administrator, Associate Administrator, and Assistant Administrators for Research and Development, Program Development, and Administration.

1. Management and central services:

Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	381	$4,378,000	387	$4,606,000	+6	+$228,000
Other expenses.....	--	1,452,000	--	1,597,000	--	+145,000
Total.....	381	5,830,000	387	6,203,000	+6	+373,000

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
a. Program direction..	145	$2,074,000	145	$2,090,000	--	+$16,000

The emphasis of the 1970 budget request is the implementation of the responsibilities placed with the Service during the past year. The concern toward which the attention of Consumer Protection and Environmental Health Service must be directed include the wide spectrum of environmental and consumer problems in our society which affect the health and well-being of the individual.

The Office of the Administrator is responsible for direction and leadership of the Consumer Protection and Environmental Health Service. The request provides resources for the Immediate Office of the Administrator, Regional Office functions, Program Development activities, and Research and Development guidance activities.

The Administrator, with the assistance of the Deputy and Associate Administrators, establishes the goals, objectives, and basic policies of the Service for both intramural and grant operations and provides the guidance, coordination, and progress evaluation to meet these Service objectives. The Office of Public Affairs develops media, institutional and public support for the role and mission of the Consumer Protection and Environmental Health Service. It conducts a comprehensive public education program and provides consumer protection advisory services to consumer interest groups. The Assistant Administrator for Program Development formulates an operational strategy for dealing with consumer protection and environmental health problems and develops an integrated planning process. The Assistant Administrator for Research and Development provides scientific leadership in evaluating the impact of man's activities on the ecologic system in which man lives. This assures, through a systems approach, that balanced, mission-oriented research and development, test and engineering demonstration programs are conducted to provide a sound scientific and technological basis for action programs.

An increase of $16,000 is requested for program direction to provide for full-year funding of 1969 pay raises and the net additional costs of within-grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
b. Administrative management.....	236	$3,756,000	242	$4,113,000	+6	+$357,000

Administrative management activities of the Office of the Administrator

include the functions of personnel, budget, accounting, general administrative services, management analysis, data processing, and facilities management. These activities provide leadership to operating Administrations in the implementation of Department and Service administrative and managerial policies. They include planning, directing, coordinating and evaluating centralized staff management necessary at the Service level to assure effective utilization and control of management resources. They also provide leadership, coordination, technical assistance and management consultation to staff offices of the operating Administrations in developing and carrying out their management programs and administrative operations. This activity provides advice to the Administrator on all phases of administrative management related to Service operations and participates and cooperates with the Administrator and other officials of the Service in appraising accomplishments and developing Service programs and objectives.

The increase of 3 positions and related costs in data processing will permit upgrading and replacement of data processing equipment and support for outside contract processing costs. It will permit the expansion of current staffing for programming operations and consultative services on data systems and retrieval. These increases are required to meet additional computer service demands resulting from expanding Service programs.

The other increase of 3 positions in the accounting area is required for increased workload resulting from the centralization of the accounting function. An analysis of this accounting workload indicates that about 755,000 transactions are processed annually under the current systems. This workload is expected to increase to an annual volume of about 1,000,000 transactions when the centralized accounting system is fully implemented. The increase along with functional transfers will permit a unified accounting capability for the Service. This capability previously had been provided by two sources--the Food and Drug Administration and the Public Health Service.

In 1970, the total increase requested for Salaries and Expenses, Office of the Administrator, is 6 positions and $357,000.

New Positions Requested
Fiscal Year 1970

	Grade		Annual Salary
Administrative management			
Systems analyst	GS-13		$ 14,409
Cost accountant	GS-12		12,174
Computer programmer	GS-11		10,203
Accounting technician	GS-9		8,462
Voucher examiner	GS-6		6,321
Computer operator	GS-5		5,732
		(6)	57,301

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Wednesday, March 19, 1969.

WITNESSES

DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
JOHN H. KELSO, ASSISTANT ADMINISTRATOR FOR MANAGEMENT
KARL D. YORDY, ASSISTANT ADMINISTRATOR FOR PROGRAM PLANNING AND EVALUATION
DR. DANIEL HORN, DIRECTOR, NATIONAL CLEARINGHOUSE FOR SMOKING AND HEALTH
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

Mr. FLOOD. We have the Health Services and Mental Health Administration. The Administrator is Dr. Joseph T. English.

I see you have a statement, Doctor. What do you propose to do?

Dr. ENGLISH. I would like to read the statement to you, Mr. Chairman, if I may.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. FLOOD. Very well. We will place your biographical sketch in the record and you may proceed.

(The biographical sketch follows:)

BIOGRAPHICAL SKETCH—JOSEPH T. ENGLISH, M.D.

Current position: Administrator, Health Services and Mental Health Administration, Public Health Service, U.S. Department of Health, Education, and Welfare.

Birth: May 21, 1933, Philadelphia, Pa.

Education: A.B., St. Joseph's College, 1954, M.D., Jefferson Medical College, 1958; internship, Jefferson Medical College Hospital, 1958–59; residency in psychiatry, Institute of the Pennsylvania Hospital, Philadelphia, 1959–61; clinical associate and senior resident, National Institute of Mental Health, Bethesda, Md., 1961–62.

Experience: Founder and director, St. Joseph's College Student Mental Health Center, 1960–61; clinical associate, Laboratory of Clinical Science, National Institute of Mental Health, 1961–62; psychiatrist, NIMH on detail to Peace Corps, 1962–65; assistant chief, policy and program coordination, Office of the Director, NIMH, on detail to Peace Corps 1965–66; chief psychiatrist, Medical Program Division, Peace Corps, 1962–66; Deputy Assistant Director of the Office of Economic Opportunity for Health Affairs, 1966; Acting Assistant Director of OEO for Health Affairs, 1966–68; Assistant Director of OEO for Health Affairs, 1968–69.

Honors: Arthur S. Flemming Award as one of 10 outstanding young men in Federal service, 1968; Meritorious Award for exemplary achievement in public administration, William A. Jump Memorial Foundation, 1966; U.S. Junior Chamber of Commerce Citation as one of the outstanding young men of 1964.

GENERAL STATEMENT

Dr. ENGLISH. Mr. Chairman and members of the committee, I welcome this opportunity to testify in support of the budget for the Health Services and Mental Health Administration for the 1970 fiscal year.

As you know, Mr. Chairman, I have had the privilege of appearing before this committee in previous years in a different capacity. On those occasions, I was speaking in behalf of the appropriations of the Office of Economic Opportunity that were addressed to improving the health of the poor.

Mr. FLOOD. And you did it very well.

Dr. ENGLISH. Thank you, sir. During the course of our work at OEO, and especially as I discussed it with others both here in Washington and across the country, I frequently encountered the reaction that the health problems we were seeking to solve were by no means limited to the less-privileged segments of our population.

Certainly the challenges differ in degree—the health problems of the poor are more immediate and more painfully acute, but they do not differ essentially in kind.

Many others than the poor share problems of access to the high quality health services which our society is scientifically able to deliver and which we are entitled to receive.

American medicine has much to be proud of. It is doing more things well, for the benefit of more people, than ever before in our history. But the enormous needs for health care which have now become manifest, and the heightened expectation on the part of all our people that these needs shall be met, has generated overwhelming pressure on the capacity of American medicine to fulfill these expectations.

Because this is true, and because I have unlimited confidence in the will and desire of our health resources to do this enormous job, I consider my new post as Administrator of the Health Services and Mental Health Administration one of the most challenging positions in all of Government.

For as I view its mission, HSMHA is designed and intended to enhance in every appropriate way the capacity of American medicine so that it can meet the needs of the people for health care.

Our aim is to work toward good health care for every American. Our function is to strengthen the hand of each partner involved in the delivery of care. We are involved in relationships with every element of the purveyor system—the physicians, the hospitals and other community institutions and agencies, State and regional authorities, voluntary groups—and with the consumers of health care who have an important role to play in assuring that they are well served.

Medical care is both an individual and family affair. It takes place in the community setting, and it is dependent upon local resources, acting locally—the health worker in the neighborhood, the doctor and nurse in the office or clinic, the surgical team in the hospital. Therefore, because of the particularly personal and local nature of health care, whatever we do in the Federal Government, here in Washington and across the Nation, must ultimately be responsive to community problems and community needs. Ours are national resources which, to be useful, must be relevant to local need and made available in ways that encourage local adaptation and synthesis.

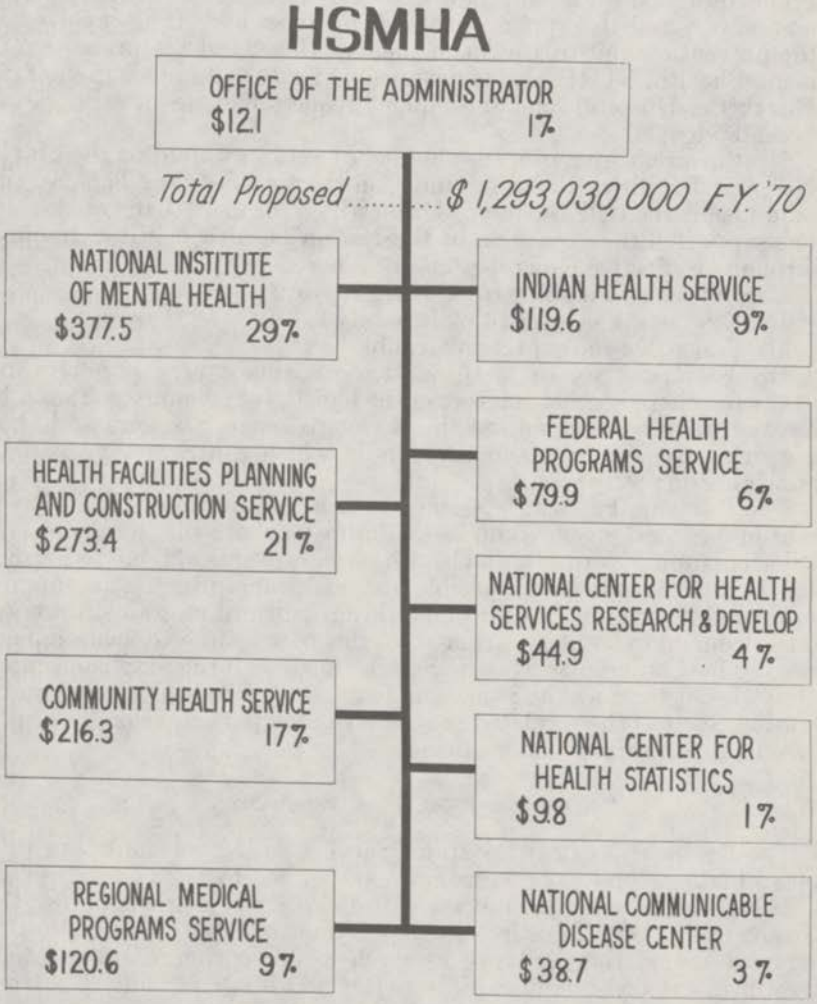
Because this is the first time that an Administrator of HSMHA has appeared before this committee, I should like to describe very briefly for you the nature of the resources we have at our disposal. I know that the committee is familiar with many of our component elements, but I felt it would be helpful to describe them in their new organizational

setting which is, I believe, rich in promise for helping these programs to make an impact that is greater than the sum of the parts.

ORGANIZATION OF AGENCY

There is a chart before you which summarizes the new organization of this Administration.

Mr. FLOOD. We will put that chart in the record.



Dr. ENGLISH. The Health Services and Mental Health Administration was established on April 1, 1968, as one of three major health agencies within the Department of Health, Education, and Welfare, as a part of the general reorganization of health activities of the Department. Our total request for budget authority in the 1970 President's

budget is $1,288,710,000 to which is added about $4.3 million transferred from the Social Security Trust Fund.

Our largest single component is the National Institute of Mental Health. Its proposed budget of $377.5 million makes up about 29 percent of the HSMHA total. As this committee is well aware, the NIMH has as its basic mission the improvement of the mental health of the American people, and its activities strengthen then the capacity of the American health enterprise in many ways. It conducts extensive programs designed to develop new knowledge through research, to train manpower, and to support mental health services. It is involved in the prevention and treatment of mental illness and the promotion of mental health. NIMH also is responsible for the administration of St. Elizabeths Hospital, and the budget request includes the St. Elizabeths budget.

Next in size, with a proposed budget of $273.4 million for 1970, is the Hospital Facilities Planning and Construction Service. This Service administers the Hill-Burton program which for more than two decades has supported the expansion of the Nation's health facilities resource through an effective Federal-State-local partnership.

Mr. FLOOD. Is that going to expire next year?

Dr. ENGLISH. Yes, sir. I think it is July 1, 1970.

Mr. FLOOD. Do you expect any trouble?

Dr. ENGLISH. No, sir. I think that remains a very popular program and there is great interest in the legislative committee. Two bills have already been submitted there. Congressman Staggers and Congressman Rogers have submitted bills which the Secretary will be testifying on pretty soon.

The Community Health Service, which accounts for about 17 percent of our total proposed budget, administers both the comprehensive health planning, formula, and health services grants of the Partnership for Health Act. It is responsible for our grant program to support improved health services for domestic agricultural migrant workers—one of our most vital programs in terms of response to acute human need. The Community Health Service also performs our continuing activities of technical assistance and support in medical care administration, such as those related to standards for participation by health resources in medicare and medicaid.

REGIONAL MEDICAL PROGRAMS

The Regional Medical Programs Service, with 9 percent of our proposed budget, conducts the program authorized by the Heart Disease, Cancer, and Stroke Amendments of 1965. In 55 regions across the Nation it is stimulating effective cooperation among providers of health services so that the results of research in prevention, diagnosis, and treatment can be brought rapidly to the aid of patients suffering from these and related diseases.

Mr. FLOOD. Is this thing finally getting off the ground?

Dr. ENGLISH. It certainly is. As a matter of fact, there are now 1,000 medical institutions around the country participating in the program. All the medical schools and about 800 hospitals are actually involved in regional activities.

Mr. FLOOD. You know it is one of my favorite projects. I am very much interested in setting up one in Philadelphia as a base for northern Pennsylvania. I wish that you would keep an eye on that.

Dr. ENGLISH. I certainly will.

Mr. FLOOD. I have been disappointed with the whole program getting started so slowly. Do you think it is now getting off the ground?

Dr. ENGLISH. Yes; I do. We saw very tangible evidence of what it was doing in the poverty program. For example, it was a great help to the neighborhood health center started in Nashville with Dr. Olson, now the director of the regional medical program. He was originally involved in the regional medical programs in the Tennessee area. They gave a supplementary grant to the neighborhood health center run by Meharry to enhance its capabilities.

Mr. FLOOD. There is no horizon to the potential of this?

Dr. ENGLISH. That is right.

Mr. LEWIS. There are 31 regions now in operation. We think that we will have about 45 before the year is out and hope to get five additional in the next year.

Mr. FLOOD. It will be a great show.

Mr. LEWIS. In 55 regions in all, 31 already fully operational.

Mr. FLOOD. The public is surprisingly unaware of this. The average guy does not know what you are talking about. Why is that?

Dr. ENGLISH. I think it was because the process by which it had to get underway began with the medical institutions. For example, in Philadelphia, with five medical schools, the first thing was to try to get those medical schools——

Mr. FLOOD. When you have medical schools and hospitals and technical schools as in Philadelphia, you have a lot of prima donnas and it is hard to get them around the same table.

Dr. ENGLISH. That is right. There are, however, real changes going on in the medical schools. They are attempting to work together around the country in the regional medical program. As a result of this activity, they are actually getting into the delivery of health care to poor people. Twenty-five percent of the medical schools in the country are now involved in neighborhood health centers.

Mr. FLOOD. It is catching on with the pros slowly, reluctantly, but I think ultimately it will, without much doubt, be a very good operation. It is very hard to get people into this thing. I am concerned that you don't restrict this to one hospital or one medical school or just to doctors and what not. This is not what Congress intended it to be. If this is not a community enterprise with many elements of the community in it, it will never accomplish its mission.

Dr. ENGLISH. It was very heartening at a meeting that was held recently just after I came to HSMHA, where people around the country involved in regional medical programs were present, to hear how many and what they contributed to the discussion. It indicated they had been in touch with poor consumer groups.

Mr. FLOOD. Poor groups?

Dr. ENGLISH. Yes.

Mr. FLOOD. This must be a cross section of the community upon which it is based like the mother hen and the various chicks or satellites. That must be a cross section of the community or it is spoiled.

Dr. ENGLISH. That is right. I agree with you.

There are 55 regions now established across the Nation which are getting together the resources of health services, providers in these areas, in order that the new results of research in prevention and diagnosis and treatment can be brought rapidly to the aid of patients suffering from heart disease, cancer, stroke, and related diseases apart from the health problem they pose.

It thereby plays an important part in upgrading the general level of care available to the American people. Through these efforts, now linked with the programs of the former National Center for Chronic Diseases, the RMP Service furnishes a bridge between biomedical research and the application of the growing store of knowledge through the health service system.

The Indian Health Service, the appropriation for which is heard by another subcommittee, and Federal Health Programs Service are responsible for the direct delivery of medical care to specified groups—American Indians and Alaska natives, merchant seamen, and other Federal beneficiaries. Together these direct-care programs account for about 15 percent of our budget proposal. These operations contribute significantly to the total capacity of American medicine in two ways: They provide services to groups not otherwise reached, and they serve as proving grounds for innovative approaches to the delivery of care. It is our intention in the immediate future to emphasize further this innovative capacity.

The National Center for Health Services Research and Development is the newest component of HSMHA. It was formally established on July 1 of last year. Its purpose is to study and experiment with new methods of delivering health care, applying scientific methodology in the social and behavioral sciences to problems of medical care organization and delivery in the community setting. Among its highest priorities are devising new approaches to the delivery of medical care for the poor, and testing methods which show promise of controlling and reducing health care costs.

Two well-known and long-established public health programs are also integral parts of HSMHA.

The National Center for Health Statistics is one of the ranking statistical agencies of Government. It collects and provides data which define and describe the changing state of health of the American people. These data, in turn, furnish the basis for setting priorities both nationally and locally, and constitute baselines against which progress can be measured.

The National Communicable Disease Center provides leadership and expertise to States and communities in preventing and controlling infectious diseases. NCDC leadership has been responsible in large part for the virtual eradication of polio and the dramatic reduction in measles over the past few years.

It will now spearhead a national immunization program to reduce drastically the tragic congenital defects resulting from the effects of German measles on unborn children.

Mr. FLOOD. Rubella?

Dr. ENGLISH. Yes, sir.

Mr. FLOOD. Do you have anything to add to that?

Dr. ENGLISH. No, sir; I think Dr. Sencer in his conversations with you in relation to the supplemental covered that area very well and

the importance of it; so we are quite hopeful about what the efforts will be in the fall, in relationship to this epidemic which is expected.

I hope, Mr. Chairman, that this very quick tour has been useful in identifying for you the broad sweep of the programs incorporated in the Health Services and Mental Health Administration. Now, if I may, I should like to illustrate briefly how these programs relate to each other and to the broad mission of HSMHA—strengthening the capacity of American medicine to provide high quality health care to all the American people.

First, let me set the stage.

For a long time it was widely believed that the predominant barrier to good health care was financial—that given sufficient money, anyone would receive the care he needed. Acting on this assumption, the Federal Government invested heavily in financing medical care through enactment by the Congress of the social security amendments authorizing medicare and medicaid in 1965. This vitally important step has enabled millions to pay for care they urgently need and could not otherwise afford.

Meanwhile the greatly heightened demand for medical care has placed enormous stress on the capacity of the American health enterprise. Increased patient loads have made it extremely difficult for doctors and health care institutions to maintain high standards of quality. The increased demand, imposed on a relatively static and limited supply of health resources, has produced strong inflationary pressures, and costs have shot upward. In short, we have found that issuing money tickets into the health system, while necessary, is by no means the whole solution to the problem.

What is needed is a concerted effort to build the capacity of our health resources so that they can respond to the scale of the challenge they face.

Moreover, because of the peculiarly personal and local character of medical care, this national effort must have its impact in the community where doctors and hospitals are facing daily the demands of serving more people better than ever before.

The Federal Government in the past few years has initiated a number of programs aimed at strengthening health capacity, with payoff at the local level. Most, though not all, of these programs have now been pulled together in HSMHA, and it is this mission that gives HSMHA its unity of purpose.

Let me list a few of these programs on the "capacity" side of the health care equation.

OBSOLETE HOSPITAL DESIGN

The first, historically, is the Hill-Burton program which has added 300,000 beds to the physical capacity of the American health enterprise over more than two decades.

Mr. FLOOD. To what extent, in your concern and interest with Hill-Burton funds, are you fellows going to continue to build these medieval, obsolete hospitals?

Are you going to let these local architects and engineers, simply because they know somebody who is a head of a hospital, continue to

build new hospitals on the same plans that were used 50 years ago, or are you going to do something new and modern, to help utilize staff more efficiently? All they are doing is exactly what they have done for 50 years and it is obsolete. You folks do not seem to care much about that.

Dr. ENGLISH. Mr. Chairman, I think that you put your finger on the fact that the place in which medical care is given is an important part of the quality of care.

Mr. FLOOD. I put my whole hand on it.

Dr. ENGLISH. I couldn't agree with you more. I think it is not only important in designing hospitals that they be "human" places where people can come for care——

Mr. FLOOD. You have spent a lot of money in the Hill-Burton program since it was started. I can take you to places right now where they are doing exactly what they did 50 years ago, building exactly the same type of buildings with exactly the same design. It is a shame.

Dr. ENGLISH. I think what you are going to see, Mr. Chairman, is even more of a change of emphasis in the Hill-Burton program. In addition to building the hospitals, the Hill-Burton program has supported 942 diagnostic or treatment centers aimed at keeping people out of the hospital. That is one of the fundamental changes.

Mr. FLOOD. Let us talk about building hospitals.

Dr. ENGLISH. All right. I think that we are going to do everything that we can, Mr. Chairman, to stimulate innovations in hospital design.

Mr. FLOOD. You haven't so far.

Dr. ENGLISH. I think the National Center for Health Services Research and Development, which is going to be concerned about innovations in many kinds of things in medical care, is going to very concerned about the design not only of hospitals but all kinds of facilities that are places where people come to receive health care. I think what we are learning is that the environment where medical care is given is terribly important.

Mr. FLOOD. The local establishments prepare their plans and with local architects. They then go to the State capital where it is approved pro forma and it is sent down here and comes back approved.

Dr. ENGLISH. We will have to look into what we can do about that, Mr. Chairman. I would agree with you. I think we need much innovation.

Mr. FLOOD. It is the same old shillelagh my daddy used to wear. The same thing.

Dr. ENGLISH. I think it is important. I think that some of these other planning agencies that are involved with the partnership for health program now, which are going to be working very closely with Hill-Burton agencies, may be able to provide further stimulus.

Mr. FLOOD. Of course, these facilities are badly needed, but what a waste and shame after all these years with these hundreds of millions of dollars that all these doctors have only this. We should have something much better, and we don't. Nobody cares very much, I guess. I seldom hear anybody mention that, do you?

Dr. ENGLISH. I know Dr. Graning is very concerned. The other day he was showing us some of the later public health centers that have been built under the Hill-Burton program. Maybe he could show you some of the pictures. They are very beautiful. They are the kinds of places where people would like to come for care. They are the kinds of

places where professionals would like to work. That is almost as important as the environment for the patients.

Mr. FLOOD. It certainly is.

Dr. ENGLISH. The regional medical program is getting a lot of emphasis. They are getting involved in this.

Mr. FLOOD. The way the Hill-Burton program has been run and handled by the people at the local level, the type of construction we have been getting is not good. They are tickled to death but you and I know that we didn't get our money's worth. All we got was bricks, mortar, beds, space, and rooms. The wrong kind of space.

Dr. ENGLISH. We had some interesting experiences in the poverty program in that regard, Mr. Chairman. The consumer representation on the neighborhood advisory council in a neighborhood health center, the consumer panel, would often sit down and discuss with the architects themselves the design of health centers.

You should see the impact that consumer input had, together with the input you get from the doctors and nurses, on the design of facilities. I think a lot of them are not only functionally better, esthetically better——

Mr. FLOOD. The type of architect doing this Hill-Burton stuff is a pretty closed corporation, isn't it? Very. Talk about the Stagehands Union.

That is a real closed corporation, architects who built those hospitals. They really have this thing closed up. That ain't good.

Dr. ENGLISH. I think as Hill-Burton begins to move into some of these new facilities, new kinds of facilities, facilities to keep people out of the hospitals, that the field may open up a bit more.

Mr. FLOOD. I am going to keep pressing you on that. I am disappointed in the whole thing.

Dr. ENGLISH. We will try.

Mr. FLOOD. I don't quarrel with the fact that the facilities are needed. God knows they were needed. I am not talking about that.

Dr. ENGLISH. Very good.

In addition, on the capacity side, besides hospital beds and manpower, there are some additional considerations that are important to capacity.

Less obviously, the Hill-Burton program has pioneered in planning procedures to help assure that these additions to the system truly strengthen capacity rather than needlessly duplicating it.

MANPOWER ACTIVITIES

In the manpower field—the second basic building block of capacity—somewhat different kinds of Federal approaches have evolved in the past few years, notably through the programs of the Bureau of Health Manpower of NIH and the Department of Labor. These are designed to augment the total national supply of manpower upon which communities ultimately draw. Within HSMHA, the National Institute of Mental Health has primary responsibility for training a broad range of personnel urgently needed in the mental health field.

It is one of the most important manpower training programs in this administration.

But the most critical and immediate need is to make better use of the resources already available in communities across the Nation. Sev-

eral programs, mostly of very recent origin, are now underway with the purpose of strengthening capacity by improving the ways in which health care is organized and delivered in the community.

One of these is the neighborhood health centers effort of OEO, with which I was formerly associated. Another is the maternal and child health program of the Children's Bureau. Both are aimed at the target of immediate accessibility of health care at the neighborhood level. Both involve deployment of existing resources in new patterns and the creation of new resources.

Within HSMHA several programs provide us with levers for raising the capacity of the community health resource.

The community mental health centers program is bringing treatment of mental illness out of remote isolation and into community range. It is also, thereby, advancing the prevention of mental illness in highly significant ways.

Project grants under the partnership for health are encouraging new modalities of care, supporting innovative efforts of a variety of health institutions and agencies.

Each regional medical program seeks to pull existing resources together into new relationships. Their purpose is to enable physicians to deliver the best in modern care to their patients.

The migrant health program augments community capacity to serve a group whose overwhelming health needs have been beyond the reach of the existing system.

New programs with direct community impact are emerging in such critically important fields as narcotics addiction, alcoholism, and suicide prevention.

In addition, as I have already noted, our direct medical care programs constitute an important extension of community capacity, nationwide, by serving Indians and others for whom such care has been extremely difficult to obtain.

Each of these programs should be viewed as a source of strength upon which the community may draw, singly or in combination, according to its own needs and priorities. The synthesis of these community-focused efforts must take place in the community itself if it is to be truly meaningful—in terms of real medical care delivered to individuals and families.

Thus the task of Federal health services programs, I believe, is to facilitate this synthesis in every possible way.

One important way is to support and encourage the planning processes whereby States and communities can arrive at rational assessments of need and priority. This we are seeking to do through several mechanisms. The primary thrust is through the comprehensive health planning program which promotes planning by States and by areawide agencies and which supports training of persons skilled in the health planning disciplines.

A second important Federal role is to make available the best that our current state of technology can offer in organizing and delivering health care. This technical support includes our activities designed to upgrade standards of performance of individual elements of the health system.

A third logical Federal role is to help advance the frontiers of our health services technology, through study and experimentation. This is the chief target of the National Center for Health Services Research

and Development, and also of the applied research activities of the Regional Medical Programs Service.

Fourth, the Federal health services enterprise has a responsibility for encouraging attention to important national health goals which have either been beyond the range of scientific feasibility or which have been given inadequate attention in the past. The forthcoming rubella immunization program is an example of the former. Concerted efforts in family planning and nutrition are representative of the second category.

Finally, and perhaps most basic of all, the Federal health services need to be administered in such a way that they are truly responsive to the diverse needs of our varied neighborhoods and communities. If the synthesis is to be achieved locally, then the Federal sources of strength must permit and encourage such a synthesis. Excessive rigidity, fragmentation, a one-dimensional view of each separate program mission—all of these would defeat rather than advance the strengthening of local and national medical capability. It is an important objective of HSMHA to overcome these difficulties.

Mr. Chairman, I hope I have been able to communicate to you and to the committee some measure of the promise I feel in the HSMHA mission. This committee has demonstrated many times its deep concern for the health of the American people. The existence of the strong array of programs I have described is due in substantial part to that concern.

I am proud that it has been my privilege to introduce to you this new and closely interwoven fabric of health service resources, and I shall be happy to answer any questions you may have.

Mr. FLOOD. You mean delivery to the bedside of the patients or where?

Dr. ENGLISH. In the home, in the family. I think that what we are looking to, quite frankly, Mr. Chairman, as we see it, is the deficit in capacity. This is particularly true among the poor populations living in the urban areas, the poor areas of our cities and in the rural areas of our country where even if you are not poor you can sometimes be medically poor because there are sometimes not enough medical doctors.

SHORTAGE OF PSYCHIATRISTS OUTSIDE LARGE CITIES

Mr. FLOOD. What are we going to do about people like psychiatrists, people like you? There are a lot of them in Pennsylvania. I have a district of 500,000 people. I have one psychiatrist. They are all in Pittsburgh and Philadelphia. You know why. What about that?

Dr. ENGLISH. I think there are some things we are learning that we can do about that. Let us take Philadelphia, for example. You know the Pennsylvania Hospital at Eighth and Spruce in Philadelphia; it has a very fine department of psychiatry.

Mr. FLOOD. You are out of there, are you not?

Dr. ENGLISH. Yes. I actually trained at 49th and Market, which is the psychiatric hospital. Then there is a department of psychiatry at Eighth and Spruce, too. They received a community mental health center grant to develop a program there. What that did was to get those psychiatrists involved in community——

Mr. FLOOD. What about Wilkes-Barre, Scranton, Johnstown?

Dr. ENGLISH. After they got the community mental health center going at Eighth and Spruce, they decided they wanted to get a neighborhood health center into the target area of the community mental health center.

Mr. FLOOD. Psychiatry only right now?

Dr. ENGLISH. The psychiatrists were taking the leadership in what was first a community mental health program, a comprehensive program, and they decided maybe they could learn something about how to deal with the problems of the inner city in Philadelphia by having a rural program somewhere. I know that before I left OEO, one of the things that the psychiatrists there were talking about was getting out there and into a rural part of the State of Pennsylvania and bringing the resources of that urban hospital and its psychiatrists, with other medical disciplines, into a rural area as part of the same program. I think that is one way we can begin to get psychiatrists out to some of the areas where they are not right now.

The community mental health center program itself has many programs in rural areas that help get psychiatrists out there. We have a long way to go.

Mr. FLOOD. You sure have.

Dr. ENGLISH. In general, psychiatrists tend to cluster in the big cities. I think that what we have got to do, Mr. Chairman, is to encourage, to the extent that we can, a psychiatrist, and really every other professional in medicine, to look beyond the horizons of his own practice to the total community need. The development of urban centers, which are looking for rural areas where they can learn something about development of systems of medical care in a rural area, will help to deal with problems in the inner cities.

Mr. FLOOD. Get them interested in something besides the golf score and the Wall Street Journal.

Dr. ENGLISH. There are many physicians, I think, that have that interest, particularly among the young. The young students, Mr. Chairman, I think in many ways are the hope for some of the problems that we are concerned with now. The growing concern among young medical students that you talk to these days about poor urban, poor rural areas, the fact that they see the new action as getting out there and helping with the development of medical programs that will meet the needs of those areas, I think this is going to help us really meet the problems that we have now.

Mr. FLOOD. You are not gung ho because you were in the Peace Corps and OEO; you are not going to get carried away with yourself?

Dr. ENGLISH. I feel, Mr. Chairman, my enthusiasm comes from moving around the country, which I had quite a chance to do while I was with the Office of Economic Opportunity. I felt that the only way you could understand how to make not only poverty programs but really all Federal health programs try to serve people was to get out and listen to how the people perceived them.

Frankly, the more one had a chance to move around the country—I spent a lot of time in Alabama in rural areas—the more I became encouraged that the job in Washington is to try to get the flexibility to help these people, and the resources for these programs, to be responsive to the things around the country that people want to do. That is where my enthusiasm comes from—from seeing three doctors in

Lowndes County, Ala., where there are 16,000 people and the per capita income is $850 a year, where those 16,000 people are spread over 1,000 square miles—no clustering like you have in the city—those three doctors, one of them over 80 years of age, another one in his 50's, one of them had had two coronaries, from seeing what they are willing to try to do.

I think the task for us is to try to back them up. That is where I think you pick up the enthusiasm. That is an area where they are trying to bring together the resources not only of OEO programs but of the regional medical programs in some very interesting ways. In other words, there is a local synthesis going on there that we have to continue. We were talking about some of the issues of technology that we hope to help with. This includes technical support in the communities designed to upgrade standards of performance of all the elements of the health care center. It involves technical and laboratory improvement programs. In addition to technology, I think a third logical Federal role is to help advance the frontiers of our health services technology, through study and experimentation. This is the chief target of the National Center for Health Services Research and Development, and also of the applied research activities of the regional medical programs service.

ORGANIZATION OF HEALTH PROGRAMS

Mr. FLOOD. Is this present organization of the Health Services and Mental Health Administration pretty firm; do you have any further organizational ideas in the works? We have been listening to organizations and reorganizations and organizations against reorganizations and they go on and on. What about yours? Is this firm? Are you set up with an organization that will last for a year or two, or are you going to have something else to propose in a few months?

Dr. ENGLISH. Mr. Chairman, I hate to suggest to you that this is the final and perfect way of assuring that these health programs are going to be able to serve needs best. I can tell you this, we have declared a moratorium on further reorganization. I think the feeling that everyone has had has been that there had been too much preoccupation with reorganization. This organizational pattern is fundamentally sound. We are going to try to stay with this for a while and make it work. I think you would agree most reorganizations are evolutionary. I am sure there will be some changes eventually.

Mr. FLOOD. I don't mean rigid. I mean within the rule of reason.

Dr. ENGLISH. Fundamentally, I think the overall reorganization is sound and I would not expect to see major changes in it over the next year or so.

EFFECTS OF MEDICAID

Mr. FLOOD. I hope you get your hope. I am interested in your remarks on page 6 of your statement about medicare and medicaid having created demand for health services without a corresponding increase of the supply. According to an article by William Raspberry in the Washington Post of March 16—and I hold it here in my hand—in the District of Columbia medicaid has not really done anything

except to pay for medical care for poor people who were already getting free medical care anyway. The quality—that is the thing that startled me—the quality of the care they are getting has actually deteriorated.

(The article follows:)

[Reprinted from The Washington Post]

D.C. Medicaid Program Proves a Flop

(By William Raspberry)

Medicaid, a theoretical boon, is—at least in the District of Columbia—a practical bust.

The avowed intent of the medicaid law was that any citizen too poor to pay for his own medical care would get it free. Theoretically, this would include people whose income is quite adequate to meet their day-to-day needs but who have no money left for medical care.

In fact, however, medicaid has been largely limited here to people who are on public assistance, or whose income would make them eligible for public assistance. And these people already were getting free medical care.

This has come about because the medicaid law, whatever its initial intent, provides Federal assistance to States (and the District) to enable them to expand the amount, duration, scope, and variety of the medical assistance they already were providing.

What this means is that for the "categorically needy" (those persons on public assistance) and the "categorically related" (those persons who, on the basis of their income, would be eligible for public assistance), medicaid will reimburse the District of Columbia Government at the rate of 50 percent. These categories include some 122,000 persons.

Another 49,000 residents meet another test for participation in the medicaid program. They can support themselves except for their medical needs.

The medicaid law permits, but does not require, States to provide medical care for people in this category. But it does not provide for reimbursement of the cost of that care, even at the District's 50-percent rate.

According to the law, the States must pay the cost of care for these medical indigents, with the Federal Government paying half the management cost. In the District, about 10 cents of every medicaid dollar goes to the cost of managing the program. Thus, for every dollar the District spends on the medically indigent, it gets back a nickel.

Since Federal reimbursement is the only source of additional funds for medical care here, the District has chosen not to extend coverage to the self-supporting medically indigent. As a result, 49,000 District residents who are technically eligible for free medical care aren't getting it.

(In Maryland, former Gov. Spiro Agnew withdrew medicaid coverage from 22,000 medically indigent; Gov. Marvin Mandel recently restored it.)

The practical result in Washington is that only those who were already getting free medical care are covered by medicaid. And for these people, it makes little difference under which program they are covered.

Medicaid is supposed to have some other advantages over the old program. Poor people who formerly had to get their health care at public clinics now can go to private doctors and be treated at private hospitals.

That, at least, is the theory. But only 525 of the city's 2,000 physicians have signed up for participation in the program, and only about 135 of these are actually participating.

The only hospitals participating in the medicaid program are Children's Hospital and District of Columbia General, both of which have long records of treating large numbers of charity patients, and the Hospital for Sick Children.

Thus, not only is medicaid not treating any new people, it is treating the old ones in the same hospitals.

It is even worse than that. Some medicaid enrollees say their medical care has actually deteriorated.

Waiting time for emergency care at District of Columbia General has increased and even the doctors who have signed up for the plan are "too busy" to

see medicaid patients, the District of Columbia Citywide Welfare Alliance told an HEW hearing on medicaid.

HEW also was told that "drugstores treat us like dirt," sometimes requiring waits of up to 5 hours "while others get served."

Medicaid was supposed to do for the rest of the poor what medicare did for the elderly. The evidence is that in the District it isn't doing much of anything for anybody.

Mr. FLOOD. I will ask you, is that a fair criticism or is it just the case in the District of Columbia? What about the rest of the United States generally?

Let me read this. I will put the whole thing in the record.

Medicaid, a theoretical boon, is—at least in the District of Columbia—a practical bust.

The avowed intent of the medicaid law was that any citizen too poor to pay for his own medical care would get it free. Theoretically, this would include people whose income is quite adequate to meet their day-to-day needs but who have no money left for medical care.

In fact, however, medicaid has been largely limited here to people who are on public assistance, or whose income would make them eligible for public assistance. And these people already were getting free medical care.

Then it goes on at some length and he has these paragraphs.

Thus, not only is medicaid not treating any new people. It is treating the old ones in the same hospitals.

It is even worse than that. Some medicaid enrollees say their medical care has actually deteriorated.

He winds up by saying this:

Medicaid was supposed to do for the rest of the poor what medicare did for the elderly. The evidence is that in the District it isn't doing much of anything for anybody.

What about that? With reference to the District and, more particularly, with reference to the United States. I am just using the District as an example.

Dr. ENGLISH. I think, Mr. Chairman, that Mr. Raspberry has put his finger on some fundamental problems.

Mr. FLOOD. Quite an indictment.

Dr. ENGLISH. We are really just beginning to understand. I think that the first thing that you have to keep in mind is that medicaid, as it developed, was an evolutionary thing, and in the District of Columbia or any State, will eventually be able to pay for all the comprehensive medical care which a family declared to be medically indigent by the District or State would require.

It requires a Federal share of money to pay that bill. It requires a local share of money to pay that bill. In looking at what the local contribution could be in different parts of the country, you will find some parts of the country that are too poor to muster the local share, and for that reason have not yet implemented the medicaid legislation. For example, when I spent some time in Alabama before leaving the poverty program, that State at that time had not yet been able to implement the medicaid program at all because it was too poor a State to be able to get the local share for the most minimal implementation of medicaid.

In a State like California, or New York, a wealthier State, which has implemented medicaid to provide financing for relatively comprehensive service, and includes many more than just the people that used to be on the welfare rolls, you have another problem because of medicaid. You recognize that it is an important breakthrough. It

provides for the financing of medical care, but once you have provided money that people can use to pay for medical care, you run into a second problem, which is that you have not at the same time increased the capacity of medicine to provide that care as you bring new people into the system.

Mr. FLOOD. Isn't New York a classic example of the other extreme? Didn't they go off the deep end?

Dr. ENGLISH. New York was very generous in its implementation of medicaid. I think it experienced, in many parts of the State, capacity problems. Waiting rooms, for example, had many more people in them. The doctors had less time to see patients. I saw this in a very striking way.

Let me give you a precise example I am familiar with on the impact of this. Take an area like Watts where you have one-fifth——

Mr. FLOOD. Take New York. Isn't medicaid eating them out of house and home?

Dr. ENGLISH. Yes, indeed. It has become a very important financial expense both locally and federally. I think that the problem is that as you develop money to finance medical care, if you want to see those dollars really produce quality medical care, you have got to at the same time increase the capacity of the local physicians and of the hospitals to provide a way of turning those dollars into something other than inflationary costs, dilution in the quality of care, and more people going into the hospital. When you get that busy, you don't have time to see patients and you have to send them into the hospital. I would say what we have learned is that medicaid is a tremendous breakthrough. It is tremendously important.

Mr. FLOOD. Are you keeping it within the intent of Congress. Is it an open-ended thing and becoming manna from heaven?

Dr. ENGLISH. I think that that is something, Mr. Chairman, that Dr. Land can talk to you about very well when he testifies. I think he shares some of these concerns and has a number of ideas of how to try to balance the two sides of the equation in a way that avoids some of the problems that Mr. Raspberry is talking about and that you are concerned about.

Mr. LEWIS. I have a couple of clarifying points. The medicaid law has the effect of extending the claims for service to all categorical welfare assistance groups, those already receiving assistance and those called categorically related. Before we established medicaid, not everybody on welfare got the same level or kinds of services, but medicaid now requires that everybody under the program receive the same services.

Secondly, it is true that the original medicaid law did not prescribe any definition of medical indigency, but the Congress in time did establish the limit. That tended to put a monetary lid on the program so far as eligibility goes.

I think that in terms of the things Dr. English is talking about, the financing for the total system is simply too broad in relation to capacity. That was part of the problem New York had in getting it under some control.

Mr. FLOOD. Do you think you have covered the United States now? You were speaking broadly enough, were you not, Dr. English?

Dr. ENGLISH. I think we have learned what a job it is going to be to provide high quality medical care for all of the people in the United States, Mr. Chairman.

Mr. FLOOD. Indeed it is.

Dr. ENGLISH. It is a tremendous thing for many reasons. I think people prize medical care now much more than they did 20 years ago. It was not too long ago we did not have much to offer to patients from physicians. But today we do.

And as you know, getting good medical care is becoming more expensive. It involves highly sophisticated personnel, it involves very sophisticated technology, and yet there are some people in this country who cannot get to see a doctor when they want to.

Mr. FLOOD. And a lot of doctors will not go and see anybody in their home.

Dr. ENGLISH. That is right.

I think when they are overworked they tend to want to see patients in their office, not to go out to the home, and of course to deal with patients in a hospital. I think what we somehow have to do, Mr. Chairman, is develop programs with the medical profession. I think they are also interested.

Mr. FLOOD. You had better start talking about the general practitioner.

Dr. ENGLISH. And I think he is going to need helpers.

In the neighborhood health center, for example, you know that doctors have left the urban areas, there has been a flight from the urban areas. There never were very many in the rural areas, but if you look at the rural areas in the country, the doctors are getting older and young doctors are not coming into these areas. I think that is of great concern.

I think if you look at the reasons for this, it is very frustrating for a doctor to practice in the inner city these days because he recognizes his own limitations in dealing with the total needs of the family that comes to him. If you can provide a setting in the inner city or rural areas where a man can practice good medicine in association with other physicians where perhaps he is part of a family health team helped by nurses and social workers, we would and already do have a whole new breed of professionals developing.

Mr. FLOOD. A co-op kind of thing?

Dr. ENGLISH. Exactly. It could be a group practice, it could be a family health center, but it permits local people to become family health workers.

Let me give you a precise example of how it is working in some settings in this country where, say, a mother comes to a family health center with her sick child. She not only sees the doctor who might be part of a family health team, but she sees a family health worker who may be a local neighborhood woman who is a part of that team with the physician.

Mr. FLOOD. In your grandfather's time the lawyer and doctor and minister were the three important people in the town.

Dr. ENGLISH. Exactly.

Mr. FLOOD. That is not so any more today.

Dr. ENGLISH. I agree.

Mr. FLOOD. With reference to the lawyer and doctor, they have fallen into ill repute with the average man on the street. Do you know that? They do not have the same status in the community any more.

Dr. ENGLISH. They are not as close to the family, I think, in many parts of the country. My father did general practice in Philadelphia, Mr. Chairman.

Mr. FLOOD. He was the adviser to the family on real estate, who the kids dated, and everything else.

Dr. ENGLISH. That is exactly right. And he was often paid not in real estate but in potatoes and chickens.

Mr. FLOOD. He advised them about everything.

Dr. ENGLISH. That is right.

Now of course he is doing specialty practice. He is an obstetrician and gynecologist. He misses that contact he used to have as a family practitioner, but I do not think, as the Surgeon General was saying to you a couple of days ago, we are going to see the rebirth of the old family practitioner. I think what we are going to see and what we must support are settings where the new breed of young physician, who is highly trained, who is interested in being able to practice good medicine, can associate with his medical colleagues, with the nurses, and others.

Mr. FLOOD. I do not know for sure what we want, but I know that there is something the matter with what we have.

Dr. ENGLISH. I would agree with you, Mr. Chairman. We have a long way to go in dealing with the problems of centers of our cities which the doctors have largely left, and rural areas. But I think we have learned in the last couple of years that if you provide a setting where a man can practice good medicine in the center of the city, particularly in relationship to poor people, or in a rural area where he can practice good medicine, you can get him to go back out there.

Mr. FLOOD. I am not just concerned about poor people or the center of the city; I am talking about everybody in the country.

Dr. ENGLISH. I think it is a problem for more than poor people. I remember Mr. Michel mentioning to the Surgeon General a rural area in his State where I do not suppose the people would be poor, but they are medically poor, they cannot get a doctor other than the doctor from overseas to stay there.

I think what we have to learn to do is be able to support the kinds of things that will provide the kinds of facilities that will get doctors interested in going back into rural areas. Many of them I have talked to, Mr. Chairman, would prefer to live in rural areas. They think the quality of life is better in rural areas, they think the hunting and fishing are better in rural areas, but they are not sure they can practice good medicine in rural areas. And the doctor who comes out of today's medical school wants to practice good medicine.

RISING COST OF MEDICAL CARE

Mr. FLOOD. On page 5 you talk about devising new approaches to the delivery of medical care for the poor and about testing methods which show promise of controlling and reducing health care costs.

Do you have any new approaches? What are they?

Dr. ENGLISH. I can tell you there are no easy answers to that one, Mr. Chairman. But the very newest organization of HSMHA, the National Center for Health Services Research and Development is going to be concentrating on these questions. This organization is very new, and its effort is going to be directed at looking at some of the new methods of delivery of medical care. They are starting all over the country now and examining these methods, seeing what their implications are for not only extending quality medical care to more people but examining the central question of medical care costs.

I think, for example, one of the questions that Dr. Sanazaro and the center is going to be concentrating on is the very simple fact that if you do not have medical resources out in the community that can take care of the ambulatory health care needs of people, they are going to come into the hospital. It is not only more expensive to take care of them in the hospital, but the degree of illness they have, by the time they get to the hospital, may be greater.

I think that one of the things that Dr. Sanazaro is going to be looking toward is how to develop programs of health care which not only have great human implications, but great cost implications for trying to keep people out of the hospital.

For example, we learned in the poverty program that you could provide in a neighborhood health center for a year the kind of comprehensive health care that would keep people out of the hospital for the same amount it would cost to put them in the hospital for 2 days.

So I think that is the kind of question, the kind of research we need. I would not want to suggest that there are any easy answers, but I think we now have a center that can look at these questions, not only do the kind of research that is needed in this new area, the delivery of medical care, but help to develop around the country the capacity for doing this kind of research. This is a new field.

Mr. FLOOD. Secretary Finch asked me in a conversation we had when he first came to town, what did I think was the chief problem with reference to health care.

"No speech on that, the answer on that, Mr. Secretary, is one word, 'cost'."

Dr. ENGLISH. That is right. I think what we have got to do is take a look at what is now a $53 billion part of our economy, and understand what measures can be taken not only to improve the quality of care, getting what we know out to a lot of people who are not really touched by that information yet, but how to do it economically.

That is going to be a major role of this center, Mr. Chairman, and they have already begun something very interesting that Dr. Sanazaro will want to talk about in detail, that is starting to develop and support around the country university centers that will have the capacity to do this new kind of research. You do not find many experts in this country at the present time, Mr. Chairman, in this kind of question, and I think this is one of the new areas of concern in our society, the delivery of medical care. One of the new areas of research that is going to have to develop is research into why medical care is so costly, how you can reduce the cost and maintain the high quality at the same time.

Mr. FLOOD. I often wonder, in 10 years we created a new breed all over the country, a new profession, a new doctorate degree for city

planners. Now they give doctorates for city planning and urban redevelopment.

Dr. ENGLISH. Yes.

Mr. FLOOD. But nobody has paid that kind of attention to costs in medical schools, medical care centers, and medical care generally.

Dr. ENGLISH. I think that is true, Mr. Chairman. It is developing now as a new profession. Let me mention some of the centers Dr. Sanazaro is going to be working with, not only on the problem of costs, but research on how you deliver to many, many more people than we ever did before the ability to get more medical care.

What we need to find out is how to gear up to deliver medical care in this country without having the growing demand decrease the quality of care. The centers I mentioned are: the University of North Carolina, Harvard Center for Community Health and Medical Care, Kaiser Permanente in Oakland, Calif., the same organization in Portland, Oreg., University of California at Los Angeles, Northwestern University, American Rehabilitation Foundation.

This new type of center is supporting the development of a university capacity to look into these questions.

COORDINATION OF HEALTH PROGRAMS

Mr. FLOOD. This committee last year expressed concern about the lack of coordination among the regional medical programs, the comprehensive health planning programs, and the OEO neighborhood health center program.

Have you looked into this? This committee last year went to some length to point this out.

I made a point of it myself. Is this a three-headed Hydra?

Dr. ENGLISH. I was involved with it, Mr. Chairman, before coming to HSMHA while working with OEO because, as you know, the neighborhood health center program of OEO was what you call a "last dollars" program and we were supposed to look for every other available source of funds as it existed in the community. This brought us into contact with a large range of Federal, State, and local efforts in relationship to health, and with some of the problems in pulling them together. I would be quite frank in telling you, Mr. Chairman, that we cannot suggest to you definitely now at the national level what the relationship between the three programs that you mentioned is.

We can give you a lot of rhetoric about what it ought to be, but they are all too young to really state definitely from any national perspective what the relationship is going to be.

I think myself what we have to do, recognizing again that these programs are very young, is to look at the way States, localities, and communities are pulling the programs together and mustering their resources in ways that are very meaningful locally.

Let me just give you an example of where I saw this done.

In the State of Alabama, for example, in the city of Montgomery, one of the major urban areas of Alabama as well as an adjacent rural area, Lowndes County, Ala., the medical people wanted to try, first, to do something to extend medical care to everyone in the community; No. 2, when medicaid was introduced, they wanted to have the capacity to turn those dollars into high-quality medical care for all of their

people. They began to see some ways really in which the OEO program, the regional medical program, and the partnership for health program could work together. At the meetings which I attended in Alabama representatives of all three——

Mr. FLOOD. Do you not go to anyplace else besides Alabama?

Dr. ENGLISH. As you can sense, Mr. Chairman, I feel I learned a lot not only in Alabama but in other places where we had a chance to see the way many of these programs could work together. If I could just cite an example in Alabama.

Mr. FLOOD. Go ahead.

Dr. ENGLISH. In both Lowndes County and in Montgomery, the physicians and the other health officials felt, first, that the OEO program could contribute to ambulatory health care, could help set up a family health care program for ambulatory patients.

No. 2, the people under the regional program auspices were involved with the University of Alabama School of Medicine. The people in the Department of Preventive Medicine working with the people of the regional medical program helped to develop the capacity to train local people to do the health surveys required for good planning in both the rural area and urban area. The people thus contributed to the regional medical program.

The regional medical program was looking at the utilization of hospitals in Montgomery. The problem was that though there were five hospitals in the city of Montgomery, there was no hospital in the rural area nearby. The question was, if you are going to provide high-quality medical care, did you need another hospital in the rural area or did you need another hospital in Montgomery?

The conclusion the physicians drew was if they utilized the five hospitals better, if they got the hospital administrators together and thought about whether you needed emergency services in every one of those hospitals, whether you needed all of the special services in each one of those hospitals, that if you made better utilization of five hospitals, you might not need to build another one.

So the regional medical program people concentrated on hospital utilization and the more sophisticated needs of the community coronary care unit and a renal dialysis program. The people involved in the partnership for health planning agency both at the State and local level were thinking about how they could extend in the planning process what was learned in one rural county of Alabama, Lowndes, and one city of Alabama, Montgomery, so that it might help in planning to meet the health needs of the entire State.

TRANSFER OF OEO HEALTH PROGRAMS

Mr. FLOOD. You have considerably more than casual knowledge of the OEO and its health center program. Should it be transferred to HEW?

Dr. ENGLISH. Mr. Chairman, I think a review of that is going on right now within the new administration.

Mr. FLOOD. I'm sure it is.

Dr. ENGLISH. And I think it would be premature for me at this point to comment. I can say this: That regardless of what organizational steps are taken, we are going to work very closely with that program

wherever it is, because it is a fundamental part of the total Federal health effort in this country.

Mr. FLOOD. Not bad. You did not say a thing.

Mr. Michel?

COST OF HOSPITAL CARE

Mr. MICHEL. Dr. English, the chairman touched on a number of subjects, one of which had to do with medicaid, to a degree. Tomorrow morning Mrs. Reid and I are going to have breakfast with the Governor and a number of his associates from our home State on this matter of welfare payments, the whole area of welfare and what is happening out in the State, what their problems are and how we get involved. They have a batch of recommendations. But I was reading and boning up for that breakfast meeting and I notice one point which is No. 9 of about 17 says something about mandatory bases for hospital payments.

> The problem of increasing hospital and medical cost is national. Payments for hospital costs are tied to the Federal requirements that came about with medicare. Payments must equal the cost incurred by general hospitals. In other medical areas formulas and guidelines provide some leeway for negotiation. The required payment of costs to hospitals not only increased public aid expenditures, but left us with no reasonable explanation of why we are paying hospitals more than do private paying patients for the same services. We do not object if hospitals collect enough for services to meet reasonable costs but all who get the services should share the cost equally.
>
> We believe that until cost accounting procedures can be worked out and hospitals make the same charges for private pay patients as they do for title 19 and medicare patients, the regulations should be amended to provide for the payment of the less expensive charges or costs.

What do you have to say to that?

Dr. ENGLISH. Mr. Michel, I think really that Dr. Land, of the Social and Rehabilitation Service in HEW, is the most familiar with some of those considerations. The medicaid program is not administered by HSMHA.

Mr. MICHEL. Will he testify later here?

Dr. ENGLISH. Yes, he will be up here.

I might say that I think you are well aware, Mr. Michel, that the people that work in hospitals—I am not talking just about the doctors but the nurses, the aides—are some of the lowest paid people in our society. As a matter of fact, if they were not as committed as they are to their work, we would have even more difficulty in getting them to work in institutions like the hospital.

Medicare was one of the first things to come along that helped hospitals bring the pay scale of people who had been very underpaid for a long time up close to being somewhat competitive with other occupations in the community. I think if you look at the——

Mr. MICHEL. Does the minimum wage have anything to do with it?

Dr. ENGLISH. I think that helped, too. That is right. But I think there is a backlog there that is being picked up. You are quite right that the major expenditure under medicare and medicaid is for hospitalized patients. This is a concern.

I think Dr. Land can talk to you about some of the things he hopes to do about that. I think that is part of the reason we are very concerned about the development of programs that will help to try to keep people out of the hospital and why we are going to put such emphasis and effort on that. I think that is a complementary thing that will eventually have great cost implications.

Mr. MICHEL. I am reminded of your exchange with the chairman relative to the need for doctors in our rural areas. You were making the point that there needs to be, in a particular community, those facilities and the kind of professional environment that attracts him.

I am reminded in a very small community in my district we have constructed a hospital called the Hopedale Medical Complex, for which Dr. Rossi, a good friend of mine, started out and bought a piece of farmland adjacent to the small community and got a number of the farmers in that particular area to ante up $500 or $1,000. He developed from that a going hospital complex aimed at this intermediate care with a nursing home operation along with it. Maybe this was part of the attraction in the first place for some of the elderly in the area who thought: some day I want to get off the homestead and have a place to take it easy, and this might be it.

Now, it is amazing what this hospital is providing for the whole surrounding community. This thing came out of nowhere just because of one doctor's feeling that this could be accomplished if you just set your mind to doing it. So as a result, there are doctors in that community and they are practicing medicine, including surgery.

I do not know what it takes to get this thing stimulated and started on a broader scale around the country. There is not a Federal dime in it yet, not a State dime in it yet, and Dr. Rossi was not a man of considerable means at all. He just had the support of the community and said we ought to go out and do something about it, and did it. It has been written up in Reader's Digest and a number of magazines.

Is that the kind of thing you are talking about?

We realize you cannot have a hospital in every small community like this one which has less than a thousand population.

Dr. ENGLISH. Mr. Michel, I think there are a couple of things which you said that are of some concern to us.

First, of all, I do not think we are ever going to have enough Federal dollars to stimulate that kind of thing nor should we, because I do not think there is any issue that will get a community together better than the issue of health, particularly if you have a doctor who will take the initiative and go to the community and talk about doing something like that. I think that there are many examples like that that do not get into the Reader's Digest.

I think the first way we can help federally with the development of programs like that out of private resources is really to publicize them. In the regional medical program, when examples like that come to the attention of the regional staff or the national staff, they try to publicize them, and I think we have to encourage that.

The American Hospital Association in December of 1967 devoted an issue to federally sponsored neighborhood health centers, most of which were in urban areas. It could have also devoted an issue to them in rural areas, because there have been promising developments there, too. In addition to citing the two federally sponsored projects, it also showed two privately sponsored programs, very similar, but in areas better able to muster their own resources.

I think we have got to encourage this kind of private initiative, particularly in rural areas that could not support a hospital.

For example, I remember talking with some general practitioners in the northern part of Wisconsin who were concerned about the fact that the doctors were practicing in relative isolation up there, getting older, with young doctors not coming in, and their solution, locally contrived, was to try to stimulate group practice.

The average doctor does not know much about how to get something like this together.

I think, in addition to trying to provide Federal dollars, we have to provide technical assistance to groups that want to try to get something like this going, to share with them what we are learning about nonhospital care in rural areas. This can be very attractive for physicians to go into areas like this, and can significantly reduce the cost involved where you do not have resources available and people have to travel a couple hundred miles to a hospital when they are sick.

CHIROPRACTORS

Mr. MICHEL. I read something recently that there was a greater percentage of chiropractors out in the rural areas than M.D.'s.

Would it be an unfair question to put to you as to whether or not you think that type of treatment ought to qualify under medicare?

Dr. ENGLISH. I have not had that much contact with chiropractors over the long run.

Mr. MICHEL. Recognizing in the long run it is not the answer for all ills, apparently it is the answer for some or they would not be there.

Dr. ENGLISH. I think the way osteopaths and medical doctors are getting together in many parts of the country is an indication of what the trend is going to have to be. We just do not have the health manpower in this country that is needed to do the job. I think that we have got to try to develop training programs that will not only insure that people get good medical care from physicians, but that we have got to have greater acceptance in this country—this is going to take a great deal of education—of medical corpsmen, family health workers, family nurses, that kind of concept. But there are some sticky issues, as you know, in relation to that. We are going to have to work on that.

INCREASED POSITIONS REQUESTED

Mr. MICHEL. This first item of some $377 million for the National Institute of Mental Health is an increase over last year of better than $9 million, is it not?

Dr. ENGLISH. Yes, sir. Last year, Mr. Chairman, it was $367,923,000. This year it is $377,299,000.

Mr. MICHEL. You are asking for an additional 132 people?

Dr. ENGLISH. That is correct.

Mr. MILLER. This does not include St. Elizabeths.

Mr. MICHEL. How many go to St. Elizabeths?

Mr. MILLER. About 104.

Mr. MICHEL. Somewhere I saw where the whole budget for St. Elizabeths is down. Is that correct?

Mr. MILLER. No, I do not believe so.

Dr. ENGLISH. Last year's St. Elizabeths budget, Mr. Michel, was $39,832,000.

Mr. MICHEL. This year it is $38,876,000?

Dr. ENGLISH. That is correct.

Mr. MICHEL. Isn't that kind of confusing?

Mr. MILLER. The reason, Mr. Michel, that it shows a reduction in the schedule that you have before you, and Dr. Yolles will be talking about that tomorrow, is the fact that they have set up a new center within the Mental Health Institute which includes the research activities of St. Elizabeths Hospital. I think the total program effort of St. Elizabeths, which includes that which was transferred to the mental health appropriation, is slightly higher.

Mr. LEWIS. There is an increase for running the hospital. But because of the reorganization which took place and the shifting of funds which Mr. Miller outlined there is an impression of an apparent decline.

Mr. MICHEL. Does this reflect a transfer of training activities of $1,436,000 in one item and transfer of research activities of $620,000 and transfer of four clinical and community services positions funded at $56,000?

Mr. MILLER. That is correct. Also the point should be made that about 80 percent of the costs of St. Elizabeths are borne by reimbursement from the District of Columbia. Those will be up in 1970.

Mr. MICHEL. Addressing ourselves to the roughly 32 increased positions in your shop, my figures show an increase in the overall here of 132. If you say 100 of them are at St. Elizabeths, then I wonder where are these other 32?

Mr. MILLER. Mr. Michel, I think that you are referring only to the Mental Health component. The health services and mental health administration has an increase of 660 positions. We can break those down by appropriation if you wish.

Mr. MICHEL. If you would.

Mr. MILLER. Yes, sir.

(The information follows:)

Health services and mental health administration new positions 1970

Mental health	132
Saint Elizabeths Hospital	11
Health services research and development	16
Comprehensive health planning and services	19
Regional medical programs	13
Communicable diseases	5
Hospital construction	10
Patient care and special health services	131
National health statistics	28
Salaries and expenses, Office of the Administrator	9
Indian health services	147
Emergency health	1
Other accounts	138
Total new positions	660

EMPLOYMENT REDUCTION DUE TO REVENUE AND EXPENDITURE CONTROL ACT

Dr. ENGLISH. While Mr. Miller is getting that information, just let me mention I believe the last time we testified before this committee we were authorized an increase of about 600 positions for activities which we explained at that time, but then the Revenue and Expendi-

ture Control Act came into play so that we not only did not get those 600 positions, but we are down 1,000 positions further as a result of that act. This has had serious implications particularly for the patient care operations that we are responsible for. St. Elizabeths would be one example of that.

The 660 positions that we are asking for this time, that Mr. Miller is going to describe. are within that context. Just to repeat again, we didn't get the 600 that you authorized us last time and we are down 1,000 from the close of fiscal year 1968.

Mr. MICHEL. Refresh my memory. In the 1969 fiscal year request there was a request for how many?

Mr. MILLER. About 600.

Mr. MICHEL. We allowed how many?

Mr. MILLER. My answer referred to how many we were allowed. I don't remember how many we requested.

Mr. MICHEL. Allowed 600?

Mr. MILLER. Yes, sir.

Mr. MICHEL. The request must have been considerably more. Because of the Revenue and Expenditure Control Act you have had to cut 1,000?

Dr. ENGLISH. That is right. Below that 600.

Mr. MILLER. This is the actual reduction in employment in permanent positions.

Mr. MICHEL. Congress gave you 600 more, and now you have 400 less than your level of a year ago; is that right?

Mr. CARDWELL. No. HSMHA is 1,000 below the level of a year ago; 1,600 below the budget level approved by the Congress.

Mr. LEWIS. 1,066 as of February 28. We had 1,066 employees fewer than there were on June 30, 1968, in this organization—permanent employees.

Mr. MICHEL. Is there a target level?

Mr. CARDWELL. No, sir. It is the result of filling only seven out of 10 vacancies.

Mr. MICHEL. In other words, on June 30 of this current fiscal year 1969, what is that figure going to be?

Mr. CARDWELL. I think generally I would expect it to be about where we are now. The attrition rate has been faster than we predicted. I think the 1970 budget predicted that this organization would be down about 1,000. It is already down about 1,000. It may go below the level of the budget prediction before the year is out.

Mr. MICHEL. What if another personnel limitation were imposed?

Dr. ENGLISH. That is what I am glad you asked about. I am relatively new in this position, Mr. Michel, but I want to tell you, as I made my rounds with the program directors, in almost every instance when I asked them what their problems were, the impact of these personnel cuts was No. 1 on the list. As a matter of fact, if I could, I would like to submit for the record just what the impact of those cuts has been on each of the programs because in the patient care area—take the Indian health program—what those cuts meant is that they have had to stop for the most part their outreach activities in many areas because they only had enough personnel to take care of hospital patients. This has had great impact on the health care they are able to provide. In some of the Public Health Service hospitals, services in elective surgery have been cut or curtailed. Wards have had to be closed

because of the lack of personnel. There have been periods when an entire 300-bed hospital had only two professional nurses on a shift and in several instances an 80- or 90-patient ward, including acutely ill patients, had only one professional nurse on duty. We would be happy to supply that kind of impact for you for the record, if we could, in relation to all the programs.

From what I have learned, this is one of the more critical problems which HSMHA has had.

Mr. CARDWELL. Mr. Michel, you asked if there were another "revenue and expenditure control limitation." You don't need another one. This one stays in effect unless somebody repeals it. The budget proposed for the Federal Government by the last administration does assume it would somehow be repealed. It does not indicate just how that might come about, but the assumption is there nevertheless.

ADMINISTRATION OF EMPLOYMENT RESTRICTIONS

Mr. MICHEL. Because of that limitation, the reduction in personnel that comes about by your being permitted to replace only seven of ten, attrition has to be accomplished within how broad an area?

Mr. CARDWELL. The law does not specify it has to be applied uniformly to every organization, and within HEW there are a few exceptions. As a practical matter that is the way it tends to work. The problem with it is that employment then is determined by the happenstance of where vacancies occur. It is a very uneven and inefficient way to do whatever it is that we are trying to do. If we are trying to cut Federal employment, this is probably the worst way to do it.

Mr. MICHEL. The point I am making is if we feel as a committee that even further personnel cuts are desirable overall, would it not be better from your standpoint if we determined a particular force level for a department, say HEW? Then we would leave the flexibility in your own shop to determine where reductions can best be made and priorities established?

Obviously you have some things that you think are more important and where cuts are more severe and other areas where maybe it is pretty much deadwood and you have decided not to fill any of the vacancies in a given program or shop. Would you think that would be a better way for us to accomplish the same thing?

Mr. CARDWELL. I think we probably would prefer, if we have to take a cut, for Congress to identify where they want the cut taken. As a practical matter, the Secretary has a very tough time allocating an across-the-board cut. One of the reasons he does, as already pointed out by Dr. English, he has some built-in mandatory workloads he cannot avoid. The direct patient care responsibilities to HEW beneficiaries happens to be one. The processing of social security benefits happens to be another. He would probably have to exempt those, and what that does is increase the crunch as it lands on all other activities. The net effect on the other activities is it ends up probably at a lower level than you would have intended. It is a very tough one for either side. I guess all things being equal, we would prefer the Congress to take the initiative and say we don't like this program. Don't staff it.

Mr. LEWIS. May I add, Mr. Michel, quite often availability of people will not run down the same track as availability of funds. There

are many programs in this kind of a situation. Money is not the sole criteria. Availability of people to do the job becomes almost an equally important criterion. If the situation Mr. Cardwell described were to come about, certain numbers of people are needed to maintain a program such as patient care, and are absolutely essential because you cannot take care of patients without doctors, nurses, and associated personnel. Where large groups of people are required for small amounts of money, you run into a situation where in order to husband what we ought to be doing in dollars, and watch them carefully, we have fewer numbers of people doing the job. Quite often you do not have the flexibility to put the people in the places in balance with the money.

Mr. MICHEL. Thank you, Mr. Chairman.

SMOKING AND HEALTH

Mr. FLOOD. Mr. Hull?

Mr. HULL. Thank you, Mr. Chairman.

Dr. English, last year's budget justification mentioned broader use of noncategorical formula grants under the comprehensive health planning and Public Health Service Amendments of 1966. I believe that has been called partnership for health program. It also said that smoking and health were among the new kinds of health programs being planned by a number of States under partnership for health.

Doctor, is any of the $98 million you have requested this year for that program to be used for programs related to smoking and health?

Dr. ENGLISH. Yes, sir, Mr. Hull.

In 1969 the figure was $2,100,000. In 1970 it will be $2,500,000.

Mr. MILLER. Was your question with respect to comprehensive health only or totally in——

Mr. HULL. Only.

Mr. MILLER. The figure is lower, Mr. Hull. In 1969 it is only $267,000. In 1970 we estimate about $149,000.

Mr. HULL. The question I asked: Is any of the $98 million you have requested this year for that program related to smoking and health?

Mr. MILLER. It would be about $149,000.

Mr. HULL. How much will these grants come to?

Mr. MILLER. The comprehensive health grants for smoking and health will amount to $149,000.

Mr. HULL. Dr. English, how much is your administration actually spending on research in smoking and health?

Dr. ENGLISH. Altogether, they would be the figures that I gave you originally. Let me repeat them once again.

Mr. HULL. Not just the activities of Dr. Horn and his staff, but anything that might be labeled cancer control.

Dr. ENGLISH. I see. Let me first give you the figures for smoking and health per se. In 1969 it would be $2,100,000 for the National Clearinghouse for Smoking and Health Activities.

Within the comprehensive health planning program, as Mr. Miller indicated, it would be for 1969 $267,000. The 1970 figure would be $2,500,000 for the activity of the National Clearinghouse for Smoking and Health. Within the comprehensive health planning and services program, $149,000.

Mr. HULL. That would be added to the $2.5 million?

Dr. ENGLISH. That is correct.

If you want to add on to that what we are doing in cancer projects generally, you would add for 1969 $2,445,000 for cancer-control activities.

Mr. CARDWELL. That is all kinds of activities, not necessarily smoking and cancer—probably not.

Mr. MILLER. Probably none of it is smoking and health in that category.

Dr. ENGLISH. That is correct.

Mr. HULL. Dr. English, I see that the Clearinghouse request is for an additional $400,000 this year, which you mentioned.

Dr. ENGLISH. Yes, sir.

Mr. HULL. Only $400,000 this year?

Dr. ENGLISH. That is correct.

Mr. HULL. I have learned that Dr. Horn was quoted in Syracuse, N.Y., only 4 months ago as saying:

You could stand on a rooftop and shout "Smoking is dangerous" at the top of your lungs and you would not be telling anyone anything they didn't already know.

How can Dr. Horn ask for more money, almost half a million dollars, to tell people something they already know?

Dr. ENGLISH. I do not think that Dr. Horn meant to imply that in that statement, Mr. Hull. There is still a pretty important public education job to do here, especially among young people. I think that is where public education activities are going to be critically important for the indefinite future.

Mr. HULL. Wouldn't it be better to spend that money on other research to find out how significant cigarettes are as a cause of disease, if they cause disease?

Dr. ENGLISH. Part of the activity of the Clearinghouse is to support such research, Mr. Hull. It is not just a program of education.

Mr. HULL. Dr. Horn and Dr. Green of the clearinghouse staff reported at a medical meeting last year on a poll that indicated that only 38 percent of the doctors queried said they advised all patients, or almost all patients—even those without any conditions supposedly associated with smoking—to give up cigarettes.

Do you suppose Dr. Horn needs all that extra money to tell the doctors of the danger to the patients of smoking?

Dr. ENGLISH. Sir, being a physician myself, I would never exclude doctors from those who need education in all matters. I think this one, too.

Mr. HULL. Doctor, I see that actor Tony Curtis has just been made chairman of a new antismoking drive, the Anti-Cancer Society. You know the clearinghouse and the American Cancer Society have been involved in the past in some joint antismoking projects. Can you tell us if any Government funds will be involved in this new campaign headed by Curtis? I believe that the Cancer Society calls it the IQ programs for "I quit smoking."

Dr. ENGLISH. I can't tell you that. I would be happy to submit it for the record. I did hear Tony Curtis on television when he described why he was going to involve himself in that campaign. Apparently his father died from cancer of the lung and apparently that had a considerable impact on him. That is the reason he is taking this initiative.

I will look into whether any Federal funds are involved. I do not believe they are.

(The following was subsequently submitted:)

There are no Health Services and Mental Health Administration funds being used to support the "I Quit Smoking" campaign.

Mr. HULL. The reason I asked, is because in the Washington Star last week, Curtis was quoted as saying giving up smoking improved his sex life. That is one thing to tell adults, I am sure, but do you think this is appropriate that Government money be expended to tell that sort of thing to children?

Dr. ENGLISH. I do not think that that would be exactly the form of public education our efforts would take.

NATIONAL CLEARING HOUSE ON SMOKING AND HEALTH

Mr. HULL. At the time of the fifth anniversary of the 1964 Advisory Committee Report to the Surgeon General, the same month you came aboard at HEW, the National Clearinghouse on Smoking and Health sent out a 13-page document called "Smoking and Health Programs in Other Countries." It was picked up by the Washington Post and newspapers in most other major cities detailing the antismoking activities of 19 European nations and Japan, and our good friend to the north, Canada. I would like to read you the first paragraph of the highlights, Doctor.

Several countries prohibit or restrict cigarette advertising on television and radio. Advertising is barred from television in England and France and from television and radio stations in Czechoslovakia, Norway, Sweden, Denmark, Switzerland and Italy.

I happen to know that there are no commercials at all on the state-owned radio and TV in Scandinavian countries and there at least was another half truth from the Clearinghouse. It has been suspected for some time that the 1962 ban on all cigarette advertising in Italy was sparked by a desire to suppress competition from foreign brands to the state-owned Italian cigarette monopoly.

I must admit that these half truths as to 4 of the countries named have made me wonder how accurate are the statements about the other nations. I wonder, under the circumstances, if instead of requesting an increase for the Clearinghouse of $400,000 this year for continuing research on smoking behavior, organized community approaches, school programs and mass communications activity, as it says on page 152 of the justifications, it might not be wise to spend a bit more on researching and checking the materials issued by the Clearinghouse.

Is there any control of these materials?

Dr. ENGLISH. Yes, there is.

As the Surgeon General described in his testimony, there is a very careful clearance process for the materials produced by the National Clearinghouse, and I don't think that those materials intend to suggest in any way we should take the steps other countries have taken, particularly in relationship to the communications media, though they view this problem as seriously as we do.

Mr. HULL. Apparently the National Clearinghouse on Smoking thought of that.

Dr. ENGLISH. I would think, Mr. Hull, that the activities of the Clearinghouse reflect not only the need to do research in this area, but

in addition to do research that may help us to develop a less hazardous cigarette——

Mr. HULL. I am in favor of that.

Dr. ENGLISH. We are, too.

I think that is a critical form of research. At the same time, I think that our concern is that the American public know the facts and voluntarily can make their own decision.

Mr. HULL. I think that is the way it should be. I agree with you completely. If it is really harmful, I for one want to know it.

Dr. ENGLISH. Thank you.

Mr. HULL. Thank you very much.

NEIGHBORHOOD HEALTH CENTERS

Mr. FLOOD. Mr. Casey?

Mr. CASEY. Thank you, Mr. Chairman.

Dr. English, you state on page 2 of your statement, "Our aim is to work toward good health care for every American. Our function is to strengthen the hands of each component involved in the delivery of care."

You are involved in partnership with every element of the system, physicians, hospitals, and other community institutions, and State and regional authorities, voluntary groups and with the consumers of health care who have an important role to play in assuring that they are well served. If someone reads that down home they will say, "OK. Is Dr. English going to help us with our neighborhood clinics if OEO goes out of business?"

What is your answer?

Dr. ENGLISH. Sir, in the city of Houston, and I think in the clinic that you referred to in your conversation with the Surgeon General the other day, I think we have one of the finest examples of what not only the Office of Economic Opportunity but HEW and particularly HSMHA have to develop—increased capacity. I was interested to hear that satisfaction on the part of both the physicians and the neighborhood people being served by that clinic, Settasast Clinic, the clinic on the outskirts of Houston; it is no surprise to me because I had a chance to visit it. I was taken out there by physicians, part of the medical society there in the area. It was just getting underway at that time. I understand that from enthusiasm and hard work and a lot of voluntary activity that those physicians put behind that effort, there is going to be an intent to expand that kind of program in Houston and in other parts of the country.

One of the reasons that we think that that kind of thing will eventually be possible is because medicaid will eventually be the long-range support of a program like that. I think that is an example of where medicaid dollars can help, with the quality of medical care being insured by a setting in which the medical society is very involved, No. 1; No. 2, where other kinds of resources besides physicians are brought together in a clinic like that can help, too, so that those medicaid dollars really serve more people without any dilution of quality.

What we hope to see is for medicaid to develop around the country more and more of its support, carrying on the long-range effort in a setting like that and using OEO money or 314(e) project grant money

available under partnership for health to be the seed money to start new efforts.

I want to tell you quite frankly, Mr. Casey, that we do not have the resources anywhere in the Federal Government at the moment to be as responsive as we would like to be to all the communities that would like to do programs like that, not only in Houston but in other parts of the country, but I can assure you that kind of effort is going to receive a very high priority as the system develops.

HEALTH SERVICES RESEARCH AND DEVELOPMENT

Mr. CASEY. Of course, a new word keeps cropping up here or the frequent use of it in all statements. You must be using the same script-writers. This word "methodology," developing new methodology and new approaches in delivery of medical care for the poor." That is what you are going to spend some of your money for. How are you going to do this?

Is somebody going to sit down and start thinking or are you going to get a draftsman? Is there going to be any practical application of this?

Dr. ENGLISH. A few years ago, Mr. Casey, it was pretty much just an idea, but there is a lot of it underway now that I think we can study, and after we know more about it and have a chance to evaluate it, we can consider appealing for the resources to extend it quite considerably around the country.

For example, if I may speak for a moment about the methodology we used in the poverty program, because it is in poor areas of the country very often where you have the greatest opportunity for innovation because you have so little there, we have seen over the last 3 years the development of what was a very small demonstration program, around $8 million in 1965. It developed almost overnight into one of the major national emphasis efforts of the war on poverty, the neighborhood health center program.

At this point in time, about $100 million have been invested in that effort. There are 48 such programs underway around the country in urban and rural areas. When they are fully operational, 1 million poor people will be receiving comprehensive family health care as a part of them. There are more than 700 physicians now involved which——

Mr. CASEY. You are talking about the past. I am talking about the future. You have this new national center for health services research and development, is that right?

Dr. ENGLISH. That is correct.

Mr. CASEY. How much money are you asking for it?

Dr. ENGLISH. $45 million.

Mr. CASEY. $45 million?

Dr. ENGLISH. Yes, that is correct.

Mr. CASEY. Are you going to use all of that for study to try to develop new methods? Cannot the patient die while you are thinking of new methods if you do not give some of this money to the old methods to try to keep them alive?

Dr. ENGLISH. Let me explain about that $45 million, Mr. Casey, because it is not all new money coming to the National Center. That

is the first thing I think we have to explain. Much of that is commitment to research that was going on before the center was organized. There is relatively little new money that the Center can use for the kind of research, for example, that we are talking about in relationship to the study of neighborhood health centers and what ought to have wider national implementation.

I would estimate that the free money that is available—Dr. Sanazaro, who is the director of the center, is in the room with us and can state that more precisely.

Mr. CASEY. Is he going to testify later?

Dr. ENGLISH. He is.

Mr. CASEY. In more detail?

Dr. ENGLISH. He could give you much more detail about that.

Mr. CASEY. Okay. He has a little advance notice of what I want to know about.

What you are going to do with the money and what type of research. Whether this is just a think factory or you are getting anything out of it. Even with all of the big budget you have here, I still take my hat off and hold it over my heart for $45 million.

Do you know what is going to happen?

Dr. ENGLISH. I know this, Mr. Casey, that I do not think there is another program anywhere in the country that has stimulated more interest on the part of the consumers of medical care, the medical schools, organized medicine, medical societies, hospitals. I think that the organizational kind of concerns that we have, you know, in the Federal Government stand as a secondary consideration to the whole new thrust in health care which the neighborhood health centers program represents. I know it is being carefully considered where it ought to be, whether it should stay in OEO or be put in HEW. Aside from how that works out, I have great confidence in the future of that program simply because of the excitement it has caused around the country.

The number of people who want to do programs like that far surpass our capacity at the present time anywhere in the Federal Government to be responsibe.

Mr. CASEY. I presume that part of this center for health services research and development is to give technical assistance and advice and guidance and so forth to State government, local agencies. I think you include everybody in that.

Dr. ENGLISH. That is correct.

Mr. CASEY. Would I be fair to tell the chairman of the board of my hospital district down here to inquire about what is the possibility of setting up the additional three centers that they think they need for metropolitan Houston?

Dr. ENGLISH. Certainly, sir.

Mr. CASEY. Should I send him to our research center or what?

Dr. ENGLISH. Here is what I would suggest, Mr. Casey: I think the National Center will soon be able to say to him on the basis of the studies they are doing and the evaluation they will be getting into of programs like the neighborhood health centers, whether or not this is a program that you want to extend in Houston. It is more that kind of concern that the National Center would have.

Mr. CASEY. Doctor, since the other people who head up these various activities under your administration will be coming along later on, I will reserve any further questions for them. I look forward to communicating with you more in the future on some of the problems we have.

Dr. ENGLISH. Thank you, sir.

Mr. FLOOD. The committee will recess until 10 o'clock tomorrow.

THURSDAY, MARCH 20, 1969.

MEDICAL CARE FOR THE POOR

Mr. NATCHER. The committee will come to order.

Mrs. Reid.

Mrs. REID. Thank you, Mr. Chairman.

Dr. English, I can certainly appreciate your enthusiasm for the challenge of your new assignment and the task ahead. Certainly all of us hope for the day when adequate and competent medical care will be within the reach of everyone.

In your opening statement you call our attention to the "heightened expectation on the part of all of our people that their needs shall be met." You go on to cite the need for high priorities in devising new approaches for the delivery of medical care to the poor and the need to augment our society's capacity to serve groups whose overwhelming health needs may be beyond the reach of the existing system.

It seems to me that to accomplish what you set out to do, or apparently feel should ultimately be done, we would really have to have free medical care for everyone. Do you see this as a future goal?

Dr. ENGLISH. No, Mrs. Reid. I think that in relationship to the poor obviously there is a financial problem in their not having the money to pay for medical care which in some instances may be available to them if they do have the money to buy it. I think that that is where medicare and medicaid legislation has been a great step forward. I think, however, we are learning in the years during which that legislation has been operative, that in many parts of the country, in relationship to the poor, money alone to buy services is not enough; you also have to have funds that will support the development of medical resources that are not there in poor urban and rural areas. In other words, there has been a flight of physicians from urban areas where the urban poor are. Also in many rural areas of the country there never have been many physicians, and there are many rural areas where there are certainly not enough physicians now even though people receive the money to pay for them.

The point I was trying to make was that we have to develop the resources that will help us on the capacity side as well as the resources to help us on the financing side. I think that we can do that without having to provide free medical care for everyone in this country. The better off people in this country do have good access to medical care. I think that their situation can be improved by other things than making medical care free. I think at some point we could get into that in more detail.

I think the fundamental problem is in urban and rural areas of poverty, and it was to those areas that I was directing those remarks.

Mrs. REID. In your summary on page 10 you caution that Federal health services need to be administered in such a way that they are truly responsive to the diverse needs of our varied neighborhoods and communities.

You said excessive rigidity, fragmentation of one's time, and review of each separate program mission would all defeat rather than improve medical capability. How far do you propose to actually go in devising separate standards for separate economic groups?

Dr. ENGLISH. The first step in achieving that flexibility has been taken in the reorganization itself in that now in one administration, HSMHA, are programs like the regional medical program, the partnership for health, community mental health centers program, other programs which have great potentiality in increasing the capacity of the country to provide high-quality medical care. They have been brought together in such a way that they function in an interrelated and more flexible way so as to be responsive to the diversity of needs, let us say in the suburban area where certain kinds of help might be needed, or in the urban area of Detroit where the kind of help needed might be very different from the kind of help that would be needed in Atlanta, Ga.

I think the very first step is to get the programs together in such a way that they can, through good interrelationships, attempt to be more flexibly responsive to the different kinds of problems, different areas of the country, and where there is great respect for the local synthesis, for the local way of pulling things together, and that in Washington our diverse programs are responsive to that local synthesis. We are going to try to create a situation where local synthesis does not have to be sacrificed simply because there is a variety of different kinds of programs that may not relate well at the Washington or regional level.

The second part of it is to make quite clear that there may be special efforts directed toward the poor for two reasons: One, they do not have very often the financial support to buy into a medical care resource that may be available to them, or if medicare and medicaid take care of that, the second problem may be that even with that money there is not adequate medical care available and certain kinds of help are required there. I think that Federal support should be more in that direction. I think that we have got to be cautious in the Federal Government about trying to take on and help with Federal dollars the problems of the better-off parts of our population because I am not sure that (1) we are ever going to have enough Federal dollars to do that; and (2) some of the innovations learned in working with the poor groups may be taken up sufficiently on the initiative of the private sector.

We have seen medical societies, for example, in this country that have helped through Federal programs to deal with poor people in a particular city, like Atlanta, take some of those things that they have learned in working with poverty populations and begin to apply them voluntarily with a slightly different approach in their own practice. I think that when you get economically above the poor you have to leave to private initiative, and very often with private resources, the kinds of things that can help in developing better medical care for better-off people in this country.

Mrs. REID. I think we have to realize that there is a limit to the Federal dollars.

Dr. ENGLISH. Yes, ma'am.

Mrs. REID. Thank you.

That is all.

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. Thank you, Mr. Chairman.

Dr. English, does the District of Columbia medical facilities appropriation come within your Administration?

Dr. ENGLISH. Yes, sir; it does.

Mr. SHRIVER. Did you participate in the request for the supplemental funds for medical facilities in the District?

Dr. ENGLISH. No, sir. I was not here, Mr. Lewis, who is the deputy administrator, represented us during those hearings.

Mr. LEWIS. The principal witness that day was Dr. Graning.

Mr. SHRIVER. Were you here?

Mr. LEWIS. I was here.

Mr. CARDWELL. Mr. Shriver, we would be glad to answer any questions that you might have on that subject, if you want to address them to us.

Mr. SHRIVER. I think perhaps they have covered that if he was here. I didn't know this office was present.

Mr. CARDWELL. They were here.

BUDGET INCREASES REQUESTED

Mr. SHRIVER. Dr. English, how does your total 1970 budget request compare with the 1969 figure for all of these functions that are now combined under the Health Services and Mental Health Administration?

Dr. ENGLISH. The 1969 request was $1,172,004,000 as compared to the 1970 request of $1,309,730,000.

Mr. SHRIVER. You may do this for the record, but would you identify for the record the areas showing the largest increases and decreases?

Dr. ENGLISH. Yes, sir; we will be happy to do that.

(The information follows:)

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Largest increases and decreases—1970 over 1969 budget authority

Appropriation:	*Increase or decrease*
Mental health	$34,681,000
St. Elizabeths Hospital	—2,960,000
Health services research and development	4,053,000
Comprehensive health planning and services	24,921,000
Regional medical programs	37,725,000
District of Columbia medical facilities	15,000,000
Retired pay of commissioned officers	3,659,000
Buildings and facilities	2,100,000
Indian health services	5,299,000
Emergency health	7,167,000

HEALTH REORGANIZATION

Mr. SHRIVER. You point out on page 7, most but not all of the new Federal programs aimed at strengthening local level health capacity are now pulled together in the Health Services and Mental Health Administration. Which new programs have not been heretofore centered in this administration?

Dr. ENGLISH. The first one that I would think of would be the regional medical program which has tremendous potentiality, I think, for increasing the capacity of American medicine to provide high-quality health care.

Mr. SHRIVER. Where has that been?

Dr. ENGLISH. In the National Institutes of Health. It has now moved into HSMHA. I could give one other example.

The National Institute of Mental Health also was one of the National Institutes of Health, where, in addition to having really supported mental health research and mental health training programs in a way that I know is well known to this committee, also pioneered in the development of getting that knowledge to people who needed it through the Community Mental Health Centers program. I think NIMH's presence in HSMHA, will be the strongest part of this Administration in terms of getting what has been learned through research into programs that really serve people.

Mr. MILLER. It might be well to recall that this Administration was formed out of the former Public Health Service. Three administrations were formed out of the former Public Health Service, and there was no Health Services and Mental Health Administration so it is a little difficult to describe which is new and which is old to us.

Mr. SHRIVER. He has named two of them.

Is this causing any administrative difficulties at the local level as to where things are now?

Dr. ENGLISH. At least——

Mr. SHRIVER. I understand it better than the old setup.

Dr. ENGLISH. Yes, sir. I think that basically it makes a great deal of sense. I would not be surprised, though, if some people don't understand it yet in communities around the country, which is why we are going to make every effort to try to make sure it is clear and to assist them in getting in touch with parts of HSMHA they remember being somewhere else in the Federal Government.

EXTENSION OF HILL-BURTON PROGRAM

Mr. SHRIVER. You testified to some extent concerning the Hill-Burton program and the authorizing legislation coming before the Congress this year for extension. Do you favor the extension of this program in the same form as in the past, or will you recommend increased emphasis on the neighborhood health center approach?

Dr. ENGLISH. That question, Mr. Shriver, is under very careful consideration now in the new administration by the Secretary, and he will be testifying very shortly on what recommendations he is going to have for the Congress in relation to the Hill-Burton program. I think that it would be best for us to wait until he completes his review to really answer that question definitely for you.

I might just say this: I think we recognize the contribution the Hill-Burton program has made over the last 20 years in developing a tremendous hospital capacity now in this country. The situation didn't exist 20 years ago. I would not be at all surprised if the new proposals put forth might be an attempt to extend that capacity in support for ambulatory health facilities, the kinds of things that help to keep people out of the hospital. It does not demean the hospital but there is another new capacity we have to encourage in this country as well. That will be part of what we would suggest in relationship to the Hill-Burton program.

Mr. SHRIVER. Thank you.

Mr. FLOOD. Mr. Natcher?

Mr. NATCHER. No questions.

Mr. FLOOD. Thank you very much.

Dr. ENGLISH. Thank you, Mr. Chairman.

MENTAL HEALTH

WITNESSES

DR. STANLEY F. YOLLES, DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH
JAMES D. ISBISTER, EXECUTIVE OFFICER
DR. SHERMAN N. KIEFFER, DIRECTOR, NATIONAL CENTER FOR MENTAL HEALTH SERVICES, TRAINING, AND RESEARCH
DR. MORTON G. MILLER, DIRECTOR, DIVISION OF SPECIAL MENTAL HEALTH PROGRAMS
DR. ALAN I. LEVENSON, DIRECTOR, DIVISION OF MENTAL HEALTH SERVICE PROGRAMS
DR. ELI RUBENSTEIN, ASSISTANT DIRECTOR FOR BEHAVIORAL SCIENCE
DR. SIDNEY COHEN, DIRECTOR, DIVISION OF NARCOTIC ADDICTION AND DRUG ABUSE
JAMES D. LAWRENCE, FINANCIAL MANAGEMENT OFFICER
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
NATIONAL INSTITUTE OF MENTAL HEALTH			
Personnel compensation:			
Permanent positions	20,152	23,176	24,743
Positions other than permanent	1,224	1,847	2,647
Other personnel compensation	448	568	463
Total personnel compensation	21,824	25,591	27,853
Personnel benefits: Civilian employees	2,282	2,610	2,764
Travel and transportation of persons	1,181	1,274	1,305
Transportation of things	234	191	196
Rent, communications, and utilities	952	1,046	1,033
Printing and reproduction	536	414	424
Other services	16,968	17,038	20,737
Supplies and materials	2,220	2,274	2,413
Equipment	2,104	2,001	2,149
Grants, subsidies, and contributions	278,784	315,504	318,451
Subtotal	327,085	367,943	377,325
Quarters and subsistence charges	−20	−20	−26
Subtotal obligations except St. Elizabeths Hospital allocation	327,065	367,923	377,299
ALLOCATION TO ST. ELIZABETHS HOSPITAL			
Personnel compensation:			
Permanent positions	91	----	----
Other personnel compensation	11	----	----
Total personnel compensation	102	----	----
Personnel benefits: Civilian employees	7	----	----
Rent, communications, and utilities	23	----	----
Other services	2	----	----
Supplies and materials	4	----	----
Equipment	1	----	----
Subtotal obligations, St. Elizabeths Hospital	139	----	----
Total obligations	327,204	367,923	377,299

PERSONNEL SUMMARY

NATIONAL INSTITUTE OF MENTAL HEALTH			
Total number of permanent positions	2,726	2,459	2,591
Full-time equivalent of other positions	273	295	432
Average number of all employees	2,491	2,645	2,937
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794
Average salary of ungraded positions	$6,001	$6,625	$6,862
ALLOCATION TO ST. ELIZABETHS HOSPITAL			
Total number of permanent positions	14	----	----
Average number of all employees	13	----	----
Average GS grade	5.7	----	----
Average GS salary	$7,365	----	----
Average salary of ungraded positions	$5,760	----	----

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 est.	1970 est.
Program by activities:			
1. Support and conduct or research:			
(a) Grants:			
(1) Research	72,306	81,159	82,273
(2) Hospital improvement	10,491	10,610	8,000
(3) Early child care demonstrations			1,000
(b) Direct operations:			
(1) Intramural research	14,625	17,339	18,259
(2) Planning, development, and administration	3,262	5,070	5,775
Total, support and conduct of research	100,684	114,178	115,307
2. Manpower development:			
(a) Grants:			
(1) Training	96,518	109,046	112,500
(2) Fellowships	10,155	10,641	10,866
(b) Direct operations	2,532	3,094	4,583
Total, manpower development	109,205	122,781	127,949
3. Support of State and community programs:			
(a) Grants:			
(1) Construction of community mental health centers	41,937	50,000	40,500
(2) Staffing of community mental health centers	43,359	46,032	51,300
(3) Narcotic addiction and alcoholism community assistance	4,000	8,000	12,000
(b) Direct operations	2,158	2,364	2,379
Total, support of State and community programs	91,454	106,396	106,179
4. Service activities:			
(a) Narcotic addict treatment program	12,567	14,663	17,526
(b) Regional and field activities	2,230	2,346	2,346
(c) Scientific communication and public education	1,494	2,588	2,771
Total, service activities	16,291	19,597	22,643
5. Program direction and management services	4,419	4,971	5,221
Total program costs, funded [1]	322,053	367,923	377,299
Change in selected resources [2]	5,151		
Total obligations	327,204	367,923	377,299
Financing:			
Receipts and reimbursements from:			
Administrative budget accounts	—1,280	—467	—162
Non-Federal sources [3]	—8	—8	—8
Unobligated balance available, start of year	—46,859	—45,000	—10,000
Unobligated balances transferred to other accounts	3,371		
Unobligated balance available, end of year	45,000	10,000	
Unobligated balance lapsing	17,855	3,525	
Budget authority	345,283	335,973	367,129
Budget authority:			
Appropriation	346,909	350,439	367,129
Transferred to other accounts	—1,626	—120	
Proposed transfer to other accounts		—9,186	
Appropriation (adjusted)	345,283	341,133	367,129
Proposed transfer to other accounts for pay increases		—5,160	
Distribution of budget authority by account:			
Mental Health Research and Services	246,741	253,419	
Proposed transfer from other accounts for pay increases		401	
Community Mental Health Resource Support	100,168	87,714	
Proposed transfer to other accounts for pay increases		—5,561	
Mental Health			367,129
Relation of obligations to outlays:			
Obligations incurred, net	325,916	367,448	367,129
Obligated balance, start of year	303,027	382,292	464,521
Obligated balance, end of year	—382,292	—464,521	—499,586
Adjustments in expired accounts	—13,562		
Outlays	233,089	285,219	332,064
Distribution of outlays by account:			
Mental Health Research and Services	218,516	240,219	170,914
Community Mental Health Resource Support	14,573	45,000	75,000
Mental Health			86,150

[1] Includes capital outlay as follows: 1968, $1,409,000; 1969, $2,001,000; 1970, $2,029,000.
[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $6,597,000 (1968 adjustment —$1,000) 1968, $11,747,000; 1969, $11,747,000; 1970, $11,747,000.
[3] Non-Federal sources include sponsored travel; voluntary payment for hospital care (narcotic addict patients).

Mr. FLOOD. We now have the mental health programs of the Health Services and Mental Health Administration. We have Dr. Stanley F. Yolles, the Director of the National Institute of Mental Health, and associates.

With reference to the mental health part of your presentation, Doctor, do you have any new people here that we have not met?

How long have you been around here?

Dr. YOLLES. I hate to remember back that long.

Mr. FLOOD. It hasn't been that long? Do you have any new people in your cast that you would like us to meet?

INTRODUCTION OF SUPPORTING WITNESSES

Dr. YOLLES. I would like you to meet the cast. Starting in back here, the distinguished gentleman with the white hair is a world renowned authority in the field of narcotics and drug abuse, Dr. Sidney Cohen.

Mr. FLOOD. Where are you from?

Dr. COHEN. Los Angeles.

Mr. FLOOD. Where were you born?

Dr. COHEN. New York.

Mr. FLOOD. How did you get into this business of narcotics? Are you a doctor of medicine?

Dr. COHEN. Yes, sir. I began as a researcher of LSD, and because of the LSD story that got on the streets about 8 years ago, I got into the general field of narcotics and dangerous drugs.

Mr. FLOOD. How long have you been with the Department?

Dr. COHEN. Six months.

Dr. YOLLES. We consider ourselves very fortunate to have enlisted his aid.

Mr. FLOOD. You should know.

Dr. YOLLES. Next is Dr. Morton Miller, who is Acting Associate Director of the Institute and is in charge of the programs in the fields of alcoholism, child and family mental health, suicide, crime, and delinquency, metropolitan mental health problems, and narcotics and drug abuse.

Mr. FLOOD. Where were you born, Doctor?

Dr. MILLER. Philadelphia.

Mr. FLOOD. How long have you been in this Department?

Dr. MILLER. I have been here for 4 years.

Dr. YOLLES. Next is Dr. Eli Rubenstein, Assistant Director of the Institute for extramural programs and responsible for the field of behavioral sciences.

Mr. FLOOD. Where are you from?

Dr. RUBENSTEIN. New York.

Mr. FLOOD. We know the doctor.

Dr. YOLLES. You met Dr. Levenson last year.

We also have Mr. James Lawrence, our financial management officer.

Mr. FLOOD. He will live that down.

Dr. YOLLES. Dr. Sherman Kieffer is sitting over at the far end. He is the new Director of the National Center which includes St. Elizabeths Hospital now. He is also Associate Director for Patient Care at the Institute.

Mr. FLOOD. Where are you from?

Dr. KIEFFER. Minnesota.

Mr. FLOOD. How long have you been here?

Dr. KIEFFER. Two and a half years.

Mr. FLOOD. Your job at St. Elizabeths is what?

Dr. KIEFFER. Director of the National Center for Mental Health Services, Training and Research. That includes St. Elizabeths Hospital as one of the three divisions.

Dr. YOLLES. Mr. Flood, Dr. Kieffer is somewhat shy. He has been with the Public Health Service as long as I have. We trained together. He is an Assistant Surgeon General of the Public Health Service and helped run our Fort Worth hospital for many years. He is a well-trained psychiatrist and he holds the responsibility for all patient care within the Institute.

Mr. FLOOD. I know about him. The records show that.

Doctor, you have a statement here dealing with mental health. How do you wish to proceed?

Dr. YOLLES. Mr. Chairman, in order to conserve time I would like to submit the statement for the record and just summarize it.

Mr. FLOOD. Suppose we do that.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

We will also place your impressive biographical sketch in the record.

(The biographical sketch and prepared statement follow:)

Biographical Sketch

NAME: Dr. Stanley F. Yolles

POSITION: Director, National Institute of Mental Health

BIRTHPLACE AND DATE: New York, New York, April 19, 1919

EDUCATION:

1939	A.B.	Brooklyn College
1940	A.M.	Harvard University
1950	M.D.	New York University, Bellevue Medical Center
1950-51		Internship, U.S. Public Health Service Hospital, Staten Island, New York
1951-54		Resident in Psychiatry, U.S. Public Health Service Hospital, Lexington, Kentucky
1957	M.P.H.	Johns Hopkins University
1959		Certified in Psychiatry by American Board of Psychiatry and Neurology

EXPERIENCE:

Dec. 18, 1964-Present	Director, National Institute of Mental Health
Oct. 1964-Dec. 18, 1964	Acting Director, National Institute of Mental Health

Aug. 1963- Oct. 1, 1964	Deputy Director, National Institute of Mental Health
Aug. 1960- July 1963	Associate Director for Extramural Programs, NIMH
July 1957- July 1960	Associate Director and Director, Mental Health Study Center, Community Services Branch, NIMH
Jan. 1955- July 1957	Associate Director, Mental Health Study Center, Community Services Branch, NIMH
July 1954- Dec. 1954	Staff Psychiatrist, Mental Health Study Center, Community Services Branch, NIMH
July 1, 1950	Commissioned in Public Health Service
Nov. 1947- Jan. 1948	Guest Lecturer in Tropical Medicine, New York University College of Medicine
Nov. 1945- April 1946	Commanding Officer, Sector Epidemiological Laboratory, U.S. Army, British West Indies
Jan. 1943- Nov. 1945	Associate Director, Sector Epidemiological Laboratory, U.S. Army
Nov. 1941- Jan. 1943	Parasitologist, Sector Epidemiological Laboratory, U.S. Army
July 1941- Nov. 1941	Parasitologist, U.S. Engineer Department, U.S. Army, British Guiana, South America
Oct. 1940- July 1941	Parasitologist, Army Medical School, Washington, D.C.

ASSOCIATION MEMBERSHIPS:

Alpha Omega Alpha

Fellow-American Psychiatric Association

Fellow-American Public Health Association

Fellow-American College of Psychiatrists

American Association for Advancement of Science

American Medical Association

American Society of Parasitologists

Group for the Advancement of Psychiatry

Maryland Public Health Association

New York Academy of Sciences

Pan American Medical Association

Washington Psychiatric Society

World Federation for Mental Health

American Psychopathological Association

Cosmos Club

Medical Society of Saint Elizabeths Hospital

Fellow-American Association of Suicidology

OTHER PROFESSIONAL AFFILIATIONS:

1962-1966	Chairman, Public Health Service Inter-Bureau Committee on Narcotic Drug Addiction
1963 ---	Visiting Lecturer, Department of Psychiatry, Harvard University
1964 ---	Liaison Member, Mental Health Council, American Medical Association
1964-1966	Member, Inter-Departmental Committee on Narcotics
1964 ---	Member, Advisory Committee, Psychiatry, Neurology, and Psychology Service, Veterans Administration
1964-1968	Visiting Lecturer, School of Hygiene and Public Health, The Johns Hopkins University
1965 ---	Member, Board of Editors, Psychiatry Digest
1966 ---	Chairman, Hofheimer Prize Board, American Psychiatric Association
1966-1969	Member, Committee on Federal Government Health Agencies
1966 ---	Special Advisor, Board of Education, New York City

1966	Distinguished Alumni Lecturer, School of Medicine New York University
1966	Post-Graduate Medical Education Lecturer, University of Wisconsin
1966	Porter Award Lecturer, Association of Military Surgeons of the United States
1967 ---	Clinical Professor of Psychiatry, George Washington University
1967 ---	Board of Trustees, New York School of Psychiatry
1967	Visiting Professor, Department of Psychiatry, State University of New York at Buffalo
1967	George Kirby Collier Memorial Lecturer, University of Rochester Medical School
1968 ---	Federal Panel on Early Childhood
1968 ---	Associate Editorial Board of the Journal, "Diseases of the Nervous System"
1968 ---	Professional Advisory Board of the International Committee Against Mental Illness
1968 ---	Advisory Committee on Research, Federal Judicial Center
1968	Herman Goldman International Lecturer, New York Medical College, New York
1969	Kradwell Visiting Professor - Marquette School of Medicine, Milwaukee, Wisconsin

February 11, 1969

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Services and Mental Health Administration
Statement by Director, National Institute of Mental Health

on

Mental Health

Mr. Chairman and Members of the Committee:

It is a pleasure for me once again to report to you the progress being made in reducing both the human and economic toll of mental health problems among our citizens. That progress continues to be achieved through an integrated program of research, training and service activities.

No goal of the Institute is being pursued more zealously than the conquest of the major mental illnesses - notably schizophrenia and depression - that are so costly in human welfare and resources. A measure of our progress toward that goal is reflected in the continuing decrease in the number of Americans residing in the Nation's mental hospitals. Thirteen years ago, that number was well over one-half million. Today, after more than a decade of steady advances in research and treatment, there are 401,000 - a reduction of nearly 30 percent. Last year alone saw a decline of 25,000 patients, or 5.9 percent, including, for the first time, a decrease of 2 percent in the crucial 15-26 age group. Had the rising mental hospital population seen before 1955 gone unchecked, we would today be confronted by 731,000 patients in our mental hospitals - or nearly twice the actual number.

Despite our progress, mental illness continues to exact a high toll. The economic cost of mental illness is estimated at over 20 billion dollars per year, excluding the costs of such major social problems as suicide, alcoholism, drug abuse, crime and delinquency - which reflect mental and emotional disorders. Nearly a quarter of a million Americans - most of them in the prime of life - are institutionalized victims of schizophrenia, and 3 percent of children reaching the age of 15 will develop the disorder during their lifetime. Fortunately, the chronic schizophrenic patient is no longer inevitably the chronic public charge; he can now often be returned as a functioning and productive member of the community.

Equally devastating is depression - a disorder known to man in antiquity, but only now becoming amenable to scientific treatment. In the course of a year, over 100,000 Americans enter hospitals suffering severe depression, while many more - perhaps as many as 200,000 - receive outpatient treatment. The depressed person, racked by psychological and physical symptoms that render him helpless and hopeless, often sees suicide as his only escape. Depression must, therefore, be regarded as a potentially fatal illness.

This year, the deaths of over 20,000 Americans will be reported as suicides, but that is only a fraction of the actual number. The suffering among surviving family members is beyond our techniques of measurement, and today, parents are increasingly confronted by the special agony of suicide in their young. Over the last decade, suicide

rates in the 15-24 age group have increased by 67 percent. The economic waste represented by suicide has been estimated at over 4 billion dollars per year; in contrast, if only one third of the country's potentially suicidal persons were to be successfully treated, the cost would total less than 100 million dollars.

Begun three years ago, the Institute's suicide prevention effort has stimulated a rapid growth of activities in the field. Across the Nation there are now 99 suicide prevention programs - triple the number in 1966, and 30 times that of 10 years ago. Last year, a reduction of one percent in the Nation's suicides was reported. Evaluation of the relative success of various approaches to the suicidal person are sharpening the clinician's arsenal of preventive techniques. To overcome the shortage of mental health professionals in the field, and to foster public understanding of the problem, the Institute is providing a wide range of training programs in suicide prevention - along with publications, educational materials, and consultation.

In another problem area - alcoholism - we are faced with a condition afflicting one of every 22 Americans over the age of 21. Alcoholism accounts for more than one fifth of the male admissions to mental hospitals; the dollar cost to the Nation has been measured at 4 billion dollars. Consultation and support provided to communities across the Nation have speeded the development of meaningful treatment programs, and efforts are being advanced to train medical personnel and a broad range of other mental health workers to deal effectively

with the alcoholic in the community. It has now been demonstrated that an effective community treatment program requires only a fraction of the public dollars ultimately consumed by untreated alcoholics.

Like alcoholism, narcotic addiction is being dealt with increasingly through comprehensive, community-based diagnostic and treatment programs. The passage of the Narcotic Rehabilitation Act of 1966 has helped advance programs of therapy, public education, and prevention, and an increasing number of addicts are now receiving services that are truly responsive to their problems. The changing role of the drug addiction facilities at Lexington and Fort Worth reflects the growing emphasis on new clinical and research approaches.

Concern over the use of drugs other than narcotics is highlighted by nationwide college surveys revealing that approximately 20 percent of college students have used marihuana one or more times, and that roughly 8 percent have used LSD or other hallucinogenic drugs: Data from one university show a dramatic rise in the use of marihuana - from 21 percent of students in 1967, to 57 percent currently, with a predicted level of 70 percent during 1969 - although most students included here use marihuana only once or twice, with only a small proportion being chronic users. The growing dependence on both sleeping pills and stimulants also poses an increasing threat to the Nation's health. The problem of drug abuse is increasingly apparent among children at the junior high school level and, because of the potency of "fads" in early adolescence, the problem begins to affect students in the upper grades of elementary school as well.

To help solve this problem, the Institute is devoting over $800,000 to an educational campaign. Films are being developed and disseminated to educate the public in prime TV time in major American cities. Pamphlets have been prepared and distributed for use at all age levels, including the junior and senior high schools, and special school curriculum materials have been developed for teachers. An extensive campaign advertising the dangers of drug abuse will make use of radio, television and print media.

The twin problems of crime and delinquency have drawn the attention of the Institute since its inception in 1948. In the two decades since, NIMH has provided over 63 million dollars in support of over 350 research and demonstration projects in this area. That concern is fully warranted for, in addition to their social and psychological toll to the Nation, the annual cost of crime and delinquency exceeds 20 billion dollars - with over 4 billion dollars being consumed yearly by police, legal and correctional activities. Through efforts ranging from basic studies of aggression to the development of community treatment programs, the Institute is working toward the containment and reduction of anti-social behavior. Community treatment programs of adolescent delinquents have proved not only more effective than institutionalization, but more economical as well. A major thrust next year will be to study the long-neglected National problem of providing adequate care and treatment for the mentally ill offender, now typically held in grossly inadequate "maximum security" hospital facilities.

The roots of social problems such as delinquency and crime often lie in early life, and investigators continue to isolate those factors in the child's early environment that so markedly influence his maturation and later behavior. The demonstrated success of early care and treatment in preventing intellectual and emotional problems has led to the development of effective programs in behalf of the child's mental health. Such programs - and still newer ones - must now be tested in a variety of settings, and more universally applied. Only in this way can we nurture the intellectual and psychological potential of children - particularly children of disadvantaged families - whose normal development is being stunted by lives of trauma and deprivation.

At the other end of the life cycle, it is clear that advances in the medical sciences have raised a growing challenge for the behavioral scientist. The span of man's years on earth has been significantly lengthened. Today there are some 20 million Americans above the age of 65 and some 12,000 above the age of 100; by the year 2000, it is estimated that 28 million people will be over 65 years of age. These are gratifying data, but the concern with a prolongation of life must be accompanied now by an equal concern for the quality of the latter years. The aged are victims of special mental health problems, and work of a number of Institute scientific and service programs is devoted, therefore, to efforts that will permit a larger number of our older citizens to achieve and maintain meaningful and rewarding roles in society. The aged must no longer be permitted unnecessarily to occupy

30 percent of all public mental hospital beds; comprehensive treatment and rehabilitation services in the community, tested and demonstrated by the Institute, must now be made available to all our aged citizens.

Indeed, the American community can no longer accept outmoded and self-defeating programs of mental health care for any of its citizens. Projects directed toward improving State hospitals for the mentally ill have amply demonstrated that the status quo is no longer acceptable. Over 120,000 patients have been served by the Institute's Hospital Improvement Projects, with over half of these patients improved sufficiently to be returned to their own homes, to nursing or boarding homes, or to other modes of semi-independent living within the community - all at an average cost per patient of only $621. The average patient reached by these projects had been hospitalized for five years at a cost of nearly $3000 per year per patient.

In one hospital, a program of therapy emphasizing carefully planned social activities reduced the patients' average length of hospitalization from over four years to seven and one-half months; in another, a vocational rehabilitation program for schizophrenic patients reduced the readmission rate from 30 percent to 10 percent. The emphasis in these projects has varied. Some have focused their efforts on specific categories of patients - schizophrenics, or alcoholics, or children, or the aged; some have achieved improvement by introducing new patient services, others by changing the organization of hospital services, and still others by redistributing staff and altering their roles. But

the results tell a consistent story: The long and unproductive role of the mental hospital as a holding operation is obsolete.

The rapidly evolving dynamic role of the community as the Nation's primary agent for mental health is evident from the growth of the Community Mental Health Centers Program. To date, 351 community mental health centers have been funded in as many communities throughout the United States, and all 50 States have now received funds to aid in the development of center programs. These centers will serve approximately 54 million people - or almost one quarter of the population.

Less than four years ago, when the centers program was begun, there was for the vast majority of Americans but one resource for mental health services: The public, State mental hospital - understaffed, overcrowded, and usually some distance from the community. For a relatively few, there was the private psychiatric hospital and the psychiatrist's office - offering traditional, generally high quality mental health services, but at costs which severely strained the budgets of many middle- and upper-middle-income families. Overall, the existing service system was fragmented; it lacked continuity and comprehensiveness, and a rigid dividing line separated the public and private sectors.

Today, the scene has changed dramatically, with the implementation of the National mental health program and the recognition of the validity of and need for community-based mental health services. Every resident of a center service area has available and accessible frontline quality help - comprehensive enough to respond to the total range of mental

health problems found among our people: Help for the college student undergoing a severe schizophrenic episode; the rehabilitated mental patient who needs temporary supportive therapy; the young mother suffering a depression; the troubled and unruly adolescent; and the elderly citizen, newly retired, facing difficulties in adjusting to his altered life style. Of equal importance, help is available in the measure needed by the individual - total or partial hospitalization, outpatient services, or quick intervention in a life crisis. In addition, the centers' consultation and education arms reach out into the community, building prevention programs and assisting other individuals, organizations and agencies in their development of mental health services.

The benefits of community centers are available to all, regardless of economic circumstance. Some patients are treated along traditional fee-for-service lines, others through voluntary or group health insurance coverage, others through Medicare and Medicaid payments, and still others on a sliding scale, according to their ability to pay. This mix of public and private financing is mirrored in the total mix of dollars working in support of centers' operations. During an average center's first year, Federal staffing funds account for only 35 percent of the total operating costs; 40 percent are shared by State and local governments, and 25 percent are obtained from patient payments, insurance and philanthropy. Equally significant is the fact that in over half of the funded centers, services are provided through a cooperative arrangement between hitherto unrelated and diverse public and private agencies.

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Fifty-one percent of the applicants for centers are private, non-profit agencies, and the remainder public. More than three quarters of the funded centers are providing new or expanded services in the five essential areas - that is, inpatient services, outpatient services, emergency care, day or night hospitalization, and educational and consultative services. Additionally, most of the new centers are including programs that extend beyond the minimal five essential services.

Many gaps remain in mental health services and the needs of millions of citizens continue unmet. But remarkable progress has been made in a short time. The first community mental health center construction award was made in July of 1965. Since then, the Institute has awarded a total of 187.4 million dollars, 94.7 for construction and 92.7 for staffing. One of our States spends 25 percent more than that amount each year just to maintain its mental hospitals, and the annual total outlay of all the States for mental health purposes is 1.5 billion - or over 8 times the amount expended to date on the centers' program.

To maintain and expand the achievements of the national mental health program, however, requires two crucial elements: Increased knowledge and sufficient skilled manpower.

An important base of the Institute's total effort is, therefore, its investigational program - both basic and applied. The NIMH, as the focal point of Federal efforts in the behavioral sciences, supports researchers who continue to expand our knowledge at several levels. For example, studies of learning and memory may now permit us to use techniques to enhance the intellectual abilities of youngsters, and to prolong the

active mental lives of the aged. A variety of studies are indicating what factors of heredity and environmental stress combine to produce psychosomatic and neurotic illnesses, and some researchers have been developing methods to train people to control states of consciousness in a way that should help counteract symptoms. Other studies of behavior and physiology are yielding clues to the roots of aggressiveness, and the environmental and hormonal factors in homosexuality. Ecological studies are beginning to offer evidence for behavioral and physiological deterioration as a result of overcrowding - studies that have counterparts in sociological surveys, and strong implications for today's city planning and for the prevention of mental illness.

The long and arduous search for the causes of schizophrenia continues among scientists of various disciplines. Their quest is leading to a clearer understanding of the factors at play in the evolution of a schizophrenic - such factors as defects in body chemistry, genetic abnormalities, faulty family relationships, and stress - and their findings will lead ultimately to the development of preventive programs. Meanwhile, the results of research are being used to improve existing treatment approaches - from family counseling to drug therapy. In one project, for example, active family participation in the treatment of patients reduced average hospital stay from a half-year to one month; in another, data now begin to indicate the specific drugs best suited to specific types of patients.

Institute scientists have now identified a number of biochemical events associated with depressive illness, and they have thereby

advanced the search for new drugs that promise to alleviate the disorder. Their work may lead to an understanding of the apparent effectiveness of lithium as a therapeutic agent for patients suffering serious mood disorders. A network of drug evaluation units, established across the country, uses the most modern clinical evaluation techniques in the continuing search for effective and safe antidepressants. In the related area of suicide, Institute investigators continue to aid prevention programs - for example, by identifying the life situations and personal characteristics among those predisposed to suicide.

Encouraged by the increasing acceptance of alcoholism as a mental health problem, Institute-supported investigators - many of them working at large multidisciplinary research centers - are advancing our understanding of the physiological and social dynamics of alcohol addiction. Meanwhile, researchers continue their quest for an effective and safe means to combat drug addiction, and other investigators continue to seek more information about drug users - their motivations and their physiological and psychological responses to drugs. Research by social scientists is resulting in new insights into the origins and dynamics of criminality and delinquency - while clinical personnel seek to translate that knowledge into more effective means of treatment and control.

In the field of psychopharmacology, scientists push still further their quest for effective drug therapy. Over the past 8 years, NIMH has conducted a series of large-scale collaborative studies in more than 75 hospitals and clinics across the country to assess the value of newly

available psychiatric drugs. The results now allow a more meaningful matching between specific drugs and individual patients - and therefore permit more effective treatment. Because of the rapid expansion of knowledge in the drug field, the Institute has established, in cooperation with the World Health Organization, an International Reference Center for Information on Psychotropic Drugs; the new Center will coordinate the dissemination of information on such drugs to the world's scientific community.

Progress in the biology of mental illness has not, however, blunted the recognition that psychiatric disorders rarely spring full-blown from within the individual's brain and body. A man's behavior is only partly the product of internal chemistry; it is shaped also by his family, his community and his culture. Therefore, Institute investigators continue to develop and test new therapeutic approaches to mental patients in their everyday environment. Successful programs have been developed not only in the hospital setting - but in the home, the school, the factory.

New knowledge alone, however, will not meet all of our needs. Required also is sufficient and well-trained manpower to deliver help to those requiring it. The Institute, therefore, continues to expand its efforts to supply the corps of mental health personnel needed by the Nation.

NIMH has now supported the training of over 37,000 professionals in psychiatry, psychology, psychiatric social work and nursing. Between 1960 and 1966, the number of psychiatrists has increased by 45 percent,

psychologists by 27 percent, social workers by 73 percent, and psychiatric nurses by 79 percent. Trainee stipends awarded from Federal funds have grown from over 200 in 1948 to over 11,000 in 1968, and in addition, 12,000 nonpsychiatric physicians have received training courses in psychiatry.

To keep pace with the Nation's growing needs, the Institute has developed a broad range of experimental and innovative training programs. High priority is being given to new approaches that incorporate the training and employment of the indigenous mental health worker. Such a person knows more intimately how his neighbors think and feel and what their problems are; specially trained, he can greatly extend the reach of the traditional professional mental health worker.

In support of the overall program, and with the interest and support of the Congress, the National Clearinghouse for Mental Health Information continues to serve as a central facility to coordinate information exchange in the field. Making use of modern computer technology and information-processing techniques, the Clearinghouse now provides an increasing array of mental health data and reports in utilizable form to scientists, practitioners, and the public at large. For example, the number of journals examined for articles related to mental health has increased sixfold during the past 3 years - from 200 journals in FY 1967, to more than 1200 last year. Over 40,000 items were processed during the current fiscal year. These data serve as the basis for analyses and systematic surveys used to coordinate diverse efforts and speed

progress in various mental health fields. The Clearinghouse provided a broad array of in-depth abstracts - the only such service available - and contains the world's largest collection of abstracts and articles on narcotics and drug abuse.

It is clear that tangible advances have been made on a number of fronts in the Nation's continuing effort to improve the mental health of its citizens. It is equally clear, however, that the agenda remaining is long and difficult. The cost of mental illness and of the various special mental health problems afflicting the American people amounts to well over 3 percent of the gross national product. We now know that this cost can be reduced significantly through the wise investment of both financial and human resources. The progress of the recent past offers good reason for confidence in the ultimate success of our efforts.

GENERAL STATEMENT

Dr. YOLLES. It will be no news to the committee that the No. 1 public health problem in the United States still remains the problem of mental and emotional disease. Amongst our people there are an estimated 19 to 20 million persons suffering from some form of mental or emotional disorder, minor or major. Of most concern to us are the children who are suffering from mental and emotional disorders and there are a minimum of 3 million children under the age of 21 who are suffering from such disorders. Roughly one million are in need of immediate help at this point in time.

Twenty percent of all the schoolchildren need assistance for mental or emotional problems. The interesting thing about it all is that out of this——

Mr. FLOOD. What about the teachers?

Dr. YOLLES. Without commenting——

Mr. FLOOD. On cause and effect?

Dr. YOLLES (continuing). Generally on the profession, I would say there are a number of teachers who could well use the help of mental health services, just as there is a significant portion of the general population that could use it.

I have for use of the committee two pamphlets that we have just put out, one on the utilization of psychiatric facilities of the country by children and another on mental health programs for children.

Mr. FLOOD. I have seen them both.

Dr. YOLLES. The interesting point in this matter of children who are mentally disturbed, a minimum of 3 million, and it may go as high as 5 million, is that only 25 percent of them will utilize the services that are available. It is estimated that only 1 percent of the children who need such services actually will receive treatment.

As far as costs to the Nation are concerned, I think you know the figure, $20 billion a year, that mental illness costs the Nation in lost earnings, and so forth. This is equivalent to 3 percent of the gross national product. This is on the gloomy side.

DECREASE IN RESIDENT PATIENT POPULATION

On the brighter side, I am always pleased to report that for the 13th consecutive year the resident patient population in our mental hospitals has decreased. If you will glance at page 5 of the chart book that you have, you will see the reduction in the hospital populations. It has been reduced by some 6 percent in this past year. In the past 13 years there has been an overall reduction of about 30 percent and for the first time—and this is a really happy phenomenon—for the first time we have seen a reduction in the age group 15 to 26 years of age. In prior years this group has gone up in spite of the reduction in the total population group.

The questions that we have to ask ourselves is, why are these reductions going on in State hospital populations? I think we have at least, for the current time, two of the answers. One has been a rather remarkable program which was funded by the Congress, the hospital improvement project program, which has done an enormous amount to demonstrate within the State hospitals and institutions for the mentally retarded in the United States how the most modern ideas of care,

treatment, and rehabilitation of the mentally ill can be carried out. This has resulted in rather remarkable reductions in hospital populations. This, together and linked with the development of community mental health centers, is reflected in this reduction.

COMMUNITY MENTAL HEALTH CENTERS

As far as community mental health centers are concerned, we have now funded 351 of these centers. This represents a coverage in the United States of about 27 percent of the population—some 54 million people. I would like to point out that one of the outstanding examples of coverage by local community mental health centers is in the State of Kentucky, Mr. Natcher. About 92 percent of the population is covered with funded centers in Kentucky. In terms of operating centers, centers that are already operating and delivering services, about 67 percent of the State population is covered. This is a rather remarkable feat.

I might also say, Mr. Flood, that Pennsylvania is listed as second in the number of centers which have been funded in the United States. Kentucky, in number of centers funded, ranks third.

However, we still need a good deal more in the way of intermediate services for patients released from State hospitals. We need hostels, nursing homes, and so forth, all of which must be developed to correlate with the programs not only of the community mental health centers but of the State hospitals.

SUICIDE PREVENTION

Let me turn now to the area of suicide. We spoke of costs a moment ago, the $20 billion that mental illness costs the Nation. It is rather difficult to estimate the cost of suicide. You can estimate it in terms of dollars, but I think I have raised this question before. How do you estimate the cost of a suicide of a child in emotional terms?

I mention this only because in the past 10 years in the age group 15 to 24 there has been a 67-percent increase in suicide. Another statistic is interesting; there are 90,000 college students in the United States each year who threaten suicide, of which some 10,000 actually attempt suicide. About 1,000 students in the United States actually commit suicide each year on college campuses. It is not a publicly known fact. Colleges and universities try to cover up these suicides on campus. It is a critical problem and one that we are trying to address ourselves to. We must uncover the causes and try to prevent some of these student suicides.

In terms of national figures, you may know that there are about 1½ million attempts at suicide each year. Our greatest push in the suicide prevention program therefore is to educate and help the professions to recognize the early signs of impending suicide, and to intervene appropriately. To this end we have developed, through consultation, some 105 suicide prevention centers in the United States. This is about three times as many as existed in 1966 and 30 times as many as 1959.

Mr. FLOOD. What is a suicide center?

Dr. YOLLES. A suicide prevention center may range in size from two people to x number of people who are available at all times to receive telephone calls, to go out or to make their services available to prevent suicide in case of a threatened attempt.

Mr. FLOOD. Is that similar to the operation in California where it first started?

Dr. YOLLES. That is quite right. The Los Angeles Suicide Prevention Center was one of our original funded operations. This has spread around the United States.

Mr. FLOOD. Are they effective? Do you know?

Dr. YOLLES. This is the $64 question. We are trying to evaluate these centers at the present time. On the other hand, if you look at it from the point of human suffering, if you prevent just one suicide in such a center, it may have well paid for the cost of operation of that center many times over. We don't know as yet and it will be a few years before we can evaluate the impact of the suicide prevention centers.

Mr. FLOOD. Will you tell us a little bit more about that? How does a suicide prevention center operate? What happens? Do you work around the clock?

Dr. YOLLES. Twenty-four hours a day. They vary from State to State and place to place. To take a typical suicide prevention center, if there is such a thing, you would have at least one member of the staff available around the clock to answer the phone calls that come in.

Mr. FLOOD. What percentage of the staff are volunteers?

Dr. YOLLES. Usually in these types of suicide prevention centers somewhere up to 30 or 40 percent of the staff may be volunteers, but they are trained volunteers who work with the professionals. The number of professionals, at least highly trained professionals such as psychiatrists, is the smallest number because there are not enough to go around. The professionals provide the training in most of these situations. There is relatively little Federal support. These are locally developed programs stimulated through consultation, and professional and technical assistance. Many of them have become associated with the community mental health centers.

Mr. FLOOD. What happens?

Dr. YOLLES. They take calls from people who call and say that they are considering committing suicide, or have taken pills, or have taken poison, et cetera.

Mr. FLOOD. Let's say I am going to commit suicide. How do I know where to call? It is 2 in the morning and there I am. How do I know where to call?

Dr. YOLLES. In an increasing number of cities there is a listing in the telephone book, either in the front or under suicide prevention center—"call this number." A remarkable number of calls do come in. The effectiveness of the center in terms of reaching people depends on the publicity the center has received, and how well it has been able to get its information to the people.

Mr. FLOOD. Suppose I call up and say, "I have a friend Joe Zilch at such-and-such a number. I just talked to him and I think you better get ahold of him." Do you get that kind of a call?

Dr. YOLLES. Yes, sir. If it seems at all likely that the person is threatening to commit suicide or has taken an overdose, the police become involved. The local hospitals become involved. A network develops at the local level around the typical prevention activities which involves the police, fire departments, and the health professions.

Mr. FLOOD. I am going to commit suicide again. I missed the last one. So I call the center and it is half past 2 in the morning. You are on duty. I am on the telephone. What do you say?

Dr. YOLLES. I talk to you, principally talk to you, try to find out where you are and what you have taken. In other words, be able to reach the individual. The one cardinal concern is not to drive the person away, in other words, to cut the connection on the telephone. I have mentioned to this committee before that practically every suicide reaches out for help in spite of the attempt they are making to terminate their own lives. The cry for help, so to speak. There is an extremely large percentage of such persons who call at the last minute. Some of them have refused to give their location or tell anything but that they have taken a large amount of pills. "I am going to end it all."

With careful interviewing, and this is where the training of the volunteers does come in, so that you do not drive the person away, in many cases it is possible to find out where the person is and finally to take advantage of the so-called cry for help.

Mr. FLOOD. I am going to commit suicide. What do you tell me?

Dr. YOLLES. The message that we are trying to get across to people is that there are people who are interested or trying to help. You can come in or we can go out and meet you. There is some system of care that you can enter. There are people who are interested in helping you overcome your problems so that the need for suicide will disappear. Using these techniques has been a rather successful venture in the suicide prevention center in California. This is the acute situation where the person who is about to commit suicide calls. There are other activities that go on in the suicide prevention centers in terms of committed suicides. They can perform a psychological autopsy to find out after the fact what really happened in order to learn more about techniques of intervention to prevent suicide.

MATERIALS AVAILABLE TO SUICIDE PREVENTION CENTERS

One of the items that I wanted to show you is this: It is the first long-playing record we have produced and have now sent out to the profession. It is a series of interviews with suicidal persons.

Mr. FLOOD. The witness now shows the committee a case called Suicide Prevention, which is a cover, and enclosed therein there is a record called "First Training Record in Suicidology" prepared by the Center of Studies for Suicide Prevention, National Institute of Mental Health, Chevy Chase, Md. There are two sides to this.

Dr. YOLLES. This is the transcript which goes with the record. There are three interviews of actual calls that have come in in a suicide attempt. This material is produced to train the suicide prevention worker to handle such calls.

Mr. FLOOD. The witness refers to a brochure called Training Record in Suicidology, a verbatim transcript prepared by the National Institute of Mental Health.

Dr. YOLLES. In addition to dissemination of that record, to train people in such suicide prevention——

Mr. FLOOD. How do you disseminate this?

Dr. YOLLES. We send these out to suicide prevention centers. In addition to that, the "Bulletin of Suicidology," a new publication that we are putting out which talks about methods of preventing suicide, the etiology of suicide, et cetera, was picked up as being so useful to the

medical profession that one of the pharmaceutical houses asked for permission to reprint it without any advertising attached, merely to reprint it. They then sent it out to every physician in the United States. It has received very wide distribution. In addition to that, we have made available for purchase a basic library in the area of suicide prevention to train professionals.

Mr. FLOOD. The witness exhibits what is called a basic library on suicidology. It is a cardboard container probably 12 inches by 6 inches with a backing of the same material with a set of instructions and information on it. It contains a dozen or so volumes of different sizes dealing with this subject, a very compact unit.

Dr. YOLLES. We are hoping that this will have an impact on the field since there has been so little known about the area of suicides and suicide prevention.

Mr. FLOOD. What do you do with this compact unit?

Dr. YOLLES. We inform the public that this unit is available from the Mental Health Materiel Center, which is an educational institution.

Mr. FLOOD. Is it for sale?

Dr. YOLLES. Yes, it is for sale at cost.

Mr. FLOOD. You supply it at cost to the center?

Dr. YOLLES. No, sir.

Mr. FLOOD. Why not?

Dr. YOLLES. The materials in that library kit were developed, and the selection of the materials and some of the basic work was done on a grant from the National Institute of Mental Health. This becomes available on purchase at cost price from the Mental Health Materiel Center.

Mr. FLOOD. Who would want to buy it?

Dr. YOLLES. Universities, physicians, medical schools, suicide prevention centers buy it. Community health centers buy it. It is a very good seller for all mental health——

Mr. FLOOD. It is a good seller?

Dr. YOLLES. Yes, sir. In addition to these activities with the record and the literature, an international organization has been formed in the field of suicidology to disseminate information in this field.

I don't want to use up all the time talking about suicide. Another activity that we are——

Mr. MICHEL. Mr. Chairman, may I ask a question?

Mr. FLOOD. Yes.

Mr. MICHEL. The other night just by chance on television I saw Sidney Poitier as a guest on a program. The whole theme that evening, or the plot, was around this study and the suicide prevention center with the calls coming in, and so on. It was a strung-out story but I thought it was quite an interesting kind of thing. Obviously taken from the experience that you have already told us about.

ALCOHOLISM

Dr. YOLLES. You are quite right, Mr. Michel. It was quite realistic and quite an accurate portrayal of what happens.

In the area of alcoholism, in terms of statistics, the cost to the Nation is $4 billion. One out of every 22 persons over the age of 21 will develop an alcohol problem of some sort. We have the dubious distinction of

having the highest rate of alcoholism in the world, according to the WHO.

Mr. FLOOD. Higher than the Scandinavian countries?

Dr. YOLLES. Yes, sir.

Mr. FLOOD. Since when?

Dr. YOLLES. The last few years we have had the highest rate in the world.

Mr. FLOOD. Higher than France?

Dr. YOLLES. Yes, sir. Well, they have quite an acute problem in France, and they have publicly announced that they have a problem with alcoholism.

Mr. FLOOD. They cannot beat us?

Dr. YOLLES. That is right. Our major need in this area is again for training of the professions, helping professions in the area of alcohol and the treatment of alcoholism. We are woefully underdeveloped in that area. Physicians and all of the related professions, even in the fields of psychiatry and mental health, receive all too little training in alcoholism. We are concentrating on having training courses developed in this area.

Mr. MICHEL. How far down the road do you have to be before you become one of these statistics?

Dr. YOLLES. It is a little hard to say. What we are trying to do is determine some standards in this field. We have had similar discussions with this committee before. The definition of an alcoholic is one that is not very precise. In other words, it is someone who no longer can carry out his usual employment or his usual activities in his family, socially, and at work. It gets down to that. He has a problem with alcohol and this affects his daily life. We have studies going on to try to determine standards in this field but it is a very difficult problem. To answer your question, how do you become one of the statistics: When we say there are somewhere between 4½ and 6½ million alcoholics in the United States these are estimates based on surveys of smaller samples.

Mr. FLOOD. It could follow that if there is uncertainty about definitions, and obviously there is, then the fact that the United States is now listed as the highest in the world, might be because our standards are of a different nature than the French or Scandinavians and hence our figures look worse?

Dr. YOLLES. That is a possibility. However, I do not think the standards in any other country are any more precise than ours. Generally, the WHO attempts to establish a common criterion when they evaluate countries.

Whether we accept that criterion, totally or not, or whether any other country does or not is immaterial.

Mr. FLOOD. You told us about mental health and suicide, the startling figure in certain juvenile-age brackets. What about alcoholism by age brackets and sex?

Dr. YOLLES. In terms of sex, you know that the rate among women in the United States has been increasing sharply. We are seeing more in the 25- to 45-year-old age group; women in that age group are now being listed as alcoholics or having an alcohol problem. Heretofore it was overwhelmingly a male problem.

Mr. FLOOD. Is there a difference between the unmarried working girl and the married woman at home alone, with a husband at work, and that kind of thing?

Dr. YOLLES. I don't know, Mr. Chairman. I can ask Dr. Miller.

Dr. MILLER. We do not have that broken down that precisely.

Mr. FLOOD. What do you think, off the top of your head? What is your reaction?

Dr. MILLER. I think the definition becomes important because it has to do with functions; it is much easier to identify a decreasing function in someone who is working than in someone who is at home and protected by the walls of her house and can keep the drinking problem to herself. This would be a difficulty in trying to make any estimate of that particular break. From the evidence that we have, one would suspect the incidence of alcoholism increases in both groups, but to find a definitive fix you have to bring in this problem of definition.

Dr. YOLLES. We are hopeful that in terms of treatment of the alcohol problems that the alcoholism and drug abuse amendments to the Community Mental Health Centers Act passed last year, which authorizes us to award grants for the construction and staffing of community treatment centers for alcoholism, will help make inroads on the problem. As you know, we are asking for $4 million in the 1970 budget request to fund that program.

NARCOTICS AND DRUG ABUSE

In the area of narcotics and drug abuse, as the committee is well aware, there has been a great deal of activity and a great deal of interest during the past year. There has been a rather sharp rise in the number of persons using marihuana in the United States. As I told this committee last year, we have done a number of surveys in colleges and high schools around the United States. We resurveyed one of those schools again this year and we found that where previously some 20 percent of the students had used marihuana at least once, that figure was now 57 percent in the same school. If one were to extrapolate that increase, to carry out that increase into 1970, it would be about 70 percent of the student population using or having used marihuana at least once. We estimate now that there is about 35 percent overall usage in all colleges and high schools.

Mr. FLOOD. High schools?

Dr. YOLLES. Mr. Flood, not only high schools but junior high schools and even grammar schools.

Mr. FLOOD. Thirty-five percent?

Dr. YOLLES. The 35 percent relates only to high schools and colleges. I have not included anything below that. That is one of the figures that gives me pause.

Mr. FLOOD. There is a sex problem here as a matter of statistics?

Dr. YOLLES. No, sir. In the first few years of our checking on this it seemed as though there was an overwhelming number of boys who smoked marihuana rather than girls, but that figure no longer pertains. There is a very large number of girls and it is increasing all the time so that within a short period of time, if this trend continues, we will have equal numbers of boys and girls smoking marihuana. I just happened to come across this material. It is the school newspaper from one of our local high schools.

Mr. FLOOD. The witness shows the committee a tabloid-type newspaper called "The Pitch" from the Walter Johnson High School, Friday, February 14, 1969.

Where is the Walter Johnson High School?

Dr. YOLLES. In Bethesda.

Mr. FLOOD. That is adjacent and contiguous to the District of Columbia?

Dr. YOLLES. Yes, sir.

Look at page 5. Maybe I have turned old and conservative, but in my day I never saw this in a high school newspaper.

Mr. FLOOD. You never saw what?

Dr. YOLLES. An article similar to the one titled "Drug Usage Explodes," on page 5.

Mr. FLOOD. If there is no objection, we will include that article referred to at this point in the record.

(The newspaper article follows:)

DRUG USAGE EXPLODES AT WJ

STUDENT "HEADS" JOIN RANKS; SHARE IN DRUG INVOLVEMENT

Tea, hash, acid, mesc, speed, meth, smack; these terms are all names for drugs. Specifically, they are synonyms for marijuana, hashish, lysergic acid diethylemide, mescaline, amphetamines, methedrine and heroin. These words are part of the vernacular of a "head" (drug user).

Most "heads" have been exposed to these drugs either directly, through their own personal experience, or indirectly, through association with others who have related their experiences.

ESTIMATES UNSURE

To estimate accurately the number of students in this school who use drugs may be virtually impossible, because the use of drugs is not confined to one particular group of students. To say that the use of drugs by WJ students is restricted to one specific group would be as inaccurate as saying there is only one type of student at WJ. Some users have long hair and wear unusual clothes; some dress in sport shirts and slacks and wear their hair neatly trimmed. Some students don't achieve academic success, others maintain high academic averages. Some student users are active in service clubs and athletics; others are active in student government; while still others are inactive in extracurricular activities.

CHARACTERISTICS VARY

Some of them are loud and boisterous; others are quiet and reserved. There are those who are genuinely concerned about other people and the problems facing the world they live in. On the other hand, there are those who have dropped out of everything completely. Many users live in a constant state of paranoia, fearing that any moment they may be exposed and have to face the legal consequences pertaining to drug abuse. By the same token, however, there are those who make no attempt to conceal their involvement with drugs. Some of these people even go so far as to show open contempt for the "establishment" and everyone they feel it represents. For these users, to be straight is to be constantly hassled and perpetually uptight. Think about this! These are not student radicals at Berkeley or Columbia who are in their early 20's. These are high school students in Bethesda, Maryland—in their middle teens!

COMMON BOND

With so many distinct types of people and with each type bearing its own distinguishable characteristics, it seems that the only common bond the students share is their involvement with drugs. This common bond is, in many cases, the only distinction between students who use drugs and those who do not.

Involvement with drugs ranges from smoking marijuana and hashish to ingesting or "dropping" LSD, amphetamines, methedrine or mescaline. Methedrine

can be and is usually taken intravenously, as is the case with heroin. In regard to the idea of "shooting" heroin or methedrine one user replied, "Spikes (hypodermic needles) aren't for me. It's just too easy to get hung up on smack (heroin) or meth (methedrine). Besides, all you need is a dirty needle and you get 'hep' (hepatitis), or an air bubble and you're gone." Death occurs almost immediately when a sufficient quantity of air is injected into the blood stream. A seizure takes place when the air reaches the heart.

Some students feel that as a result of their involvement with drugs they are indeed a very distinct social class, despite the fact that they come from upper-middle class families, as do virtually all other students at WJ.

"We're a minority. We are in fact the people our parents warned us about. People are always hassling us! The police, our parents, teachers, and other students. We get hassled about the length of our hair, the way we dress, the way we think, and our use of drugs. You name it, and people hassle us about it! The more they hassle us, the tighter we pull together and the more we resist.

"We've developed into a primary group, almost a complete sub-culture. What they're trying to do is to legislate personal morality and it just can't be done."

DEALERS SELL DRUGS; RISK JAIL SENTENCES

D.M.T. treated gold—one quarter ounce—$5.00, weight ounces $15.00; Blond Hash, half gram—$5.00, weight gram $8.00; Blue Flats, two trips tabs—$6.00; S.K.F. ten milligram Dexedrene spansules—ten for $1.00.

If you're hip to what's happening around school, then you already know that the lines above contain the asking prices here at school for the current stock of marijuana, hashish, LSD, and pharmaceutically-produced speed.

If you weren't aware of these facts, then it's time your eyes were opened and you took a look around. Buying and selling of these items take place at W.J. on practically any given day. The same holds true for many other schools in the county, such as Blair, B-C-C, Whitman, Kennedy, and other high schools and junior high schools.

"If you're going to 'deal' to other people you just have to buy in quantity, that's all there is to it." This statement was made by a senior who expends a great amount of time, effort, and money in order to assure his clientele of all the dope they want.

When asked why he dealt in drugs, one dealer replied, "I don't know, just to help out, I guess. I don't make any profit. The only compensation I get is my share of the tea (marijuana) or hash (hashish), depending on what I'm dealing in. I deal exclusively in hash and grass and I've sold acid (LSD) once.

"I've been turning on since November of 1967 and dealing since March of 1968. The idea of being busted (arrested) is always in my mind. I'm going to quit dealing on my eighteenth birthday because if I'm busted after that, I'm no longer regarded as a juvenile. Then I would more than likely be prosecuted to the full extent of the law." First offense conviction of a violation of the Harrison Act of 1937 provides for one to five years in prison.

In regard to his biggest deal, the same senior commented, "I bought a pound of grass for $100 and sold it in 'nickels' for $320." (A nickel is generally about a quarter of an ounce that sells for $5.) "On good deals I've made between $500 and $600; on bad deals I've lost about $300 total so I'm still about $200 ahead."

When someone wants to buy in quantity and deal to others there are two common methods of raising the money. One method is by having the cash to begin with. The other is "fronting"—getting the dope in advance, with an agreement to pay your "source" at a later date or having potential customers advance you the money for their order, enabling you to make the purchase. In most cases fronting is regarded as a good way to get "beat," that is to lose one's money and/or dope.

However, if after dealing in drug traffic, all you lose is your money and/or your dope, consider yourself lucky. Most people who run the risk of dealing in drug traffic lose a lot more—their chance for the future and a few years of their life in jail.

USERS ARGUE EFFECTS OF MARIJUANA

"You smoke marijuana? Are you out of your mind? Do you want to end up a drug addict? Where are your values?"

"What do you mean my values? You go out and get drunk and smoke cigarettes. Both have been proven more harmful than marijuana. Look at all the people who die from alcoholism and lung cancer. Have you ever heard of someone dying from marijuana?"

Arguments like this take place all over the country every day, but perhaps neither side has the opposition convinced about the effects of marijuana. According to the National Institute of Mental Health, the results from their research reveal that the intoxicant present in marijuana, Delta Nine Trans Tera Hydracanabinol or THC, is less harmful than nicotine or alcohol. Furthermore, studies made by the NIMH show that there is no correlation between the number of people using hard drugs such as heroin, cocaine, and methedrine and the number smoking marihuana.

The NIMH also stated marijuana smokers suffer no physiological effects whatsoever. On the other hand people who drink alcohol may damage their brains and livers, and people who smoke may destroy their lungs. However, the results of research with marijuana do not include the long range effects. Experts will probably not be sure of these effects for several years.

Although the use of marijuana may produce no harmful physiological effects, the mere possession of marijuana is a federal offense. A person who is convicted for possession of marijuana faces a prison term of one to five years. The second offense can be punished with two to ten years in prison. And in at least one state, a person over 21 who is convicted of selling marijuana to a minor for the second time may receive the death penalty.

Mr. FLOOD. What about it?

Dr. YOLLES. I merely point this out to the committee to show the attitude that the students have. It is a matter-of-fact attitude today to the use of narcotics and drugs of all sorts.

Mr. FLOOD. Are you pointing out to us that you are amazed by the mere fact that this kind of article appears in such a paper?

Dr. YOLLES. Yes, sir. The matter-of-factness in which the material is presented in a high school newspaper at the present time.

Mrs. REID. Mr. Chairman?

Mr. FLOOD. Yes.

Mrs. REID. In glancing at this briefly, there is one thing which really concerns me and I quote from the article:

MARIHUANA

"What do you mean by values? You go out and get drunk and smoke cigarettes. Both have been proven more harmful than marihuana."

This attitude among some young people today does concern me. Do you say that marihuana is not harmful?

Dr. YOLLES. Well, there are pros and cons on that subject, as you well know. The students today read a good deal, are aware of all the findings in the field, and if you would allow me to read one paragraph from the Lancet——

Mr. FLOOD. What is the Lancet?

Dr. YOLLES. It is a British medical journal which reports on the findings of——

Mr. FLOOD. What is the date of the article?

Dr. YOLLES. The 18th of January 1969, from the Lancet. It is an editorial titled "Cannabis," which is the technical name for marihuana.

This is a report on the findings of the Wooton Committee appointed to advise the British Government on the use of marihuana. I quote from the article:

"Notwithstanding the limits of present knowledge, it is clear that cannabis is a potent drug, having as wide a capacity as alcohol to alter mood, judgment and functional ability. In that sense we agree * * * that cannabis is a dangerous drug."

But we think it is also clear that in terms of physical harmfulness cannabis is very much less dangerous than the opiates, amphetamines, and barbiturates, and also less dangerous than alcohol. The committee could find no evidence that the increase in the consumption of this drug in Britain is causing violent crime or aggressive antisocial behavior producing in otherwise normal people conditions of dependence or psychosis requiring medical treatment.

Mr. FLOOD. It fails to mention in that article that, we are advised, one of the great dangers in marihuana is not so much marihuana itself as it is the first step and an invitation to go on to heroin, morphine, and more obviously dangerous drugs; is that the general opinion?

Dr. YOLLES. It is one of the views held. The article goes on, if you will allow me:

> As for the widely held view that cannabis users commonly succumb to opiate addiction, the report concludes that it is the personality of the user rather than the properties of the drug which is likely to cause progression to other drugs. Though restrictions on the availability and use of cannabis should, in the committee's view, be retained, the aim should clearly be to bring about a situation in which it is extremely unlikely that anyone will go to prison for an offense involving only possession for personal use or for supply on a very limited scale. To this end the report proposes a reduced scale of penalties.

I think for a long time now, experts in the field have agreed with this latter position, that it is primarily the personality of the user which may lead him to go on to other drugs rather than marihuana having any specific effect and leading him on to the use of opiates. The problem is growing much more serious. It would be serious enough if it were only the college students using it because it is another intoxicant they are using. But when you get down into the junior high schools and into the upper grades of grammar schools, I become very, very much concerned.

It is just at that age level that the personality is being molded and formed through an interaction of the individual with the society around him. The effect of these drugs, marihuana, LSD, et cetera, is to reduce the interaction between the person and his environment. It removes him from that. The effects on the personality can, for long continued use in a child of this age, be devastating.

Mr. HULL. Where do they get their money to buy this?

Dr. YOLLES. Having a teenage daughter myself, I know from direct and indirect experience that there are sufficient funds in the weekly allowance. The kids just have enough money these days. They save on lunch money and all sorts of things to collect enough money to get these drugs.

Mr. HULL. Are the parents aware of these youngsters doing this?

Dr. YOLLES. In most cases, no. This is the big effort that we have to put out, not only to inform the kids themselves of what the problems are and the dangers. We think that you can do this if you are perfectly straightforward with them, not using scare techniques as we have used in the past. "You are going to eternal damnation if you smoke one cigarette," et cetera. We have to educate the parents as well as the kids to really know the facts about drugs.

Mr. HULL. How do you get to the parents? Tell the parents their youngsters are using these things?

Dr. YOLLES. We have made an attempt now through putting out these types of pamphlets which cover the range of the drugs in use and some of the treatment programs. If the committee has not seen them, I will make that available to the committee.

We have also developed a series of three major films for general viewing on television. These films cover the area of the soft narcotics, so-called, and the area of hard narcotics, as well as research efforts and treatment methods. These are general educational films and have been seen in the Washington area on prime television time. The series is called "The Distant Drummer," for those of you who have not seen it. I have a very strong feeling that this is the way to approach adult education in this field. In addition to——

Mr. MICHEL. I saw one of those films. Is it, you say, a series of three?

Dr. YOLLES. Yes, sir. Two are out and the third one is about to come out.

Mr. FLOOD. Incidentally, these pamphlets the witness has shown the committee are small pocket-sized brochures. One is called "The Up and Down Drugs, Amphetamines and Barbiturates." The next is "LSD, Some Questions and Answers." The next is "NARA, the Narcotic Addiction Rehabilitation Act of 1966." The other, "Community-Based Treatment Programs for Narcotic Addiction." The other, "Narcotics, Some Questions and Answers." The other, "Marihuana, Some Questions and Answers."

I presume these are all put out by the Department of Health, Education, and Welfare?

Dr. YOLLES. Yes, sir.

Mr. FLOOD. Public Health Service?

Dr. YOLLES. Yes, sir.

Mr. FLOOD. How are they distributed?

Dr. YOLLES. They are distributed around the country. Those are our best sellers. They are in demand all over the country for school systems, even medical societies are requesting them.

Mr. FLOOD. Are they free?

Dr. YOLLES. Yes, sir. They may be purchased in bulk from the Government Printing Office as well. In addition to those, we have our all-time bestseller, our comic-book-type pamphlet on narcotics for children in underprivileged areas. We have now distributed from our supplies over 750,000 copies of that, and I don't know what the figures run to now in terms of sale by the Government Printing Office.

Mr. FLOOD. The witness now shows the committee a small pamphlet, probably 3½ inches by 2 inches, which is composed of what we would call comic strips page by page. It is titled "Hooked." It contains a series of comic strip types of display dealing with the subject of narcotics.

Mrs. REID. Mr. Chairman?

Mr. FLOOD. Yes.

Mrs. REID. Do you have any films which can be used by parent-teacher clubs or service clubs, or other such groups? I purchased a film on LSD put out by the Navy. In fact, I purchased two of them and they have been shown throughout my district.

People are interested in seeing something like this because it is presented well and explains the dire results of LSD. I have been

looking for one on marihuana and other drugs but I have not seen one which I felt was good enough to send out. I certainly would be interested in seeing something on this.

Dr. YOLLES. Fine. I would be perfectly happy to arrange a showing of the films or send them to you. Any way you wish.

Mr. MICHEL. This "Distant Drummer" series that you are talking about, that is not produced in-house?

Mr. YOLLES. No, sir. It is an excellent series. What we needed was a film series that could be shown on prime television time.

Mr. MICHEL. It would have to be a professionally done thing?

Dr. YOLLES. Without deprecating any in-house attempts at all, it has to be a really good job in order to get on prime TV time. We did this on contract. I discussed this last year when I appeared before the committee. Mr. Laird asked that in the future we do these films on grant. So we have taken his advice and are producing two films of the same quality, one in the field of suicide prevention and one in the field of alcoholism under grant support. These are very high quality films. What we have attempted to do in the drug-abuse films is not take any moralistic attitude, not to take any particular position except to present the facts as they are. The presentation is not limited to the United States but gives a global point of view showing that this problem exists in other parts of the world as well. The two parts that have been shown on TV have been very well received and have received excellent reviews.

Mr. FLOOD. With reference to the type of film Mrs. Reid spoke about, do you have produced and available films of that nature?

Dr. YOLLES. Yes, sir. These films will be available for that purpose. While they were shown on television to reach a mass audience, they are also available for——

Mrs. REID. These same films?

Dr. YOLLES. Yes, ma'am.

Mr. FLOOD. How do you get them?

Dr. YOLLES. By request to the National Institute of Mental Health. Once the distribution system is set up, these films will be available for rental and will be available throughout the country for purchase, for those groups that want to purchase them.

Mr. MICHEL. Do you have any idea what the cost would be?

Dr. YOLLES. I can get that figure for you, if you wish.

COST OF "THE DISTANT DRUMMER"

The Institute plans to satisfy the demand for sales prints and free loan distribution through the Office of Government Films, National Archives and Record Services, GSA. The "Distant Drummer" series, and a forty-five minute combination version will be sold by the Office of Government Films for approximately $100 for each film in the series, and approximately $280 for the longer version.

Free loan distribution will be made available to the general public through the Office of Government Films.

Mr. FLOOD. Go on with your presentation.

Dr. YOLLES. There is another item that I would like to point out to the committee. We produced this pamphlet, "Students and Drug Abuse."

Mr. FLOOD. The witness shows the committee a pamphlet titled "Students and Drug Abuse," with psychedelic type of green and yellow cover, 16 pages in length and dated March 1969. It contains a series of articles and pictures of psychedelic style throughout the copy.

Dr. YOLLES. That pamphlet, Mr. Chairman, was distributed to the National Education Association. They then put one of those in each copy of the NEA journal that goes out to all of their members, so that this has now been distributed very widely to the teaching profession. We are trying to get to the teachers with the facts about narcotics and drug abuse. In addition, we have developed a curriculum for schools and teachers. This has just come in today. Dr. Cohen handed me that this morning. It is a finished product that will go out to schools for schools and teachers to develop a program of teaching in the area of narcotics and drug abuse.

Mr. FLOOD. The witness shows the committee now a looseleaf hard-covered document with tabs dealing with titles: Introduction to pharmacology, psychological research, and so on, called Drug Abuse Education Guidelines and selected references. It is a very professional and attractive, apparently very expensive document.

Dr. YOLLES. In addition, we have been actively engaged in other areas of prevention and training. We have contracted with one of the major advertising agencies in the United States to produce at cost a series of spot announcements and films for television and radio. The agency has done this at cost for us and this program of spot announcements to educate parents, children, housewives, et cetera, on the dangers of narcotics and drug abuse will be going on the air in April. The National Advertising Council has approved the series for national distribution. In addition, we hold conferences for professionals, for children, and for their teachers. We meet with school people to tell them about the field of narcotics and drug abuse.

Mr. FLOOD. Doctor, will you see that a set of these exhibits is delivered to each member of the subcommittee?

Dr. YOLLES. Yes, sir; I will.

RESEARCH ON MARIHUANA

Obviously what is needed in the field is a good deal more in the field of research and training. We still know far too little about marihuana, for example, and as you may have read in the newspapers, we are now growing our own marihuana. It was formerly an unnamed location in the United States but I understand that some of the newspapers have the information. It is being grown for us under contract so that we can have a standardized type of marihuana. Definitive studies of the effects of marihuana cannot be carried out if a standard drug is not available. This has been one of the problems over the years; we have not had a standardized drug for testing.

Mr. SMITH. Would the chairman yield?

Apparently one of the sources of supply for pushers comes from along the railroad tracks in Iowa. Have you been getting some of that?

Dr. YOLLES. No, sir.

Mr. SMITH. You would not have to buy that. Just send somebody out to get it. Pushers and dealers come after it all the way from New York.

Dr. YOLLES. It is a nationwide problem, as you realize. It grows wild, as a weed, in many parts of the United States. New Jersey has a special problem at the present time because of dumping of some of the seeds and some of the dried plants in the marshes in New Jersey.

I would like now to turn to the Narcotic Addict Rehabilitation Act. I would like to point out to the committee that of all of the civil commitments in this program, some 66 percent of those commitments are for essentially non-Federal beneficiaries. You will remember that the program for volunteer treatment at Lexington and Fort Worth was replaced by a civil commitment program. There are three types of civil commitments in the program. Title I enables those persons who are addicts and are accused of a Federal crime to elect civil commitment rather than standing trial. Title II allows those addicts convicted of a Federal crime who elect to receive treatment, rather than going to prison to do so, and title III of the act enables those addicts from the several States in which no suitable facilities exist for treatment of their addiction to be civilly committed to the care of the Surgeon General.

Mr. FLOOD. Any type of Federal crime?

Dr. YOLLES. Certain types of Federal crime. This latter category, title III, constitutes 66 percent of all of the commitments that have been so far made to the program. In fiscal year 1969 there will have been some 1,400 patients treated both in the hospitals and in aftercare. There is an estimated cost of some $11,600 per addict for the 2½ years that he would be in the aftercare program. If you look at pages 29 and 30 in the chart book, you will see the increasing number of commitments into the program.

I would point out especially on page 31 the implications of this program for future financing with the rise in the total number of aftercare patients.

Mr. FLOOD. What is an aftercare patient?

Dr. YOLLES. The program provides for commitment to the Surgeon General for a program of treatment and aftercare, acute treatment in the hospital, and then supervised aftercare and rehabilitation in the community for 2½ years. One of the problems in the treatment of narcotic addicts in the past has been that you may denarcotize them, if you will, or withdraw them from their acute addiction, and then release them and they go right back to their prior addiction.

Mr. FLOOD. Is the aftercare part of the problem for the Federal parole officers or how is the followup made?

Dr. YOLLES. The followup is made by our own program people. We contract with local agencies in the several States to undertake supervised aftercare for us. One of the principles on which the program was developed was that a person is best treated in his own community and close to his home, friends, and relatives. So we have taken advantage of this in developing the aftercare to have these individuals treated and supervised under contract by agencies in the community. As a corollary, the act also calls for our support for the construction and staffing of facilities in the several States so that the States ultimately can have their own facilities to take care of their own addicts rather than having them referred to the Federal Government under title III of the act.

Mr. FLOOD. Is this type of problem generally restricted to the large metropolitan areas or is it nationwide? What about the hinterland—out in the provinces and the rural areas?

Dr. YOLLES. We have a considerable number of addicts who come from the hinterlands. As you point out correctly, the percentage of addicts in the cities is by far the largest proportion of the addicts in the country. For example, we have some 70 different agencies in 66 cities and 39 States that have aftercare programs. This merely reflects the home communities of the some 306 patients that we have in aftercare around the United States. Eventually we will have to have quite a number of contracts going around the country to take care of these individuals.

DEPRESSION AND SCHIZOPHRENIA

If I may turn now to different areas, those of depression and schizophrenia, two of the subject areas of great concern in the field of mental illness. These are two of our most pressing difficulties. Schizophrenia still accounts for half of the beds occupied by the mentally ill. It is estimated that 3 to 6 percent of all children who reach the age of 15 will have a schizophrenic episode sometime in their life, and this is the most serious of the mental illnesses.

Turning to the field of depression, we have, it is estimated, some 300,000 persons who seek treatment every year for depression. There is perhaps another 50 percent who do not seek treatment and are not so listed.

I would like to point out to the committee that this disease entity depression, is a potentially fatal illness. This is the group from which a large number of the suicides come. Research, fortunately, has been proceeding very well in this field and we feel we are closer to solutions in this field than in any other field of mental illness.

Our own laboratories have contributed very, very greatly to the knowledge we already have, but research must continue. What we need most desperately is a rapid acting antidepressant so you can get the effect of the medication started very, very quickly in the depressed person so as to prevent the early suicides which occur.

Mr. FLOOD. It should be taken orally by the subject?

Dr. YOLLES. Either way. If the individual comes to the attention of a physician, it can be given parenterally, that is by injection, or by mouth.

We have had a recent investigational report which details the effect of giving an antidepressant drug combined with thyroid. Apparently the combination seems to speed up the effect of the antidepressant. We still have to evaluate it.

I point out we must intensify our efforts in this area because it is a potentially fatal disease.

PSYCHOPHARMACOLOGY

I would like to go on now to speak generally of testing of drugs. Again, for the education of the field, we have just published a review of progress in the field of psychopharmacology drugs affecting the mind, which I make available to the committee.

Mr. FLOOD. The witness shows the committee now a standard prepared book, hard cover, the title is "Psychopharmacology, A Review of Progress 1957 and 1967." It is a very thick, heavy volume containing 1,342 pages.

Dr. YOLLES. I might point out that we have been able to make this progress only because of the consistent support of this committee and the committee in the other House.

Mr. FLOOD. Is this volume you now show us available to the public? To whom is it available?

Dr. YOLLES. It is available to the general public and to the professions by purchase.

Mr. FLOOD. From where?

Dr. YOLLES. The Government Printing Office. Complimentary copies are available from the NIMH.

Mr. FLOOD. What does it cost?

Dr. YOLLES. I do not know, I think the price is in the book.

During 1968 we have evaluated over 50 different new drugs for their possible effectiveness in any and all of the conditions of mental illness.

Mr. FLOOD. I might add this: This is marked "Volume for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402, price $11.25."

Dr. YOLLES. What is interesting, and we feel it is an accomplishment, is that a new system of testing drugs has been developed by our Psychopharmacology Research Branch which involves the use of optical scan rating sheets. In evaluating a new drug, we use a cooperative arrangement between a number of hospitals, the manufacturers of the drug, and the Food and Drug Administration. We have developed standardized forms that can be filled out by the investigators and submitted directly to our computer which reads the optical scan form. It does away with many of the intermediary steps which involve a lot of personnel in coding such forms, and has made available to the profession generally a new method of evaluating drugs, not solely the psychiatric drugs.

In the area of research and investigation generally, we have our annual report which contains reports of some of our supported investigations, edited so they are readable, and devoid of the usual professional gobbledy-gook. I make this available to the committee.

Mr. FLOOD. The witness shows the committee a volume with a hard paper cover entitled "Mental Health Program Reports, 3, National Institute of Mental Health." It is a volume of 462 pages, with extensive bibliography at the end, prepared by the program analysis and evaluation branch, Office of Program Planning and Evaluation, National Institute of Mental Health, Chevy Chase, Md., U.S. Department of Health, Education, and Welfare, Public Health Service, Health Services and Mental Health Administration.

Dr. YOLLES. I would like to point out that our research is not limited solely to new drugs and the effect of drugs on the mind. We are most concerned about the basic operations which go on in the brain and, as just one example, may I point out to the committee that for the past 10 years we have been actively engaged in research to find out the chemical substances which allow for the transfer of the nerve impulse from one cell in the brain to the next. This has been going on most actively for the past 10 years. At the present time we have identified, at least there is general consensus of scientists, two such substances, and if we were to extrapolate that finding to the totality of the brain's connections, the system that we have devised to study those two chemicals would be applicable in 15 percent of the connections in the brain.

Mr. FLOOD. Are those drugs now registered?

Dr. YOLLES. No, sir; they are chemical substances such as acetylcholine and norepinephrine. The problem is to identify which one of these drugs and in what form it is transmitted from one nerve to the next in order to carry the nerve impulse.

If I turn that around, it says that 85 percent of the brain connections are still unknown and the chemicals that mediate those connections are sometimes unknown; this is still an area of vast importance that must be pursued if we are to know anything about the brain and hence about mental illness and mental health.

BEHAVIORAL SCIENCES

But our activity is also not limited to basic studies on the brain. We are very much involved in the behavioral sciences. We are involved on a daily basis with all of the current social problems.

Mr. FLOOD. What are the behavioral sciences?

Dr. YOLLES. They cover the behavior of man in relation to his own activity, his culture, and his environment, and include the fields of psychology, anthropology, sociology, et cetera.

We are involved very heavily in these areas because of our involvement with problems of social change, problems of aggression, for example, problems of prejudice, problems of sexual behavior, student unrest, violence, both individual and mass violence, and we have been supporting studies in all of these areas.

I merely point out that research in these areas needs expansion, since we are the focal point for the Department and the Public Health Service in the area of behavioral sciences.

If I may quickly point out before I close, Mr. Chairman, the fact that very recently, as you may have read, we have become involved in another area of behavioral sciences, namely acting as a staff for a new panel which the Secretary will appoint on the effects of television and televised violence on the behavior of children.

Mr. FLOOD. Would you call that applied psychology?

Dr. YOLLES It will be both applied and basic because we have to study some of the basic phenomena of communication here, what gets communicated. You have to differentiate between real acts of aggression which are being filmed and those which are fantasy. There are a whole series of basic questions in the field of psychology that have to be answered as well as applied ones, Mr. Chairman.

One last note on our dissemination of information which goes on all the time, and I did not mean to barrage you with all of these handouts but I am trying to give the committee some idea of the range and scope of the activities in the National Institute of Mental Health and the kind of things we must be involved with in the area of public information and dissemination of information.

The National Clearinghouse for Mental Health Information is our main focus for dissemination of such scientific and public information. It is functioning very well at the present time and has put out a number of documents which are new.

For example, this one, a complete review of the reports in the scientific literature in the field of aging and mental health. Another is in the field of crime and delinquency. These are abstracts of new findings in the field of occupational mental health.

Another reports on the literature regarding important psychological and social aspects of human tissue transplantation. This is a new field and the psychological implications of heart transplants, for example, are extremely important. Lastly, a new digest which reports new findings in the field and notes of interest. This is a new venture for the Clearinghouse, a monthly journal which is totally on subscription and it has been a best seller and we have now nearly 5,000 subscriptions to it as of March.

Lastly, we engage in scientific dissemination of information through abstracts from the literature and through regular printouts from the computer's store of information.

I have not mentioned such areas as aging, poverty, school mental health, mental health in family and children, services for children, normal and disturbed sexuality, training and manpower development, urban mental health problems, rural mental health problems, the field of memory, and sleep and its effect on mental health; these are areas I did not touch on.

In conclusion, Mr. Chairman, the request for mental health——

SCOPE OF INSTITUTE'S ACTIVITIES

Mr. FLOOD. Is there anything you do not touch on?

Dr. YOLLES. Many areas. However, the field of mental health, as you well realize, is very broad. We have to be concerned about the impact of the environment on the population. Our mission——

Mr. FLOOD. I will ask the question again, without any intention of being facetious. Is there anything you do not touch on?

Dr. ENGLISH. If I could just say a word about that, I hope there will be no area in HSMHA that Dr. Yolles and his staff in this Institute, which is I think one of the strongest parts of our organization, will not touch upon. We look for their help on programs across the board because there is hardly a program which does not have a mental health dimension.

Frankly, we are looking forward to Dr. Yolles' assistance in many areas. In the regional medical programs, for example, there are mental health concerns, and also in the Indian programs. So we look forward to that kind of assistance and I think his testimony indicates why we are so anxious to have that occur.

SUMMARY OF THE BUDGET

Dr. YOLLES. In conclusion, Mr. Chairman, the request for mental health is $377,299,000 for 1970 as compared with an operating level of $367,923,000 in 1969. This increase of $9,376,000 includes a transfer to this appropriation of $2,147,000 previously carried in the St. Elizabeths Hospital, salaries and expenses "appropriation for research and training activities following the establishment of the National Center for Mental Health Services, Training and Research. The balance of the increase includes $440,000 for the support and conduct of research, $3,710,000 for manpower development, $2,863,000 for community-based narcotic addict treatment and rehabilitation and $448,000 for other direct operations.

In the community mental health centers program, increases of $5,268,000 for staffing grants and $4,000,000 for new community alco-

holism centers are offset by a decrease of $9,500,000 in the level of obligations for construction grants.

Thank you, Mr. Chairman.

SCOPE OF RESEARCH SUPPORTED BY NIMH

Mr. FLOOD. You seem to be supporting research in just about every phase of human behavior. How do you draw the boundaries around the types of research that you support? In other words, how do you establish your jurisdiction for these various research programs? Do you have any written criteria?

Dr. YOLLES. No, sir; there are no written criteria, but the criterion that is applied in terms of support of grants, for example, is the project's relevance to the field of mental illness first, and then mental health generally, and it must be directly relevant, not remotely relevant.

For example, we support only a small prcentage of all of the requests that come to us in the field of crime and delinquency.

Mr. FLOOD. How do you establish the perimeter of your jurisdiction for a research program in such an extremely difficult area?

Dr. YOLLES. It is done by a group of scientific experts that we use for the primary review of the application.

Mr. FLOOD. There must be a great deal of overlapping?

Dr. YOLLES. Yes. We overlap with studies that the Food and Drug Administration does, and that the Justice Department does in the area of narcotic and drug abuse, for example. We overlap with many agencies.

Mr. FLOOD. But this is not duplication in the pure sense of that word?

Dr. YOLLES. No, sir. Many times we have joint support of an application. In a study of the psychological effects of coronary heart disease; for example, we might provide joint support with the Heart Institute.

As I said, we use the best scientific talent available in the country and have their opinion, and it is a double review system—we have not only that first review by the scientists, but also a second review by the National Advisory Mental Health Council that looks at it more closely from the point of view of its relevance in the total program in NIMH. They have primarily a policy approach to support.

Mr. FLOOD. Is there more mental illness than there used to be or are we just more aware of it?

Dr. YOLLES. I would hesitate to say we have more of it. I would say we are better aware of it. I do not think that mental illness is increasing in the United States.

TREATMENT OF NARCOTIC ADDICTS

Mr. FLOOD. Are we making any progress in the treatment of narcotic addiction? Has anyone really found an effective way of getting addicts off the stuff and keeping them off? Is there a way yet?

Dr. YOLLES. May I answer the question this way, Mr. Chairman: There is not a way, there are a number of ways. And our biggest problem is fighting the battle of a way. There is no universal panacea in this field so far.

Some addicts can be kept off drugs by being involved in a program such as Synanon or Daytop Village have developed. This works for a certain percentage of addicts. Another percentage of addicts, as has been demonstrated, can be effectively helped by a methadone maintenance program such as is being used experimentally in New York and in some other places we are supporting at the present time.

There is also cyclazocine, a narcotic antagonist which is being used effectively for some addicts.

I might point out that in our NARA program (narcotic addict rehabilitation program) there has been a remarkably small percentage of persons who have dropped out and had to be returned to the court. It is rather gratifying to see this, that 6 months after the program was started we have so many addicts who would formerly have reverted immediately after leaving the hospital, but who have still not gone back to the use of narcotics. It remains to be seen how long this will continue, but it is very hopeful.

Mr. FLOOD. What method do you use in treating the addicts at the Lexington, Ky., operation?

Dr. YOLLES. Our activity there consists primarily of withdrawing them from the use of narcotics, particularly if they are addicted at the time they enter, and then testing them to find out what their education and vocational abilities are and getting them started in a rehabilitation program.

Concurrently, if they seem suited to such a program, we may start psychotherapy with them. But I might point out, Mr. Chairman—I want to be careful what I say—that we do not have very much of an active treatment program at Lexington nor any of our hospitals for that matter. We do not have the staff to treat them, nor do we have the program personnel. Lexington works on a shoestring, financially and personnelwise, and it has for many years.

My overriding concern—and this may come up later on the St. Elizabeths appropriation—has to do with our hospitals in Lexington and Fort Worth, and with St. Elizabeths Hospital. Aside from my concern about not rendering the best medical care, which is my responsibility, to the people we take under our supervision, and now more recently who are committed to my care—civilly committed to my care—aside from this concern because I do not have the people to do it, there is another question that has come up, and that is the legal right to treatment.

Remember, we incarcerate these people; it is a commitment for 3 years, and unless we can show, and the courts have been most impatient with us——

Mr. FLOOD. You mean a constitutional problem?

Dr. YOLLES. Yes, sir.

You are putting your finger exactly on the point.

Unless we can show that we are giving them adequate treatment in our hospitals, other than just incarcerating them, we stand in danger of having the court require that we release these people. There have been a number of cases which have come up in the District of Columbia already with regard to this, and there have been a number of questions raised about the hospitals at Lexington and Fort Worth.

Mr. FLOOD. How does the question come up, on habeas corpus? Do you have the burden of proof?

Dr. YOLLES. Yes; that we are providing treatment, and adequate treatment. And this goes far beyond just taking them in, as we have done over the years in most mental hospitals, and saying by inhaling the atmosphere in the hospital, so to speak, and having a few doctors walk through and wave their hands magically at the patient, each having 500 to 600 patients under his care, we are rendering adequate treatment. We have not, and we are not at the present time. This is a source of great concern to me.

Mr. FLOOD. Those are the ones who have been sentenced to go to you?

Dr. YOLLES. These are the ones who are committed to go to us; whether or not they are self-commitments, they have signed a commitment and the court has ordered them into the custody of the Surgeon General for a period of 3 years. They are not free agents any more.

Mr. FLOOD. What about the person who comes to you voluntarily and all of a sudden decides, I am not getting good treatment? What does he do, get up and pack his bag and go home?

Dr. YOLLES. Many have. Of course the voluntary program at Lexington and Fort Worth is almost nonexistent at the present time.

CIVIL COMMITMENT OF NARCOTIC ADDICTS

Mr. FLOOD. How many narcotic addicts have you treated as a result of the civil commitment provisions of the Narcotic Addict Rehabilitation Act?

Dr. YOLLES. It is about 1,400, I believe, altogether.

Mr. FLOOD. Place the exact figures in the record.

Dr. YOLLES. Yes, sir.

(The information follows:)

There have been 1,477 persons referred to the Fort Worth and Lexington Centers by the Federal courts for examination and evaluation pursuant to the Narcotic Addict Rehabilitation Act of 1966. Of these referrals, 747 addict-patients have been committed to the custody of the Surgeon General for treatment and rehabilitation.

Mr. FLOOD. What is your procedure in handling these people? What happens under the act?

Dr. YOLLES. It depends on the type of commitment that you are talking about. But generally speaking——

Mr. FLOOD. The civil commitments under the act.

Dr. YOLLES. There are two different types we deal with.

Under title I, where an individual has been accused of a Federal crime and comes before the court, the court may then ask him whether he would elect to go to Lexington or to become a civil committee in the program, rather than standing trial. If he so elects, he is sent to a medical facility, in most cases Lexington or Fort Worth, to be examined to find out if he is an addict, and if he is amenable to treatment. Following that he is returned to the court——

Mr. FLOOD. If he is amenable to treatment? Are they not all amenable to treatment?

Dr. YOLLES. There are some who have been in treatment 30 or 40 times who are really not interested in being treated, they are just interested in avoiding sentences. We try to weed out these people so that we can have a successful treatment program.

Mr. FLOOD. What happens then, do they go back to the court?

Dr. YOLLES. They go back to the court, and if the determination is made by the Surgeon General that the person is an addict, the court may then commit him to the custody of the Surgeon General for 3 years.

In the title III commitment, which is a so-called voluntary commitment, the individual may elect to be committed to Lexington and the U.S. attorney then decides, in consultation with the Surgeon General, whether facilities for the treatment of addiction are locally available. If they are not, the court will commit him to the custody of the Surgeon General for a period of 3 years.

RESPONSIBILITY FOR COSTS OF TREATMENT

Mr. FLOOD. If it is a voluntary commitment do you bill him or the family or anybody for any part of the costs?

Dr. YOLLES. No, sir.

Mr. FLOOD. As they say in the Army, this is SIW. Here is a self-inflicted wound. It is the result of the addict's own conduct that he reaches this stage of addiction. Now he says to himself, I am sorry, and he goes to you and at the taxpayers' expense he is taken care of for x number of months or years, and he is not billed for any part of this?

Dr. YOLLES. That is quite correct, sir.

Mr. FLOOD. Should that be so?

Dr. YOLLES. It was the wisdom of the Congress to pass the law as they did pass it.

Mr. FLOOD. I am aking you what do you think?

Dr. YOLLES. I am on the record at the time of the hearings on the act that I did not feel that the voluntary commitment to Lexington should be done en masse, that it took the States "off the hook" in developing their own services. We have been facing that problem for almost 35 years at Lexington. Those two institutions, Lexington in 1935 and Fort Worth in 1938, were constructed as demonstrations to the States of how you could treat narcotic addiction.

Mr. FLOOD. Why is this a Federal problem? Why should there not be responsibility on the part of the State of which the addict is resident and the addict himself?

Dr. YOLLES. I feel very strongly that this should be the case. I think it developed that the Federal Government is the repository and the responsible agent for all addiction in the United States simply because the States have reneged on their own responsibilities over the years and have refused to develop facilities.

There was an obvious place to dump such patients and that was Lexington and Fort Worth and the States used it.

Mr. FLOOD. Is there any evidence of real success in rehabilitating these people?

Dr. YOLLES. Yes. Even the gloomiest statistics which came out in the earlier years, some 5 to 10 years ago, at Lexington and Forth Worth, showed that we were rehabilitating and curing some 15 to 20 percent of the addicts. That proportion has risen.

BUDGET FOR NARCOTIC ADDICT REHABILITATION ACT

Mr. FLOOD. In total, how much are you spending this year under the authority of the Narcotic Addict Rehabilitation Act and how much do you have budgeted for 1970?

Dr. YOLLES. In 1969, we spent $3,199,000 in the Narcotic Addict Rehabilitation Branch, which administers the community-based program of care under contracts with community agencies. We are asking for a total of $5,851,000 in 1970, which is an increase of $2,652,000 for this specific program.

NEW PROGRAM FOR TREATMENT OF ALCOHOLICS

Mr. FLOOD. You are proposing $4 million in 1970 to start a new program for the treatment of alcoholics. Suppose you tell us how this program will work.

What do you expect to accomplish by the program and why is it so important to start it at this time? This is a bad time to start anything. Why, under all of the fiscal circumstances, is that the time?

Dr. YOLLES. The $4 million you refer to, Mr. Chairman, will be for the construction and the staffing of facilities for the treatment of alcoholics. We intend to award several construction grants and approximately 20 staffing grants for facilities related to or a part of community health centers; these can be used for acute withdrawal of alcoholics, and can also provide the necessary treatment and rehabilitation services.

Where such facilities for treatment do not exist at the present time, the program will allow grants for construction, but most of these funds will be used for staffing, in other words, for operational support of the program.

Mr. FLOOD. How will the program itself work? What do you expect to accomplish by it? And why now? Why the $4 million now? Three separate questions.

Dr. YOLLES. The program will be one involving all methods of treatment of alcoholics.

Mr. FLOOD. There are different methods?

Dr. YOLLES. There are a number of methods which are combined, not only the psychological methods and treatment in psychotherapy, but there are also physical methods of treatment of the alcoholic.

Mr. FLOOD. Hypnosis?

Dr. YOLLES. This is used as well in some places. In other words, we are not prescribing the treatment, Mr. Chairman, we are making available to those communities that want to have a program of treatment, the support to start such programs and, depending on their own professionals there, they will render the professional care.

What we are trying to do is to make facilities available and to encourage the community to start programs of treatment, and there are all too few programs of treatment in the United States for alcoholics.

Mr. FLOOD. Why now?

Dr. YOLLES. The program was not funded last year at all. We are hoping that we can make a start. The original authorization in the act, and the amendments that were passed, provided for a much higher level than the $4 million we are asking for in this second year.

Mr. FLOOD. You are not going to saddle us with a new Lexington, are you?

Dr. YOLLES. No, sir. These will not be Federal installations.

Mr. FLOOD. You are not going to saddle us with another Federal installation to treat alcoholics and give the States a dumping place. Their handling of the problem is a scandal and disgrace and a mark upon the escutcheon of the proud sovereign States, and they know it.

Dr. YOLLES. If I may inject a personal note, I would be the last person to do that.

Mr. FLOOD. You are not going to start the same thing with alcoholics that we have with narcotic addicts?

Dr. YOLLES. No, sir. If I may put it in perspective, you will recall that a number of States have already said it is not a criminal offense to be an alcoholic. You no longer can put such an individual in the local "tank," in the jail.

Mr. FLOOD. But that does not mean he goes into the Federal tank?

Dr. YOLLES. No, sir. But most communities do not have facilities to take care of them; for example, the District of Columbia is having problems in this area.

Mr. FLOOD. Does that mean Uncle Sam shall do it because they do not do it?

Dr. YOLLES. No, sir. In keeping with the approach which the Public Health Service has developed over the years, we are attempting to encourage the States and support them in their initial efforts. We will be sharing in the cost of constructing such facilities on the same basis that we share in the cost of constructing community mental health centers and also give them the initial impetus to develop such a program through a staffing grant, which rapidly reduces the Federal contribution, and after 4 years and 3 months the Federal contribution ends.

Mr. FLOOD. Why do you not go back to Congress and point out to them again and again the scandalous situation that the States are burdening us with as far as narcotic addict treatment is concerned? This is not a Federal treatment problem. Why do you not revoice that?

Dr. YOLLES. I have tried each time when I have appeared, and I most certainly will.

As you can see from the chart book, the implications for support will be quite great in future years.

Mr. FLOOD. There is nothing more annoying to me than to have these proponents of State sovereignty and these groups who protest most vehemently the encroachment upon State jurisdiction of the Federal Government, the centralization of power, and yet in the whole broad spectrum of narcotic addicts and treatment, they run crying on our shoulders to take care of their citizens. Right?

Dr. YOLLES. Right.

SAVINGS IN GRANTS FOR STAFFING OF COMMUNITY MENTAL HEALTH CENTERS

Mr. FLOOD. Although we appropriated $64.3 million last year for grants for staffing of these community mental health centers, you are only using about $46 million. Tell us how you managed to save all of that money, $18.3 million. You amaze me.

Dr. YOLLES. There were three factors which worked together to produce this saving.

The first was that because of financial restraints in 1968, and the delay in making allocations to the States many of the States did not apply for grants because they were not quite sure there would be money available. As a result, there were some 40 fewer awards for staffing grants in 1968 than originally estimated. This amounted to a reduction in estimated continuation costs of about $5,478,000 in 1969.

The second factor is that we have changed our policy with respect to funding of continuation grants. The community mental health center program is relatively a new program and we have been gaining experience in administering it. What we have done this year is to reduce the time between the award of the grant and the date on which the grant goes into effect. In this way, we were able to delay many continuation grants until the next fiscal year without doing any damage to the grantee, and this has resulted in a saving of some $10,960,000 in 1969.

Mr. FLOOD. A great trick.

Dr. YOLLES. This cannot be done more than once, because the funding now is much closer to the actual start of the operation of the centers.

The third factor responsible for the total reduction is the application of approximately $1,830,000 in accrued unexpended balances within grants awarded in previous years, which we authorized the grantees to use as part of their 1969 awards, thus reducing the necessity for new obligations by that same amount this year.

Mr. FLOOD. That brings on the next question. Now you are reversing your field. You are asking for an increase of $5,268,000 for 1970.

Dr. YOLLES. Yes, sir.

Mr. FLOOD. What assurances do we have that you really need the increase?

Dr. YOLLES. On the basis of our estimates of those applications which are presently in our regional offices and those that will be coming it, it is clear that the States feel more sure of their allocations, and we fully expect to fund the 51 new staffing grants estimated in the 1970 budget.

Mr. FLOOD. What will be your carryover?

Dr. YOLLES. We are not authorized to carry over funds for staffing grants, but we will carry over $10 million this year in construction grant funds.

REDUCTION IN HOSPITAL IMPROVEMENT GRANTS

Mr. FLOOD. Does the proposed reduction in 1970 of $2,610,000 in the hospital improvement grant program reflect a reduction in need or is it simply due to the so-called budgetary restraints that have been imposed?

Dr. YOLLES. It is certainly not a reduction in need, Mr. Chairman. Of all programs that are needed, and I spoke of this before in terms of the reduction in State mental hospital populations, the most effective program has been the Hospital Improvement Project program. But in the process of coming to a total figure for the Federal budget, and within the limits that were imposed, there were some cuts that

had to be made and this is the result of total budget tailoring that resulted in a decrease in this program.

Mr. FLOOD. In your training grants program, the number of grants will decline by 54 in 1970, but the dollars go up by $3.5 million. What about that?

Dr. YOLLES. In some cases there has been an increase in the size of the individual grant project itself, and we are also experiencing increased average costs related to the general rise in salaries and prices. There was also an increase in the noncompeting continuations from last year. The new awards last year have resulted in an almost $6 million increase in noncompeting continuation awards. This will net out, together with reductions in the new grants and competing renewals, to an increase of $3.5 million.

Mr. FLOOD. Including new starts?

Dr. YOLLES. There will be 47 fewer new starts.

COMMUNITY MENTAL HEALTH CENTERS

Mr. FLOOD. On page 51 of your justifications you say you need 2,000 community mental health centers. What is magical about the figure 2,000. How did you get that figure?

Dr. YOLLES. Nothing magical about the figure at all, Mr. Chairman.

In 1962 when we were first proposing this program and implementating the report of the Joint Commission on Mental Illness and Health, we decided, using the best scientific advice we had available, that the United States should have one community mental health center available for every 100,000 population. Dividing this into the population by 1980, the 230 million population estimate, it came out to about 2,300 mental health centers, and the rough figure of 2,000 is for those that would be federally supported. Some 300 would be privately supported.

Mr. FLOOD. How many are now in existence?

Dr. YOLLES. We have funded 351 so far and there are 200 in operation.

Mr. FLOOD. How many will be provided out of these new funds you are requesting?

Dr. YOLLES. There will be 90 new grants for construction and 51 new ones for staffing; since many grantees will receive both a construction grant and a staffing grant, we are estimating that there will be a net increase of 83 community mental health centers in 1970.

EARLY CHILD CARE DEMONSTRATIONS

Mr. FLOOD. Last year you asked for funds for something called Early Child Care Demonstration Grants.

Dr. YOLLES. Yes.

Mr. FLOOD. That was not approved by the Congress. However, in the conference report, I am sure you will recall this language:

> The conferees agreed that the provision included in the House report to prohibit the use of funds contained in the appropriation for the "Early Child Care Demonstration and Evaluation Program" shall not apply.

For 1970 you are asking $1 million for exactly the same thing. You are free to use some of your 1969 appropriations and you did not do it. So I suppose that this is a pretty low priority item, is it not?

Dr. YOLLES. No, sir, it is not.

Mr. FLOOD. It is not?

Dr. YOLLES. It is not a low priority.

Mr. FLOOD. How could you get lower on the totem pole than that?

Dr. YOLLES. It is hard to talk to it as a relative priority when it affects so many of the programs in NIMH. This is the key to prevention of emotional disturbance, antisocial behavior. This is what we have been talking about all through the years in terms of reaching people before it is too late to try to prevent some of these things rather than to treat them after the fact.

Mr. FLOOD. Let me ask this: In view of the action that the Congress took and in view of the fact you have the 1969 appropriation available, which you did not use; why do you think this project is so important now that this committee should reverse its position it took last year? Why?

Dr. YOLLES. For the very reason I just gave in terms of its importance in preventing mental and emotional disturbances.

Mr. FLOOD. Those are the same reasons you gave last year.

Dr. YOLLES. Yes. We are hoping we could make a new start in this area, to make a beginning and develop a program.

Mr. FLOOD. Commonwealth rests, the case is now in the hands of the jury. You have nothing to add; is that right?

Dr. YOLLES. That is right.

I really cannot say it any more strongly than that it offers a hope for the future which few of the other programs have, but in order to do it we need the personnel and the funds. Because of the current employment restrictions, whatever positions we had are no longer available.

Mr. FLOOD. You were free to use some of the 1969 funds and you did not do it.

Mr. CARDWELL. Mr. Chairman, I would like to comment on that point. We did not realize there was a consensus within the Congress that would permit us to initiate this program.

Mr. FLOOD. I was on that conference committee, and my English is above average.

Mr. CARDWELL. I would agree with that, sir.

Mr. FLOOD. Can you fellows not read down there?

Mr. CARDWELL. We can read, but this is one case where we did not understand.

Mr. FLOOD. Plain as the nose on your face. At least I thought it was.

Mr. CARDWELL. I am sorry we did not understand it that way.

Mr. FLOOD. Do you remember the language?

Mr. CARDWELL. Yes, sir; you have just refreshed my memory.

Mr. FLOOD. You fooled me on that one. That was an invitation. I know; I wrote it.

Mr. LEWIS. I would say I guess we have to add another person that did not understand it.

Mr. FLOOD. What?

Mr. LEWIS. I would have to agree, in my understanding, that we were not going to be able to move ahead in 1969. Maybe we just did not understand the language. Somewhere along the line our communications were bad. Especially in 1970, I think the difference between

$1 million and $14.5 million is essentially a budget approach, it is not a question of magnitude of need.

Mr. FLOOD. This is not legal gobbledygook. Here is an express statement that the prohibition does not apply. I cannot imagine people like you and Jim Kelly not being able to read and understand that.

[Reads:]

The conferees agree that the provision included in the House report to prohibit the use of funds contained in the appropriation for the Early Child Care Demonstration and Evaluation Program shall not apply.

Mr. FLOOD. I will try the next one in Greek. I do not know how in the world I could have improved on that.

You can imagine how startled I was to find you spending no money in 1969 and now coming back for a million dollars.

FAMILY PLANNING

I notice on page 65, one of the accomplishments under "Scientific Communications and Public Education" is publishing a "Bibliography on the International Aspects of Family Planning." I thought that the family planning activities of the Institute had been centralized in the Institute of Child Health and Human Development.

Dr. YOLLES. You are quite right, Mr. Chairman, except that the National Institute of Mental Health is interested in family planning as it affects the mental health of children in a family, and for this reason we are very much interested in the psychological aspects of the field.

Mr. FLOOD. You see, Doctor, what we are up against; a few years ago this was taboo, the whole subject. Now all of a sudden the taboo has been removed and everybody wants to get into the act. Everybody who sees a chance to get some money are now for family planning overnight.

Now you want a piece. Here we go again.

Dr. YOLLES. Mr. Chairman, this is not a new field of endeavor for the National Institute of Mental Health. We have been involved in this area for quite a number of years. If you look in our child and mental health publication which we made available to this committee a number of years ago, we were interested in this field and we have continued to support it to a degree.

Mr. FLOOD. We thought, without any question, this was all going to be centralized, to prevent duplication, in the Institute of Child Health and Human Development. We should have known better.

Dr. YOLLES. You raise the point of overlap and duplication. I do not think the studies we are doing in the area of child planning overlap the studies which the Institute of Child Health and Human Development are doing. They do not really. These are mainly concerned with psychological aspects, which is a concern of the Child Health and Human Development Institute to far less degree, and, by and large, our people work with their people to prevent unnecessary overlap or duplication. With the scarcity of research funds available——

Mr. FLOOD. Scarcity of research funds?

Dr. YOLLES. Yes, sir.

Mr. FLOOD. Seventeen billion dollars in the budget for research and development and there is a scarcity of research funds? That is not the majority reaction up here anymore. That has become a bad word.

Dr. YOLLES. I realize there have been many questions asked about research, but I can restrict myself solely, and I do, to research needs in the field of mental health. We are just starting in this field. The needs of research are very large in this field, if we are ever to come to grips with and eventually overcome the problem of mental illness. We are just starting.

You know, we always get caught in the switches in this field; we have for years.

Mr. FLOOD. So are we.

FAMILY PLANNING ACTIVITIES OF THE DEPARTMENT

Mr. CARDWELL. Mr. Chairman, on the question of centralization of family planning activities, it might help if we could insert in the record at this point where the various family planning activities are located in the Department.

(The information follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
POPULATION AND FAMILY PLANNING ACTIVITIES

Obligations, FY 1966 -- FY 1970

Agency and Program	Fiscal Year 1966	1967	1968	1969	1970
		(in dollars)			
Total, Department of Health, Education, and Welfare	13,380,000	19,719,000	29,255,000	47,242,000	68,653,500
SOCIAL AND REHABILITATION SERVICE:					
Maternal and Child Health:					
Maternal and child health formula grants to States	1,800,000	2,500,000	3,500,000	3,500,000	3,500,000
Project grants for maternity and infant care	1,200,000	2,500,000	2,500,000	14,500,000	26,300,000
Research and training in Maternal and child health	600,000	500,000	500,000	500,000	1,700,000
Public assistance:					
Social Services	2,000,000	3,000,000	6,300,000	8,300,000	10,300,000
Medical Assistance	1,000,000	1,500,000	3,000,000	4,500,000	6,400,000
Cooperative research to prevent and reduce dependency	---	---	200,000	200,000	300,000
Subtotal, Social and Rehabilitation Service	6,600,000	10,000,000	16,000,000	31,500,000	48,500,000

Agency and Program	Fiscal Year 1966	1967	1968	1969	1970
PUBLIC HEALTH SERVICE					
Consumer Protection and Environmental Health Service:					
Food and drug administration, research contracts	---	82,000	569,000	843,000	1,118,000
Subtotal, Consumer Protection and Environmental Health Service	---	82,000	569,000	843,000	1,118,000
Health Services and Mental Health Administration:					
Patient care and Special Health Services	---	---	160,000	220,000	254,000
Indian Health Service	152,000	181,000	273,000	323,000	425,000
National Communicable Disease Center	---	20,000	20,000	38,000	43,000
National Institute of Mental Health	416,000	481,000	554,000	635,000	644,000
National Center for Health Statistics	---	---	---	64,000	314,000
Comprehensive Health Planning: Partnership for Health	---	125,000	171,000	391,000	500,000
Subtotal, Health Services and Mental Health Administration	568,000	807,000	1,178,000	1,671,000	2,180,000

Agency and Program	Fiscal Year 1966	1967	1968	1969	1970
National Institutes of Health:					
National Institute of Child Health and Human Development.....	5,257,000	7,219,000	8,113,000	9,632,000	13,145,000
Health Manpower, training grants	81,000	199,000	417,000	483,000	443,000
Subtotal, National Institutes of Health	5,338,000	7,418,000	8,530,000	10,115,000	13,588,000
Subtotal, Public Health Service	5,906,000	8,307,000	10,360,000	12,586,000	16,843,000
OFFICE OF EDUCATION					
Elementary and Secondary Education:					
Supplementary educational centers and services	63,000	502,000	1,485,000	1,500,000	1,500,000
Grants to States for guidance, counseling, and testing	233,000	233,000	233,000	161,500	161,500
Dropout prevention program	---	---	---	8,000	20,000
Higher Education:					
Grants to States for community service and continuing education..	175,000	225,000	315,000	380,000	410,000
Prospective elementary and secondary teacher fellowships	72,000	121,000	121,000	100,000	162,000

Agency and Program	Fiscal Year 1966	1967	1968	1969	1970
OFFICE OF EDUCATION (Continued)					
EPDA Institute Programs.....	---	---	---	230,000	200,000
Adult Education:					
Adult basic education programs	317,000	317,000	644,000	720,000	800,000
Grants to States for vocational education	14,000	14,000	14,000	14,000	14,000
Subtotal, Office of Education	874,000	1,412,000	2,812,000	3,113,500	3,267,500
Scientific Activities Overseas * (Special Foreign Currency Programs, P.L. 480)	(---)	(---)	(314,000)	(2,400,000)	(3,500,000)

* Not included in the DHEW total.

SCHIZOPHRENIA

Mr. FLOOD. We have never finished a hearing, Doctor, with you without asking you to update the progress on schizophrenia. Does it still account for roughly half——

Dr. YOLLES. Half of the beds occupied by the mentally ill in hospitals.

Mr. FLOOD. What did you accomplish during the last year then?

Dr. YOLLES. There has been a reduction in the number of schizophrenics in hospitals, but proportionate to the reduction of all mental patients in hospitals. We have submitted the report to the committee on this subject.

I wish the progress was as great in this area as it has been in the area of depression, but it is not; and this is an area where we need more research.

INCREASE IN CONTRACTS

Mr. FLOOD. Why the 50-percent increase from $6,013,000 in 1969 to $9,372,000 in 1970 for project contracts?

Mr. ISBISTER. $2½ of that increase is to fund contracts for the aftercare of narcotic addicts, the program that Dr. Yolles referred to earlier in his testimony. These are the contracts in the local communities for supervised aftercare of the addict, following his hospitalization. The other major element in that increase is one-half of a million dollars for contracts for specialized research.

Mr. FLOOD. Specialized research?

Dr. YOLLES. The system of support for research that we have developed relies to a large degree on applications from scientists on the outside. From the point of view of a national program, we see certain loopholes, certain areas which are not developed as yet, and in order to stimulate a field where some research is vitally necessary and is not being done, we may go out and contract to have that research done in order to stimulate efforts in the field.

Then there are other types of contracts where we need—for example, in some of the complicated and complex pharmacological studies, we may need an intermediate compound which is not available. We contract to have it constructed or synthesized on the outside.

There are specialized studies that are needed right now which cannot be supported on grants, which no applicant has applied for, which we might support on contracts. These are the kind of specialized studies we get involved in. These are mainly ad hoc.

Mr. CARDWELL. It is important to understand that distinction. We are not talking here about contracts that are simply substitutes for Federal employment. These are, in effect, program contracts: a contract which you might do as a grant if an application existed. However, if there is no application to do research in a needed area, the Institute must let a contract to have the work done.

DISSEMINATION OF INFORMATION

Mr. FLOOD. Mr. Michel?

Mr. MICHEL. Doctor, your testimony thus far has cut a wide swath, covered a lot of ground, and it has been most interesting. You have shown us a number of publications gathering together information and

given us some indication as to what extent it is being distributed. How much of this information really gets out to the public, particularly the professionals who can put this to good use?

Dr. YOLLES. Mr. Michel, we have been wrestling with this problem for a number of years. As you know, this committee has been concerned and has asked us time and again why we have not been able to bring our principal tool for dissemination of scientific information, the National Clearinghouse for Mental Health Information, up to full operating capacity. The answer rests, one, in terms of personnel; we have not had an adequate number of personnel to run that operation.

Second, and very importantly, we have not been able to update and upgrade and improve our technical facilities sufficiently to do the job.

For example, the computer which serves the National Clearinghouse at the present time has to provide answers in the field of psychopharmacology, in analyzing some of the results of grants which come in. We have recently established an International Reference Center on Psychotropic Drugs, in cooperation with the World Health Organization. The objective is to disseminate a good deal of information. In order to do this properly, the Reference Center needs access to our computer, even though the primary purpose of the computer is for the dissemination of other types of scientific information, such as abstracts of new research findings, training, from the National Clearinghouse.

These functions which relate to psychopharmacology are necessary, but we have not been able to upgrade our equipment sufficiently to do the job well. We have made the request for additional equipment, and this has been going on for some 2½ years, in response to the committee's urging that we upgrade the facility. But I suppose that this is the length of time that it takes for redtape to be uwound, so to speak. What does concern us——

Mr. MICHEL. What are you talking about specifically?

Dr. YOLLES. We are talking about upgrading the memory core of our computer, and adding three or four remote terminals to this computer so that the Psychopharmacology Branch can handle this sort of activity.

Mr. MICHEL. What are we talking about in dollars?

Mr. ISBISTER. We are requesting in the budget request before you, Mr. Michel, as increase of $186,000 for this purpose.

Mr. MICHEL. What does this get us then?

Mr. ISBISTER. It will increase the capacity of the central processing unit, including the core memory capacity of the computer, and, as Dr. Yolles indicated, it will enable us to rent three or four remote terminals.

Dr. YOLLES. What I am also concerned about is a process discussed yesterday by the committee; namely, the centralization process. Having been around for a few years, I have been through this time and time again and what I am concerned about is that in the process of centralizing for the purpose of expediting and making more efficient dissemination of information, the primary purpose of our facilities is lost sight of. This is what concerns me.

For example, we are striving toward the goal of a turnaround time, which means the time from receipt of the question to the time the answer goes out to the requestor in the field, of between 24 hours and 48 hours. What concerns me in the long run is that if we have to subordinate the National Clearinghouse to other priorities in order

to centralize machines, that those priorities will put us in a position where it will take 2 or 3 weeks or even months before the answers go out.

This is a concern of mine. The Clearinghouse, as I started to say, is our principal means of disseminating information. Related to that is the public information program, and you saw some evidence of that activity this morning, in terms of publications that we put out.

Mr. MICHEL. You say $186,000 in the 1970 budget?

Mr. ISBISTER. The increase is $186,000. We are now spending about $220,000 on rental of computer equipment. Total of about $400,000.

Mr. MICHEL. Would that be a continuing kind of expense like in 1971?

Mr. ISBISTER. Yes, sir.

Mr. MICHEL. Would you anticipate that you would want to go beyond that?

Dr. YOLLES. The long-range plan for computers relates to our need to develop systems for having rapid retrieval of information, and input of information on what is happening in community mental health centers. We have a rather large grant that we have awarded to New York State where all of their facilities are connected by remote terminals to a computer, which enables them to get generalized information, such as how many admissions there have been during the year, or during the month; and what the diagnoses are. There is no personal information that comes out the machine. This is collective information that we never have been able to get before.

With perhaps the largest system for collection of biometric materials, statistics on mental illness in the world, our data are usually a year and a half old before we can get the material together.

Mr. MICHEL. This grant to which you referred, is that the State of New York?

Dr. YOLLES. Yes, sir.

Mr. MICHEL. For the entire State of New York?

Dr. YOLLES. All of their hospitals in New York State and some States surrounding.

Mr. MICHEL. Is this desirable for my home State of Illinois?

Dr. YOLLES. The commissioner of your home State has been related to this project as well. This is an ongoing project, I mentioned as an example. We are not requesting any new funding for it. We hope to extend this type of activity within our own Institute to the new field of collecting that kind of statistics on the community mental health centers. Nobody has experimented with this field, because the centers are so new. This is the long-range goal of our statistics collection and it is a very specialized statistics operation.

COMMUNITY MENTAL HEALTH CENTERS

Mr. MICHEL. We passed quite a sizable bond issue out in Illinois several years ago to build facilities for this whole area of mental health. One of these facilities is in my home community of Peoria. It was one of six or seven they built throughout the State. The one distressing factor is that having once constructed this fine facility, then we find that it is not really needed after all the crying need we were hearing about. It was not being utilized to its fullest potential. I don't know whether or not you can argue and say we were

really planning for the future and provided the kind of facility that would look to future needs. It is a distressing kind of thing to the general taxpayer in the area, who is under tremendous burden at the present time, and he tells us, "You people are supposed to be responsible." In our case at the Federal level. The State legislators are getting the same kind of pressure, probably more so, because they were more responsible in this case for that facility. We are a little bit hard put for answers. I don't know if it is the question of the State legislatures themselves being under the gun for a sufficient amount of funds to staff these facilities. Is that a problem around the country?

Dr. YOLLES. Generally speaking, this is a problem around the country, having the matching funds for staffing grants. It is becoming more apparent now, as some of the current mental health centers originally funded are down in the lower Federal matching level; for example 30-percent matching, where the community and the State has to put up the remaining 70 percent. This is becoming a problem especially in the States that do not have community mental health center acts or other support legislation. The State supports the local community and matches the Federal funds.

NEW POSITIONS REQUESTED

Mr. MICHEL. Yesterday I began to develop a line of questioning with Dr. English but realized it would be more appropriately put to you. Let us go back, if we can, to those positions I talked about which we see in the justification; a request of an increase of 132. As I understand it, about 100 of those are going to be out at St. Elizabeths; is that correct?

Dr. YOLLES. That is quite right.

Mr. MICHEL. What will their jobs be?

Dr. YOLLES. These are patient care positions, to increase the patient care activities at St. Elizabeths Hospital.

Mr. MICHEL. The other 32 are for what purpose?

Dr. YOLLES. These are for the remainder of the mental health program we were talking about this morning. Ten of them are for the early child care program we mentioned this morning. There are also seven positions to initiate the new community assistance program in alcoholism. There are 12 positions for our intramural research programs, divided between three different divisions we have there. There are 10 positions for the National Clearinghouse, to improve the dissemination of scientific information.

Mr. ISBISTER. There are 39 new positions in the 132, Mr. Michel. The 93 positions remaining are really not new positions. They were in the St. Elizabeths Hospital account last year. They have been transferred to the mental health appropriation this year. They are positions filled by people in research and training programs.

Since the St. Elizabeths Hospital is now part of the NIMH, we will account for those research and training positions in our basic appropriation rather than in the St. Elizabeths Hospital appropriation. In the "Mental Health" appropriation account there are actually only 39 new positions for 1970. They are for the purposes which Dr. Yolles indicated.

Dr. YOLLES. Right.

Mr. MICHEL. What have your personnel figures been for the last 5 years?

Mr. ISBISTER. I will have to provide that for the record.

Mr. MICHEL. Would you do that?

Mr. ISBISTER. Yes, sir.

(The information follows:)

NATIONAL INSTITUTE OF MENTAL HEALTH—5-YEAR EMPLOYMENT DATA, FULL-TIME PERMANENT POSITIONS

	Fiscal year 1965	Fiscal year 1966	Fiscal year 1967	Fiscal year 1968	Fiscal year 1969
Mental health appropriation:					
Authorized positions	2,172	2,299	2,697	2,740	2,459
End of year employment	1,993	1,961	2,100	2,378	2,387
Average employment	1,838	2,089	2,161	2,231	2,350
St. Elizabeths hospital appropriation:					
Authorized positions	3,973	3,852	4,012	4,071	3,914
End of year employment	3,640	3,640	3,831	3,835	3,800
Average employment	3,666	3,589	3,645	3,789	3,792

FELLOWSHIPS AND TRAINING GRANTS

Mr. MICHEL. I also note that you are asking for an increase of $225,000 for a total of $10,641,000 in fellowships for manpower development, and then I also made mention yesterday that you had a decrease of $2.5 million in manpower training grants, competing awards.

I asked the question then and would repeat it here: What is the reasoning behind this?

Dr. YOLLES. The $225,000 increase you referred to in the fellowships account is to continue awards that were made last year. These are noncompeting continuations and this increase takes care of that. There is no increase in the number of new awards being made. In regard to the support of training grants, the net increase is $3,454,000. It is made up of some minus figures and some plus figures. There is an increase in the continuations, that is, grants awarded last year that have to be continued this year. This amounts to a total of about $6 million. This is offset by a reduction of 74 competing renewal grants totaling about $1.1 million. There is $135,000 less in the budget supplementals in 1970, and $1,280,000 less for new grants to be awarded this year. That results in a total net increase of $3,454,000.

Mr. MICHEL. Do you care to look in your crystal ball and tell me a year from now what will that picture look like?

Dr. YOLLES. In terms of training grants?

Mr. MICHEL. Yes.

Dr. YOLLES. I could look in my crystal ball, but I would like to tell you that the only thing I see is the kind of projections made in 1960 which we have been trying to abide by all along. If I may, I would like to go over this once more very briefly. When the Joint Commission report was implemented, one of the principal concerns in the White House and in the Administration was whether we would be able to provide the necessary personnel for the mental health establishment and by that I mean the hospitals, medical schools, researchers, as well as the community facilities, clinics, and community mental health centers. It was decided at that time that the way things were going,

you would not have sufficient personnel to take care of the mental health establishment. It was agreed, for example, that in psychiatry we would be allowed to increase our share of the basic medical manpower pool, those graduating from medical school, from 8 percent of the graduates to 12 percent. We would support the training of these people in the area of psychiatry by increased training grants.

Similarly for the other core professions. With the aid of the Budget Bureau and all the manpower experts in the Public Health Service, we arrived at a projection to net us the appropriate number of personnel to run the mental health establishment through the years reaching 1980, when we were to have these 2,000 community mental health centers to provide service to all persons in the United States. At that time it was projected we would need an increase of $15 million a year, each year, in order to award that number of training grants. Obviously this has not come about.

In terms of our requirements for the training program for the national mental health program, these are the projections. We try to adhere to them as closely as possible. If I may go to your original question of the crystal ball, it would be somewhere close to that amount.

Mr. MICHEL. In other words, we are keeping up?

Dr. YOLLES. I am hoping to keep up in terms of increasing the necessary manpower as best we can. We realize that there are certain stringencies. We are falling behind now. It won't become apparent until a number of years from now because it takes a number of years, 5 years or so, to train an individual professionally. It will become evident in the future when we will have a lack of personnel to staff these facilities. That is not apparent as of now. Thus far we have been able to staff our community mental health centers and the rest of the establishment.

EARLY CHILD CARE DEMONSTRATIONS

Mr. MICHEL. Will you be working with the Social and Rehabilitation Service in this field of early child care demonstration and evaluation, for which you are requesting $1 million, that I read about somewhere?

Dr. YOLLES. We hope that we will. One of the items that we proposed to test is the way early child care is delivered at the present time. Most of our efforts in this area would be in the area of evaluation, to see how well some of these newer ideas are put into practice and would be working with child care centers already established, and those which will be established, in order to incorporate in them some of the new approaches and to test some of the findings.

TREATMENT OF NARCOTIC ADDICTS

Mr. MICHEL. How much do we have in total in this budget for the treatment of narcotic addicts?

Dr. YOLLES. The naroctic addict rehabilitation program, in other words the treatment of addicts both in hospitals and in followup calls for an increase of $2.7 million which results in a total of $5,851,000 for this program. The operation of the two clinical research centers at Lexington and Fort Worth amount to a total of $10,505,000.

In addition, the Center for Studies of Narcotics and Drug Abuse is allocated $351,000; management of the total narcotics program costs

about $316,000. In addition to that, we have an $8 million item for construction and staffing of narcotic addict facilities under grants which are now authorized in the Community Mental Health Centers Act. So we have a total of $25,526,000 in this area of narcotics and drug abuse.

Mr. MICHEL. Is there anything going into this area from the private sector that you know of?

Dr. YOLLES. In the area of research, yes sir. Even one of our research grants does not pay for all of the expenses of carrying out the research. Similarly in the area of some of the training, which is going on in the field, private universities, well as some of the State universities carry a portion of this cost. There are a number of treatment efforts which are being carried out by private parties and private organizations.

Mr. MICHEL. What would be the aggregate in dollars? Any idea at all?

Dr. YOLLES. It might run to about half of what we are spending federally on this problem. You must realize this is always considered a Federal problem, rightly or wrongly.

Mr. MICHEL. How about the States; is that including the States' activities?

Dr. YOLLES. No, sir; New York State and California put a large amount of money into this area. California has had a program going for the last 5 years. New York State modified its program and had an active program going for the last 2½ years. I do not have the figures with me on what they are putting in, but I could submit them.

Mr. MICHEL. Are those the two States where the problem is more critical?

Dr. YOLLES. The problem, Mr. Michel, is a problem mainly of four States in the United States: New York, California, Illinois, and New Jersey. I can list them for you in terms of amount. There are 13 States with the highest incidence. The 13 State total amounts to 93.5 percent of the national total. I can submit that for the record.

Mr. MICHEL. Fine.

(The information follows:)

INCIDENCE OF NARCOTIC ADDICTION, BY STATE[1]—13 STATES WITH HIGHEST INCIDENCE

	Number of addicts	Percent of total
New York	32,240	50.4
California	8,207	12.8
Illinois	6,027	9.4
New Jersey	3,392	5.3
Maryland	1,940	3.0
Michigan	1,876	2.9
Pennsylvania	1,754	2.8
Texas	1,281	2.0
District of Columbia	1,162	1.8
Louisiana	561	.9
Massachusetts	491	.8
New Mexico	460	.7
Connecticut	442	.7
Total	59,833	93.5
Total, all States	64,011	

[1] Recorded by the U.S. Bureau of Narcotics and Dangerous Drugs as of Dec. 31, 1968.

Mr. MICHEL. At the Federal level, to combat alocholism or deal with the problem of alcoholism, we have a total figure of what?

Dr. YOLLES. For 1970 it is $11,528,000.

Mr. MICHEL. Do you know or do we have a figure on what the States are doing in this area?

Dr. YOLLES. I am sure that we can get that.

Mr. MICHEL. Supply that.

Dr. YOLLES. Yes, sir.

(The information follows:)

State support for the treatment of alcoholism (fiscal year 1968)

	Millions
1. State alcoholism agencies	$35–$40
2. Psychiatric wards of tax-supported general hospitals	6–8
3. State mental hospitals	60–75
4. Community mental health centers, psychiatric clinics	3–5
5. Vocational rehabilitation agencies	3–5
Total expenditures for the treatment of alcoholism	107–133

The above figures refer only to actual medical, psychiatric, and rehabilitation services for alcoholics. The following are excluded:

(*a*) Public assistance payment for alcoholics or their families (not actual treatment).

(*b*) Costs of services—custodial and rehabilitative—in correctional agencies (impossible to determine what is treatment).

(*c*) Medical treatment of acutely ill alcoholics in the medical and surgical wards of general hospitals (no information available).

Mr. MICHEL. Thirdly, in the private sector, what is being done.

Dr. YOLLES. Yes, sir.

(The information follows:)

PRIVATE SUPPORT FOR ALCOHOLISM PROGRAMS

There are no published data on the amount of support by private organizations for support of alcoholism programs. However, the National Center for Prevention and Control of Alcoholism has obtained the following data on expenditures through direct inquiry. The level of expenditures shown for these organizations was primarily for educational and public information activities in 1968.

National Councilon Alcoholism and affiliates	$2,400,000
Smither's Foundation	600,000
Licensed Beverages Industries, Inc	150,000
Total	3,150,000

In addition to the above, it is estimated that the Volunteers of America, the Salvation Army, and other similar groups spend at least $12 million per year in providing services to alcoholics.

Mr. MICHEL. Don't most of the funds that go to combat this problem at the State level come by way of a tax on distilled spirits?

Dr. YOLLES. In some of the States, but not in all of the States. Some of the States have taxes, and that revenue goes to support research in the area of alcoholism and treatment services, but not all the States.

Mr. MICHEL. Do you think that is a proper way to go about raising the revenue?

Dr. YOLLES. It has worked very well in some of the States that do have it. Of course, the newer approach is to combine the alcoholism efforts with the community mental health centers and support those

centers through a Community Mental Health Service Act in the State. This is perhaps the newer approach to the problem, making it a part of the total mental health problem and having total support for it through the State.

METROPOLITAN PROBLEMS

Mr. MICHEL. What is involved in this metropolitan problem program?

Is that spelled out in the record?

Dr. YOLLES. No, I had not covered that. That is one of the points I had not covered. Let me just briefly indicate what this area covers. The problems of the delivery of mental health service in metropolitan areas varies greatly from the problems that one has in delivery of services in rural areas and, again, in suburban areas. There are special problems in the central core of large cities; there is the one of persons unable to pay, of not being able to get to the services and not having the services tailored to the needs of the community being served.

The Center for Metropolitan Problems was set up to do research and to come up with some answers of how you would most appropriately get mental health services to people in cities. For example, they addressed themselves to problems of those cities which sit on State lines; for example, the Philadelphia area or the New York City area or any of the others which sit on State lines.

They have addressed themselves to this problem and now we have, as an experimental approach, funded those which go across State lines. We are even working with one community mental health center up in the State of Maine which goes across the border, international border, so they occasionally see patients from Canada on an exchange basis.

These are the types of problems that the Center addresses itself to. It also addresses itself to the special problems in the field of mental health which have occurred in cities of late, the problems of aggression and violence which need to be studied in terms of large populations. The Center works conjointly with our Center for Crime and Delinquency, which is interested in this field.

SCHIZOPHRENIA

Mr. MICHEL. Have you reached a point in your study of schizophrenia whereby these people could be treated and discharged in any significant number?

Dr. YOLLES. Let me answer that last half of the question first.

Schizophrenics are being discharged in larger numbers back to the communities under their own supervision, or back to their families in larger numbers than ever before. This is part of the general overall phenomenon of increased discharge from State mental hospitals. The newer psychoactive drugs have done a great deal to allow us to bring schizophrenics back into the community and then to treat them effectively in the community. As far as getting close to the causes of schizophrenia, I am sorry to have to say that our progress is slow. We know a lot of things about it that we didn't know before and we have some clues, but a great deal more research needs to be done in this area before we come close.

Mr. MICHEL. How much is in this budget?

Dr. YOLLES. For schizophrenia?

Mr. MICHEL. Yes.

Dr. YOLLES. About $12,135,000 for that whole field.

Mr. MICHEL. Last year how much was it?

Dr. YOLLES. Approximately $11.5 million.

Mr. MICHEL. That adds up to about $23 million and I could go back and ask you for the figures for a few more years and we could have a higher figure. Then I have to ask myself, Are we getting our money's worth for what little we have found out about it?

Dr. YOLLES. It is a question we ask ourselves, too, very definitely. The process of research is a slow one and you never can tell what you have uncovered today is going to mean when another small piece is added to it. It may, perhaps, mean much more than the sum of the two pieces together. This is the course of research. In essence, an investment in research is an article of faith, because one cannot predict in supporting research what the outcome will be. For example, there are some areas where we know we need certain information, a type of directed research. We know that we have paid for a product and we have gotten that product. But in terms of investing money toward the final cure of a disease, it is very difficult to estimate how you are coming along. The answer may come tomorrow, based on findings that were made yesterday, or the year before, or 10 years ago, or it may not come for another 5 or 10 years.

In the case of schizophrenia, I suspect it may be 10 years. The one thing that is obvious is that we don't dare stop.

Mr. MICHEL. Why?

Dr. YOLLES. Unless we want the hospitals to fill up again with the most common and the most severe disorder, mental disorder, schizophrenia. Beyond that I cannot go in supporting research.

Mr. MICHEL. I think that you pretty well covered what you were doing to train more people to work in the mental health field.

Dr. YOLLES. Yes, sir.

EFFECT OF DRUGS ON MOOD AND BEHAVIOR

Mr. MICHEL. How much money is there budgeted for the mechanisms by which drugs are able to influence mood and behavior?

Dr. YOLLES. It is difficult for me to arrive at a figure on that simply because ——

Mr. MICHEL. We are doing something?

Dr. YOLLES. Very definitely, because this relates to depression and it relates to psychopharmacology.

Mr. MICHEL. I would like to know if it is a small amount or what?

Dr. YOLLES. A very large amount, because we are putting a great deal of effort in psychopharmacology and the study of depression. When you say mood, this also gets into the area of schizophrenia. There is a portion of the funds for schizophrenia involved.

Mr. MICHEL. Give me some round figure.

Dr. YOLLES. Somewhere in order of $9 million or so. Maybe eight, in that order.

Mr. MICHEL. How long is it going to be before we get results here?

Dr. YOLLES. Mood and behavior studies? These are all kinds of basic studies.

Mr. MICHEL. They continue and go on and on?

Dr. YOLLES. Let me give you an example of a research study which was supported and which will have, I predict, just from my knowledge of the field, the greatest influence. It is a study done at the Rockefeller Institute. It is a basic research study and would appear to be a sort of tangential from its subject area of learning techniques with rats. In the application of these learning techniques and his special techniques, the researcher came up with some startling results. He was able to train these animals to control visceral responses; in other words, responses in the body that are not under voluntary control, such as the level of the blood pressure, formation of urine in the kidney, size of the blood vessels, and a number of other phenomena. I would predict that this will have the greatest influence in studies of kidney diseases, heart diseases, et cetera, a whole variety of studies, because suddenly you have experimental animals that you can train to change a certain function which formerly was not subject to control, except chemically in some cases. No one could have predicted this finding before.

Mr. MICHEL. So rats can be useful?

Dr. YOLLES. Yes, sir.

PREVENTION OF ALCOHOLISM

Mr. MICHEL. Are we doing any educational work on alcoholism prevention?

Dr. YOLLES. Yes.

Mr. MICHEL. We all see so much about treatment, but what about prevention?

Dr. YOLLES. There is a good deal of money going into this area. A good deal of effort rather than a good deal of money, to try to train physicians, social workers, and others, about the field of alcoholism so that they will know how to intervene with kids at an early age. In addition to that, we have been working with the Children's Bureau in terms of publications for the kids. It is very difficult to try to tailor a publication specifically to this age group. We put out a publication jointly with the Children's Bureau called Thinking About Drinking which is widely available in schools and to children. Then in the area of research we have been looking at preventive aspects but that is a much longer range program.

CITIZEN VOLUNTEER PROBATION WORKERS

Mr. MICHEL. Didn't I read someplace of a study of volunteer probation services of nonprofessionals for juvenile delinquents? Is there some such study going on?

Dr. YOLLES. I am sure there is, because this is one of the areas where we do encourage programs to use volunteers. I don't know which specific one you are relating to.

Mr. MICHEL. My information is that this program is currently in about 58 cities. My next question would be: How many more cities would that program include?

Dr. MILLER. We have supported such a project in Michigan. The original project was in Royal Oak, Mich., which involved citizen volunteer probation workers. Indeed, you are quite right. Our records

show that 58 municipal courts across the country are now using this technique. It is shown to be effective. It has been shown that by using citizen volunteers—doctors, lawyers, as well as professionals—it has been possible to cut down recidivism among people who are on probation. We are supporting expansion of this kind of effort in other places through consultation as well as to continue the research to evaluate it over a longer period of time to see how well it works over time.

Mr. MICHEL. Would you be willing to wager a guess as to how many additional areas that might become a reality in the next year?

Dr. MILLER. In the next year it would be hard to say. It has grown rather rapidly in the last few years. This project was started in 1965. I think to have this kind of proliferation in just 3 years is evidence of something that is moving pretty rapidly.

Dr. YOLLES. Mr. Michel, I would like to make a point. Many of the replications of original studies we supported are not supported by the United States. These are picked up privately on local funds or State funds. For example, one of the projects that we supported in California in the area of juvenile delinquency was a treatment program for delinquent youth which demonstrated the effectiveness of community treatment over institutional treatment. It was so successful that it has saved $8 million in construction funds alone; 600 children who were undergoing their first commitments from juvenile court participated in the study. Within 15 months on parole, only 28 percent of those treated in the community had violated their parole, as compared to 52 percent of the control group treated in the institution.

The State of California has passed recent legislation which provides funds both to support the delinquents within the community who would otherwise be institutionalized, and to develop the community resource. This is a clear example of what I talked about, where it was picked up by the State or in other cases locally.

Mr. MICHEL. Is any of the hospital improvement program construction?

Dr. YOLLES. No, sir. None of it is construction. This is a program that was operating previously at a level of $10.5 million. These are the grants that we make to individual State hospitals for demonstration of improved methods of care and treatment.

WORKSHOP IN COMMUNITY SERVICE FOR ALCOHOLICS

Mr. MICHEL. Where is this workshop for community services for alcoholics to be held? How is it to be organized?

Dr. MILLER. We recently held a workshop in Williamsburg, Va., to which we invited—this was a pilot workshop in some ways—to which we invited a number of professionals and others involved in alcoholism rehabilitation programs for communities around the country, having them there for a week of intensive discussion, lectures, seminars, and to discuss some of the more recent techniques which have been evolved for community treatment of alcoholism. Our hope would be that this type of program will now be replicated, starting with each of the nine regional offices around the country, to gradually expand the knowledge and make available to those who are on the frontline information on the latest advances in the area of alcoholism treatment.

Along these lines, just yesterday another program of this type was held at Johns Hopkins University, which is one of our clinical research centers, where, because of their interest in that subject, they had the State hospital association personnel discussing with them some of the recent advances in research, and possibilities for better community programing for alcoholics.

Mr. MICHEL. How much money is involved in this workshop?

Dr. MILLER. I cannot answer that question.

Mr. MICHEL. Supply this for the record.

Dr. MILLER. Yes, sir.

(The information follows:)

WORKSHOP ON COMMUNITY SERVICES FOR PROBLEM DRINKERS AND THEIR FAMILIES

A workshop on community services for problem drinkers and their families was held in Williamsburg, Va., in February of 1969.

Forty persons, representing alcoholism treatment agencies, State alcoholism programs, community mental health centers, public welfare departments, the National Council on Alcoholism, public health departments, vocational rehabilitation agencies and State mental health departments, met to discuss issues in the development of comprehensive services. Participants included psychiatrists, internists, psychologists, social workers, sociologists, public health and psychiatric nurses, vocational rehabilitation counselors, and recovered alcoholics.

The papers presented at this conference will shortly be published. A subsequent publication will summarize the major issues discussed at the workshop. These two reports should be of major assistance to persons throughout the United States who have responsibility for the planning and organizing of community services for problem drinkers and their families.

The total cost of this workshop was $14,500.

REDUCTION IN LENGTH OF STAY OF PATIENTS IN MENTAL HOSPITALS

Mr. FLOOD. Mr. Smith?

Mr. SMITH. There has been a significant reduction in the stay of patiets in State institutions. Do you have figures showing exactly what that reduction is?

Dr. YOLLES. Yes. Generally speaking, it averages now somewhere slightly above 6 months stay in mental hospitals for first admission.

Mr. SMITH. What was it?

Dr. YOLLES. Years ago the fortunate ones got out within a year. One of our statistics used to be "release within 1 year from admission." It was far less than it is today. The stay for most patients averaged somewhere between 4 and 6 years. That is the average with a large number getting out in the second and third year, but an awfully large number remaining in the hospital almost permanently.

Mr. SMITH. The average was 4 to 6 years. What is the average now?

Dr. YOLLES. Six months.

Mr. SMITH. One big reason I understand is the use of tranquilizers?

Dr. YOLLES. Yes.

Mr. SMITH. Can NIMH claim a contribution to development of the tranquilizer treatment?

Dr. YOLLES. Yes, sir; we can. Only in part.

The psychopharmacology program in the National Institute of Mental Health has supported a great deal of efforts in this area and can rightfully claim a part of it. However, the discovery of the use of psychoactive drugs was not made in the National Institute of Mental Health, it was made outside; but the dissemination of information

about these drugs and support for new studies has been in large part a function of the support of the National Institute of Mental Health.

Mr. SMITH. Another reason is, as I understand, with the pressure on for money, many, if not most, of the States have just simply not had the money to keep these patients and they have turned them out whether they are ready to go or not, and let the county take them or whatever may happen to them.

Another thing is, we have much better nursing homes than we had had before. Other than these three things, what else has contributed to this?

Dr. YOLLES. You mention the psychoactive drug. One thing that has really been the major contribution has been a change in the attitude of professional staff of the hospital. This came about in part through the discovery of the effect of psychoactive drugs. It suddenly gave the staff in the hospital hope that they could get these patients back out again because suddenly the patients become amenable to treatment, they were reachable. Once this happened, there was more intensive effort on the part of the same staff. With the development of hope there is a development of energy and spirit and all of the rest of it, and this has contributed very much to the more acute and more intensive treatment of patients in hospitals.

Mr. SMITH. What else can you point to resulting from the appropriations that have been made over the years to your shop?

Dr. YOLLES. The development of the hospital improvement project program that we talked about a few minutes ago and the in-service staff development which has been supported by this committee over the years.

In addition to the hope which the drugs generated in the hospitals, these in recent years have been the most critical elements in changing the attitude within the hospital and demonstrating that patients can be gotten out quickly. The senile patient, the elderly patient who comes into the hospital, those who are considered by many in the mental health field to be almost untreatable, have been released from hospitals in a very short period of time.

Where a project like this has been supported, it has reduced the average stay from 4½ months in some cases to 1½ months.

RESULTS OF RESEARCH

Mr. SMITH. Understandably with the nature of research we would not expect a very high proportion of basic research projects to actually bear fruit you could point to, but can you point to some specific research projects and say they actually made contributions?

Dr. YOLLES. Yes, sir; we can. We can supply for the record a whole list of them.

For example, in the hospital improvement project program.

Mr. SMITH. Would this list also define the contribution that was made?

Dr. YOLLES. Yes, sir.

Mr. SMITH. I think it would be well to do that because there are a lot of people who are beginning to say, after seeing millions of dollars appropriated year after year for mental health, "What have they done?"

Dr. YOLLES. We have specific examples like the one in crime and delinquency I was talking about. I have some of them here. But in the interests of time, if it satisfies you, I would be happy to provide them for the record.

Mr. SMITH. I think that would be the thing to do.

In addition to that, we always find someone ridiculing some project because it involves rats or animals or insects. They do not seem to understand that may have something to do with people. This might help to clarify how some of those do affect people.

Dr. YOLLES. I would be delighted to do it.

(The information follows:)

Contributions of NIMH Research Programs, Including Examples of Significant Projects

Even a very cursory review of the NIMH research programs will reveal the diversity of effort, however, there is a very clear unity of purpose.

Investigators are working diligently to unravel the complex relationships among physical health, mental health, and socially adaptive behavior.

Subtle metabolic imbalances appear to occur during mental illness. They are usually revealed by unusual chemical products that have been discovered only recently in the urine or blood samples. Whether or not these chemical factors cause symptoms of mental disturbances is not yet certain. However, it has been shown that biochemical changes have an impact upon brain function, and thereby influence attitude and behavior.

Physiological balance, mental attitude, behavior, and social interaction are interlinked. On the one hand, a physical interference can change the entire chain as can be shown by the chemical that makes a depressed patient optimistic, thus changing his behavior with others, and causing a different response in social interactions. On the other hand, the social environment influences emotions, and these change the behavior and physiology of the individual.

In trying to remedy or eventually prevent a particular disorder, the first question is what link in the chain should be attacked, a question which is being answered by research, for it is not always obvious that drug help is appropriate in situations that appear to be purely social or that psychotherapy will prove effective in reducing physiological imbalance. An almost improbable merging of findings from different basic settings is beginning to outline how the results may intermesh, for example, how changes in the behavior and the adrenal gland of animals living under crowded conditions may point to a physiological aspect of neuroses found in urban populations.

NIMH is, accordingly, supporting a whole gamut of studies and applications, that may seem unrelated on the surface, but they are, in fact, only facets of the same whole.

The law establishing the Institute assigned it responsibility to provide support of research on the etiology, diagnosis, treatment, and prevention and control of mental illness, and the promotion of mental health. The NIMH is responsible, therefore, for support of both clinical and basic research aimed at the resolution of specific problems of mental and emotional illness and the enlargement of knowledge regarding the boundaries of human behavior both normal and abnormal.

Recent findings from this research effort have included the following:

...sixty percent of severely disturbed children are improved by presently available drugs.

...of former State mental hospital patients in New York City who were kept under continuous close supervision and given aftercare for five years, only 37 percent had to return to the hospital, and of the patients still in the community after five years, only 12 percent were unemployed.

While studies directly related to schizophrenia comprise a large portion of the NIMH research efforts, it must be emphasized that the eventual understanding of a complex disorder such as schizophrenia will depend not only on an exhaustive exploration of the schizophrenic process itself, but, more important, on an accumulation of knowledge regarding the fundamental mechanisms involved in the brain and in behavior. The causes of schizophrenia are still unknown, and the development of pathology in the disorder undoubtedly involves complex interrelationships within the nervous system, as well as interactions among the nervous

system, various other organ systems of the body, and the interpersonal relationships of individuals.

Basic information from a variety of sciences is, therefore, of prime importance. Basic research on normal thought processes, for example, is essential to an understanding of abnormal thinking; and fundamental knowledge of normal metabolism and of the biochemistry of the brain is essential to a comprehension of the ways in which these processes may be defective in a disorder like schizophrenia.

There are no assurances on the basis of current research that the schizophrenic illnesses which have challenged the best scientific minds for two thousand years will be solved within the next year or so. There are, however, a gratifying number of new observations of considerable potential significance which demand further exploration; fortunately, an increasing number of competent investigators are interested in exploring them.

In general, the results achieved to date in research programs and the progress of current work warrants optimism about the future. In basic research efforts, we are steadily accumulating knowledge on how the biological processes and psychological and social experiences determine the individual's level of adaptation. In clinical and field research efforts, much is being learned which can be applied in the Community Mental Health Centers of the future.

Specific examples of successful research follow:

Brain and Behavior, Psychopharmacology

Dr. Miller at Yale University has shown that the brain operates, in part, according to a chemical coding system. A certain chemical introduced into one small area of the brain causes changes in one type of behavior, while a different chemical introduced in the same area causes a change in another type of behavior. Knowledge of the brain's chemical code may lead to new chemical means of influencing behavior. Meanwhile, direct chemical stimulation seems to offer a valuable new technique for studying how the brain works.

Among the compounds used in Dr. Miller's studies were acetylcholine, a transmitting agent apparently involved in activating the parasympathetic nervous system, and noradrenaline, another transmitting agent which seems to work primarily on the sympathetic nervous system. The compounds were inserted by means of a hypodermic needle, painlessly implanted in a rat's brain so as to reach a particular spot in a hypothalamus. The first drug motivated thirst, the second hunger. The question is now whether or not chemicals can be used to motivate other types of behavior.

This kind of research extends our knowledge of how the brain reacts to various chemical substances, many of which the brain itself produces, and of the relation between brain reactions and significant aspects of behavior. The research will help us understand the action of existing drugs and provide a rational basis for developing more effective ones.

Population Density, Urbanization

NIMH supported research at the University of Chicago has demonstrated that an important factor in mental health is a man's living space. The need to maintain a sufficient distance from one's fellow man may prove to be just as basic as the need for food, sex, or approval. Dr. Hall's basic work with human populations ties in neatly with the already famous NIMH intramural studies (Calhoun) which show the negative effects of animals of a crowded environment. And, as part of the Institute's activities in the development of community mental health facilities, a number of studies dealing not only with the treatment program, but the architectural design of community health centers has been initiated. The aim

here is to develop new and creative approaches to mental health facilities planning that take account of the importance of man's immediate environment to his well being.

Dr. Hall cites as one example of the importance of space the findings made in one of the seldom visited wards of a large mental hospital. Here, dramatic improvements were noted in the behavior of patients moved to a more adequate setting within the hospital. Dr. Calhoun's now famous Institute studies of rat populations have shown that even well fed rats, exceeding a certain population size in an inescapable area, developed behavioral disorders such as cannibalism, homosexuality, and a range of disturbances among females rendering them unable to bear full term infants or rear those they did bear. Findings such as these carry great importance in community planning - including the planning and design of new mental health facilities.

Psychopharmacology

Results of a 30-month NIMH supported controlled study of the effectiveness of drug therapy in maintaining schizophrenic patients under nursing care at home indicate that hospitalization of more than 75 percent was prevented - in contrast to only 33 percent in a control group.

The major studies attesting to the efficacy of the phenothiazine derivatives in either enabling patients to be maintained in the community without hospitalization or in producing rapid improvement in patients who have been hospitalized for their schizophrenic illness have come from NIMH grant-supported studies. In this study, the importance of drug medication in preventing institutionalization became apparent when the drug and placebo home-care patients were compared. The support, advice and services of a public health nurse became increasingly less effective and soon proved insufficient to prevent hospitalization in placebo cases; the same help proved adequate in most drug-treated cases.

In quantitative terms: It was estimated that the placebo patients were saved 1,156 days of hospitalization and the drug patients 4,818 days during the 30 months of the study. After the drug patients had remained successfully at home for six months, their success rate did not greatly decline during a period ranging up to two years in some instances.

Intramural Research on Disturbed Adolescents

Adolescence is a period marked by rapid changes in behavior which are determined by psychological maturation and by new social expectations; adolescence is also a period of vulnerability to serious personality disorders. It is the general goal of NIMH studies of personality development in adolescence, therefore, to investigate the basis of psychiatric disorders during this period.

A group of adolescents was hospitalized who have had severe emotional breakdowns in the period of their first separation from their parents during the first year of college. Investigators are identifying the specific personality difficulties of each adolescent, and then relating these to the characteristics of the adolescent's family relationships.

Data regarding the parents of the patients reveal them to be uniformly disturbed individuals, whose marriages are fraught with difficulty and who frequently have difficulties at work. They are found to be highly anxious persons, deeply concerned about their own adequacy in coping with life's problems. Often they have had experiences of great difficulty in their own adolescence, and their anxious interference with the patients' adolescent adaptive efforts seems to reflect the parents' own areas of conflict.

Because the parents themselves are exceedingly insecure, they manifest an inability to tolerate independent thinking and action on the part of the developing adolescent - as if such behavior were a challenge to their precarious self-esteem. What emerges is behavior designed to control and mold the adolescent in ways which will not threaten the parents' authority and their preconceptions. The parents also exhibit a type of competive behavior toward the maturing adolescent. This competitive response on the part of the parent is often threatening to the adolescent and inhibits his attempts to achieve more mature satisfactions. Such parents often have extremely pessimistic expectations of what tasks the adolescent can master and accomplish with success. The pessimism seems in part to reflect competitive attitudes toward their children as emerging adults. The more complex dynamics of this pessimism seem to indicate an inability by the parents to psychologically distinguish their children from themselves, as they project their own anxiety and low self-esteem onto their image of what the children might be and do. The result is often that the adolescent "freezes" at a level of behavior dictated more by the parents' anxieties than the child's capacities.

In this research with the family groups the investigators are also interested in developing new techniques of family group therapy which will provide a more effective treatment of disorders of adolescence than presently exists.

Treatment of the Addict

Intensive study of the use of nalorphine as a narcotic antagonist has opened a new possibility for the ambulatory treatment of the narcotic addict.

During the past four years a great deal of effort has been spent in characterizing the development of the addict's tolerance to and physical dependence on the nalorphine type of drugs which are administered to counteract the effects of morphine and reduce drug-seeking behavior. It has been known for many years that the nalorphines are effective analgesics, but their side effects - unpleasant thoughts, delusions, and hallucinations - have precluded their use clinically. Findings now indicate that patients develop a high level of tolerance to these effects when the nalorphine is given over a period of time and in slowly increased doses. They also become physically dependent on the antagonist drug. When subjects are withdrawn from the nalorphine, an abstinence syndrome emerges that is quite different from the morphine abstinence syndrome. It does not produce compulsive drug-seeking behavior. While tolerance is developed to the subjective effects of the morphine antagonist, little or no tolerance hampers the ability of the nalorphine type of drug to antagonize the effects of morphine.

Further study showed that cyclazocine, one of the nalorphine-type drugs, and a potent narcotic antagonist, has a very long duration of action and is effective orally. By taking cyclazocine orally twice daily the addict can be protected through treatment at a clinic. Using slowly increased doses now clinically determined, he will experience no unpleasant side effects.

Although studies are still in progress, indications are that with steady treatment with one of the nalorphines, the physical dependency on them can be minimized or prevented.

Detection of Drug Use

It is of great importance medically and legally to be able to determine clearly and rapidly whether patients are using or have used addicting drugs. Recently a very efficient procedure for extracting a wide variety of narcotics (more than 30) from urine, blood, and other body tissues, has been devised. In addition, procedures have been developed for identifying these extracted narcotics, using gas chromatography, thin-layer chromatography, and spectrophotometry.

The Prediction of Characteristics of Schizophrenic Children from Family Interaction Patterns

Family Studies research has demonstrated that the presence and type of schizophrenic disorder in a considerable variety of patients, both adults and children, can be deduced from the forms of thinking and patterns of communication found in the rest of the family in which the individual patient has developed.

Diagnosis and form of thinking in patients has been predicted successfully using a transactional, psychodynamic interpretation of both projective test data obtained from the other family members and excerpts of interaction of the parents with a psychiatrist, all of these without the scientist knowing who the patients were or from which families they came. We have also been able to match the patients with the families to which they belong.

The Family Rorschacht Test

As a type of corraboration, an NIMH scientist has developed a family Rorschach test which reveals whether the family is most likely to produce neurotic, or schizophrenic children. Family members are all shown the same psychological test card and asked to come to a consensus on what the figures resemble. With normal, and neurotic families, the members are able to agree on the resemblance and such resemblance is validated by each member separately.

The families producing schizophrenics agree superficially on the resemblance. When the family members are questioned individually, it is apparent their agreement was quite superficial. As a family, they see things less realistically than as individuals. On the other hand, neurotic and normal families see things more realistically as families.

The scientist feels the test, which takes only 30 to 60 minutes, is highly reliable. She reports that the schizophrenic-producing families can be identified in 80 percent of the cases.

Studies of Pituitary-Adrenal Gland and Brain Function in Depressive States

Intensive studies during the clinical course of over 40 patients with severe depressive states, employing continuous behavioral observations and independently recorded estimations of pituitary-adrenal glandular function by means of determinations of exretion of urinary metabolites of cortisol (17-OHCS), have yielded the following well substantiated findings. One subgroup of depressed patients showed continually elevated 17-OHCS levels. Another subgroup showed normal levels despite clinical evidence of depression, while a third group manifested elevated 17-OHCS levels only during periods of crisis during the course of the illness.

The possible etiological significance of aberrant pituitary-adrenal function is being studied by employing drugs which block this system at certain points, while observing various behavioral elements of depression. Our efforts to classify depressive states on a biochemical basis might provide a more rational basis for therapy.

Our preliminary findings based on data from three patients who committed suicide subsequent to study on this project, suggest the possibility that 17-OHCS levels and perhaps other biochemical measures, may be useful in predicting suicidal potential. This is an early finding based on a few cases, and conclusions must remain tentative at this time. Further studies of high risk populations such as patients contacting suicide prevention centers, are in the planning stage in order to further test this hypothesis.

Self-Instruction for Offenders

A research project in Alabama has been able to motivate hardened offenders to help themselves, and has enabled 12 men with only an 8th grade education to complete high school and be accepted into college. 610 young inmates have received prevocational training, and 163 employers have employed trainees. 382 men have been released with only 6% recidivism. 49 illiterates were taught to read. Over 90% of the inmate population are now engaged in some form of educational activities. The project could well become a model for application in other correctional settings. The Department of Labor and the VRA now support major projects in this setting based on the initial work of NIMH.

Community Treatment for Delinquents

A research program carried out in California under NIMH support has demonstrated the effectiveness of intensive community treatment and has developed and demonstrated the efficacy of a new treatment approach called the Differential Treatment Model. Community treatment proved more effective in terms of both parole success and psychological test results while saving 8 million dollars in construction funds alone. 600 youths undergoing first commitments from juvenile Court participated in the study. Within 15 months on parole only 28% of those treated in the community had violated parole, compared to 52% of the control group. Deriving in part from the implications of this study, the State of California has passed recent legislation which provides funds both to support delinquents within the community who would otherwise be institutionalized and to develop community resources.

Early Child Stimulation

The importance of verbal and visual stimulation in the intellectual development of infants and very young children has been established by a scientist in NIMH laboratories. Research on intellectual development has demonstrated that as a group, infants of the lower socioeconomic levels develop a below-average level of intellectual functioning during the second year of life. Evidence suggests that this deficit in intellectual functioning emerges during the period of early verbal development because of a deficiency in verbal stimulation. In a related study, it was found that both supplementary tutoring and the quality of maternal care are related to adjustment and cognitive development; this supports the need for programs to improve child care during infancy. In addition, somewhat older children from deprived backgrounds gained in I.Q. after taking special, stimulating pre-school classes, while a control group lost. These studies of Dr. Earl Schaefer demonstrate the validity of and the need for early child care and intellectual stimulation, particularly for children from disadvantaged homes.

Hospital Improvement Program and Reduction in Length of Hospitalization in State Mental Hospitals

National data on the number of resident patients and the rates of admissions and releases clearly indicate that significant reductions in length of hospitalization are occurring. At the close of 1958 there were 545,182 resident patients in State and county hospitals, compared to 504,604 at the close of 1963 and 401,000 at the close of 1968. Thus, the overall decrease in resident patients over this ten-year period was 145,000. In 1963 there were 283,591 admissions and 294,797 releases (a difference of over 11,000) contrasted with 365,455 admissions and 391,138 releases in 1968 (a difference of over 25,000).

Data from individual States indicate the extent of the reduction in length of stay: For example, in Maryland in 1958 there were 4,145 admissions to State hospitals, and only 36 percent were released within the first six months. In 1963, there were 7,257 admissions, and 55 percent were released within a comparable period. Finally, in 1966, Maryland State hospitals had 9,675 admissions, with a 62 percent release rate within a six-month period. The average length of stay for all patients discharged dropped from 12 months in 1960 to 3 months in 1967. In the State of New York the median length of stay for new admissions in 1967 was only 67 days, as contrasted with 210 days in 1954.

The National Institute of Mental Health has contributed to the reduction in length of stay in State mental hospitals in several major ways, including supporting advances in psychopharmacology, the development and implementation of new methods of organizing and delivering mental health services in the community, and the improvement of existing State hospital facilities.

The Hospital Improvement Program is focused on the introduction of new knowledge and techniques to improve the quality of patient care. A total of 121,411 patients have been admitted to these HIP programs to date. They have ranged from under 10 to over 90 years of age, with the majority falling between the ages of 25 and 55 years. These patients had been hospitalized for an average of almost five years prior to entering the HIP project. After an average stay in a HIP project of 11.5 months, over 60,000 were sufficiently improved to be returned to their own homes, to nursing homes, boarding homes, or some other mode of semi-independent living within the community. Others were placed in more appropriate treatment situations within the hospital.

The average cost per patient of the HIP programs to date has been only $621. The average patient reached by the projects had been hospitalized for five years at a cost of nearly $3,000 per year per patient.

The most cogent illustrations of the impact of the Hospital Improvement Program on the reduction of length of hospitalization is provided by projects which have concerned themselves with chronically ill patients. The average HIP project in this category has been operational for just under four years, and serves patients who had been in the hospital for an average of almost 12 years prior to their admission to the program. The average stay in the project has been only a little more than ten months. While it is true that all chronic patients discharged from a HIP project are not discharged from the hospital, experience to date indicates that over 70 percent of them are returned either to their own homes, to nursing homes, boarding homes, or some other mode of independent living within the community.

As a result of HIP projects, more than 5,000 chronic patients have been returned to the communities. Without the intensive therapy or placement services made possible in these programs, most of these patients would have remained largely forgotten in the back wards of State hospitals.

At Boston State Hospital a vocational rehabilitation program begins by moving chronic schizophrenic patients to a ward offering opportunities for

stimulating activities and socialization. They are then given increasingly difficult tasks - and commensurate pay - in a sheltered workshop program, and later, the patient may draw and spend his own income, and come and go at will; he is expected to assume responsibility for his own actions and those of others in the group. Still later, patients move in groups from the hospital into rented furnished homes, living under the supervision of a psychiatric aide. Vocational rehabilitation services are designed to place each patient in an appropriate job situation, and the patient helps cover the cost of housing and services. About 165 patients have been discharged through this program, with a recidivism rate of about 10%, as compared to 30% in most hospitals.

As a result of intense social therapy, 79 chronic patients in Central State Griffin Memorial Hospital in Oklahoma have been returned to their homes and jobs; 9 have been placed in the more appropriate environment of a nursing home; and 95 have been sufficiently improved to be moved to open wards of the hospital. Small groups of patients are assigned to aides who supervise medication, encourage participation in ward activities and help with such tasks as letter writing. As a patient improves, he is promoted to a group with a higher level of socialization until he is ready to leave the hospital. Patients typically were hospitalized from 4 to 10 years; average time for those in the HIP project has been reduced to 7.4 months.

At Patton State Hospital in California, family members have been trained by a team of mental health professionals to deal therapeutically with their mentally ill relatives, and the method has proved effective in speeding the return of chronic schizophrenic patients to their homes in the community. Patient's average stay in hospital decreased from 6 months to less than 1 month, and 265 patients have been returned to the community. It appears the treatment method may reverse the regressive trends seen among chronic patients by bridging the gap between the patient and his family. Relatives have been willing to travel long distances and have expressed appreciation for being able to participate in speeding the recovery of the sick member of their family.

A group of HIP projects designed specifically to meet the needs of geriatric patients have served patients who had spent an average of nearly 9 years in mental hospitals before admission to the project. In contrast, after an average of only 6.5 months in HIP programs, 85 to 90 percent were considered sufficiently improved either to leave the hospital or to move to open ward settings.

One program, offering day-care services, family counseling, therapeutic recreation, rehabilitation and outpatient services at Mendota State Hospital in Wisconsin, continues to return two thirds of the geriatric patients to the community within 3 months. Another project, designed to return chronic geriatric patients to the community, succeeded in returning one fourth of the geriatric population of Manteno State Hospital in Illinois to retirement hotels, nursing homes, sheltered care facilities, and private homes, within its first year of operation. Similarly, Kentucky State Hospital staff found that only about half its geriatric population was actually so physically or mentally impaired that they could not be rehabilitated and released from the hospital. While still in its early stages, the project was found to have resulted in a 29% increase in discharges, a 40% increase in convalescent leaves, and a 44% increase in boarding home or family care placement.

A HIP project for patients committed to maximum security units of Clifton T. Perkins State Hospital in Maryland has reduced the recidivism rate among participants by 25%, and periods of remission for those who do return are longer. Therapy has centered on a specially created industrial workshop where patients who were previously not even allowed to shave without supervision, now work daily with lathes, saws and other cutting tools. Proceeds from the sale of manufactured items pay the patients' salaries - an aspect of therapy designed to restore their self-images as providers for their families.

Recreational therapy has been successful in rehabilitating patients committed to maximum security units in the Illinois Security Hospital. Of the 415 patients involved, 58 have been discharged directly to the community, 63 have been discharged back to the courts, and 197 have been released from maximum security care and transfered to other State hospitals. As a facet of therapy, patients' families are encouraged to visit and participate in the patients' activities. The program has helped patients to develop positive attitudes and aptitudes to prepare them for job training.

Family therapy is featured in several HIP programs for children and adolescents. At Colorado State Hospital families are encouraged to participate in every way possible in the child's treatment - including taking part in recreational and other activities that help comprise the overall treatment program. The hospital is open to parents, and staff are available for consultation at any time of the day or night. A group therapy program is provided for parents. Twenty-four children have been admitted to this program, with 16 discharged and returned to their homes.

Continuous psychiatric social work and nursing service in a remote, destitute, mountainous area has drastically reduced both first admission and readmission rates to Eastern State Hospital in Kentucky. A clinic was established in Pike County, where teams go out to visit those who, because of distance and poverty, are unable to come to the clinic for help. This program reduced the rate of return to the hospital by 67 percent during the first year, and in the second year the rate of return was further reduced by over one-half.

The foregoing examples illustrate the impact on hospitalization patterns as a result of improvements in State hospital programs.

Animal Research in Mental Health

The National Institute of Mental Health supports a broad range of behavioral research involving both human and animal subjects in an effort to increase our understanding of human behavior, both normal and abnormal. Research with animals - from primates through lower species - is pursued for several reasons. Many investigations require extensive physiological, anatomical, or biochemical manipulations of the subjects under study, and they cannot be carried out safely with humans. Because various animal species are similar to man in specific biological characteristics, ideas about behavioral processes can first be tested in animals; if the ideas work out, then careful research with human subjects may be undertaken. In addition, it is important to undertake comparative studies of the behavior of subhuman species in order to establish what aspects of man's behavior are unique, and what aspects are shared in common with primates, mammals, and animals in general. Such knowledge is needed in order to understand the basic origins of man's behavior and, hence, what facets of his behavior are more readily subject to change under varying environmental influences.

Productive animal research has been accomplished in a number of areas of great relevance to mental health. For example: Studies of the mechanisms of action of various biochemicals in the animal brain, and of their impact on behavior, have led to the refinement of drugs useful in the treatment of the mentally ill. Systematic analyses of the impact of severe early deprivation, trauma and social isolation in animals have advanced our knowledge of the importance of early environment in later behavior. The severe physical and psychological effects of overcrowding have been revealed in animal studies - research that now has counterparts in sociological surveys, and strong implications for today's city planning and for the prevention of mental illness. Recent studies have demonstrated that it is possible to condition animals to control such physiological responses as heart rate and blood pressure, offering the possibility that specialized training procedures may be effective in helping patients suffering from psychosomatic diseases to overcome their symptoms. Studies of operant conditioning of animals in the laboratory have provided the data about the learning process necessary for the development of teaching machines and programmed learning techniques used with the mentally ill and retarded. Finally, animal studies have demonstrated that lack of sleep, or even of certain phases of sleep, produce predictable deteriorations in behavior and biochemical changes in the body, and these data are being used in developing improved methods for diagnosing and treating sleep disorders.

Dr. ENGLISH. I would like to interrupt if I might at this point because I think the question you are raising indicates the general lack of knowledge of some of the most significant things that have come out of the Institute of Mental Health.

To give a personal example, having worked in the Clinical Center in Intramural Training, some of the research going on there was a great help in developing the mental health program for the Peace Corps. This research resulted in a rate of premature return for psychiatric reasons for Peace Corps volunteers that went abroad of less than seven-tenths of 1 percent. If you compare that rate with other groups, industry, missionary groups, other kinds of population not really comparable to Peace Corps volunteers but at least working in some of the same settings that they did, that is a pretty remarkable record.

Mr. SMITH. They were not comparable groups to the groups you are comparing with.

Dr. ENGLISH. They are not really comparable populations.

On the other hand, if you compare the record of Peace Corps volunteers to other groups of college students who have gone abroad without a comparable mental health program, I think you can see that some of this research can have a real payoff.

Dr. Yolles referred to the importance of hope in the whole mental health movement; I think that is one critical role of psychiatry.

Moving around the country in many other settings like the Peace Corps and poverty program, one thing I noticed as a product of the National Institute of Mental Health work was a tremendous reduction in the stigma attached to mental illness. This has been a product of the National Institute of Mental Health efforts.

For example, the acceptability of mental health efforts in an outfit like the Peace Corps or in the poverty program, and in relationship to what Dr. Yolles was saying about hope, one of the finest papers of psychiatric literature on the subject of hope, the role of hope in mental illness, by Karl Menninger, one of the most interesting pieces of evidence he cites, has to do with rats. So I think some of these things come together in some interesting ways.

RESEARCH ON SEX OFFENDERS

Mr. SMITH. One of the several social problems we have that involves in some way your research or what you could be researching involves the failure of or the inability of some individuals to control their sexual activity in such a way that it results in violating our criminal laws; and in addition to that, not only their mental condition but also the condition of or impact upon the assaulted person is important.

Now what have you done to research this and try to come up with some better answers?

Dr. YOLLES. In the area of human sexuality taken collectively, we are supporting grants at a total of a million and a half at the present time, and we are planning an increase of about $200,000 in this area. We are supporting studies in the area of homosexuality, the general area of sexuality, but most importantly in this area is the recommendation, which will be out later this month, of the ad hoc task

force I appointed last year to make recommendations to the National Institute of Mental Health on a program in the area of human sexuality.

The committee has submitted its report. While they address themselves very largely to the area of male and female homosexuality, they also address themselves to the question of deviant sexuality generally, and recommend the establishment of a center in the Institute, such as those for drug addiction, and for child care, for the study of human sexuality, to focus the efforts and to stimulate others to do research in this area.

Mr. SMITH. Homosexuality of course is an important subject and should be researched, but that is usually by mutual consent, but rape and some sexually based activity is without consent and involves violence and an adverse effect upon other people that do not want to be involved. It seems to me you ought to be stressing that kind of research.

Dr. YOLLES. Let me put it in this context: Much as our ultimate purpose really, in spite of our charge to improve the mental health of people in the United States in a positive sort of way, we do study those with mental illness, but we also study the healthy to be able to understand the mentally ill. It is true in this area as well.

We must study normal human sexuality to be able to understand deviant sexuality. The problem of sex crime is one we are very much interested in, but the area of human sexuality has not been explored to any depth whatsoever. We are really very ignorant.

For example, this does not relate to research so much, but in the area of training it is really astounding, when one looks at the field, the lack of training of the physicians and other specialists in the area related to human services get in the area of sexuality. Even a psychiatrist with the specialized type of training receives very little. What they know and what they give their patient, very frankly, is what they learned in growing up in the streets and from either their mother or father.

One of the purposes of this center would be to support training in this area for physicians and for mental health specialists, so that we can disseminate information we already have as well as new information.

Mr. SMITH. Would it also include—I asked you questions about this a year ago—what effect it might have or what might be done physically to the individuals unable to control themselves?

Dr. YOLLES. Most certainly. It would involve both psychological methods, physical methods of treatment, and it would cover the entire area. NIMH, in approaching a problem, never restricts itself to one approach; as a principal supporter of research in mental health in the United States, we cannot afford to take any one point of view, so we support all of them.

Mr. SMITH. When I asked you about this a year ago, as I recall, you indicated there has been a research program of some kind in Sweden.

Dr. YOLLES. Scandinavia.

Mr. SMITH. Yes; that did not indicate that physical alteration had any effect mentally.

Dr. YOLLES. It has had some effect, yes; but not the results that were expected of the program. It has not solved the problem, so to speak.

Mr. SMITH. I talked to some doctors about that and they were astounded that it would not show results. They said they thought that your conclusion could not possibly be right.

They also pointed to the fact that on every animal it does have an effect, so why would it not with human beings?

Dr. ENGLISH. In those studies, I might mention there has been a review of the literature by the staff of the National Institute of Mental Health which showed that the effect you anticipated is evident with certain groups of patients. For psychopaths, severe sexual offenders, and psychotic patients, alterations, particularly if done against their will, produce long-lasting hostility on the part of the patient, and increase in aggressiveness in other areas. This has no positive effect on the underlying psychiatric disorder, particularly if it is involuntary and done with most severe sexual offenders.

Mr. SMITH. Apparently this is one area where you cannot transfer knowledge gained about animals to humans then, because with stallions it is never done with their consent and it certainly stops their meanness.

Dr. YOLLES. Again we are never sure of the psychological effect on stallions.

Mr. SMITH. But this also involves, I think, a real serious problem and I think it ought to be a crash program really, because judges are just at their wits' end. What do they do? They sentence a man to the penitentiary and when he is incarcerated there is no program to cure him and when he gets out 20 years later probably he will be worse instead of better and, in addition to that, the other prisoners are exposed to problems making them worse than if he had not been there.

It seems to me there ought to be some major attention directed to that.

Dr. YOLLES. I agree with you.

Mr. SMITH. What do you anticipate as your timetable as you see it?

Dr. YOLLES. We will start our activity in this area during this coming year, I hope.

Mr. SMITH. I think all the judges need is some advise from someone or group that seems to be authentic as to what they should consider when they are considering paroles and so forth.

Dr. YOLLES. Mr. Smith, as you well realize, there are a number of areas that we really should be involved with and we are not, and in order to expand these areas it involves more people and more dollars.

Mr. SMITH. I do not know of any area that affects other people as much as this. They all affect the person that is mentally ill, but this area affects not only them but other people too.

Dr. YOLLES. I agree with you, it has a high priority, yes, but we have to find the people and we have to have the authority to hire the people and have the money to do the necessary studies.

Mr. SMITH. Also whether or not you give it priority over some other research project which you could have done.

Dr. YOLLES. We are supporting some now. It is a question, of course, of where you place your priorities, and how many people are involved. Everything has high priority in terms of mental illness. All of these things are pressing problems at the present time.

Mr. SMITH. That is all I have.

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. In looking at the language in the proposed bill for this committee's consideration, I notice that the language includes "purchase and exchange of farm products and livestock and purchase of firearms and ammunition."

Do you have some institution where you have the need for firearms?

Dr. YOLLES. I prefer not to think about the area, but our hospitals at Lexington and Fort Worth have been at one time security institutions. We have only recently, by welding torch, et cetera, removed the maximum security block on the Lexington Hospital. In effect, it was more of a jail for many years. And the guards did need—I use the term "guards" advisedly—the appurtenances of the police.

Mr. SHRIVER. Do you still need that language?

Dr. YOLLES. No, sir; I do not think so.

Mr. ISBISTER. As far as we are concerned it can be deleted.

CAUSES OF STUDENT RIOTS

Mr. SHRIVER. The Institute recently granted $114,400 to the American Counsel of Education for a 3-year study of the cause of riots. Among the questions the study will seek to answer is what accounts for individual differences in the protest behavior of students. What are the current trends and what do they suggest for the immediate future?

Dr. YOLLES. May I ask Dr. Rubenstein to answer that question since he is handling that area.

Dr. RUBENSTEIN. I think it is a very serious problem at the present time because it seems not only to be escalating within the colleges, but frankly, the whole process of confrontation, which is one of the things the study hopes to look at, is now moving down to the high school levels.

The problem really relates to a whole host of variables, not just what is happening on the college campus, but what is now moving down to the high school level. The influence of mass media make many of the students feel this is an important thing to engage in and a very small proportion of students on some of the college campuses are able to get a larger number of students involved in this.

I think we can see at this time with some of the most recent occurrences an increased polarization where there seems to be a real need to provide some kind of control and yet that often incites the students to even more rebellion and reaction to it.

This study which we have initiated just 2 months ago hopes to be able to take a look at the attitudes of students, the attitudes of the faculty, and the attitudes of the administration. It hopes to be able to do some intensive case studies on 20 or 30 college campuses.

Mr. FLOOD. We have a few thousand in the country, do we not?

Dr. RUBENSTEIN. That is true, but it would be very difficult to do an intensive case study on a larger number of campuses and get some really good information depth. We hope thereby to be able to get a picture of what happens in the whole sequence of events, what really precipitates this kind of confrontation.

Mr. FLOOD. How many of these campuses are actually involved in this problem? We only hear of a handful. Is this an epidemic, are they all infected?

Dr. RUBENSTEIN. It is a problem that has been increasing.

Mr. FLOOD. What do you think?

Dr. RUBENSTEIN. I really would hesitate to give a prediction right now. I think it depends a great deal on what happens either in terms of some of the legislation which now seems imminent, or the manner in which the administration has responded.

Mr. FLOOD. How many are infected now?

Dr. RUBENSTEIN. A couple hundred, I would say.

Mr. FLOOD. Out of a few thousand?

Dr. RUBENSTEIN. Yes, and actually a relatively small proportion of students.

Mr. FLOOD. And even those in varying degrees?

Dr. RUBENSTEIN. In varying degrees, and often with a much smaller proportion of students than I think seems to be the case from the newspaper accounts. I think we should be——

Mr. FLOOD. We are not making a mountain out of a molehill?

Dr. RUBENSTEIN. No, we are not making a mountain out of a molehill.

I think it is also true that there are a large proportion of college students who are among the best students we have ever had at the college level who are trying very hard to get the kind of education they should be getting, and I think we should not indict all the college students because of the problems we see with the newspapers.

Mr. FLOOD. Or indict all of the colleges?

Dr. RUBENSTEIN. Or indict all of the colleges.

Mr. SHRIVER. In fact the vast majority of students and colleges are just as they were back when some of us attended college.

Dr. RUBENSTEIN. I think you are seeing a reaction now in the sense that many of the students are now viewing this as something they should be alarmed about, and there is within the campus itself a reaction of some of the students against the very violent and highly demonstrable kinds of activity going on.

Mr. SHRIVER. The amount you have in mind is for just 1 year?

Dr. RUBENSTEIN. That is true, $114,000 the first year and slightly less than that for the next few years. It is approximately $300,000 for 3 years.

Mr. SHRIVER. Do you think we can wait that long, 3 years?

Dr. RUBENSTEIN. No. And this study does not hope to provide frankly those kinds of answers. I think it is moving too fast. But I think what is important here and in response to the point made a moment ago, those of us who went through schooling in the 1930's and 1940's remember that college students at that time had some serious objections to things that were going on. We do not now know in a truly good sociological way the sequence of events that happened then. I would hope some of the data we get now would not only be useful now, in meeting an emergency but useful now in terms of understanding better a very important social phenomenon.

Mr. FLOOD. At the end of World War I, when the students came out of the service, they call themselves the Soldats and the Gobs and they were older than the average student of today coming in. There was quite a good deal of rumbling around the campus in those days. They never approximated this sort of thing, but there was a manifestation.

Dr. RUBENSTEIN. Student unrest is not a new phenomenon.

Mr. SHRIVER. You are requesting a million dollars in grant funds and 10 positions and $102,000 for the new early child care demonstration and evaluation program.

Do you expect the cost and scope of this program to expand in the coming year?

Dr. YOLLES. As I mentioned before in discussing this program we feel this is a beginning and, depending on how the evaluation of some of these new methods of child care proceeds, we will be coming back for either that or more, depending on what the need for research in this area will be. We cannot predict at this point.

VOCATIONAL TRAINING FOR PUBLIC OFFENDERS

Mr. SHRIVER. On page 30 you mentioned the low-cost self-instructional program of education and vocational training for youthful offenders in institutions which has been operating since 1962, and you note some promising results of the program, but only a thousand inmates have been affected.

Should that be expanded, perhaps by some other Federal agency?

Dr. YOLLES. I would hope that this type of program would be expanded. It is again one of the things that Mr. Smith was talking about. An outstanding finding that was supported by the National Institute of Mental Health that really needs to be replicated very widely. We would hope local programs, States, would pick this up to see it is replicated.

Mr. SHRIVER. Are any of the States picking it up?

Dr. YOLLES. Some of them are, yes. And again, this relates to another one of our activities, the dissemination of scientific information which we talked about before. We have a certain responsibility in this area to be sure that these results are made known to all of the people who need to know about them in order to establish programs. That is why we get these people together for workshops and for conferences and disseminate information through the National Clearinghouse for Mental Health Information.

HOSPITAL IMPROVEMENT GRANT PROGRAM

Mr. SHRIVER. On pages 34 and 35, you justify the hospital improvement grant program. I note it has been cut by $2,610,000.

Dr. YOLLES. Yes, sir.

Mr. SHRIVER. Why the cut?

Dr. YOLLES. I suppose the cut reflects the stringencies of the funding situation, in terms of allocating the overall budget of the Federal Government, in terms of allocating funds within the overall ceilings.

Mr. SHRIVER. Who made the cut?

Dr. YOLLES. The Bureau of the Budget.

Mr. SHRIVER. What did you request?

Dr. YOLLES. We had originally requested an increase of $2.5 million in this program because of the successful demonstrations it has had in all of the hospitals which have received awards and its relationship to reducing hospital population. The request that went to the Budget Bureau requested a million and a half increase in this program, which was not only deleted by the Budget Bureau but another $2,610,000 was taken out.

STUDY OF KANSAS CITY RIOT

Mr. SHRIVER. One of the research programs listed on page 39 is a sociological study of the Kansas City riot of April of 1968.

Dr. YOLLES. Yes, sir.

Mr. SHRIVER. When is that to be completed? Do you have any idea?

Dr. YOLLES. I understand that it is a 1-year study and we should be getting the final results fairly soon.

Mr. SHRIVER. What has been done on it now?

Dr. YOLLES They are analyzing the results. I have not seen an interim report as yet. If you would like one, we can submit it.

TRAINING AND MANPOWER PROGRAMS

Mr. SHRIVER. Yes. You are requesting nearly $128 million for mental health manpower programs. Could you summarize the manpower picture, the needs, the resources for the fulfillment of what is needed? You can do that for the record.

Dr. YOLLES. Yes.

(The information follows:)

TRAINING AND MANPOWER PROGRAMS

Progress in the delivery of mental health care depends upon the availability of adequately trained manpower who can translate mental health knowledge into tangible improvements in the treatment of mental illness. A major segment of the Institute's program is, therefore, channeled toward improving the quality of training in the mental health disciplines, while increasing as rapidly as possible the number of specialists—among them many in new professional and subprofessional areas.

The NIMH provides nationwide programs of support for training of mental health personnel for research and service, including training in the mental health core disciplines of psychiatry, psychology, psychiatric nursing, and social work; specialized training for professionals and subprofessionals in allied fields; and training devised to provide manpower to deal specifically with such major problem areas as alcoholism, suicide, and drug abuse.

The Institute is responsible for administration of training support and analysis of the Nation's mental health manpower needs. Since today's needs for mental health skills in research and services are far greater than the national training capacity, the NIMH training program is designed to stimulate the quality and diversity of training opportunities not only in the key mental health disciplines, but in auxiliary and related professions as well. Therefore, experimental and special training projects are supported to explore new avenues of training, ways to improve the quality of training and the training of new types of mental health personnel. In addition, programs of continuing education are designed to increase the effectiveness of mental health personnel wherever they may work, and to update basic professional training through postgraduate courses for the mental health and allied professions.

The NIMH manpower efforts are directed not only toward developing clinical skills, but also toward preparing the mental health research personnel our country needs in the medical, biological, and social sciences. A segment of the training program is devoted, therefore, to training for research.

As a result of the Institute's comprehensive efforts, participating in the NIMH training program today are virtually all departments of psychiatry in schools of medicine and osteopathy in the United States, as well as most of the major graduate schools of social work, public health, nursing, and graduate departments of psychology. Other training centers supported include many of the Nation's mental hospitals, collegiate schools of nursing, child guidance clinics, research centers, private nonprofit psychiatric treatment centers, and institutions for the mentally ill.

Between 1948 and the end of fiscal year 1969, NIMH has supported the training of over 37,000 professionals in psychiatry, psychology, psychiatric social work,

and nursing, and more than 5,000 others in the social and biological sciences, public health, and interdisciplinary programs. Between 1960 and 1966, the number of psychiatrists has increased by 45 percent, psychologists by 27 percent, social workers by 73 percent, and psychiatric nurses by 79 percent. Trainee stipends awarded from Federal funds have grown from over 200 in 1948 to over 11,000 in 1968, and in addition, 12,000 nonpsychiatric physicians have received training courses in psychiatry.

The scope of the Institute's training program extends, as intended, beyond those traditionally recognized core disciplines; through pilot, experimental and inservice projects, innovative training programs have been created, many emphasizing new concepts of community-based mental health services.

As a result, mental health knowledge and methods have been provided to those who deal with troubled and disturbed people at the earliest stages of their difficulties—for example, to the clergy, medical practitioners, judges, or school personnel. High priority has also been given to new approaches that incorporate the training and employment of the indigenous mental health worker. Such a person knows more intimately how his neighbors think and feel and what their problems are; specially trained, he has extended significantly the reach of the traditional professional mental health workers.

The hospital staff development program, designed to increase the effectiveness of mental health personnel and to improve the quality of care of patients in mental hospitals, has yielded significant results. Priority has been given to on-the-job training of such personnel as psychiatric aides, and attendants, to help them gain a better understanding of the mentally ill, to acquire more positive attitudes toward patients and their potential for recovery, and to enhance therapeutic skills. By the end of fiscal year 1968, 200 of the 302 eligible mental hospitals had been awarded HSD grants, and an estimated 40,000 persons had received training.

Mr. SHRIVER. That is all.

COMMUNITY MENTAL HEALTH CENTERS

Mr. FLOOD. Mr. Casey?

Mr. CASEY. Thank you, Mr. Chairman.

I notice in your Community Mental Health Centers, 351, you do not anticipate an increase in those that are actually funded in fiscal year 1970.

Dr. YOLLES. The dark areas in the chart are the actual ones funded and the lighter gray portion above represents the projected ones that will be funded using those funds.

Actually, we are projecting 443 centers in 1969 and 526 in fiscal 1970.

Mr. CASEY. What is the dark gray?

Dr. YOLLES. The Institute has funded 351 centers to date and expects to fund an additional 92 centers by the end of this year, bringing the total number of centers funded by the end of 1969 to 443. By the end of 1970, 526 centers will have been supported.

Mr. CASEY. Would you say these centers are helping you reduce the population of the hospitals?

Dr. YOLLES. Yes, sir; I neglected to mention before that the centers are making a definite contribution to reducing hospital population.

Mr. CASEY. A few years ago I had some association with this problem and we always had a problem when they released them from the hospital, they came back home to inexperienced people. Their own families were sometimes their worst enemy. No outpatient clinic and no one to keep tab on them and to help them readjust or, rather, get back into the mainstream of the family life and the community life. Back they would go in sometimes as little as 30 days.

I think you should point with pride in your accomplishments on these Community Mental Health Centers because in my opinion they are

going to be the mainstay once they have intensive care, and they will also prevent the necessity of many being confined to a hospital for intensive care, I would say.

Dr. YOLLES. You are quite right.

NARCOTIC ADDICTION AMONG SCHOOLCHILDREN

Mr. CASEY. Did you by any chance see this last issue, I believe, of Life magazine about the community at Fort Bragg?

Dr. YOLLES. In terms of narcotic conditions among the high school students?

Mr. CASEY. Yes.

Dr. YOLLES. Yes, I saw it with a good deal of amazement.

Mr. CASEY. A community of 5,000 and about 75 percent of the kids in school there down through some of the elementary, as you pointed out earlier.

Dr. YOLLES. Yes.

Mr. CASEY. I was interested of course in—the article did not say they had whipped it—the community approach there and the two reformed addicts, if they are reformed, who came in and worked with them and kept the criminal law aspects out of the picture entirely. Have you had occasion to observe that personally or just the article; any of your staff?

Dr. YOLLES. I do not know of any of my staff.

Dr. COHEN. The Mendocino County program contributed the two people that you mentioned to go to Fort Bragg. These were young users of "Speed," who took excessive amounts of amphetamines for stimulation. They went to Fort Bragg and spoke the language of the young person to the young person. They themselves are young people, and they made a great impact upon the grade school, junior high school, and high school youngsters in Fort Bragg. I believe they may turn that serious situation around.

Mr. CASEY. They must have made an impact, or I am sure the magazine writer could not have gotten permission he had from the parents to take pictures of the children; and lay it all open as he did.

Dr. COHEN. This reflects what I think is a breakthrough in the management of the nonaddict—that is the user of amphetamines, LSD, marihuana, and so forth—to approach him with former drug users who have been through the mill and who know all of the answers to the drug user's rationalizations. These people are very effective, and we intend to expand on this technique in the coming year.

Mr. CASEY. I know it would be kind of a hard proposition, but if any of these kids see someone going through the withdrawal symptoms, I think it would jar them pretty good.

Dr. COHEN. Yes, sir.

Mr. CASEY. Incidentally, Doctor, not having anything to do with the appropriation, but what is the best method now? You used to have some that would want to go voluntarily for treatment, but then they would say, "I do not want to go to this hospital because I have heard about that doctor up there, he just cuts you off and I cannot take it."

Dr. YOLLES. The best method is still the one devised at Lexington Hospital, which substitutes Methadon for the hard narcotics. The withdrawal from it is a much milder one since we gradually reduce the doses.

Mr. CASEY. How long have you been using it?

Dr. YOLLES. Since the end of World War II, it was a German discovery which became available after the war. Before that we used morphine in reducing dosages for withdrawal.

Mr. CASEY. Was there not a lack of education among some of the doctors over the use of Methadon for a good many years?

Dr. YOLLES. Yes, sir. There was a good deal of lack of education in the use of all narcotic drugs among physicians for many, many years. This accounted for the phenomenon which we had in the twenties and thirties of so many individuals becoming addicted to potent drugs which were given to them on a continuing basis for relief of pain. It was not really necessary to use such potent drugs.

Mr. FLOOD. Is there any startling addiction to narcotics among the physicians?

Dr. YOLLES. Perhaps the professional group that has the highest addiction rate is the physician. Most likely not because he is inherently more addiction-prone, but because he has access to the drug. Physicians have always constituted a high-risk occupational group in admission to Lexington and Fort Worth.

Mr. FLOOD. The accessibility, you say?

Dr. YOLLES. Yes. Once you rule out that factor, you find the same phenomena occurring, that is taking of drugs to relax from overwork or to recover from a hangover.

Mr. FLOOD. That is very odd because surprisingly, a large number of bartenders do not drink anything. A great many of them have a jar of ice tea under the bar. When some big shot says give everybody a drink, and bartender you have a drink, he pours himself a shot of ice tea.

Mr. CASEY. Is thorazine still one of the main ones?

Dr. YOLLES. Thorazine is still a very effective drug in treatment of many mental illnesses.

Mr. CASEY. You were talking about one of the reasons was the accessibility to drugs for addiction becoming a problem with a particular profession. Is it easier now than it used to be to get hold of?

Dr. YOLLES. The question really is a good one. I smile only because I do not know how to put it in quantitative terms. Let me only say that most school children can even direct you to a source of drugs.

Mr. CASEY. Where does it begin? It is manufactured. Then it goes where, to a wholesale drug house.

Dr. YOLLES. It depends on the drug you are talking about. If you are talking about hard narcotics, most of them come into this country from abroad. They come from Eastern Europe——

Mr. CASEY. These kids usually start on the pills, do they not?

Dr. YOLLES. It depends. Some of them go from smoking marihuana cigarettes to using amphetamines by injection, others go to heroin which they use by injection. It depends on the individual. Some of them go to LSD.

Admittedly fewer use it than did a few years ago. Each one of these substances has a different life history, if you will, comes from a different place and has a different distribution pattern.

Many of our barbiturates that are seized and used in illegal channels are manufactured in the United States, exported, and then reintroduced into the United States.

As I said before, the hard narcotics, heroin, morphine, etc., usually are smuggled in from Eastern Europe.

Marihuana is ubiquitous. If you have been following the papers it comes in from all parts of the world.

Mr. CASEY. Your ordinary barbiturates and depression pills, do all of those pills now have to have a prescription?

Dr. YOLLES. Yes, sir. Under the food and drug amendment barbiturates and amphetamines are controlled substances, dangerous drugs, and cannot be sold over the counter without a prescription. There are vast numbers of these drugs in the illicit market.

Mr. CASEY. I know that.

Dr. YOLLES. So this is a very widespread problem in our culture today.

Mr. CASEY. I mention the youngsters since it has flared up so recently.

Usually I would think when they start selling to the kids somebody is awfully bold and it is easy to get hold of, one or both?

Dr. YOLLES. Both.

Mr. FLOOD. What is a barbiturate?

Dr. YOLLES. It is an artificial chemically synthesized drug, synthesized in the late 1890's.

Mr. FLOOD. What was its original good purpose?

Dr. YOLLES. As a pure sedative. The most common ones are used as sleeping pills.

Seconal is the trade name for seco barbital. Phenobarbital was one of the earliest used. Barbiturates have a very, very legitimate use in order to induce sleep, but they have been abused and are perhaps more dangerous than heroin. They are truly addictive substances.

Acute withdrawal from barbiturates may result in convulsions and even death.

Mrs. REID. Will the gentleman yield?

Mr. CASEY. Yes.

Mrs. REID. Concerning tranquilizers, there are those on the market which do not require prescriptions. Are those used in quantity?

Dr. YOLLES. Yes, Mrs. Reid, all of the tranquilizing substances are used to a great degree. The ones on the market currently which you can buy without a prescription are non-addicting substances.

One of the primary functions of the Addiction Research Center which we operate at the Lexington Hospital is to test various new drugs which come out and which are claimed to be non-addicting and are either tranquilizers, pain killers, or sedatives for putting people to sleep.

Mr. CASEY. I believe that is all.

Mr. FLOOD. What would be the point in children taking sedatives. I thought they wanted to get hopped up.

Dr. YOLLES. It is an escape from reality, Mr. Flood. They escape from reality by being high or way down. Either way they are divorced from reality.

For instance, the narcotic addict is divorced from reality. He is on the verge of falling asleep all the time. He is "on the nod." All of his basic needs are blacked out by the drug so he is in a state of seeming tranquility.

There is no interaction with his environment at all until he needs the next shot. You can get high and you can be sedated. Both ways

you are withdrawing from reaction with the environment and that is what causes us to be concerned about having young children withdraw from the environment.

SUICIDE PREVENTION

Mr. FLOOD. Mrs. Reid?

Mrs. REID. Thank you, Mr. Chairman.

Dr. Yolles, you were talking earlier about the suicide prevention centers. How many of those are there throughout the country?

Dr. YOLLES. The latest figure is 105. There is a graph in this pamphlet which I handed out which shows the growth of them. Page 22 shows 60 in 1968 and 105 listed for 1969.

Mrs. REID. What does your research show as to the cause of increase in teenage and young adult suicide? Would you say the increased pressures of living, parental problems?

Dr. YOLLES. I do not have a ready answer for that.

Mrs. REID. You do not have statistics to show this?

Dr. YOLLES. We have some hunches. We think that there are increased pressures on college students and we have done studies in our own institutions in studying high school seniors very intensively before they go to college and then observing them during their first year of college. We are still in the early stages of trying to find out what really happens, and it is going to need some more research.

GAPS IN MENTAL HEALTH SERVICES

Mrs. REID. You say that many gaps still remain in the Nation's mental health services. Are you speaking in terms of shortages of treatment facilities or medical technology?

What areas would you say are the most deficient?

Dr. YOLLES. Yet me go through the three basic approaches in the field of mental health.

In the area of research there are many gaps that are still extant, gaps in our knowledge. I was speaking before of schizophrenia. We know relatively little about the various chemical substances in the bloodstream of individuals suffering from schizophrenia. Each year "new" substances are being isolated and our researchers are then proving or disclaiming their abnormality. We trace this down and do the necessary research to see if it is so or not.

In most cases we have found these are derivative products, for example, of normal foods that the schizophrenic may be taking. Studies in this area must be intensified. We must know what biological changes go on in the schizophrenic. We should also study some of the family interaction patterns in schizophrenia. We know this is very important. These are just some of the areas requiring research.

In the area of training, for example, it is a different order of gap. At the present time there are 95 functioning medical schools in the United States. I believe that five more colleges are planning to enroll medical students within the next year or two, and there are another five in the planning stage.

We attempt to support training in the field of mental health and have it incorporated in the training of the young physician in medical schools, in every medical school in the United States.

On the one hand, we have a limitation of funds; on the other hand, we have expanded medical schools. Then staring us in the face is this lack of mental health personnel that are needed.

TRAINING OF PHYSICIANS IN THE SOVIET UNION

I pointed out to this committee last year the very obvious phenomena, at least to me having just returned from the Soviet Union where I made the first exchange visit to the Soviet Union to look at their service facilities, the vast number of personnel they had available in this field. They were graduating 35,000 physicians a year and we are graduating 9,000 a year, and the population difference is not that great between the two countries.

Mr. FLOOD. Thirty-five thousand physicians, in the extent we educate them?

Dr. YOLLES. Yes, sir. We went into that fairly carefully and the education of the physician—they are not ersatz physicians, poorly trained, they are very well-trained physicians.

Mr. FLOOD. What about their pay scales?

Dr. YOLLES. Pay scales are very good. We were very much impressed in talking to the Deputy Minister of Health in the Soviet Union. We were talking about the general practitioner or at least the closest you get to it in the Soviet Union. In other words, the individual who had responsibility for medical care of two or three blocks since everything is on a geographic basis. They have trouble keeping them in that position because there are so many opportunities for postgraduate training which are available to them free.

We posed the question, how do you keep them there? We know you have a problem. He said yes, we do have a problem, we have tried everything under the sun and now we are planning to pay them double salaries. This is in the Soviet Union, which was rather surprising. The basic salary they get is not bad in comparison to other professions.

Mr. FLOOD. That is one inducement of course in that kind of a Socialist state. Is it a production line sort of graduate? Do they grind them out like shredded wheat?

Dr. YOLLES. If you are referring only to the numbers, I guess that is so because they turn the handle and lots of graduates come out. But we looked at this carefully because we came in with sort of a prejudice that they had turned out poor physicians. They do not.

Mr. FLOOD. This is all free, all the education is free?

Dr. YOLLES. Right. But they were not poor physicians. Just as soon as the report of the mission is out in published form, which will be very shortly, I will make that available to the members of the committee.

ALCOHOLISM, MARIHUANA, AND DRUG ADDICTION

Mrs. REID. In your treatment of alcoholics, do you coordinate at all with Alcoholics Anonymous or that kind of organization?

Dr. YOLLES. We do not carry out treatment ourselves. We support treatment programs and encourage cooperation with Alcoholics Anonymous. In fact, we encourage cooperation with any treatment modality which exists.

Mrs. REID. You mentioned in trying to find out whether marihuana leads to drug addiction that you must consider the personality of the person taking the drug.

Dr. YOLLES. Yes.

Mrs. REID. I suppose this same thing would be true with a person drinking alcohol?

Dr. YOLLES. Yes.

Mrs. REID. Do you have any kind of statistics where you could relate alcoholism to drug addiction, for instance, the people who drink becoming alcoholics or the people who smoke marihuana becoming drug addicts?

Dr. YOLLES. In the first case, in dealing with alcohol, all that I can tell you is anecdotal on the basis of mine and Dr. Kieffer's experience during the number of years we were at the Lexington Hospital. There are a number of individuals who will try to get over a hangover, especially in the medical profession, by taking a shot of morphine and so becoming adicted. At least they claim that is the way they became adicted. That is why I say this is anecdotal.

We have no figures relating alcoholism to drug abuse. However, in the relationship of marihuana to heroin use, there is one school of thought which says the vast majority—and you name it from 80 percent on to 95 percent—of heroin addicts have used marihuana at one time, and that is a valid statistic, but it is obviously only part of the story. They not only have used it, but other substances as well. However, only a very small percentage of marihuana users ever go on to using heroin.

Mrs. REID. I should think you could use the first half of your argument certainly to good advantage in talking with young people about the use of marihuana, even if it is a small percentage who go on to the use of heroin. So they do not take it so lightly. This is what bothers me.

Dr. YOLLES. Today's youth know that most marihuana users do not go on to use heroin. They know the statistics and are widely read in this field. That is why we have attempted in all of our educational programs to present strict factual material and then to help them interpret those figures. If you try to slant it, they are away ahead of you.

Mr. FLOOD. Of course I think what Mrs. Reid is pointing out is something that bothers me in your statement. While it may be true as you pros suggest it is, the personality of the user which carries them to the next step, but is not the other side of the coin the fact that the marihuana affects more acutely that type of personality?

Is it not a vicious circle? If the personality is unstable, would not the marihuana contribute directly as far as that personality going on?

Dr. YOLLES. It would have an effect on the personality. That type of individual would be looking for all sorts of other experiences as well, and this could very well lead him on to the use of other drugs.

I should also point out that the personality of the user does not explain the whole thing. Those individuals with that type of personality that choose to look for other experiences by using marihuana, having made the contract you were talking about, Mr. Casey, know where they can get to hard narcotics as well.

Mr. FLOOD. It is the old story of which came first, the chicken or the egg.

In our eagerness to disseminate information about narcotics, we have disseminated it so well as you say, they know the answers. The mere fact that is the answer does not suggest that marihuana is a plague, as it is.

Dr. YOLLES. No, sir. But you know we have tried for many, many years disseminating information on a scare basis, distorting facts or, if not distorting them, at least planting the impression.

Mr. FLOOD. Is there an analogy with the dissemination of information on venereal disease?

Dr. YOLLES. No, there is no analogy.

Mr. FLOOD. We know about that, too.

Dr. YOLLES. Yes, there has been an increase.

Mr. FLOOD. Of course there has.

What is wrong? There is something wrong someplace.

Dr. YOLLES. Mr. Chairman, if we had the answer to that we could do something about the problem. We don't. What we do know is this: When we disseminated the pure hard facts about LSD—not that if you use LSD your children will all be born deformed, or that you will get leukemia from distorting your chromosomes, but merely giving them the factual information that research has now brought out, that chromosome defects are possible, and that you do run the risk of having deformed childen—we realized a reduction in the use of LSD. In this case, the presentation of purely objective facts about LSD refuted the old argument that the dissemination of health information increases the possibility of the very thing you are trying to prevent. We don't have very many other answers, believe me.

Mr. FLOOD. Mrs. Reid?

Mrs. REID. You just mentioned getting the information about LSD and nodded your head when I mentioned this film on LSD put out by the Navy.

Dr. YOLLES. It is an excellent film.

Mrs. REID. I think it is well done because it is done in an unemotional way and it presents the facts. I think it can be understood and has been very well accepted.

Dr. YOLLES. We pre-reviewed it. It is a very good film.

Mrs. REID. There was a theory that alcoholism is a virus and could be treated as such. Is that in the midst of being researched? I think that was discussed in the hearings last year.

Dr. YOLLES. I don't know of any research that is being done on the subject of viruses in alcoholism.

The virus etiology has been raised about schizophrenia and a whole host of diseases. So far it has not been borne out.

Mrs. REID. Certainly throughout all of your testimony and our discussion here today it brings to my mind the fact that if we could solve the problem of alcoholism we would certainly solve many of our welfare problems. If we could solve the narcotics problem we could solve many of our crime problems, too.

Dr. YOLLES. That is quite true.

Mrs. REID. That is all.

Mr. FLOOD. Thank you, gentlemen.

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JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Mental Health

Amounts Available for Obligation

	1969	1970
Appropriation:		
"Mental Health Research and Services".....	$263,139,000	---
"Community Mental Health Resource Support".	87,300,000	---
"Mental Health".....	---	$367,129,000
Total appropriation.....	350,439,000	367,129,000
Transfer to "Operating expenses, Public Buildings Service," General Services Administration.....	-120,000	---
Advances and reimbursements from:		
Other Accounts.....	467,000	162,000
Non-Federal sources.....	8,000	8,000
Unobligated balance brought forward.....	45,000,000	10,000,000
Unobligated balance carried forward.....	-10,000,000	---
Cutback required by P.L. 90-364.....	-19,073,000	---
Proposed release of reserve for pay increase costs.....	1,202,000	---
Total obligations.....	367,923,000	377,299,000

Disposition of cutback:	
Proposed transfer to "Comprehensive Health Planning and Services" for Rubella Vaccine Program.....	9,186,000
Proposed transfer to other accounts for pay increases.....	5,160,000
Proposed release of reserve to cover pay increase costs in this account.....	1,202,000
To be returned to the treasury.....	3,525,000
Total cutback.....	19,073,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
	Support and conduct of Research:						
	Grants:						
20	Research	---	$81,159,000	---	$82,273,000	---	+$1,114,000
34	Hospital improvement	---	10,610,000	---	8,000,000	---	-2,610,000
36	Early child care demonstrations	---	---	---	1,000,000	---	+1,000,000
	Direct operations:						
37	Intramural research	485	17,339,000	545	18,259,000	60	+920,000
39	Planning, development, and administration	178	5,070,000	195	5,775,000	17	+705,000
	Manpower development:						
	Grants:						
44	Training	---	109,046,000	---	112,500,000	---	+3,454,000
49	Fellowships	---	10,641,000	---	10,866,000	---	+225,000
50	Direct operations	166	3,094,000	211	4,583,000	45	+1,489,000
51	Support of State and community programs:						
	Grants:						
53	Construction of community mental health centers	---	50,000,000	---	40,500,000	---	-9,500,000
55	Staffing of community mental health centers	---	46,032,000	---	51,300,000	---	+5,268,000
57	Narcotic addiction and alcoholism community assistance	---	8,000,000	---	12,000,000	---	+4,000,000
59	Direct operations	115	2,364,000	115	2,379,000	---	+15,000
	Service activities:						
60	Narcotic addict treatment program	1,002	14,663,000	1,002	17,526,000	---	+2,863,000
64	Regional and field activities	122	2,346,000	122	2,346,000	---	---
65	Scientific communication and public education	77	2,588,000	87	2,771,000	10	+183,000
67	Program direction and management services	314	4,971,000	314	5,221,000	---	+250,000
	Total obligations	2,459	367,923,000	2,591	377,299,000	+132	+9,376,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions	2,459	2,591	+132
Full-time equivalent of other positions	295	432	+137
Average number of all employees	2,645	2,937	+292
Personnel compensation:			
Permanent positions	$23,176,000	$24,743,000	+$1,567,000
Positions other than permanent	1,847,000	2,647,000	+800,000
Other personnel compensation	568,000	463,000	-105,000
Total personnel compensation	25,591,000	27,853,000	+2,262,000
Personnel benefits	2,610,000	2,764,000	+154,000
Travel and transportation of persons	1,274,000	1,305,000	+31,000
Transportation of things	191,000	196,000	+5,000
Rent, communications and utilities	1,046,000	1,033,000	-13,000
Printing and reproduction	414,000	424,000	+10,000
Other services	4,441,000	4,781,000	+340,000
Project contracts	6,013,000	9,372,000	+3,359,000
Payment to "National Institutes of Health Management Fund"	6,584,000	6,584,000	---
Supplies and materials	2,274,000	2,413,000	+139,000
Equipment	2,001,000	2,149,000	+148,000
Grants, subsidies and contributions	315,504,000	318,451,000	+2,947,000
Subtotal	367,943,000	377,325,000	+9,382,000
Quarters and subsistence charges	-20,000	-26,000	-6,000
Total obligations by object	367,923,000	377,299,000	+9,376,000

Summary of Changes

1969 estimated obligations	367,923,000
1970 estimated obligations	377,299,000
Net Change	+9,376,000

	Base		Change from Base	
	Positions	Amount	Positions	Amount
Increases				
A. Built-in				
1. Net cost of within-grade advances	---	---	---	$488,000
2. Increases in non-competing continuation grants	---	$151,392,000	---	25,335,000
(a) Research	---	(47,843,000)	---	(6,199,000)
(b) Training	---	(82,850,000)	---	(5,997,000)
(c) Staffing of community mental health centers	---	(20,699,000)	---	(13,139,000)
3. Transfer from Saint Elizabeths Hospital:				
(a) Intramural research	---	17,339,000	48	689,000
(b) Manpower development	---	3,094,000	45	1,458,000
4. Annualization for man-year increase resulting from patient care employment exemptions	---	---	---	83,000
Total built-in increases	---	---	93	28,053,000

B. Program	Base Positions	Base Amount	Change from Base Positions	Change from Base Amount
1. Support and conduct of research:				
a. General research support grants...	---	$7,755,000	---	$108,000
b. Early child care-demonstration grants.....	---	---	---	1,000,000
c. Intramural research.....	485	17,339,000	12	134,000
d. Planning, development, and administration...	178	5,070,000	17	671,000
2. Manpower development:				
a. Fellowships.....	---	10,641,000	---	225,000
3. Support of State and community programs:				
a. Narcotic addiction and alcoholism community assistance.....	---	8,000,000	---	4,000,000
4. Service activities:				
a. Narcotic addict treatment program.....	---	14,663,000	---	2,931,000
b. Scientific communication and public education.....	77	2,588,000	10	170,000
5. Program direction and management services.	---	4,971,000	---	186,000
Total program increases...	---	---	39	9,425,000
Total increases.....	---	---	132	37,478,000

	Base		Change from Base	
	Positions	Amount	Positions	Amount
Decreases				
A. Program				
1. Support and conduct of research:				
a. Research grants - competing awards..	---	$25,186,000	---	-$5,193,000
b. Hospital improvement.....	---	10,610,000	---	-2,610,000
2. Manpower development:				
a. Training grants - competing awards..	---	26,196,000	---	-2,543,000
3. Support of State and community programs:				
a. Construction of community mental health centers....	---	50,000,000	---	-9,500,000
b. Staffing of community mental health centers....	---	25,333,000	---	-7,871,000
4. Service activities:				
a. Narcotic addict treatment program.....	---	+14,663,000	---	-385,000
Total decreases.....	---	---	---	-28,102,000
Total net change requested,.....	---	---	+132	+9,376,000

Explanation of Changes

Built-in increases

1. New cost of within-grade advances-An increase of $488,000 will meet the increased cost of personal services resulting from normal periodic within-grade advances to the extent that they are not offset by savings resulting from employee turnover.

2. Non-competing continuation grants-An increase of $25,335,000 is required to meet the cost of grant projects awarded in previous years which will be eligible for additional funding as non-competing continuation grants in 1970.

3. Transfer from "St. Elizabeths Hospital"-An increase of $2,147,000 and 93 positions results from consolidation of funding for intramural training and intramural research activities, following the establishment of the National Center for Mental Health Services, Training and Research.

4. Annualization of 1969 employment increase-An increase of $83,000 will provide for the full second year costs of additional employment in 1969, following the exemption of patient-care activities from employment restrictions.

Program increases

1. Support and conduct of research:

(a) General Research Support Grants-An increase of $108,000 will provide the Institute's share of additional support for the General Research Support Grant program of the National Institutes of Health.

(b) Early child care demonstration and evaluation-A new effort to demonstrate and evaluate different methods of preventing and treating emotional disturbances of young disadvantaged children in day-care center and other pre-school education programs will be initiated with $1,000,000 in grant funds.

(c) Intramural research-An increase of 12 positions and $134,000 will permit a modest expansion of research in several areas, including the relationship of sleep to psychiatric, psychological, and somatic disorders; the performance of broader studies on the neurochemical factors in mental illness; an expansion of pharmacological research; and investigations of the biological basis for learning and memory.

(d) Planning, development, and administration-Increases are requested for two new programs; (a) 10 positions and $102,000 to administer an early child care demonstration and evaluation grant program and, (b) 7 positions and $69,000 to administer a grant program for construction, operation, and staffing of alcoholism rehabilitation facilities. An increase of $500,000 will be used to award contracts for research on a number of significant contemporary social problems.

2. Manpower development

(a) Fellowships-An increase of $225,000 will provide for an additional 21 non-competing continuation grants in 1970.

3. Support of State and community programs

(a) Narcotic addiction and alcoholism community assistance-An increase of $4,000,000 will provide $750,000 for the Federal share of construction of 3 new community facilities for the prevention and treatment of alcoholism, and $3,250,000 for twenty alcoholism staffing grant projects. These new facilities should, when fully operational, provide treatment services for approximately 10,000 alcoholics per year.

4. Service Activities

(a) Narcotic addict treatment program - The total increase requested is $2,931,000. Of this total, $2,500,000 will provide aftercare services for nearly 1,300 addicts under contracts with community agencies. An amount of $126,000 will be used to initiate a pilot program to examine, evaluate, and provide initial in-patient care to narcotic addicts in community facilities. The remaining increase of $305,000 is for the Ft. Worth and Lexington Clinical Research Centers and will be used to offset a reduction in estimated reimbursements from other agencies in 1970.

(b) Scientific communication and public education - An increase of 10 positions and $170,000 is requested to expand services provided by the National Clearinghouse for Mental Health Information.

5. Program direction and management services - An increase of $186,000 will be used to upgrade the Institute's computer equipment capability in 1970.

Program Decreases

1. Support and Conduct of Research

(a) Research grants - There is a decrease in this activity of $5,193,000 for competing awards in 1970 compared with the level of support for these types of grants in 1969.

(b) Hospital improvement - The decrease of $2,610,000 in 1970 will necessitate the award of 35 fewer grants in 1970 than were made in 1969. The number of hospitals receiving support will not be expanded.

(c) Training grants - There is a decrease in this activity of $2,543,000 for competing awards in 1970 compared with the level of support for these types of grants in 1969.

2. Support of State and Community Programs:

(a) Construction of community mental health centers - In terms of total obligations the $40,500,000 requested for 1970 represents a decrease of $9,500,000 under the estimate for 1969. The $40,500,000 will support approximately 90 new centers in 1970, as compared with 111 in 1969. In terms of new obligational authority the 1970 President's Budget provides an increase of $15,500,000 over the $15,000,000 appropriated in 1969.

(b) Staffing of community mental health centers - There is a net decrease in this activity of $7,871,000 for new awards in 1970.

3. Service Activities:

(a) Narcotic addict treatment program - The total decrease of $385,000 includes a reduction of $305,000 in anticipated reimbursements at the Ft. Worth and Lexington Clinical Research Centers and an $80,000 reduction for non-recurring overtime costs at the Lexington Center.

Authorizing Legislation for Grants

I. The following Sections of the Public Health Service Act authorizes grants made under the subactivities "Research", "Hospital improvement", "Early child care", "Training", and "Fellowships."

Sec. 301. The language of this Section will be found under the tab "Preamble Paragraph" in Volume IV.

Sec. 302. (a) In carrying out the purposes of Section 301 with respect to narcotics, the studies and investigations shall include the use and misuse of narcotic drugs, the quantities of crude opium, coca leaves, and their salts, derivatives, and preparations, together with reserves thereof, necessary to supply the normal and emergency medicinal and scientific requirements of the United States. The results of studies and investigations of the quantitites of crude opium, coca leaves, or other narcotic drugs, together with such reserves thereof, as are necessary to supply the normal and emergency medicinal and scientific requirements of the United States, shall be reported not later than the 1st day of September each year to the Secretary of the Treasury, to be used at his discretion in determining the amounts of crude opium and coca leaves to be imported under the Narcotic Drugs Import and Export Act, as amended.

(b) The Surgeon General shall cooperate with States for the purpose of aiding them to solve their narcotic drug problems and shall give authorized representatives of the States the benefit of his experience in the care, treatment, and rehabilitation of narcotic addicts to the end that each State may be encouraged to provide adequate facilities and methods for the care and treatment of its narcotic addicts.

Sec. 303. (a) In carrying out the purposes of section 301 with respect to mental health, the Surgeon General is authorized--

(1) to provide training and instruction and to establish and maintain traineeships, in accordance with the provisions of section 433 (a);

(2) to make grants to State or local agencies, laboratories, and other public or nonprofit agencies and institutions, and to individuals for investigations, experiments, demonstrations, studies, and research projects with respect to the development of improved methods of diagnosing mental illness, and of care, treatment, and rehabilitation of the mentally ill, including grants to State agencies responsible for administration of State institutions for care, or care and treatment, of mentally ill persons for developing and establishing improved methods of operation and administration of such institutions.

(b) Grants under paragraph (2) of subsection (a) may be made only upon recommendation of the National Advisory Mental Health Council. Such grants may be paid in advance or by way of reimbursement, as may be determined by the Surgeon General; and shall be made on such conditions as the Surgeon General finds necessary.

Sec. 507. Appropriations to the Public Health Service available for research, training, or demonstration project grants pursuant to this Act shall also be available on the same terms and conditions as applied to non-federal institutions, for grants for the same purpose to hospitals of the Service, of the Veteran's Administration, or of the Bureau of Prisons of the Department of Justice, and the Saint Elizabeths Hospital.

II. The following Sections of the Community Mental Health Centers Act authorize grants made under the subactivities "Construction of community mental health centers", "Staffing of community mental health centers", and "Narcotic addiction and alcoholism community assistance."

Legislation	1970 Authorization
Community Mental Health Centers Act	
Section 201--Construction of Community Mental Health Centers.....	$70,000,000
Section 224--Staffing of Community Mental Health Centers	
Initial grants.....	32,000,000
Continuation grants.....	"Such sums as may be necessary"
Narcotic Addict Rehabilitation	
Section 261 Construction and Staffing of Alcoholism and Facilities.....	25,000,000

COMMUNITY MENTAL HEALTH CENTERS ACT

Title II--Grants for Construction and Staffing of Community Mental Health Centers.

Part A--Construction of Community Mental Health Centers

Authorization of Appropriations

Sec. 201. There are authorized to be appropriated, for grants for construction of public and other nonprofit community mental health centers, $35,000,000 for the fiscal year ending June 30, 1965, $50,000,000 for the fiscal year ending June 30, 1966, $65,000,000 for the fiscal year ending June 30, 1967, $50,000,000 for the fiscal year ending June 30, 1968, $60,000,000 for the fiscal year ending June 30, 1969, and $70,000,000 for the fiscal year ending June 30, 1970.

Part B--Staffing of Community Mental Health Centers

Authorization of Appropriations

Sec. 224. There are hereby authorized to be appropriated $19,500,000 for the fiscal year ending June 30, 1966, $24,000,000 for the fiscal year ending June 30, 1967, $30,000,000 for the fiscal year ending June 30, 1968, $26,000,000 for the fiscal year ending June 30, 1969, and $32,000,000 for the fiscal year ending June 30, 1970, to enable the Secretary to make initial grants to community mental health centers under the provisions of this part. For the fiscal year ending June 30, 1967, and for each of the seven succeeding years, there are hereby authorized to be appropriated such sums as may be necessary to make grants to such centers which have previously received a grant under this part and are eligible for such a grant for the year for which sums are being appropriated under this sentence.

Title III Grants for Alcoholic and Narcotic Addict Rehabilitation

Part E--General Provisions

Authorization of Appropriations

Sec. 261. (a) There are authorized to be appropriated $15,000,000 for the fiscal year ending June 30, 1969, and $25,000,000 for the next fiscal year for project grants for construction and staffing of facilities for the prevention and treatment of alcoholism under Part C or the prevention and treatment of narcotic addiction under Part D and for grants under Section 252. Sums so appropriated for any fiscal year shall remain available for obligation until the close of the next fiscal year.

(b) There are also authorized to be appropriated for the fiscal year ending June 30, 1971, and each of the next three fiscal years such sums as may be necessary to continue to make grants for staffing with respect to any project under Part C or D for which a staffing grant was made from appropriations under subsection (a) of this section for the fiscal year ending June 30, 1969, or the fiscal year ending June 30, 1970.

Explanation of Transfers

	1969 Estimate	1970 Estimate	Purpose
Transfer to:			
"Operating Expenses, Public Buildings Service," General Services Administration	-$120,000	...	To transfer rental costs.
Proposed transfer to:			
"Comprehensive Health Planning and Services"	-9,186,000	...	To transfer funds for project grants to State and local health departments to start an immunization program against Rubella.
"Saint Elizabeths Hospital Salaries and Expenses	-1,984,000	...	Transfer of funds for 1969 pay raise costs.
"Office of the Surgeon General, Salaries and Expenses	-307,000	...	
"School Assistance in Federally Affected Areas"	-16,000	...	
"Higher Education"	-160,000	...	
"Office of Education, Salaries & Expenses"	-694,000	...	
"Civil Rights Educational Activities"	-67,000	...	
"Radiological Health"	-407,000	...	
"Gallaudet College, Salaries and Expenses"	-56,000	...	
"Howard University Salaries and Expenses"	-401,000	...	
"Freedmens Hospital, Salaries and Expenses"	-291,000	...	
"Office of the Secretary, Salaries and Expenses"	-216,000	...	
"Office of the Secretary, Office of Field Coordination"	-215,000	...	
"Office of Administration, Salaries and Expenses"	-233,000	...	
"Office of the Secretary, Surplus Property Utilization"	-57,000	...	
"Office of the General Counsel, Salaries and Expenses"	-56,000	...	

Mental Health

(Consolidated Mental Health Research and Services and Community Mental Health Resource Support)

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$52,384,000	$60,409,000	$79,986,000	$68,090,000
1961	67,563,000	79,863,000	110,800,000	100,900,000
1962	88,324,000	92,182,000	125,570,000	108,876,000
1963	126,899,000	133,599,000	148,599,000	143,599,000
1964	190,096,000	177,288,000	190,096,000	183,288,000
1965	224,085,000	223,273,000	223,273,000	223,273,000
1966	278,669,000	278,669,000	286,169,000	283,169,000
1967	305,115,000	310,119,000	315,619,000	315,619,000
1968	346,909,000	296,909,000	346,909,000	346,909,000
1969	364,939,000	342,439,000	364,939,000	350,439,000
1970	367,129,000			

National Institute of Mental Health

Narrative Justification

Introduction - The basic mission of the National Institute of Mental Health is to improve the mental health of the people of the United States through the development of knowledge, manpower, and services to treat and rehabilitate the mentally ill, to prevent mental illness, and to promote and sustain mental health.

This narrative justification reflects both a recent reorganization of the Institute and a revised appropriation and activity structure. The reorganization is designed to bring the statutory authorities, and the professional and administrative resources of the Institute to bear more effectively on the achievement of its basic mission. The new appropriation and activity structure reflects a functional distribution of the Institute's financial resources which facilitates an understanding of a coordinated approach to mental health goals through research, training, support of State and community mental health programs, and the provision of direct services.

I. Support and Conduct of Research

A. Grants

1. Research Grants

	1969 Estimates	1970 Estimate	Increase or Decrease
Research grants.....	$81,159,000	$82,273,000	+$1,114,000

The objective of the research grant program of the Institute is to support research on the etiology, diagnosis, treatment, prevention and control of mental illness, and to gain new knowledge of those factors which produce and sustain mental health.

The Institute supports basic, clinical, and applied research in the behavioral sciences, psychopharmacology, specific mental disorders (with special emphasis on the schizophrenias and the depressions), narcotics and drug abuse, alcoholism, metropolitan mental health problems, crime and delinquency, and suicide prevention. The NIMH also supports research institutions by providing a proportionate share for General Research Support Grants.

Tables 1. and 2. show the distribution of research grant funds by type of grant and by functional program, respectively. The narrative material which follows is a description of each research grant program, with examples of significant projects now underway and plans for the future.

Table 1. Distribution of Research Grants
By Type of Grant

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Non-competing Continuations...	724	$47,843,000	774	$54,042,000	+50	+$6,199,000
Competing renewals..	171	8,957,000	164	8,896,000	-7	-61,000
New Projects.....	531	14,543,000	434	9,500,000	-97	-5,043,000
Supplemental awards	(105)	1,686,000	(103)	1,597,000	(-2)	-89,000
Subtotal	1,426	73,029,000	1,372	74,035,000	-54	+ 1,006,000
Scientific Evaluation	23	375,000	23	375,000	---	---
General research support	--	7,755,000	---	7,863,000	---	+108,000
Total	1,449	81,159,000	1,395	82,273,000	-54	+1,114,000

Table 2. Research Grants Program Distribution

	1969 Estimate	1970 Estimate	Increase or Decrease
Behavioral sciences.....	$20,040,000	$20,085,000	+$45,000
Clinical research.....	9,300,000	9,325,000	+25,000
Applied research.....	18,115,000	18,160,000	+45,000
Psychopharmacology.....	9,880,000	9,905,000	+25,000
Narcotic and drug abuse.	2,614,000	2,964,000	+350,000
Alcoholism.....	5,040,000	5,240,000	+200,000
Metropolitan problems...	1,087,000	1,137,000	+50,000
Suicide prevention.....	1,783,000	1,883,000	+100,000
Crime and delinquency...	3,070,000	3,170,000	+100,000
Epidemiology.....	1,500,000	1,516,000	+16,000
Mental health services..	600,000	650,000	+50,000
Subtotal.....	73,029,000	74,035,000	+1,006,000
Scientific evaluation...	375,000	375,000	---
General research support grants.....	7,755,000	7,863,000	+108,000
Total.....	81,159,000	82,273,000	+1,114,000

a. Behavioral Sciences

The National Institute of Mental Health continues to represent the major focus of support for research in the behavioral sciences by the Federal Government. The behavioral sciences program embraces research in psychology, psychophysiology, neurophysiology, and the social sciences.

Brain and behavior - A major research program is directed toward understanding the complex relationships between brain function and behavior - including the effects of nervous system changes on behavior. The basic nature of nervous system and other physiological processes underlying normal behavior must be determined before an understanding of mental disturbance, and its prevention or amelioration are fully possible. Specific research areas presently supported which appear particularly promising include studies of the chemical basis of memory and learning, of the electrical and chemical stimulation of the brain as a means for identifying areas involved in the production of motivated or emotional behavior, and of single neuron activity to determine how the brain interprets information transmitted by the senses.

Findings from grant supported research already have suggested that memory storage is based on information coding within the brain through protein molecule syntheses. Through electrical stimulation of "pleasure centers" in the brain, investigators have trained animals to modify visceral responses such as heart rate, blood pressure and intestinal contractions, suggesting that these functions may be brought under voluntary control.

Learning and perception - Basic psychological processes such as learning and conditioning, perception, attention, and memory form the core of the second research program involving both human and animal studies. A major goal is to learn how organisms selectively attend to and perceive their environment, and what factors affect learning and memory. A recent finding, with important implications for the development of new techniques in handling handicapped persons, indicated that accurate visual perception of the relationship between one's body and its environment is essential for coordination, particularly hand-eye coordination. New methods also permit more incisive studies of conditionability and the bases for individual differences in capacity to perceive and to learn.

Since specific determinants of behavior can be investigated most thoroughly in animals, another focus is on comparative animal studies. Emphasis continues to be placed on studies of genetic and hormonal determinants of behavior and further support is planned to build on recent findings, e.g., that genetic factors in animals are related to stress-susceptibility and that these operate maximally during "critical periods" in early development. Basic behavior patterns in social interaction and communication can often be studied most effectively with subhuman primates.

Personality - The ways in which personality, emotional and complex thought processes relate to behavior serves as the focus for another major research program. Areas presently supported include studies of the development and dynamics of personality, personality assessment, human motivation, stress and emotional processes and the range of higher mental processes including intelligence, problem-solving, decision-making, and communication. Priority

areas for increased emphasis include personality assessment, stress and emotional behavior, and the emotional development of the child.

New methods and theoretical advances now suggest the feasibility of developing more reliable and valid measures of personality to meet both clinical and research needs for the accurate assessment of personal attributes. A recently formulated precise personality classification system is being used in the construction of personality tests. Also, recent findings offer new insight into emotional stress and the possibility of its control. They show that unemotional subjects are less influenced by internal visceral cues, and that the person's interpretation of such cues and his overt behavior largely determines the specific emotion experienced. A new theory of the mastery of anxiety suggests also that children learn to tolerate stress, not through previous security, but through "innoculations" gained through increasing stress.

Social sciences - Research in the social sciences relevant to mental health constitutes a further major program. It includes research on how social and cultural phenomena operate to affect human behavior, studies of social problem areas related to mental health, and basic studies of social institutions and processes. Increased emphasis is needed and will be given to how a person is taught to become an acceptable and functioning member of social groups and to the socializing effects of adult life experiences on the individual.

Societies and communities which only now are beginning to industrialize offer opportunities to study the whole process of social change. Research questions to receive continued attention are in the following areas: the sources of receptivity or resistance to innovation and how individuals, communities and institutions change; and the nature and consequence of value conflict produced by new institutions. A major NIMH study, presently being carried out in six cultures, is exploring the psychological and social adjustments of migrants from rural to urban industrial areas. The role of family relationships and structure, of ties with former communities and kin, and of membership in ethnic and religious groupings is being examined. Another major study is following a group of similar communities to explore differential effects on individuals and communities of programs of planned social change and industrialization.

b. Clinical Research

The clinical research program supports and stimulates research on the diagnosis, course, prognosis, and treatment of the mental disorders, and contributes through these activities to the development of improved clinical research methodology.

Schizophrenia - Schizophrenia continues to be a major concern of the NIMH. In the United States, schizophrenics account for about one-half of the resident patients in the State and County mental hospitals and V.A. neuropsychiatric hospitals. There is a continuing need to clarify the essential characteristics of schizophrenia, to differentiate cause and effect in its psychological, social, and biological facets, to identify high-risk populations, and to find effective methods for its treatment and control.

NIMH grantees are exploring the many aspects of schizophrenia by exploiting all approaches and data which our current knowledge indicates are relevant. The search for causes is tedious and slow due to the large number of variables and individual variations, some of them extraneous to the psychopathological process. Nevertheless, intense investigation continues in several very promising areas: 1) genetic factors, 2) biochemical factors, 3) identification of sub-classes of schizophrenia based on neurological investigations, and 4) family studies.

Increasingly sophisticated research on the genetic contribution to schizophrenia indicates that while heredity may be a factor, environmental influences emerge as being of greater importance than would have been thought based on previous studies of twins. In an effort to gauge the relative roles of environment and heredity, investigators are studying adoptees and their biologic parents. Preliminary results generally confirm the presence of a genetic predisposition to mental illness, but as yet, it is not clear whether this predisposition is specific to schizophrenia. It is increasingly clear that heredity plays a role in schizophrenia - but a somewhat less important one than was thought to be the case a decade ago.

The methods used in studies of abnormal substances in the blood of schizophrenics has continued to improve and makes possible the more rapid evaluation of new findings in this area. There is every hope that the next few years will see some definitive developments in eliminating false leads and in determining the role and the importance of specific biological substances in the etiology of schizophrenia.

While many researchers are attempting to better define the biological and genetic aspects of the illness, others continue to pursue possible neurological and socio-psychological defects in schizophrenic patients. For example, one investigator has been able to distinguish a type of childhood schizophrenia in which there is definite but subtle neurological dysfunction; the families of these children displayed less psychological disturbance than families having schizophrenic children without neurological impairment.

Another study has found that within families of schizophrenic patients, it is not so much the content of communications in the family which relates to the development of schizophrenia, but rather the pattern of these communications. A better understanding of these patterns may lead to new "high-risk" screening procedures for schizophrenia and to improved family treatment.

In the area of rehabilitation, it has been learned that chronic schizophrenic patients can be returned to the community by the creation of hospital wards in which patients who receive services have an active part in providing these services for themselves and others. Thus, patients become able to care for themselves and develop skills which successfully sustain them on discharge.

Depression - The seriousness of the depressive illnesses is suggested by the fact that approximately 90,000 patients are hospitalized for depressive reactions each year. In addition, depression may be a contributing cause of many other apparently physical illnesses. At present the program of research on depression is concentrated on biological factors. For example, several studies are currently testing the hypothesis that many depressions are associated with an absolute or relative lack of crucial substances (catecholamines) at important sites in the brain. Other scientists are testing the hypothesis that severe

psychotic depressive illnesses are associated with abnormalities in central nervous system activation. Recent studies have extended earlier findings that "stress hormone" (steroid) metabolism may be abnormally elevated in some depressive illnesses, and new findings now suggest that other substances, including thyroid hormone and insulin may be involved.

Although research on depression is currently focused heavily on the biological front, there is some concern that the research on the behavioral and psychological aspects of the disorder should be given expanded emphasis. Efforts will be made to increase support of multidisciplinary research and additional individual psychological studies of the depressive state.

Psychosomatic Disorders - One of the most intriguing experimental developments with important implications for the field of psychosomatic medicine has stemmed from the application of learning techniques to the control of visceral functions. This research holds promise of developing techniques which may enable an individual to learn to control certain physiological functions. These techniques may one day be applied in practical efforts to control asthmatic conditions, gastrointestinal disorders, and certain kinds of headache which are thought to be largely psychogenic in origin.

Increased attention in the current year will be turned to a more concerted attempt to investigate the psychological concomitants and determinants of heart disease. A conference is planned in collaboration with the National Heart Institute which will be directed toward understanding the interaction of psychological and physiological actions in the production and maintenance of organic conditions.

Psychotherapy - Psychological and behavioral methods of treatment have for a very long time been the most widely used for mental disorder in the field. Yet, little reliable scientific information has been available regarding their actual effectiveness.

Research experience of the past decade has shown that efforts in this area should be aimed at identifying the specific characteristics of the therapist, the treatment technique and the social-familial treatment context which help induce change in the patient. Several studies have now shown that hospitalized schizophrenic patients benefit less from psychotherapy than they do from drug treatment or even shock treatment, while other studies have shown that such personality characteristics of the therapist as warmth and empathy play a major role in determining good outcome among certain patients.

Clinical Methods, Diagnosis and Cross-Cultural Research - New methods for studying the behavior of the mentally disordered are contributing to more objective approaches to the problems of describing and diagnosing psychiatric patients. These procedures, which permit the development of reliable and quantitative measures describing the behavior and symptoms of patients, provide a more solid foundation for future research in psychopathology. There have been significant improvements in the development of new criteria and schemes for classifying the mental disorders; more reliable diagnosis and classification ease the task of identifying causal factors in specific disorders and, thus, contribute to progress in research on etiology. The question of whether schizophrenia or depression are the same from culture to culture or from one ethnic group to another - the type of question which is at the core of understanding environmental vs. hereditary influences in these disorders - is now being studied. Results from such studies will be forthcoming within the next few years.

c. Applied Research

The Institute's applied research program stimulates and supports research intended to improve services for the mentally disturbed; to develop programs for preserving the mental health of children and youth; and to relieve mental health problems related to adverse social conditions. Special emphasis is placed on finding increasingly effective ways to translate research results into useful action programs and on assisting in the broad application of demonstration projects.

Much of the Institute's applied research on services focuses on the mental hospital and on community mental health services. Studies have shown, for example, that it is preferable to help patients learn the rudiments of several basic occupational skills rather than one, and that the use of a non-residential transitional social rehabilitation service for recently released adult psychiatric patients makes it possible for a greater number of patients to avoid rehospitalization.

Systems research is being focused on the patterns by which mental health services are sought (and provided) in order to develop new and improved models of service. Studies of community processes are concerned with upgrading communication and cooperation among helping agencies, with improving the decision-making process in determining choice of treatment, and with increasing alternatives available to persons in need of help.

Through support provided for studies of child and family mental health, investigators have been making progress in understanding and solving the problems encountered by many emotionally disturbed students. One project indicated that highly specialized techniques for dealing with specific disturbances in the classroom are largely ineffective, but that more general teaching techniques have a marked beneficial effect on disturbed and non-disturbed children alike; training materials for such approaches have now been developed. Another project has produced an assessment procedure that differentiates between organic and emotional causes of underachievement among adolescents.

Social research has focused on areas such as the unique problems of minority groups, and other population segments which require special consideration in the development of mental health resources. Success in helping unwed pregnant adolescent girls return to school after delivery was achieved through an innovative program which provides comprehensive medical, educational, and mental health services to girls who remain in their own homes during pregnancy.

By tracing the lifetime affiliative patterns of homeless men, investigators were able to distinguish those points at which the pattern for a skid-row population deviates from the presumably more "normal" patterns shown by a low-income control group. In general, differences appeared fairly early in adulthood - well before any substantial number began residence on skid-row. If the behavioral patterns of skid-row men begin early in life, programs designed to aid the homeless should focus on those men who have not yet taken up residence on skid-row. The low rehabilitation rates of programs servicing this population support the position suggested by the study.

d. Psychopharmacology

The use of drugs in the treatment of mental illness has increased markedly both in extent and effectiveness in the past 15 years. A new discipline and area of research known as psychopharmacology has been developed with the National Institute of Mental Health in both a leadership and major support role. This role involves stimulating and supporting basic and applied research in psychopharmacology by conducting collaborative clinical studies, including the evaluation of new drugs, facilitating collection and dissemination of scientific information, and investigating new methodology for use in psychopharmacology research.

A significant program directed at explaining the mechanisms by which drugs are able to influence mood and behavior has been undertaken. The results of this research will move drug development from the present primarily empirical approach to a more logical and directed basis in the future. For example, it is known that drugs act at specific receptor sites and the shape of the receptor site determines which drugs will cause an effect. By synthesizing a drug with the proper molecular structure it will fit the receptor site as a key fits a lock and thus cause the desired action. Thus, instead of having to use animal screening techniques to find compounds which will be similar to compounds already in use, we will be able to synthesize compounds directly which will have the desired action.

Much of the explosive increase in knowledge in the field of psychopharmacology has been recorded in a volume published this year jointly by the National Institute of Mental Health and the American College of Neuropsychopharmacology entitled, "Psychopharmacology: A Review of Progress." The information contained in this volume is almost entirely based on research undertaken in the past 15 years, much of it supported by the Institute.

To facilitate the utilization of research information in psychopharmacology, the Institute has established an International Reference Center for Information on Psychotropic Drugs in collaboration with the World Health Organization. This Center will coordinate the work of additional Regional and National Centers being established throughout the world by the WHO for the collection and dissemination of information on psychotropic drugs.

A major part of the Institute's program in psychopharmacology is directed toward establishing the most effective drugs for the treatment of particular mental illnesses. A group of Centers carrying on clinical drug evaluation has been supported through the psychopharmacology program. In 1968 over 50 drugs were evaluated in the treatment of schizophrenia, depression, psychoneurosis, alcoholism, and mental disorders of children and the aged. Many of the compounds were new while others represented known drugs being tried for new indications. Modern methods of evaluation utilizing optical scan rating forms and centrally located data processing facilities permitted rapid and detailed statistical analyses of these studies.

The entire procedure-known as the Standard Reporting System-has been developed keeping in mind not only the demands of good scientific method, but also the needs of investigators, the pharmaceutical industry and the regulatory agencies such as the Food and Drug Administration. Consultation with the above mentioned sectors was essential to the development of the System and continues now at the Institute-sponsored, semi-annual meeting of investigators, drug industry representatives and representative of the Food and Drug Administration and the Food and Drug Directorate of Canada. With continued cooperation, this method of drug evaluation may well become the accepted model for future drug research.

In continuing the search for the optimum matching of drugs and patients, a number of collaborative studies involving multiple hospitals or clinics have been undertaken under the direction of Institute staff. Early studies focused on the use of phenothiazine drugs in the treatment of acute schizophrenia. Building on the results of these studies, mathematical equations based on symptoms and ward behavior exhibited by patients prior to treatment have been developed to select the most promising drug for the particular patient. A collaborative study utilizing high dosage chlorpromazine treatment of chronic schizophrenia showed this form of treatment effective only in patients under 40 years of age and hospitalized less than 10 years. Another recently completed collaborative study characterized the types of depressed patients who responded best to two currently available therapeutic agents, chlorpromazine and imipramine. Other collaborative studies currently underway will determine the effectiveness of lithium in the treatment and prevention of mania and depression; compare social therapies in preventing the rehospitalization of schizophrenic patients; determine the most effective drug treatment for hyperkinetic children; and study the effects of group therapy on drug treatment of depressed outpatients.

Clearly, many American now use drugs as one way of coping with their problems. Recently much attention has been focused on the abuse of drugs, but little information and knowledge have been available on the nature and extent of legitimate drug use in the United States. As part of the Institute's psychopharmacology program, a series of studies characterizing legitimate psychotropic drug use has been undertaken. Data are being collected from the consumers of drugs, the prescribers of drugs, and the purveyors of drugs. Early results from these studies reveal that about 25 percent of the adult population have taken a psychotropic drug in the past year, and that about 50 percent of the adult population have taken a psychotropic agent during their lifetime. In contrast to reports of drug abuse, the vast majority of individuals legitimately receiving these agents use them in a conservative and constructive way. As more data from these studies become available, it will be possible to construct for the first time a comprehensive and integrated picture of psychotropic drug use in the United States.

e. Alcoholism

In view of the magnitude of the alcoholism problem and its staggering cost to the nation, additional information about the nature, causes, treatment, and prevention of alcoholism is urgently needed. Major grants have been made to six universities for the support of multi-disciplinary research programs in such areas as the drinking patterns and behavior of chronic alcoholics in an experimental setting, drinking problems among ghetto residents, the relationship between metabolic and behavioral changes in alcoholics, the effect of alcohol on the behavior and central nervous system of animals, and pharmacological studies to determine the physiopathology of alcohol dependence. The six centers now employ well over 130 scientific workers from a variety of disciplines, including psychiatry, biochemistry, physiology and sociology.

The continuing importance of physiological studies is reflected in the fact that over one-third of the research grants awarded in the past year were in this area. These included studies of the metabolism of alcohol and the production of fatty liver, and of the effects of alcohol on the circulatory system and on the brain. A new mode for the action of alcohol

as an addictive agent is suggested by recent work at Columbia University. This research shows that a metabolic by-support of alcohol may combine with a certain crucial chemical substance in the grain to produce a new substance which is similar to morphine-like compounds.

Chemical research is also being conducted to study the effect of alcohol on the stomach, and the genesis of anemia. An unusually well qualified research team is studying alcohol-induced liver diseases on many different levels, including the pathogenesis of cirrhoisis, the role of dietary factors in liver injury, the intestinal absorption of alcohol and modifications which take place in the gastric tissues. Another important project involves the evaluation of a variety of drugs used in clinical treatment of alcoholics. A project at the Massachusetts General Hospital has demonstrated that general hospitals can successfully provide assistance to alcoholics, both on an emergency basis and through follow-up care on an out-patient basis.

In an effort to increase the effectiveness of alcoholism prevention efforts, a project has been supported to identify the personal and social factors which distinguish between persons who are likely to become problem drinkers and those who are likely to retain moderate drinking patterns.

f. Suicide Prevention

Over 22,000 suicidal deaths are reported each year. Many experts believe that the actual number of suicides is double that figure and recent progress reports from studies supported by the National Institute of Mental Health support that conclusion. In addition, since it is estimated that there are eight suicide attempts for every suicide committed, there are perhaps as many as 400,000 people who will attempt suicide this year. One of the greatest costs in suicide is the trauma and mental suffering experienced by the surviving family and intimate friends. Suicide ranks third among causes of death in the 15-19 age group and among college students. Other high risk groups include divorced males, soldiers during peacetime, American Indians and the elderly.

There are over 100 suicide prevention programs in 29 States and the District of Columbia, of which 85 were started since 1966 when the Institute established its Center for Studies of Suicide Prevention. The Center has supported research in a number of strategic and vital areas in FY 1969. Studies completed and in progress are on the reporting practices of coroners and medical examiners for suicide, including reporting of suicides in special groups (e.g. Negroes), the effect of unemployment on suicide, suicide by drugs, suicide by auto accidents, and suicide by provoking homicide. A basic goal of the Center is to redefine and refine the statistics relating to suicide so that our country can face this serious public health problem more realistically in terms of its incidence and impact on the lives of our citizens.

Some grants are aimed at certain high-risk suicidal groups with the hope that more careful descriptions of such suicide-prone individuals will not only save their lives but also prevent illness in their close survivors. Initial results from a continuing study in the City of Chicago discloses that there are higher suicide rates among the underprivileged socioeconomic classes than was believed. In addition to examining the social dynamics of the suicide process, further study into the nature and extent of error in reporting statistics is an integral part of this study as well. The role of lay personnel as gate-keepers in detection and follow-up care is under scrutiny in view of the present and probably continuing shortages of professionally trained mental health personnel.

g. Crime and Delinquency

Anti-social conduct labeled crime and delinquency covers a wide rante of behavior from truancy and petty larceny to multiple homicide and political assassination. Its monetary cost to the Nation -- including expenses related to law enforcement, administration of justice, and correctional efforts, as well as the cost of damages inflicted by offenders -- has been estimated at more than $20 billion a year. Approximately 1.3 million offenders are under correctional supervision, with close to 30 percent of them in jails, prisons, and reformatories. Public expenditures for police, courts, and corrections - currently estimated at more than $4 billion annually - are borne primarily by taxpayers at the State and local level. The emotional and psychological costs of crime, which defy measurement in monetary terms, affect in numerous ways the lives of countless innocent people.

The Institute supports basic research on the nature and causes of crime and delinquency, and on the related area of individual violent behavior. The following are some of the more critical areas of program emphasis: (1) the development of more and better knowledge concerning the causes, nature, and scope of law-violating and related deviant behavior, especially violent behavior; (2) the development of new methods of educating juvenile offenders so that they can obtain regular employment after leaving corrective institutions; (3) development of increased utilization of a variety of community-based programs as alternatives to imprisonment and (4) more systematic research on issues pertaining to the juvenile courts, including statutes, procedures and practices.

To provide better indices of delinquency and more accurate knowledge about juvenile recidivism, one study is attempting to determine the incidence, frequency, and type of delinquent acts committed by a group of 10,000 boys in a large metropolitan area. Another study regarding the actual nature and extent of crime and delinquency is designed to determine the basic background factors and psychosocial correlates of classroom behavior and juvenile delinquency.

A project which is referred to in the President's Crime Commission Report as one of the most promising approaches to the improvement of institutional service programs has sought to develop a low-cost self-instructional program of education and vocational training for youthful offenders. Nearly 1000 inmates have received vocational and remedial training in this program since its inception in 1962.

The majority have accepted employment in the fields for which they were trained, and 16 have entered college. Through the use of self-instructional materials, the educational level of some participants has been raised in one year from 7th and 8th grade levels to high school or better. Moreover, in the same period, functional illiterates have achieved 6th and 8th grade educational levels. For inmates enrolled in the pilot project, the institution's re-admission rate after a year's discharge was substantially reduced.

A number of programs have also been supported which are designed to attack the problem of delinquency at the community level, including a project to determine the feasibility of intensive community treatment as an alternative to incarceration. This project clearly demonstrated that community treatment was not only more effective, in terms of parole success rates and before-and-after results on psychological tests, but also resulted in financial savings to the community.

In another project which seeks to evaluate the effectiveness of a citizen volunteer probation program for misdemeanant offenders, professional as well as non-professional volunteers work in a one-to-one counseling relationship with the probationers. Preliminary results suggest that the volunteer probation services have been quite effective. It has demonstrated that citizen-volunteer probation programs are feasible for communities which cannot afford to maintain full-time, paid professional employees. Moreover, it has also shown that such programs can provide effective solutions to the problems of overcrowding and understaffing which confront all probation departments. This project has stimulated similar programs in 58 other municipal courts across the nation.

The development of knowledge concerning the interactive process between the law and mental health is important for the improved handling and disposition of mentally disordered offenders. The objective of one new study is to develop the criteria for the evaluation of patients referred by the courts on the question of pre-trial competency. Since the law on this particular subject is basically similar throughout the United States, the resulting mental health criteria and the diagnostic procedures are expected to be widely applicable.

h. Narcotic Addiction and Drug Abuse

Grant-supported research in narcotic addiction ranges from examination of the basic neurophysiology of drug action to studies of the personal and social characteristics of drug users within the community. Several studies of the behavior of opiate-addicted animals are providing insight into the nature of addiction. For example, research is being conducted on rats to identify and evaluate factors which influence opiate-directed behavior and shows that inherent physiological characteristics, which are seemingly genetically transmitted, affect the animal's proneness to addiction. Other researchers are studying animal addiction in such a way as to parallel the situation of the human addict who takes his drugs intravenously in large doses.

Research is also being conducted on the extent of the narcotic addiction problem in New York City, where investigators are assisting the Health Department in establishing a register which is intended to give a reliable count of narcotic addicts. It has been estimated that over one-half of the narcotic addicts in the United States live in New York. There is great potential value in the use of such a register for studying how the incidence and prevalence of narcotic addiction varies with the demography and other characteristics of the individuals involved.

The wider use of marihuana, particularly by large numbers of high school and college youth, is causing increasing public concern. Basic research on marihuana and related compounds has been severely hampered in the past by lack of legitimate sources of a standarized product. An NIMH grantee synthesized tetrahydracannibinol (or THC), one of the active substances found in marihuana, which has permitted more systematic investigations of its nature and provided adequate quantities of this compound for research purposes. A special program has been developed to secure an adequate supply of both synthetic and natural materials and to develop better analytical methods.

Current research includes studies of the personality and social characteristics of college drug users compared to non-users, and the effects of heavy use of marihuana in performing psychological tests. A study of 200 urban marihuana users focuses on the initiation of the individual into marihuana use, the motivation for continued use of the drug, the degree to which users of marihuana form an actual or potential community, and the relationship between use of marihuana and the proneness to use other drugs.

Hallucinogenic drug research is being conducted on the effect of LSD on the nervous system of fetal animals and the possible association between the use of LSD and chromosome damage.

The abuse of the amphetamines and barbiturates includes inappropriate usage of prescribed medication, in addition to clearly illegal use of drugs obtained illicitly. Very large quantities of these drugs are manufactured, and a significant portion of the production finds its way into illegal channels. It is difficult to estimate the extent to which these types of drugs are abused. Preliminary data indicates that college educated persons and young adults are more likely than others to use them, and that they tend to be used for coping with specific psychological crises rather than becoming a way of life.

It is important to investigate psychological drug dependence in the laboratory before new compounds are made available for human use. With this in mind, a grant has been awarded to study the physical and psychological dependence on amphetamines and barbiturates in monkeys. The basic mechanisms of physical dependence and the relationship of physical dependence and tolerance to psychological dependence will be studied. Another investigator plans to record and analyze in cats the psychological consequences of chronic amphetamine intoxication, which in humans is often associated with psychosis. Methods will be developed for the rapid detection of such drugs in biological fluids, utilizing thin layer and gas chromatography.

In 1970 the Institute will intensify research on the use of marihuana and the psychotropic drugs--particularly the amphetamines. New studies will include microdetection, pharmacological profile, and research on the effects of both chronic and acute use upon learning, memory, coordination, and other perceptual and cognitive processes.

i. Metropolitan Problems

By the year 2,000, Americans living in large cities will exceed the total 1960 population of the United States. This national movement toward urbanization has significant implications for understanding the relationship between man and his environment and for planning adequate mental health services, based on that understanding.

The Institute supports research grants concerned with metropolitan problems in two program areas: The Urban Ecology Program supports studies of the impact on human behavior of such factors as the physical environment, technological development, institutional change, and social planning. The Urban Problems Program concerns itself with aspects of the "urban crisis," such as racism, mass violence, crowding, the impact of the communications media on the social climate of the city, and the process of urbanization.

In order to evaluate the wide-spread belief that high population density leads to mental illness, NIMH is supporting research in the human response to patterns of urban density. The investigators will explore the response to different types of physical and social density in the urban setting.

j. Epidemiology

Epidemiology, a public health approach to mental illness rather than a clinical approach to the individual patient, is concerned with research dealing with populations defined by a community or social grouping. Current research interests include developing new tools and methods of investigation, methods of studying the distribution of genetic factors in populations; methods of estimating the level of mental health of large numbers of people; classification of types and degrees of social deviance and mental illness; and methods of collecting and analyzing population data, including computer techniques.

The Institute is also supporting the studies of distribution of mental and behavioral disorders in a population, and tests of epidemiologic or ecologic hypotheses, such as the relationship of community disorganization to incidence of illness and the correlation between physical illness and occurrence of mental illness. The goal of the public health program in mental health areas is to reduce and prevent the incidence of mental illness in a community. Epidemiologic techniques are the means by which we evaluate the effectiveness of such programs.

k. Mental Health Services

The Institute supports projects aimed at increasing the effectiveness of existing mental health services programs; developing new methods of planning mental health services; demonstrating new methods of organization, administration, and financing of services; and evaluating policies and procedures for coordinating mental health services with other human services programs.

Current projects include developing more effective methods of integrating a total human services program for a special population, and evaluating the effectiveness of an individual to work in both a Community Mental Health Center and a neighborhood multi-purpose center. A recently approved project will demonstrate the integration of mental health services for children into a family-oriented, community-based, comprehensive pediatric health center. This project serves a disadvantaged inner-city area of 24,000 people. It is directed by a neighborhood board of residents, assisted by the facilities of a medical school, and receives financial assistance from several Federal agencies.

l. General Research Support Grants

The Institute also supports research institutions by providing a proportionate share for General Research Support Grants, which are administered by the National Institutes of Health. An increase of $108,000 is requested for this program in 1970.

2. Hospital Improvement Program

	1969 Estimate	1970 Estimate	Increase or Decrease
Hospital Improvement Grants.....	$10,610,000	$8,000,000	-$2,610,000

The Hospital Improvement Program is directed toward improving the treatment, care, and rehabilitation of the mentally ill in the 300 eligible State-supported mental hospitals throughout the Nation. It is specifically focused on the use of current knowledge in demonstrating improved services for patients. Programs are planned in response to the high priority needs of the institution and directed to the long-range goals of improving patient care throughout the entire institution.

At the end of June 1968, a total of 183 Hospital Improvement Program grants had been awarded to 166 of the 300 eligible state mental hospitals. In all states except Utah, Mississippi, and Maine, at least one state hospital has applied and been funded. There are still some 70 state mental hospitals with patient populations ranging from 1,000 to over 10,000 that have not yet received assistance. There are over 80 state mental hospitals with a daily maintenance rate below the national average of $8.84, some as low as $3.99, that have not yet received assistance.

The program has had a significant impact on improving patient care in participating institutions, including: the introduction of effective treatment programs--sometimes the first such demonstration in the state--for seriously disturbed children previously consigned to years or a lifetime of custodial care; outstanding demonstrations of care and return to the community of geriatric patients; effective programs for alcoholics; and demonstration of new methods of organization and delivery of services.

These 183 Hospital Improvement Programs have involved a total of 143,363 patients. A total of 98,954 patients were discharged from these projects, 78,000 of whom can be described as significantly improved. Of these, nearly all were returned either to their own homes, nursing homes, boarding homes, or some other mode of semi-independent living within the community.

Specific projects include those directed towards dealing with the problem of patients who remain for long periods of time in hospital back wards. For example, in one New England hospital a patient hospitalized for 45 years was placed in a HIP program for chronic patients. Over a two-year period, she gradually began to participate in community preparation discussion groups, worked in the program's sheltered workshop, and was finally placed in a family care program where at last report she was functioning as member of the community. Using the concept of involving patients actively with other patients to gain interaction and to create meaningful relations with others, a Mid-Western hospital has developed a recreational program which has provided patients with the first organized activities in the hospital's history. In doing so it is reported that the program has evolved into "the backbone of the treatment program for the hospital." As a result patients once imprisoned in the facility virtually for life are now being treated and rehabilitated in a time span averaging 4 1/2 months.

New ways of delivering services through modification of clinical or administrative organization structures are exemplified by one hospital in the South which emphasizes development of volunteer resources from the community to work with individual patients who need no further psychiatric treatment. This hospital, with the aid of these volunteers, places patients in community nursing homes, boarding situations, and other community residential facilities.

Distribution of Hospital Improvement Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Noncompeting	104	$8,695,000	78	$6,786,000	-26	-$1,909,000
Competing	23	1,915,000	14	1,214,000	-9	-701,000
Total	127	10,610,000	92	8,000,000	-35	-2,610,000

3. Early Child Care Demonstration Grants

	1969 Estimate	1970 Estimate	Increase or Decrease
Early Child Care Demonstration Grants	------	$1,000,000	+$1,000,000

This is a new program to demonstrate and evaluate methods of early child care and education that are designed to foster healthy social and emotional development and to stimulate intellectual development. The program would encourage work with diverse groups, with an emphasis on low socioeconomic families that suffer a higher proportion of mental health and learning problems.

Mental illness and the social and psychological problems posed by impaired intellectual functioning, learning failure, low occupational achievement, and unemployment affect every level of our society, but are particularly prevalent in the disadvantaged, low socioeconomic portion of the population.

The following generalizations, supported by several studies, suggest the need for the development, demonstration and evaluation of improved methods of early child care and early education: 1) low socioeconomic status children receive less adequate maternal care and less intellectual stimulation than more privileged children; 2) the quantity and quality of maternal care and of intellectual stimulation received by a child during infancy can significantly influence the rate and level of intellectual development; and 3) intervention through a program of home tutoring for deprived children can result in the achievement of average levels of intelligence at three years of age, while their peers, without tutoring, receive scores that are far below average at that age.

These findings point to the need for an intensive demonstration program, including careful evaluation of techniques and alternatives methodologies to improve early, healthy child development and to prevent mental illness and the intellectual disability stemming from cultural impoverishment.

The program will include the development, demonstration, and evaluation of day-care programs, family day-care programs, home tutoring, and parent training in child care and child education.

B. Direct Operations

1. Intramural Research

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Intramural Research:						
Personnel compensation and benefits	485	$6,237,000	545	$6,982,000	+60	+$745,000
Other expenses	---	11,102,000	---	11,277,000	---	+175,000
Total	485	17,339,000	545	18,259,000	+60	+920,000

The aim of the Intramural Research program is to contribute to the greater understanding of biological structures and processes, and the psychosocial forces which together shape and determine both normal and abnormal behavior; to develop effective therapies for mental illness; and to define the nature and ordering of those processes which contribute to the realization of man's creative potential. In pursuit of these goals NIMH investigators conduct a broad program of basic research in psychology, neurophysiology, neuroendocrinology, chemistry, pharmacology, genetics and sociology.

Findings from the studies tend to support the theory that emotional life and behavior (including intellectual functioning, motivation and communication with other human beings) are affected not only by inherited capacity and biological integrity, but by important developmental processes as well; and that these processes are extensively influenced by factors in the physical and social environments. Efforts concerned with evaluating the significance and relative weights of all the variables involved in these complex problems occupy a major portion of the scientific manpower and resources available to the program.

New knowledge gained covers a broad spectrum. Brain mechanisms underlying memory and learning, and phenomena relating to vision, touch and smell have been elucidated. Anatomical systems involved in Parkinson's disease have been identified with a view to more accurate indications for surgical intervention. Studies of the thyroid gland have produced findings which have a direct bearing on the problem of cretinism. Knowledge that the pineal gland is involved in alterations in ovarian function constitutes a major contribution to the study of biological rhythms.

Evidence has been compiled which appears to refute the theory of a metabolic defect in schizophrenia; progress has also been made in delineating connections between individual forms of schizophrenic illness and family patterns of interaction. Major steps have been taken in defining the principal distinctive characteristics of the pre-schizophrenic's personality and life patterns, knowledge of which will have major public health and prophylactic implications. Comparisons between normal sleep patterns and those of schizophrenics and other psychotic patients have revealed important abnormalities in the latter. Positive correlations have been found between behavioral manifestations of depression and increased levels of urinary 17-hydroxycorticosteriods on the one hand and generally decreased levels of catecholamines on the other. This finding is important to the prevention of suicide which is the fourth most frequent cause of death in the productive years between 18 and 45.

A longitudinal study of early family formation is providing new information about the development of the healthy, socially effective personality and contributing evidence to guide public health workers in developing measures aimed at preventing emotional disorders in childhood. Comparative studies of child-rearing practices in other cultures, as well as the incidence and treatment of psychiatric illnesses in those cultures are expected to contribute to the resolution of the age-old heredity vs. environment dilemma.

In special laboratories at St. Elizabeths Hospital, clinical and laboratory research is conducted on neurochemical and metabolic factors associated with alcoholism; studies are also being made of the effects of alcohol ingestion on water and electrolyte balance in alcoholics. These projects should aid in the treatment of alcohol withdrawal symptoms and improve our understanding of basic causes of alcoholism. During the past year new studies have been initiated in an effort to achieve a better understanding of the physiological mode of action of alcohol. It has been shown that adrenocortical function may be altered in experimental animals and in man by the administration of alcohol. Acute administration of alcohol increases adrenocortical activity in experimental animals and clinical investigations in man suggests that chronic alcohol ingestion may be associated with adrenocortical insufficiency.

Another specialized intramural research program is performed at the Addiction Research Center at Lexington, Kentucky. One mission of this Center is to evaluate new drugs for their abuse potential. This includes screening compounds being investigated for their therapeutic usefulness as well as new chemicals as they are synthesized. The development of new and specific procedures for evaluating drugs which can produce dependence is primary concern. New and improved methods of evaluation have been developed for amphetamine-type, LSD-type, and morphine-type agents.

The Center did the basic work in producing the narcotic antagonist, cyclazocine, which is now being tested as a treatment for certain kinds of addicts. Additional compounds are being studied in the hope that a better, longer acting antagonist to morphine and heroin will be found. Very basic research is continuing at the molecular level on the nature of the effect of morphine upon the brain.

An increase of 12 positions and $134,000 in 1970 will permit utilization of space made available by the recent completion and occupancy of the NIMH-NINDS Basic Research Building for comparative studies of sleep in man and animal in relation to psychiatric, psychological and somatic disorders; for pursuit of important new leads in the neurochemistry of mental illness; and for research in multiple drug reactions in neuropsychiatric disorders.

Included in this activity are 48 positions and $689,000 proposed as a transfer from the "St. Elizabeths Hospital" appropriation to the "Mental Health" appropriation to consolidate funding for intramural research activities. There is also a built-in increase of $97,000 to meet increased costs due to within-grade increases.

2. Planning, Development and Administration

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	178	$2,482,000	195	$2,597,000	+17	+$115,000
Other expenses	---	2,588,000	---	3,178,000	---	+590,000
Total	178	5,070,000	195	5,775,000	+17	+705,000

a. Extramural Research Programs

The Division of Extramural Research Programs plans and administers research grant programs in the behavioral sciences, clinical research, applied research, epidemiologic studies, and psychopharmacology. The Center for Studies of Schizophrenia and the Center for Studies of Social Problems are also located in the Division; the Center for Studies of Schizophrenia serves as a coordinating unit, analyzing current research to avoid unjustified duplication of effort and to stimulate and encourage promising new avenues of scientific investigation. The Center for Studies of Social Problems serves as focal point, and coordinates Institute activities concerned with the realtionships between social factors and mental health.

The Center for Epidemiologic Studies conducts research and supports research, training and field demonstrations in mental health epidemiology. A major component of the Center is an epidemiologic field station which provides the Institute with access to community data for use in program planning and evaluation. It also provides a field location for developing and testing epidemiological tools and conducting longitudinal studies. To date the Field Station has launched a number of projects, including the following: (a) The extent and distribution of psychiatric care; (b) A study correlating behavioral manifestations with environmental conditions in a specific area; (c) Social functioning and self-conception of mentally and physically disabled persons; (d) A re-appraisal of the effects of an intervention program in a classroom setting on preventing delinquent and maladjusted behavior of youth; (e) A social psychological study of the Kansas City Riot of April 1968.

A built-in increase of $18,000 is requested for this Division to meet the net cost of within-grade increases and reclassifications.

b. Special Mental Health Programs

The Division of Special Mental Health Programs administers programs directed toward areas of special significance such as alcoholism, suicide, crime and delinquency, metropolitan problems, and the mental health of children. Each is an area of critical importance which benefits from a coordinated, multidisciplinary approach, utilizing research grants and contracts to gain new knowledge and training grants and fellowships to produce specialized manpower. Demonstrations of innovative service programs in each of these problem areas are also supported. This approach has led to the establishment, within the Division, of five highly responsive organizations which coordinate and focus Institute resources on specific problem areas:

(1) National Center for Prevention and Control of Alcoholism

The National Center for Prevention and Control of Alcoholism provides leadership in the planning and development of national programs through stimulation of research, training, educational, and service programs. Efforts are focused on developing a better understanding of the course, natural history, and eventual cure of alcoholism through studies of the interaction of complex biological, psychological and social factors.

It is apparent that attitudes about alcoholism are shifting rapidly toward the view that the alcoholic is a sick person, and that punitive measures taken against chronic alcoholics have neither reduced their number nor dealt with root causes of the problem. As communities become informed of this new source of grant support for local programs to deal scientifically and humanely with alcoholism, staff of this center will be called upon to provide technical assistance in the development of high quality programs which make efficient use of latest research findings, therapies, and manpower resources.

In relation to the strengthening of community services for alcoholics, a Workshop on Community Services for Alcoholics will be held in February 1969. The focus in this Workshop will be on the character of such community services and on issues in their development. Experts from all parts of the country will participate in this conference and the proceedings should provide badly-needed source material for agencies wishing to develop comprehensive alcoholism services.

During the past year there has been increasing concern in virtually all parts of the country regarding what kinds of alternatives can be found for the present means of handling chronic alcoholic offenders. An important publication in this regard called, "Alternatives to Arrest" has been distributed throughout the country by the National Center for Prevention and Control of Alcoholism. During the year a contract was awarded to Columbia University Law School for the analysis of legal issues in the area of alcoholism. This research covers such matters as model statutes, court procedures, civil commitment, etc. The final report of this important project will be received by NIMH during the current year.

In its role as a major Federal resource in relation to alcoholism and alcohol problems, the Center has provided substantial assistance to the President's Commission on Violence in relation to the possible role of alcohol in various types of criminal and other anti-social behavior. Similarly, staff members have worked repeatedly with the Highway Safety Administration of the Department of Transportation on the problem of drinking and driving. NIMH collaborated with this agency in the development of its important report on alcohol and highway safety. The two agencies are also working together on preventive and educational programs.

(2) Center for Studies of Suicide Prevention

In response to a growing national concern over the serious public health problems of suicide, attempted suicides, and other expressions of self-destructive behavior the Institute established in 1966 the Center for Studies of Suicide Prevention. One of the primary goals of the Center is to stimulate and catalyze suicide prevention efforts throughout the country. The long-range objective is to develop effective, practical, and acceptable programs of primary prevention. Another immediate goal is to define and describe a variety of models for identification, intervention, and treatment of suicidal persons, especially as these models come to light in suicide prevention programs, crises services, psychiatric hospitals, community mental health centers, or other health and welfare agencies.

In cooperation with the National Clearinghouse for Mental Health Information, the Center publishes quarterly the Bulletin of Suicidology. An important feature of the Bulletin will be an annual listing of Suicide Prevention Centers throughout

the country. An expanded use of film, television, and radio is planned, and a training phonograph record has been made which will present the content of several genuine suicide telephone calls with discussions by professionals. The first record of the series is now ready for distribution.

(3) Center for Crime and Delinquency

The activities of the Center for Studies of Crime and Delinquency are directed toward development of the following programs: basic research on the nature and causes of crime and delinquency; the development and better coordination of community resources directed at delinquency prevention and control; the increasing utilization of community-based treatment and rehabilitative programs as suitable alternatives to incarceration, and the development of more effective programs for offenders in institutions. Center activities also include the development of newer models for the training of professional and non-professional mental health, correctional, and related personnel; the provision of more effective services and the improvement of facilities for mentally disordered offenders, as well as research into related issues of law and mental health; and the stimulation of research in the critical area of individual violent behavior.

The Center has continued to work closely in an advisory capacity with the Joint Commission on Correctional Manpower and Training and has collaborated with the Department of Housing and Urban Development to plan a crime and delinquency prevention component in the Model Cities Program. Center staff participated with various Federal agencies in reference to the "Juvenile Delinquency Prevention and Control Act of 1968" and the "Omnibus Crime Control Act of 1968."

(4) Center for Studies of Child & Family Mental Health

The Institute coordinates its many efforts on behalf of the mental health of children and families through the Center for Child and Family Mental Health. Research, training, and service activities are focused upon the periods of greatest vulnerability and opportunity as the child grows and develops. Increasing attention is being given to the preparation of young people for child rearing by encouraging the application of new behavioral science knowledge in educational programs.

Next to the family, school is the most important institution affecting the lives of children and is of special significance for the development of preventive mental health programs. The NIMH is involved in developing more effective techniques of consultation to school teachers, counselors and administrators on normal development and special problems of school age children. Since there will continue to be a shortage of professionals to treat all the mental health problems and because teachers and other professionals are working every day with children, it is clear that consultation will be a major feature of an efficient and effective mental health program for children.

(5) Center for Metropolitan Problems

As part of its effort to focus attention on mental health problems of national importance the Institute established the Center for Metropolitan Problems which coordinates activities concerned with the impact of urban development on human well-being. To fulfill its mission, the Center employs research grants and contracts, training grants, fellowships and consultations with private, State and local agencies. Through its contract research program, the Center has supported a study of urban, social, and political processes from the perspective of ethnicity, a study of racism as a historical and social science concept, and a project to identify problems confronted by the inner-city Negro in working for the "white establishment."

It is highly important that mental health considerations penetrate every aspect of urban development, physical and social, and that the phenomenology of urban life be studied as a basis for intelligent mental health planning. The complex nature of the urban condition and the bewildering number of relevant social programs make

it quite important to maintain inter-agency communication.

During 1970, support will continue toward an understanding of the nature of the inner city ghetto, the psychodynamics of mass violence, and the impact of civil disorder on the entire urban condition.

Summary of Increases

In addition to a built-in increase of $16,000 to cover the net cost of within-grade advances, the following program increases are also requested for Special Mental Health Programs:

1. Ten positions and $102,000 - - to provide staff to initiate the Early Child Care Demonstration program (previously discussed under "Grants"). This staff will be used to develop guidelines for the program, encourage the development of program proposals, assist in the review and evaluation of grant applications and provide professional and technical assistance to grantees.

2. Seven positions and $69,000 - - to initiate the administration of a program to provide new community facilities for treating and rehabilitating chronic alcoholics under the Alcoholic Rehabilitation Act of 1968. (Justification of grant funds for alcoholism treatment and prevention appears in Activity 3 "Support of State and Community Programs".)

3. $500,000 - - for special contract studies. Although a very large majority of research supported by this Institute is supported under grants to independent scientists working in subject areas of their own choice, some promising fields of research are not represented by sufficient number of investigators to achieve an acceptable rate of progress through the normal grant procedures. In these cases research contracts are negotiated and awarded to insure that time is not lost in filling critical information gaps. The increase will support research in the following areas: (1) the basic mechanism of nerve cell functions; the integrative process within the central nervous system and the chemical control thereof, including clinical investigation of the mode of action of drugs on mood and behavior in man; (2) research into intensive subjective phenomena, particularly drug-induced; (3) demonstration of the application of behavior analysis techniques in the treatment of behavior disorders, with special reference to the mentally handicapped child and to juvenile delinquency and (4) study of normal and deviant psychosexual development including demonstrations of treatment techniques.

II. Manpower Development

Progress in mental health ultimately depends upon the availability of adequately trained manpower who can translate research developments into tangible improvements in the treatment of mental illness. The programs of the National Institute of Mental Health have provided support for training for the four core mental health disciplines (psychiatry, psychology, psychiatric nursing, and social work) at the undergraduate, graduate, and postgraduate level, both for general professional preparation and for training in special areas.

It has become apparent that a wide array of persons must be enlisted to deal with mental health problems. An increasing number of professional groups have become involved, through training, in the mental health effort. Groups such as the clergy, lawyers, occupational therapists, music therapists, specialized teachers, and research scientists in the biological and social sciences are making contributions. Re-evaluation of traditional roles and functions, and innovative training approaches are leading to the development of new types of mental health personnel illustrated by the lay counselor, the aftercare worker, the mental health technician, or the social therapist.

The development of new types of mental health personnel, who may have less than a college or even high school education, will not only help to relieve manpower shortages, but will also serve to develop new career patterns and jobs for persons seeking to enter or return to the labor force. Regular and experimental training programs are developing new means of recruiting and training members of minority groups at all levels of professional development.

A. Grants

1. Training Grants

	1969 Estimate	1970 Estimate	Increase or Decrease
Training Grants.....	$109,046,000	$112,500,000	+$3,454,000

a. Graduate Program

The graduate training grant program includes the training of clinicians in the disciplines of psychiatry, psychology, social work, psychiatric nursing; the general practitioner program; and training for careers in research. The program provides direct support to public and private nonprofit institutions to help defray teaching costs and to make financial assistance available to trainees. Participating in the program are almost all departments of psychiatry in schools of medicine and osteopathy in the United States, most major graduate schools of social work, public health, nursing, and graduate departments of psychology. Many of the Nation's mental hospitals, collegiate schools of nursing, child guidance clinics, research centers, nonprofit psychiatric treatment centers and institutions for the mentally retarded also participate.

Graduate psychiatry training - In the past decade, the role and function of the psychiatrist has expanded due to new trends in mental health programs, primarily away from custodial care, and toward the closer interrelation of mental health programs with community health services. Hospitals are providing more inpatient and outpatient services for persons who seek help on a voluntary basis, and a closer relationship is growing between the mental hospital and the community. Support is provided to medical schools, hospitals, and clinics for residency training in psychiatry, including child psychiatry; and for training in special areas such as community and forensic psychiatry, crime and delinquency, alcoholism, and geriatric psychiatry.

Behavioral, Biological, and Social Sciences - Support is currently being provided to virtually all university departments of Psychology for support of doctoral and postdoctoral programs. While broadly based, this clinical program is currently attempting to close the critical gaps of unmet training needs, particularly in underdeveloped regions with shortages of scientific and professional manpower.

Support is also provided for training of biological and social scientists for research in mental health including such specialized fields as sociology, economics, political sciences, biology, and anthropology.

Psychiatric social work training - This program supports training in the field of social work to augment the supply of social workers trained in the mental health disciplines. The demand for trained social workers in such areas as group services, community organization and planning, administration, and research have been increased by the recent anti-poverty programs, the expansion of health and medical care services, and the increase in the number of community mental health centers. Examples of current projects include the training of indigenous sub-professionals to assist the professionals in the centers and elsewhere to more effectively communicate with and treat patients in a range of sub-cultural, environmental situations; training additional non-professionals through under-graduate and community colleges; and increasing the field placement of trainees in community mental health centers or settings relevant to comprehensive services. These and other current projects specifically designed to augment the social work manpower pool by introducing new and revised training methods into social work education will be continued in 1970.

Psychiatric nursing training - In nursing, current programmatic emphasis is placed on: (1) new approaches and innovative efforts consistent with community mental health nursing needs of the times; (2) short-term training to increase effectiveness and improve utilization of existing manpower; (3) integrative teaching of mental health and behavioral science content in graduate programs of nursing other than psychiatric-mental health; (4) collaborative efforts for delineation of training needs of professional and nonprofessional personnel functioning in community mental health services; and (5) education for consultation in mental health.

In 1970, training at the graduate level will continue to focus on the preparation of individuals for responsible positions in nursing education in universities and other educational institutions, in service agencies (community mental health centers, hospitals, and other health centers, etc.), and for the expert clinical nursing care of patients.

General practitioner program - The general practitioner program will continue to provide stipends for nonpsychiatric physicians who need short-term training in psychiatric principles in order to improve the conduct of their medical practice. In addition, the program provides support for general practitioners to be trained as psychiatrists and to engage in psychiatric practice.

b. Undergraduate Program

The support of undergraduate training programs is provided on a more modest scale but is critical to the continued development of more advanced training, especially in psychiatry and in psychiatric nursing. In psychiatry, the undergraduate program provides faculty support in order to introduce the principles of psychiatry into the curriculum of the medical student early in his education. In this way he is able to integrate this teaching into his general medical education. This program has not only enhanced the quality of medical education and practice, but has also increased the number of medical school graduates influenced to enter psychiatry as a specialty. The growth of the human behavior programs in psychiatry also characterizes a growing trend toward injecting, early in the medical student's education, an appreciation of the contribution of the behavioral sciences. The undergraduate support program in nursing is intended to increase the number of graduate nurses continuing their education in the mental health field. In addition, these programs provide knowledge of the mental health aspects of nursing care to the general nurse practitioner.

c. Experimental and Special Training

In view of the growing use and demand for community mental health services, experimental and special training projects are of increasing importance. The projects represent the Institute's principal effort in planning, administering, and coordinating a national program for the exploration and development of innovative training methods and training of new mental health personnel.

It is anticipated that the development of comprehensive community mental health centers will not only be associated with demands for additional personnel but will also prompt a reconsideration of training methods for traditional mental health personnel and studies of training models for new personnel. Models are currently being formulated and tested to produce effective personnel, many of whom will be subprofessionals. A major programmatic effort will continue to be directed toward the development and assessment of new model training programs in Junior Colleges to educate new types of mental health workers.

Plans have been developed to establish programs to train a variety of mental health workers in four-year baccalaureate programs. An untapped mental health manpower pool consists of those college graduates who major in the social sciences,

where the emphasis in undergraduate training is on preparation for graduate study rather than employment after receiving a baccalaureate degree. Many of these students who are not interested in subsequent graduate study are being attracted by a mental health training program to prepare them for employment with opportunities for advancement. In addition, such programs attract graduates of junior college programs for mental health workers who wish to receive further training after their associate degree training.

Another program area being supported is the training of personnel to facilitate the development of social competency in very young children with an emphasis on working with families in poverty areas. Such personnel will be prepared to work with very young children and their parents through day care centers, parent child centers, nursery schools, etc. Models will be developed for the training of administrators, trainers, supervisors, consultants, and clinicians.

d. Continuing Education

This program is intended to improve and increase the skills of mental health specialists so that they can stay current with the most recent advances in methods and technology. In addition, the program assists training institutions by increasing their capacity to make established mental health personnel more effective and supports continuing education courses for general practitioners.

During 1970, priority will continue to be placed upon continuing education program planning, instead of support of isolated courses and workshops, and upon greater collaboration between universities and service institutions. Training centers will be encouraged to collaborate closely with State and community mental health services in their area. State departments of mental health and local service institutions will be encouraged to plan systematic continuing education programs for their own staffs and other persons in their jurisdictions.

e. Alcoholism

On a long-range basis, the most important means of overcoming the neglect of alcoholism by most professions and agencies is through the development of training programs in medical schools, schools of public health, schools of nursing, psychology departments and schools of social work. The past year has seen some major initial steps in this direction.

A program has been initiated in Boston to provide a year of comprehensive leadership training to personnel in medicine, psychiatry, psychology, nursing and social work. This is the first program of its kind in the country and over the years soon will begin to produce a cadre of persons equipped to take on leadership positions in various treatment agencies.

Programs recently approved at the Wilmar State Hospital in Minnesota and at the University of North Dakota will train alcoholism counselors to operate within established agencies of State and local government to provide guidance to the alcoholic and his family.

f. Suicide

The Institute's Center for Suicide Prevention has implemented training programs related to suicide, attempted suicide, and relevant emergency or crisis help. Educational activities directed to professional groups and the public have been launched as well as conferences on suicide prevention and crisis intervention aimed at the major group health plans and at college administrators. Proposed and present training efforts involve the training of health educators, clergy, physicians, pharmacists, lawyers and lay people with demonstrated civic interests so that these key groups may be reached and helped to interpret their role in

an emergency-suicidal situation.

The lack of trained mental health personnel, particularly in rural areas, creates a serious problem in suicide prevention as in all other areas of mental health. One training project will attempt to increase the skill of nurses as crisis interviewers in rural New England. Included in a continuing education project will be weekly opportunity for discussion of cases and individual counseling guidance. The education program includes psychopathology, interpersonal relationships and the effect of socio-cultural influence.

g. Drug Abuse

Although drug abuse continues to be a troublesome and growing problem, the number of professionals trained to work with drug abusers is small. With the increased importance of newer patterns of drug abuse, it is essential that professional staff members of community mental hygiene clinics and other facilities be equipped to handle these problems. If, as is desirable, drug abuse treatment is to be handled on the local community level, there is an especially strong need for providing training programs for local treatment personnel. NIMH is in a particularly important position to provide national leadership in encouraging the development of such programs. While facilities capable of providing treatment are limited in number, it is important to encourage as many of these facilities as possible to provide the needed training.

At present, the Institute is supporting a training program at Boston State Hospital, which is designed to train social workers and nurses in the treatment of drug addicts in a clinical and community program. It is hoped that such efforts will proliferate and eventually be a formal part of the curriculum of a large number of schools of social work and nursing. By familiarizing such groups with this specialized area of treatment, much of the stigma of addiction will also be reduced, improving the chances of addicts to receive better quality treatment in their local community.

h. Hospital Staff Development

The difficulties encountered in securing and retaining adequately trained mental health personnel in State mental hospitals has long been recognized. The Hospital Staff Development Program is directed toward aleviating these difficulties by providing a source of funds for some 300 eligible State-supported mental hospitals to initiate or expand new training programs designed to improve the quality of patient treatment by upgrading the skills of hospital personnel.

The program is focused on supporting training programs designed especially for psychiatric aides and attendents - the area of greatest immediate need for training. This emphasis is based upon three obvious conditions: aide and attendant personnel exhibit in general the lowest level of training among the personnel complement of the mental hospitals, the least amount of job satisfaction and the greatest staff turnover. At the same time, they generally have the most frequent contact with patients.

Of the 300 eligible hospitals, 200 have received staff development grants. There are currently 196 active projects being supported under the auspices of this program. It is estimated that over 41,000 persons have received training to date.

Mental health personnel are taught basic nursing skills, dynamics of human behavior, psychopathology, patient-staff relationships, and communication skills. Increased attention is being given to efforts designed to encourage aides, attendents, and nurses to participate actively as therapeutic agents. Grantees report observable impact upon staff morale, interest and enthusiasm on the part of trainees and project staff with resulting improvement in the quality of patient care.

Much effort directed toward basic training of aides and attendants is becoming more stabilized, and some hospitals are broadening their programs to include other categories of personnel. This is exemplified by a New England hospital which has extended its staff development program to include registered nurses, music therapists, occupational therapists, clinical psychologists, and psychiatric residents. One southern hospital has mounted a program specifically designed to train several different categories of personnel to work as members of interdisciplinary teams on geographic units.

Distribution of Training Grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Noncompeting continuations	1,490	$82,850,000	1,557	$88,847,000	+67	+$5,997,000
Competing renewals	459	21,705,000	385	20,577,000	-74	-1,128,000
Supplementals	(92)	575,000	(99)	440,000	(+7)	-135,000
New	121	3,580,000	74	2,300,000	-47	-1,280,000
Scientific evaluation	8	336,000	8	336,000	--	---
Total	2,078	109,046,000	2,024	112,500,000	-54	+3,454,000

Training Grants (By Type of Program)

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Graduate	1,285	$83,979,000	1,227	$86,777,000	-58	+$2,798,000
Undergraduate	301	9,669,000	310	9,960,000	+9	+291,000
Continuing Education	168	4,213,000	163	4,316,000	-5	+103,000
Experimental & Spec.	113	5,761,000	108	5,911,000	-5	+150,000
Staff Development	203	5,088,000	208	5,200,000	+5	+112,000
Scientific Evaluation	8	336,000	8	336,000	--	---
Total	2,078	109,046,000	2,024	112,500,000	-54	+3,454,000

Training Grants Program Analysis

Disciplines	1969 Estimate	1970 Estimate	Increase or Decrease
Psychiatry	$31,817,000	$32,593,000	+$776,000
Behavioral Sciences	22,451,000	23,002,000	+551,000
Psychiatric Nursing	11,975,000	12,268,000	+293,000
Social Work	14,980,000	15,346,000	+366,000
General Practitioner	10,940,000	11,206,000	+266,000
Experimental & Special	5,761,000	5,911,000	+150,000
Continuing Education	4,213,000	4,316,000	+103,000
Staff Development	5,088,000	5,200,000	+112,000
Alcoholism	673,000	1,000,000	+327,000
Suicide	314,000	474,000	+160,000
Metropolitan Problems	294,000	444,000	+150,000
Narcotics & Drug Abuse	204,000	404,000	+200,000
Scientific Evaluation	336,000	336,000	---
Total	109,046,000	112,500,000	+3,454,000

2. Fellowships

	1969 Estimate	1970 Estimate	Increase or Decrease
Fellowships.....	$10,641,000	$10,866,000	+$225,000

Research fellowships are awarded to individuals who are committed to research careers relevant to mental health and who propose to undertake full-time research training. Awards are made at several different levels: predoctoral, for graduate training toward the doctoral degree; postdoctoral, for advanced training; and special fellowships, for fully qualified individuals in mid-career who have contributed effectively to mental health research. Research fellowships are available for research training in any area of behavioral science, clinical or nonclinical, in which the applicant's proposed program shows relevance to the understanding of normal or abnormal behavior. Fellowships are also awarded for training in special areas such as alcoholism, suicide prevention, narcotic addiction and drug abuse and metropolitan problems.

Research development awards are also provided to appropriate institutions for the salary support of full-time research scientists who are engaged in the study of mental health problems. The purpose of the program is to support the expansion of research focused on problems of mental health and the establishment of new mental health research programs by individual awards to appropriate institutions for the recruitment, development and employment of research scientists. More specifically, the objective of the National Institute of Mental Health is to develop research capacity in the psychiatric profession, to engage investigators from a variety of the behavioral and biomedical sciences in mental health research, and to foster interdisciplinary research on mental health problems.

The requested increase of $225,000 in this subactivity will permit the award of 21 additional noncompeting continuations above the level supported in 1969.

Distribution of Fellowships
(By Type of Grant)

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
1. Continuations:						
a. Noncompeting.....	543	$5,949,000	564	$6,174,000	+21	+$225,000
b. Competing.....	98	784,000	98	784,000	---	---
2. Supplemental.....	(94)	80,000	(94)	80,000	---	---
3. New.....	461	3,828,000	461	3,828,000	---	---
Total fellowships.....	1,102	10,641,000	1,123	10,866,000	+21	+225,000

Fellowships (By Type of Program)

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
1. Predoctoral.....	775	$4,171,000	790	$4,261,000	+15	+$ 90,000
2. Postdoctoral.....	85	680,000	85	680,000	---	---
3. Special.....	62	837,000	64	864,000	+2	+27,000
4. Research Career.....	24	738,000	24	738,000	---	---
5. Res. Scientist Dev.....	156	4,215,000	160	4,323,000	+4	+108,000
Total fellowships.....	1,102	10,641,000	1,123	10,866,000	+21	+225,000

B. Direct operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	166	$2,209,000	211	$3,600,000	+45	+$1,391,000
Other expenses	---	885,000	---	983,000	---	+98,000
Total	166	3,094,000	211	4,583,000	+45	+1,489,000

This subactivity includes the Division of Manpower and Training, the Mental Health Career Development Program, and the Division of Intramural Training of the new National Center for Mental Health Services, Training, and Research.

Division of Manpower and Training

This Division administers most of the Institute's training grant and fellowship support programs. Division staff analyzes the nation's mental health manpower requirements, and develop optimum approaches to meet these needs with available resources. A high priority is placed upon the design of experimental programs leading to greater utilization of subprofessionals, ancillary workers, and indigenous personnel.

Among the studies currently being conducted by the Division are detailed trend analyses of NIMH training support programs from their inception in 1948 through 1968; a cumulative file of individual trainees supported under the training grants that will be converted to a computer analysis; a study of the current status and activity of former NIMH research fellowship awardees; and a detailed study of educational programs and requirements, job analyses and performance outcomes in the training of subprofessionals and nonprofessionals in mental health.

A built-in increase of $51,000 is requested for this organization to meet the costs of within-grade increases not offset by employee turnover.

The Mental Health Career Development Program and the Division of Intramural Training are described in Section VI of the statement, dealing with the National Center for Mental Health Services, Training and Research.

Of the total increase requested 45 positions and $1,458,000 results from the proposed transfer in 1970 of the Division of Intramural Training from the "Saint Elizabeth Hospital" appropriation to the "Mental Health" appropriation.

III. Support of State and Community Programs

Community Mental Health Centers Program

The goal of the Community Mental Health Centers Program is to improve the organization and delivery of mental health services with the objective of making the most effective mental health care available to all the people of the Nation. In order to reduce suffering and costly disability and to deploy resources so that greater progress can be made toward preventing mental illness, it is vital that the Nation establish a basic network of mental health services at the community level.

In most American communities the resources required to provide comprehensive mental health services have been lacking. Consequently, some or all of the services essential to meeting the mental health needs of communities have been missing. It was to help provide these services that the national Community Mental Health Centers Program was established. Through this program, Federal resources are being utilized to stimulate the development of community mental health centers. Each center is required to provide the basic services which make it possible for the community to be the first line of defense against mental illness. This is possible only if a sufficient range of services is available, so that at any time a person is in need of help he can receive the kind of care he requires. In order to meet this need, each community mental health center must provide services including: inpatient service, outpatient care, 24-hour emergency service, partial hospitalization, and consultation and education services. In addition to these five essential services, centers are encouraged to develop at least five additional services: pre-care and aftercare program for patients hospitalized on a long-term basis, rehabilitation services, specialized diagnostic programs, training activities, and research and evaluation programs.

Approximately 2,000 community mental health centers are needed in order to serve adequately the national population. A total of $218,234,000 in Federal funds awarded from the inception of the program in 1965, through fiscal year 1968 have enabled communities throughout the country to develop 331 new community mental health centers. These centers, when fully operational, will serve over 51 million people. The diversity of the areas served by these 331 centers is remarkable. They range from the very poorest counties in Appalachia to the affluent urban-suburban fringes of our major cities. Fifty-seven of the centers have been funded in population areas of 500,000 or more. One hundred and sixty-five will serve smaller cities and 109 centers are being established in small town and communities which will serve large rural areas where mental health services have previously been virtually unavailable. Despite the relative newness of the Community Mental Health Centers Program, it is already demonstrating its effectiveness by bringing mental health services to people who previously had no access to them.

In a number of urban ghetto areas across the country, community mental health centers have taken the leadership in developing innovative and imaginative services, utilizing a wide variety of professional and of para-professional personnel. A significant number of educational institutions, inspired by the leadership of community mental health movement, have implemented educational programs to provide formal training for new career personnel.

Community mental health centers have also provided a mechanism through which exciting new therapeutic concepts and techniques are being developed and implemented including aftercare and partial hospitalization. Day care engages a patient in therapeutic activity during the day, permitting him to return to his family at night and for weekends. Night care assists those who are able to function in a job or at home but who require more intensive supervision than can be provided on an outpatient basis.

Community mental health centers are providing valuable direct services to persons in need and are having a constructive impact on the traditional care-giving institutions in our society. Their continued growth and development and the extension of services to the large population still unserved depends upon continued Federal assistance.

Up to 1% of the funds appropriated for construction and staffing of community mental health centers and specialized facilities for narcotic addiction and alcoholism programs will be available for evaluation of these programs, as authorized by PL 90-574.

A. Grants

1. Construction of Community Mental Health Centers

	1969 Estimate	1970 Estimate	Increase or Decrease
Construction grants.....	$50,000,000	$40,500,000	-$9,500,000
(New Obligational Authority)...	(15,000,000)	(30,500,000)	(+15,500,000)

Construction grants assist communities in establishing appropriate facilities for the delivery of comprehensive community mental health services by supplementing state, local and private financial resources. While the primary purpose of this support is to finance the cost of structures, it is intended also to stimulate innovative architectural design of facilities to meet the specialized needs of treatment services for the mentally ill.

Funds for construction grants are allotted to the States from each annual appropriation on the basis of population and financial need, as reflected by per-capita income. Designated State agencies assign portions of allotments to approved construction projects on the basis of priorities developed in the State plan. By the close of 1968, awards had been made for 251 construction projects.

The $50,000,000 estimated for obligation in 1969 will support 111 construction awards. The amount of $30,500,000 in new obligational authority requested in the appropriation for 1970, together with $10,000,000 carried forward from 1969, will provide for the award of an additional 90 grants for new construction in 1970.

Allocations of grant-in-aid funds for construction of community mental health centers

State or Territory	1968 Allocations*	1969 Allocations	1970 Allocations
Alabama	$659,042	$660,110	$671,336
Alaska	100,000	100,000	100,000
Arizona	259,961	263,585	268,069
Arkansas	374,599	380,655	387,128
California	2,479,620	2,486,927	2,529,221
Colorado	287,707	295,562	300,589
Connecticut	367,097	366,870	373,109
Delaware	100,000	100,000	100,000
District of Columbia	100,000	100,000	100,000
Florida	939,783	950,164	966,323
Georgia	764,977	766,640	779,677
Hawaii	103,196	108,019	109,856
Idaho	113,606	114,271	116,214
Illinois	1,406,652	1,403,169	1,427,032
Indiana	708,323	713,524	725,658
Iowa	403,229	393,755	400,452
Kansas	336,056	336,322	342,042
Kentucky	564,171	559,862	569,384
Louisiana	638,599	640,697	651,593
Maine	159,027	157,681	160,363
Maryland	502,853	508,681	517,332
Massachusetts	729,698	725,701	738,043
Michigan	1,167,194	1,179,897	1,199,963
Minnesota	529,518	528,987	537,983
Mississippi	494,815	486,381	494,653
Missouri	684,357	683,988	695,620
Montana	110,113	107,512	109,340
Nebraska	214,153	209,010	212,565
Nevada	100,000	100,000	100,000
New Hampshire	102,889	103,672	105,435
New Jersey	910,934	916,520	932,107
New Mexico	167,254	169,560	172,444
New York	2,363,424	2,320,582	2,360,048
North Carolina	882,066	886,181	901,252
North Dakota	107,186	103,165	104,919
Ohio	1,481,913	1,487,041	1,512,331
Oklahoma	408,885	407,779	414,714
Oregon	289,206	290,024	294,956
Pennsylvania	1,676,795	1,669,910	1,698,311
Rhode Island	127,896	127,580	129,749
South Carolina	495,212	499,690	508,188
South Dakota	114,946	107,721	109,553
Tennessee	691,294	692,652	704,432
Texas	1,743,601	1,735,680	1,765,198
Utah	163,751	166,375	169,204
Vermont	100,000	100,000	100,000
Virginia	713,612	715,548	727,718
Washington	428,058	442,971	450,505
West Virginia	321,071	319,500	324,934
Wisconsin	606,843	603,361	613,623
Wyoming	100,000	100,000	100,000
Guam	16,701	20,454	20,803
Puerto Rico	571,931	566,740	576,379
Virgin Islands	10,430	12,952	13,172
American Samoa	5,756	6,372	6,480
Total	30,000,000	30,000,000	30,500,000

* In accord with HJR885, these funds were not available for obligation until July 1, 1968.

2. Staffing of Community Mental Health Centers

	1969 Estimate	1970 Estimate	Increase or Decrease
Staffing Grants.....	$46,032,000	$51,300,000	+$5,268,000

Staffing grants provide part of the costs for initial support of professional and technical staff in community mental health centers; this assistance enables the community to initiate new services and make them available while longer term sources of financial support are being developed. For the first 15 months, Federal funds may pay 75 percent of the costs of staffing new services. During the next three 12-month periods, the matching rate declines to 60 percent, 45 percent, and 30 percent of eligible costs.

Staffing grants have been a major factor in the development of new community mental health center programs. For example, the Appalachia Community Mental Health Center in Elkins, West Virginia, was established as a result of this assistance. This center, located in an eight-county area with a population of 130,000, is offering mental health services for the first time in this region through a central facility and nine satellite units located in county courthouses and general hospitals. Traveling teams serve outlying facilities and work with schools, and prisons help develop programs within these agencies. This center is providing mental health services that would not otherwise be available to this region.

In Northwest Philadelphia, a predominantly slum area with a high percentage of Negroes, greatly needed mental health services are being provided through a staffing grant. The community mental health center of Temple University is serving this area, which has been marked by social and economic problems. A unique feature of the Temple program is a built-in evaluation system, designed to provide constant feedback to the Center's administration. The center also utilizes the full resources of the medical school for survey research. A variety of data will be brought together into a sophisticated operations research program that should contribute to a greater understanding of the mental health problems of the poor.

Although $64,300,000 were appropriated for staffing grants in 1969, the level of obligations estimated for the current year in the 1970 budget is only $46,032,000, a reduction of $18,268,000. This reduction is the cumulative effect of the following three factors, all of which decrease the funding requirements for this program in the current year:

(1) There were some 40 fewer new staffing grants awarded in 1968 than originally estimated, thus reducing the anticipated second-year funding requirements in 1969 by approximately $5,478,000. Among the reasons for this situation, it appeared that many communities were not confident they could meet existing matching ratios, and independently finance high-quality comprehensive services at the conclusion of a relatively short period of Federal assistance. Program experience to date indicates that the pace of new grant applications submitted for 1969 has returned to former levels.

(2) The second factor which reduces obligations during 1969 is a change in Institute policy which shortens the time period between the date on which a continuation grant is awarded and the date on which it goes into effect. As a result, grants totaling $10,960,000 which had been scheduled for award during the latter part of 1969 will not need to be made until 1970 under the new policy. In addition to reducing costs in 1969, this policy will contribute to improved fiscal management generally.

(3) The third factor responsible for the total reduction is the application of approximately $1,830,000 in accrued unexpended balances from previous years which will be applied to the 1969 continuation costs.

These three factors result in a one-time cost reduction of $18,268,000 in 1969 without adverse effect on the program. Indeed, the latter two actions reflect the intensified management improvement and evaluation efforts now being focused on the community mental health centers program.

The increase of $5,268,000 in 1970 will be utilized for staffing grants as shown in the following table.

Distribution of grants for staffing of community mental health centers

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Noncompeting continuations.....	103	$20,699,000	250	$33,838,000	+147	+$13,139,000
New.....	77	25,333,000	51	17,462,000	-26	-7,871,000
Total grants.....	180	46,032,000	301	51,300,000	+121	+5,268,000

3. Narcotic Addiction and Alcoholism Community Assistance

	1969 Estimate	1970 Estimate	Increase or Decrease
Narcotic Addiction.....	$8,000,000	$8,000,000	---
Alcoholism.....	---	4,000,000	+$4,000,000
Total.....	8,000,000	12,000,000	+4,000,000

This subactivity includes funds for two programs newly authorized by the "Alcoholic and Narcotic Addict Rehabilitation Amendments of 1968". These grant funds will make it possible to bring the concepts and experiences of the Community Mental Health Center to bear on two of our most serious contemporary social problems - narcotic addiction and alcoholism.

a. Narcotic Addiction

The estimated number of narcotic addicts in this country ranges from 60,000 to 100,000, but they constitute a mental health and social problem which is far greater than their number would indicate. Typically, the addict is a ghetto dweller in a large city and is of lower class, minority status; he is, by definition, the object and subject of criminal activities. Passage of the Narcotic Addict Rehabilitation Act of 1966 represented recognition by the Congress that addiction is symptomatic of an illness that should be treated and not punished. That part of the original Act which authorized the award of grants for the construction and operation of community facilities for narcotic addict treatment has been replaced by an amendment to the Community Mental Health Centers Act. The amendment places support for construction and initial staffing of facilities for the treatment of narcotic addiction on the same basis as the Community Mental Health Center.

In a typical project, the Department of Psychiatry, University of Chicago, is collaborating with the State Department of Mental Health to expand the State pilot program for the treatment of narcotics addicts. It is designed to serve seven communities in the South Side of Chicago, with a population of approximately 428,000, of whom approximately three-quarters are Negroes. Of the estimated 9,000 heroin users in the city of Chicago, roughly one-third to one-half reside in this area. At full capacity, the project will serve about 600 addicts a year and is designed to test the relative value of the various treatment modalities currently in use. These include pharmacology (cyclazocine, methadone), group therapy, self-help methods (such as Synanon) and conventional psychiatric treatment. The guiding principle in Chicago, as with other grantees, is that narcotic addicts are not a homogeneous group, and it is therefore necessary to experiment with a variety of treatment approaches to discover the one best suited, not only to a particular addict, but to an addict at a certain stage of his addiction.

At Chicago, an automated record system is being used to chart the patient's progress, not only for clinical monitoring, but also to develop input for an evaluation unit which will study the cost effectiveness of the various treatment methods. An epidemiology section is attempting to develop methods to measure prevalence of addiction as well as evaluate the impact of the program in the target area. The Chicago grantee also offers specialized staff training programs and consultation to various community organizations.

The State of Illinois will contribute to the implementation of some of the service components, such as half-way houses, a Synanon-type therapeutic community called Gateway House, and aftercare services, including social and vocational rehabilitation.

No increase in grant funds is requested for this purpose. Of the total $8,000,000 requested, $5,365,000 will be used to continue projects begun in 1968 and 1969. The remaining $2,635,000 will permit the award of one new construction grant ($738,000), several new staffing grants ($1,370,000), and the support of projects to explore new approaches to prevention, test intervention strategies to modify or eliminate the addict sub-culture, and demonstrate ways in which the rehabilitated addict can be used in community rehabilitation programs ($527,000).

b. Alcoholism

There are approximately 5 million alcoholics in the United States in need of comprehensive medical, psychological, and social services. The effects of alcoholism are costly--both in dollars and human suffering. Industry alone loses an estimated $2 billion yearly as a result of alcohol-associated absenteeism and reduced worker efficiency. Ten thousand deaths annually can be attributed to alcoholism, and problem drinking has been identified as a factor in nearly 50 percent of all fatal traffic accidents.

Alcoholism, like other mental health problems, strikes across the board--afflicting the wealthy and the impoverished, the factory worker and the farmer. Despite the prevalence of alcoholism, most communities are woefully short of services and facilities designed to cope with this important health problem.

Some progress has been made but there are still barriers to the admission of alcoholics to general hospitals. Where these restrictions have been lowered, adequate community outpatient and follow-up services are generally lacking. Often welfare and other public agencies tend to "pass the buck" in relation to indigent alcoholics; consequently many alcoholics receive minimal medical and social services. In recent years, State mental hospitals have become a place of last resort for alcoholics to such an extent that today, more than 20 percent of all men admitted to mental institutions are alcoholics. This trend can be directly traced to the lack of available community resources.

Recognizing these facts, the Congress has passed the Alcoholic and Narcotic Addict Amendments of 1968, which states that treatment and prevention should be provided whenever possible in the community, through comprehensive services involving other public and nongovernmental agency participation. This new legislation authorizes grants for the construction and initial staffing of facilities for the prevention and treatment of alcoholism in accordance with the community mental health center concept.

This program will be initiated in 1970 at the level of $4,000,000. This amount will provide $750,000 for the Federal share of construction of three new facilities and $3,250,000 for the first year costs of approximately 20 new staffing grant projects. These new facilities will, when fully operational, provide treatment services for approximately 10,000 alcoholics per year.

B. Direct Operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	115	$1,699,000	115	$1,714,000	---	+$15,000
Other expenses	---	665,000	---	665,000	---	---
Total	115	2,364,000	115	2,379,000	---	+15,000

This sub-activity provides operating funds for the Division of Mental Health Service Programs and the Mental Health Study Center.

The Division of Mental Health Service Programs administers those NIMH programs which support the general improvement and development of State and community mental health services. These include grants for State mental hospital improvement and hospital staff development in addition to grants for construction and staffing of community mental health centers. Consultation is provided to State and local mental health agencies on methods of planning comprehensive mental health service programs. Staff architects also assist grant applicants with the development of architectural designs conducive to the provision of high quality services.

Another major responsibility of this Division is the provision of technical assistance to States and Federal agencies on the development and implementation of the mental health aspects of medical assistance programs, including Medicare, comparable to those available to persons who experience other kinds of illness. Long-range goals are to implement standards for delivery of quality care to establish controls to prevent abuse of benefits, and to encourage the development of additional resources.

A built-in increase of $15,000 is requested to meet the net cost of within-grade increases not offset by employee turnover.

The Mental Health Study Center, working with a defined population area in the southern part of Prince Georges County, Maryland, has made important contributions to knowledge concerning the delivery of mental health services in a community setting. Over the past 20 years, the staff of the Center has conducted a variety of studies of the demographic and social characteristics of this population.

The Center develops and implements innovative services for a population of approximately 200,000 in an area containing a mixture of urban and rural poverty as well as more affluent suburban development. The Center has initiated a program of clinical services and consultation to community agencies through the operation of multi-disciplinary mental health teams. The consultative activity is not only providing a meaningful service but is also useful in developing information about community needs. It thus provides a rational basis for planning the sequence and direction of service activities.

The Mental Health Study Center makes available to the National Institute of Mental Health an operations model for the examination of problems involved in the delivery of services, and for the development and evaluation of new community based service programs.

IV. Service Activities

A. Narcotic Addict Treatment Program

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	1,002	$9,234,000	1,002	$9,471,000	---	+$237,000
Other expenses	---	5,429,000	---	8,055,000	---	+2,626,000
Total	1,002	14,663,000	1,002	17,526,000	---	+2,863,000

One major feature of the recent reorganization of the Institute was the creation of a new Division of Narcotic Addiction and Drug Abuse, which consolidates the various Institute programs on this problem of special concern into one organization. Included in this activity are funds for the direct operations of the Center for Narcotics and Drug Abuse, the Narcotic Addict Rehabilitation Program, and the Ft. Worth and Lexington Clinical Research Centers, each of which is described below.

1. Center for Studies of Narcotic Addiction and Drug Abuse

The problem of drug abuse is not confined to heroin addiction, but embraces many classes of drugs and drug abusers with problems quite different from those of the narcotic addict. There may be as many as 400,000 people firmly habituated to non-narcotic compounds. For example, tranquilizers are in wide-spread use, including some with proven addiction potential. The rapid increase in the use of hallucinogens, amphetamines, and marihuana by young people in this country is a pressing national problem.

Recognizing that drug abuse is a multi-faceted problem, the National Institute of Mental Health established the Center for Studies of Narcotic and Drug Abuse in 1967 to focus and coordinate programs in this critical area of concern. In addition to participating in the administration of narcotic addict rehabilitation programs the Center supports research concerning the nature and abuse of drugs of various types, and supports the training of scientists in the special problems of drug abuse. For example, an intensive program has been mounted to secure answers to the many perplexing questions raised by the increased use of marihuana, and the public controversies surrounding the subject. Contracts have been awarded to secure adequate supplies of natural and synthetic tetrahydrocannabinol (THC - one of the active substances found in marihuana) for use in research; investigations are being conducted to learn more about absorption of these compounds, their biochemical properties, and their toxic effects.

The Center also supports research projects investigating the value of LSD as a therapeutic agent, as well as basic research into the mechanism of action, biological activity, and possible adverse effects of this and other hallucinogenic drugs.

Prevention and education - Drug abuse prevention and education remains an essential emphasis of the Center's program. It is the Center's goal to develop effective educational approaches for use in elementary, junior and senior high schools and colleges as well as with parent groups and other segments of the adult community.

In this vein, the Center is developing under contract a manual for in-service training of teachers to be more effective in their drug abuse education and prevention efforts. Part of this project involves the scheduling of workshops with local and national teacher conferences to publicize improved methods of dealing with the drug problem. It is expected that materials from this effort will be available in time for the 69-70 school year.

The Institute has also developed four pamphlets on the drug abuse problem for general use. As part of its effort to make these available to the educational community, together with additional materials addressed to the teacher, the Institute has contracted for space in the NEA Journal, a publication reaching over a million elementary and secondary school teachers. The material being published includes accurate, up-to-date information on drugs of abuse, together with specific suggestions on conducting drug abuse prevention programs and on dealing with the drug problem in the schools.

Feedback from research effort into the characteristics of drug users and drug using groups will be incorporated into new drug abuse prevention efforts as rapidly as possible. In this way, research ultimately serves to increase the effectiveness of prevention efforts.

In an effort to reach a still larger audience, the Institute has contracted for the development of a series of public service radio and TV "spots" dealing with drug abuse. Materials of this type have been developed and tailored to reach various ethnic and socioeconomic level groups. The first showing of these materials took place early in 1969. Funds for these educational activities are included under "Scientific Communication and Public Education" in the budget.

2. Narcotic Addict Rehabilitation Program

The Narcotic Addict Rehabilitation Program, authorized by the Narcotic Addict Rehabilitation Act of 1966, provides an opportunity for individuals addicted to narcotic drugs to volunteer for civil commitment (Title III), as well as allowing addicted individuals charged with violating certain Federal criminal laws to apply for civil commitment for treatment in lieu of prosecution (Title I). The program is now utilizing the Clinical Research Centers at Lexington, Kentucky, and Fort Worth, Texas, to provide for the examination and evaluation and inpatient treatment phases of the program. Following the inpatient treatment, the patient is conditionally released to his home community and provided with supervised treatment and rehabilitative services for 36 months by community agencies under contracts with the National Institute of Mental Health.

The community contract agency provides for a continuum of treatment which is begun while the patient is still within the Clinical Research Center. Upon his release to the community the local agency provides each patient supervision, treatment and rehabilitative services which are tailored to his individual needs. The agency must also facilitate and coordinate the use of existing community services for continuing psychotherapy, education, vocational training, job placement, medical care and family welfare.

Five field offices have been established in cities having large addict populations. Their primary responsibility is assessing the problems of narcotic addiction in local communities, developing community contracts, and evaluating the performance of existing contractors to insure quality care of the addicts. Another important responsibility of the field offices is to encourage the development of local inpatient and community care programs which will provide the comprehensive treatment and rehabilitation services so necessary for the addict patient.

Contracts have already been negotiated to provide treatment of patients who have been committed from 28 states and the District of Columbia. Contracts are being developed to treat patients committed from 10 additional states; by the end of June, 1969 an estimated 734 patients will have entered aftercare programs operated by community agencies.

In 1970, all existing contracts will be renewed to provide continued community treatment for those patients in the program. New contracts will be developed to provide treatment resources for the increasing patient load, and patients returning to communities where no contract agencies now exist. An additional 1,294 patients are expected to enter aftercare programs in 1970.

Research and evaluation procedures have been established to provide needed information about narcotic addiction and effective methods for treating and rehabilitating the addict. This information will be used to improve the existing program and give guidance to State and community efforts. Innovative methods evolved for the treatment and rehabilitation of the addict within the community agencies and other programs will be evaluated, refined and utilized in providing dynamic treatment programs within the existing and projected community contract agencies.

An increase of $2,500,000 will be used to continue existing contracts with community agencies for rehabilitation services for addicts, and to develop additional contracts to meet the growing need for these services.

An additional increase of $126,000 will be used to begin a pilot program of examination, evaluation and inpatient care of addicts in the community as a step toward the long range goal of having the program conducted entirely in community facilities, utilizing State and local agencies.

3. Fort Worth and Lexington Clinical Research Centers

As part of the effort to stimulate programs for the treatment and prevention of drug abuse and narcotic addiction, the Public Health Service hospitals in Lexington, Kentucky, and Fort Worth, Texas, were redesignated as Clinical Research Centers, and given the primary mission of providing new knowledge and new methods of prevention, treatment, rehabilitation, and aftercare in the field of drug dependency and disorders of personality which lead to addiction. The Centers also provide services to Public Health Service beneficiaries who require psychiatric care.

Currently, all patients committed under Titles I and III of the Narcotic Addict Rehabilitation Act (NARA) are being examined, evaluated, and given initial treatment at the two Clinical Research Centers. The Centers will be used as pilot models of innovative treatment procedures and for specialized in-service training.

Extensive physical renovations have been undertaken and are nearing completion at the Lexington Clinical Research Center. These are changing the older, jail-like facility into a treatment-oriented one. A new research section has also been established in the Center at which detailed information is being collected about every patient committed. When these data are analyzed, significant new information about the addict and addiction will become available. An experimental unit for the evaluation and treatment of barbiturate and amphetamine abusers has also been set up and is in operation.

At the Fort Worth Clinical Research Center there has been an increase in NARA admissions and a decline in addict prisoners, addict voluntary patients, and psychiatric patients. This major shift in implementing the NARA program

has been completed, and the operation is now proceeding smoothly. Treatment emphasis is on group psychotherapy, counselling, and vocational rehabilitation. A considerable amount of affiliated training for a variety of mental health trainees is offered at the Fort Worth Clinical Research Center. Psychologists, social workers, nurses, nursing assistants, and other treatment personnel receive training in the management of the addicted patient. Research at the Fort Worth Clinical Research Center focuses on the follow-up of the discharged patient. Post-hospital services are provided in collaboration with community agencies, and a controlled evaluation of these activities is being completed.

There is an increase in new obligational authority of $305,000 for the Fort Worth and Lexington Clinical Research Centers in order to offset a decrease in estimated reimbursements at the two Centers. Also included is a built-in increase of $270,000 for the two Centers which is required to meet the net cost of within-grade increases not offset by employee turnover and funds for the annualization of additional man-years granted to patient care activities in 1969. These increases are partially offset by a decrease of $80,000 in overtime requirements at the Lexington Clinical Research Center and a reduction of $305,000 in estimated reimbursements from other Federal agencies. There is also an increase of $47,000 for the cost of within-grade increases not offset by employee turnover for the Center for Narcotics and Drug Abuse and the Narcotic Addict Rehabilitation Program.

B. Regional and Field Activities

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	122	$1,632,000	122	$1,632,000	---	---
Other expenses	---	714,000	---	714,000	---	---
Total	122	$2,346,000	122	$2,346,000	---	---

This activity includes funds for the NIMH Regional Staff, based in the DHEW Regional Offices, who carry out programs of assistance to States and serve as field units providing consultative and technical assistance to State and community agencies and institutions. Among those programs facilitated by regional operations are hospital improvement projects, construction and staffing community mental health centers, and hospital staff development projects.

Funds are also included for the Office of Program Liaison, which is responsible for coordinating Institute activities with DHEW components, other Federal agencies, international groups, and with regional, State and local mental health agencies and citizen groups. It acts as the liaison between the Institute regional organization and other Institute program areas. There is no increase in this activity for 1970.

C. Scientific Communications and Public Education

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel Compensation benefits.	77	$900,000	87	$952,000	+10	-$52,000
Other expenses.....	..	1,688,000	..	1,819,000	..	+131,000
Total.....	77	2,588,000	87	2,771,000	+10	+183,000

This activity supports the cost of the Office of Communications, which is responsible for scientific communication and public information activities, including operation of the National Clearinghouse for Mental Health Information (NCMHI).

The Clearinghouse, the Institute resource for collecting, analyzing, and disseminating scientific and technical information, has basically three functions. First, it provides scientific information both upon individual request and in the form of recurring and single issue publications. Second, it provides scientific analyses and compilations which present an overview and synthesis of current research activities. Third, it attempts to develop new solutions to burgeoning scientific information problems and devises improvements in its storage and retrieval system. If information is to be useful it must be timely, comprehensive, in forms which facilitate its use by a wide range of consumers, including individual scientists, practitioners, professional organizations, and the general public.

As current information is collected and processed, it is abstracted or retrieved on the basis of areas of interest and packaged into "current-awareness" journals. The NCMHI has continued to publish "Crime and Delinquency Abstracts," "Psychopharmacology Abstracts," Psychopharmacology Bulletin," "Occupational Mental Health Notes," and "Drug Dependence and Abuse Notes" to satisfy needs in these areas; and has launched a well-received new journal, "The Bulletin of Suicidology," which includes both articles and abstracts. Another journal containing current developments and digests of original research reports was recently inaugurated as the "Mental Health Digest."

In addition, the Clearinghouse develops and publishes bibliographies in special areas of national and international concern. Among those already published are "Bibliography on the Urban Crisis," "Bibliography on the Physiological and Social Aspects of Human Transplantation," and "Bibliography on the International Aspects of Family Planning."

The Office of Communications also operates a public information and education program which provides information and materials to both individuals and lay organizations. Information efforts cover all areas of Institute concern: continuing programs, such as the Community Mental Health Centers program; new programs, such as implementing the Narcotic Addict Rehabilitation Act of 1966; and mental health problems of special interest such as drug abuse, alcohol and alcoholism, suicide prevention, child mental health, and problems of the ghetto.

These activities are reflected in increased coverage by the Nation's press; in a dramatic increase in public inquiries, which have more than doubled since 1966; and in the increased demand for publications, totaling some 800,000 -- also doubled since 1966. Types of public information materials range from brochures, fliers, fact sheets and pamphlets to news releases, news features, films, radio and television productions, research reports, articles for National magazines, special reports and background material for members of Congress. Staff are in daily contact with the public media, providing

assistance in preparing major feature stories and information.

A program increase of $170,000 and 10 positions is requested to expand these important services. This increase will permit increased acquisitions of pertinent materials, and additional indexing, abstracting, and translating services and increased public education activities in important areas such as drug abuse. It will also be used to shorten response time to the continually growing volume of requests. A built-in increase of $13,000 is also included to meet the cost of within-grade increases for this budget activity.

Also included under this subactivity are funds for a contract program to develop effective educational approaches to drug abuse for use in schools and colleges as well as with parent groups and other segments of the adult community. This program is administered by the Center for Studies of Narcotic Addiction and Drug Abuse and is described in Section IV. A. of this narrative statement.

V. Program Direction and Management Services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	314	$3,808,000	314	$3,872,000	---	+$64,000
Other expenses	---	1,163,000	---	1,349,000	---	+186,000
Total	314	4,971,000	314	5,221,000	---	+250,000

This activity includes the Immediate Office of the Director, the Office of Program Planning and Evaluation, and the Office of Administrative Management.

Office of Program Planning and Evaluation

This Office is responsible for the stimulation, development, and coordination of the Institute's program planning, analysis, and evaluation activities. In addition to the development of short-term and long-range program plans, the Office provides legislative reference services and advises on legislative matters in the field of mental health, develops national professional and technical mental health standards, and develops and administers the biometrics programs of the Institute.

In fiscal year 1970, the further development of evaluation activities will be the highest priority for this Office. Special attention will be given to the identification of indicators to measure the success of community mental health programs, to the identification of total mental health manpower needs, and to the development of programs for meeting the needs of geographic area and socioeconomic groups having great gaps in mental health services. To facilitate program evaluation, the Office will develop concise descriptive summaries of all Institute program projects and categorize them for analytic purposes.

Office of Administrative Management

This Office is responsible for centralized services in financial management, management policy, personnel management, grants and contracts management, administrative services, and data processing. It has broad responsibility for the design, issuance, and implementation of administrative operating procedures for the conduct of Institute operations.

A program increase of $186,000 will permit expansion of present data processing services. The capability of current data processing equipment and systems available to the Institute is insufficient in capacity and sophistication to meet minimum data processing requirements for the Institute's programs, including epidemologic and biometric studies, research applications, development of a management information system, and administrative programs.

A built-in increase of $64,000 for this activity is required to meet the costs of within-grade increases not offset by employee turnover.

VI. National Center for Mental Health Services Training, and Research

In past years, Saint Elizabeths Hospital has attempted to acquire the manpower and financial resources required to develop the Hospital into a high quality psychiatric treatment, training, and research center of national significance and importance. However, the rate of progress has been discouraging.

Uncertainties existed relative to the future of the Hospital - particularly its ultimate role in both national and local mental health programs. A definite role was finally established with the transfer of the Hospital to the National Institute of Mental Health in August 1967, with a mandate to develop it into a national demonstration center in the areas of treatment, training and research. A year of operation as an integral part of the NIMH has enabled the Institute to study the hospital organization, to plan for the full utilization of treatment knowledge, and to project new means for the delivery of services. This led to a reorganization in November 1968, which established the National Center for Mental Health Services, Training, and Research at Saint Elizabeths Hospital. The National Center represents a new and improved relationship between Saint Elizabeths, the Institute, and the professional community. Further, the creation of the Center provides a means of strengthening service to patients, staff development, and research into the causes and treatment of mental illness.

The National Center for Mental Health Services, Training, and Research has three major divisions:

The Division of Clinical and Community Services provides treatment, care, and rehabilitation services for the patients of the Hospital. Further, it will operate, in collaboration with the D. C. Department of Health, a model Community Mental Health Center serving the District of Columbia health area D adjacent to the Hospital and provide general health services to the residents in the neighborhood. Funds for this Division are justified in the appropriation, "Saint Elizabeths Hospital."

The Winfred Overholser Division of Clinical Research plans, develops, and conducts research and demonstration programs in the clinical and behavioral sciences as these relate to the problems of mental illness. Examples of recently completed and current projects include: (1) The development and demonstration of improved treatment techniques for early return to the community of geriatric patients; (2) investigation of reading and learning problems in hospitalized mentally ill children; (3) investigation of possible psychological factors influencing the development of criminal behavior; (4) study of social environments of patients admitted to SEH from Health Area D of the District of Columbia, particularly with regard to the possible role of social stress in precipitating the need for hospitalization; (5) investigation of possible chromosome abnormalities in mentally ill persons, especially those with concurrent neurologic disease and those with a history of serious antisocial behavior and/or drug abuse; (6) demonstration of conditioning techniques in improving the self-care and social behavior of adult patients with severe mental retardation; (7) investigation of long-range patterns of behavioral abnormality in schizophrenic patients, with particular emphasis on developing methods for predicting such patterns in individual cases to permit more effective prevention.

The Seymour D. Vestermark Division of Intramural Training conducts fully accredited programs of clinical training in fifteen professional disciplines related to the mental health field. Among these are programs for psychiatric residents, medical interns, nursing students, psychiatric social workers, clinical psychologists, dental interns, occupational therapists, pathology residents, chaplains, and hospital administrators. Approximately 500-600 students participate in these training programs annually. In addition, the Division serves as a major training base for medical students and conducts regular training institutes on recognition

and management of mentally ill persons for District of Columbia Metropolitan Police, U. S. Secret Service Agents, U. S. Park Police, and a variety of other Federal groups.

This activity serves as a major source of new professional staff for the Hospital, fosters an academic climate so necessary to attract and retain competent professional staff, and through its teaching functions and standards promotes the quality of patient care. It contributes substantially to staff development and in-service training programs at all employee levels, and offers opportunities in continuing education for NIMH staff located in the Washington area.

The Mental Health Career Development program of the National Institute of Mental Health, has been transferred from the Office of Program Planning and Evaluation to the Division of Intramural Training. This organizational transfer enables the Institute to consolidate all of its direct training responsibilities and obligations into one Division solely responsible for such activities. The Mental Health Career Development program is designed to supply the Public Health Service and the National Institute of Mental Health with professional personnel who are both qualified and motivated to fulfill program needs for psychiatrists and for nursing personnel trained in psychiatry and administration. The program provides advanced formal training opportunities for approximately 80 career personnel who are currently functioning in a wide variety of health-related settings, including patient care facilities, mental health research units, demonstration projects and mental health administration.

New Positions Requested
Fiscal Year 1970

	Grade		Annual Salary
Support and conduct of research:			
Intramural research			
Pharmacologist	GS-13		$14,409
Research Psychologist	GS-13		14,409
Medical Officer	GS-12		15,828
Biologist	GS-12		12,174
Psychologist	GS-12		12,174
Pharmacologist	GS-9		9,026
Biologist	GS-7		6,981
Psychologist Technician	GS-7		6,981
Secretary	GS-5		5,732
(2) Clerk Typist	GS-4		10,290
Animal Caretaker	GS-3		4,600
Total		(12)	112,604
Planning, development and administration			
Chief of Section	GS-15		$19,780
Psychiatrist	GS-14		16,946
Psychologist	GS-13		14,409
Statistician	GS-13		14,409
Sociologist	GS-13		14,409
Research Assistant	GS-11		10,203
Sociologist	GS-9		9,297
Secretary	GS-6		6,321
(2) Clerk Typist	GS-5		11,464
Early Child Care - Total		(10)	117,238
Chief of Section	GS-15		$19,780
Psychiatrist	GS-14		16,946
Psychologist	GS-13		14,409
Biochemist	GS-11		10,203
Research Assistant	GS-9		8,462
Secretary	GS-6		6,321
Clerk Typist	GS-4		5,145
Alcoholism - Total		(7)	81,266
Service Activities:			
Scientific communications and public education			
Visual Information Specialist	GS-13		$14,409
Technical Information Specialist	GS-12		12,174
Writer-Editor	GS-12		12,174
Public Information Specialist	GS-11		10,203
Audio-Visual Production Specialist	GS-11		10,203
Technical Information Specialist	GS-11		10,203
Public Information Specialist	GS-9		8,462
Editorial Assistant	GS-7		6,981
Clerical Assistant	GS-5		5,732
Clerical Assistant	GS-3		4,600
Total		(10)	95,141
Total new positions, all activities		(39)	406,249

THURSDAY, MARCH 20, 1969.

ST. ELIZABETHS HOSPITAL

WITNESSES

DR. STANLEY F. YOLLES, DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH
DR. SHERMAN N. KIEFFER, DIRECTOR, NATIONAL CENTER FOR MENTAL HEALTH SERVICES, TRAINING, AND RESEARCH
DR. LOUIS JACOBS, SUPERINTENDENT, ST. ELIZABETHS HOSPITAL
M. K. MADDEN, EXECUTIVE OFFICER, ST. ELIZABETHS HOSPITAL
P. E. GOODY, BUDGET OFFICER, ST. ELIZABETHS HOSPITAL
JAMES D. ISBISTER, EXECUTIVE OFFICER, NATIONAL INSTITUTE OF MENTAL HEALTH
JAMES D. LAWRENCE, FINANCIAL MANAGEMENT OFFICER, NATIONAL INSTITUTE OF MENTAL HEALTH
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

ST. ELIZABETHS HOSPITAL

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	25,535	28,144	28,080
Positions other than permanent	606	973	169
Other personnel compensation	1,551	1,946	1,694
Special personal service payments		39	39
Total personnel compensation	27,692	31,102	29,982
Personnel benefits: Civilian employees	2,106	2,334	2,322
Travel and transportation of persons	59	104	118
Transportation of things	50	48	51
Rent, communications, and utilities	336	371	404
Printing and reproduction	35	35	36
Other services	496	592	549
Supplies and materials	4,114	4,206	4,400
Equipment	964	728	792
Lands and structures	75	357	261
Insurance claims and indemnities	1	1	1
Subtotal	35,928	39,878	38,916
Quarters and subsistence charges	−40	−46	−40
Total obligations	35,888	39,832	38,876

PERSONNEL SUMMARY

Total number of permanent positions	4,071	3,914	3,925
Full-time equivalent of other positions	149	204	37
Average number of all employees	3,938	3,996	3,816
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794
Average salary of ungraded positions	$6,001	$6,625	$6,862

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimated	1970 estimated
Program by activities:			
Operating costs:			
1. Clinical and community services	33,563	37,129	38,091
2. Training and education	1,041	1,420	
3. Research	469	585	
Total operating costs	35,073	39,134	38,091
4. Unfunded adjustment to total operating costs: Property or services transferred in without charge	−151	−75	−75
Total operating costs, funded	34,922	39,059	38,016
Capital outlay:			
1. Clinical and community services	701	855	880
2. Training and education	4	16	
3. Research	25	35	
Total capital outlay	730	906	880
4. Unfunded adjustments to total capital outlay: Above capital assets transferred in without charge, net	−20	−20	−20
Total capital outlay, funded	710	886	860
Total program costs, funded	35,632	39,945	38,876
Change in selected resources [1]	256	−113	
Total obligations	35,888	39,832	38,876
Financing:			
Receipts and reimbursements from:			
Federal funds	−860	−646	−629
Trust funds	−91	−125	−125
Non-Federal sources (Public Law 90-473)	−24,404	−25,696	−27,717
Comparative transfers to other accounts	15	15	
Unobligated balance lapsing	201		
Budget authority	10,749	13,380	10,405
Budget authority:			
Appropriation	10,749	11,396	10,405
Proposed transfer from other accounts for pay increases		1,984	
Relation of obligations to outlays:			
Obligations incurred, net	10,548	13,380	10,405
Obligated balance, start of year	1,938	1,795	2,672
Obligated balance, end of year	−1,795	−2,672	−2,901
Adjustments in expired accounts	−23		
Outlays	10,668	12,503	10,176

[1] Selected resources as of June 30 are as follows:

	1967	1968 adjustments	1968	1969	1970
Stores	597		736	623	623
Unpaid undelivered orders	551	−15	653	653	653
Total	1,148	−15	1,389	1,276	1,276

Mr. FLOOD. Now we will consider St. Elizabeths Hospital. Are you going to handle that?

Dr. YOLLES. Yes, sir.

Mr. FLOOD. I see that you have a statement in connection with the hospital.

How do you wish to proceed?

Dr. YOLLES. I would like to submit the statement for the record and just summarize very briefly.

(The statement follows:)

February 27, 1969

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Health Services and Mental Health Administration
Statement by Director, National Institute of Mental Health

on

Saint Elizabeths Hospital

Mr. Chairman and Members of the Committee:

In August of 1968, Saint Elizabeths Hospital completed its first full year as an organizational component of the National Institute of Mental Health. The National aspirations for the Hospital are still those expressed when the first patient was admitted more than a century ago: We hope to synthesize science, skill, and experience in order to provide the most effective treatment and care available for the mentally ill.

Today, we - unlike our predecessors - can base our efforts on new patterns of mental health services. Through an accumulation of research findings and clinical experience, we know that mental illnesses can be treated more effectively when detected and diagnosed early and properly, and when the positive relationship between the individual and his family and the bonds to his job, his friends, and the community are not severed. We also know that custodial care, no matter how compassionate and enlightened, cannot advance the cause of the mentally ill. Effective support of an individual in emotional crisis depends on the empathy and

resources of individuals in the community and a wide variety of public and private agencies. NIMH administers a national support program to provide comprehensive mental health services in the community, working not only with State and local agencies, but also with citizen and professional groups and other Federal programs. In conjunction with this effort, many public mental hospitals throughout the country are being transformed, by means of HIP grants, from the dead-end "repositories of last resort" to active treatment institutions for rehabilitating mental patients and returning them to productive lives in the community.

These far-reaching activities are being carried out through the Federal grant mechanism. However, we have direct responsibility for Saint Elizabeths, and therefore we have the opportunity and the challenge to develop a national demonstration for the conversion of a large, old-style mental institution into a modern, community-based mental health facility. It should be clear from extensive experience in the several States, Mr. Chairman, that this cannot be accomplished quickly or inexpensively. But it must be done, not only for the sake of the thousands of patients at Saint Elizabeths itself, but also for the 400,000 Americans in mental institutions throughout the country.

Since last year, when I appeared before this Committee to testify for Saint Elizabeths for the first time, the Hospital's problems, potential, and unmet needs have received careful study.

Special Institute task forces - in collaboration with officials of the District of Columbia Government, and aided by expert professionals throughout the country - have developed a series of recommendations dealing with plans for a community mental health center to be operated jointly with the D.C. government as a component of the new National Center; with the evaluation of security facilities and procedures; and with the projected disposition of patients at the Hospital. In November 1968, an internal Institute reorganization was effected, making the Hospital a nuclear component of the new National Center for Mental Health Services, Training, and Research. Three Divisions were created within the National Center:

.The Saint Elizabeths Hospital - Division of Clinical and Community Services - will operate the Community Mental Health Center in Area "D", one of four catchment areas in the District, in collaboration with the D.C. Department of Public Health. It will also provide treatment, care and rehabilitation services for the patients at the Hospital.

.The Seymour Vestermark Division of Intramural Training will administer an expanded Institute effort to provide new types of auxiliary mental health manpower as well as traditional professional manpower, and will test innovative training techniques geared to the need for increased mental health manpower throughout the Nation.

.And the Winfred Overholser Division of Clinical Research will spearhead the search for more effective methods of treating

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the mentally ill. The formation of the National Center permits a coordinated attack on the problems now faced by the Hospital and provides a structure which will maximize the participation of other NIMH staff.

We have identified several areas of urgent need at the Hospital: First, the Hospital must eliminate staffing deficiencies. Saint Elizabeths, by any reasonable standard, is grossly understaffed - with obvious adverse effects on the patient treatment program. In 1962, the Hospital surveyed its staffing, workload, and inpatient population and concluded that a ratio of not less than one employee per inpatient was necessary to provide adequate treatment for the nearly 7,000 resident patients at that time. Despite a steady decrease in the inpatient population to the 1968 level of about 5,400 the ratio this year is only 72 staff members - including such personnel as groundskeepers and laundry workers - to 100 inpatients. In addition, the Hospital's outpatient population, which averaged about 500 a decade ago, now stands at more than 1,800. The obvious result has been the diversion of increasing amounts of scarce staff time for services to outpatients - entirely at the expense of the resident population. The unprecedented increase in admissions - from 1,600 in 1959 to nearly 4,000 in 1968 - has also diverted substantial professional staff time. No hospital - certainly not one which was organized to be, and aspires to again become, a model for the Nation - should have to admit patients knowing full well that they

cannot be afforded every opportunity for recovery. Therefore, Mr. Chairman, we will continue as planned to request increases in the number of authorized positions over the next several years.

Secondly, Saint Elizabeths must expand both its training and research programs, relating them more closely to the needs of the Hospital. Experience has shown that teaching-hospitals and those with strong research programs have a significant advantage in attracting and retaining high quality personnel. Efforts to introduce new concepts of care and treatment also depend for their success on research capabilities - on the validation of new approaches and on the rigorous evaluation of alternative treatment modes. An intimate relationship between research and service fosters valuable interaction between scientists in the laboratory and clinicians working on the ward, concerned with the day-to-day treatment of mentally ill patients.

The new National Center offers a wide spectrum of fully accredited training in such varied mental health fields as psychiatry, psychology, psychiatric nursing, occupational and recreational therapy hospital administration, neurology, chaplaincy, and psychodrama. The Hospital has had an active role for many years in teaching medical students from area universities. In addition, a large number of students in their third and fourth years of medical school take their supervised clinical experience in psychiatry at Saint Elizabeths. To extend the Hospital's relationship with the community, two new seminars were established in FY 68. The first

deals with theoretical and practical issues of community psychiatry and the delivery of services within the community mental health framework; the second deals with issues of forensic psychiatry and involves leaders from the local professional community working with Hospital staff on common problems.

The research program at Saint Elizabeths will benefit greatly from the formation of the National Center. The alcoholism research now being conducted by NIMH staff, for example, will be expanded. In addition, work is progressing in a number of areas, which range from the development of self-care skills in the mentally retarded to methods of reducing alienation and hostility among geriatric patients.

Third, the gross deficiencies of the physical plant must be remedied. About 700 patients are housed in buildings built prior to the Civil War, more than 115 years ago. About two-thirds of the patients housed at Saint Elizabeths occupy buildings which are more than 65 years old. Nearly a quarter of a century ago the Public Buildings Service recommended the demolition and replacement of 31 buildings still in use today. In 1962, the Hospital made a detailed study, using generally accepted space standards to determine bed capacity. The Hospital is now overcrowded by 60 to 65 percent - and this is a conservative estimate, since it includes some ward space which should not house patients at all. In view of the urgency of the problem, the Hospital hopes to move ahead in 1970,

using reprogrammed 1969 funds, with plans and specifications for two new multi-purpose patient treatment buildings. Again using already authorized funds, we propose to develop plans for constructing a new building for the treatment of medical and surgical cases. Although the present medicine and surgery building can be retained and used for the other purposes, the cost of renovation to bring it up to modern general hospital standards would be almost as great as the cost of a new facility. A hospital with the mission of setting a national example - and with responsibility for the welfare of several thousand human beings - should be freed from such problems as collapsing ceilings in ward areas and ruptures in century-old sewer lines.

Last, and most important, Mr. Chairman, Saint Elizabeths must have the resources to return more patients to the community - to their families, to foster-care situations, or to other institutional living arrangements. This will require continuing and improved collaboration between the Hospital and the District of Columbia in particular, since about three-fourths of the patients admitted to the Hospital reside in the District. The Hospital recently established a central admissions unit and four receiving divisions, corresponding to the four community mental health catchment areas in the District. This permits more effective interaction between hospital staff and community agencies and mental health centers. It also emphasizes and preserves the patient's sense of identification with his own community and eases the transition and readjustment of patients to community life.

The Area "D" Community Mental Health Center will provide an important link between the Hospital and the immediate neighborhood, and will become a focal point for badly needed human services of all kinds. The Community Mental Health Center will provide services to alcoholics and drug addicts and will have a suicide prevention program. It will also attempt to insure that patients receive, when needed, legal aid, recreation and vocational training, welfare, and other social services, which are all too often disconnected and uncoordinated in communities around the country. Plans are also underway for establishing a Neighborhood Health Center at the Hospital to provide a range of general medical services to residents of the immediate neighborhood.

Some patients at the Hospital now go into the Washington metropolitan area each day to work, but return to the Hospital at night. Others spend nights at home but are treated during the day. Still others, who cannot sustain themselves in the community because of their illness, have been selected for a sheltered workshop program. In addition, referrals and testing started in July 1968 for the more effective evaluation of patients for participation in the sheltered workshop program of the D.C. Department of Vocational Rehabilitation. A pilot program was authorized in the FY 69 budget under which certain patients participating in industrial therapy receive a small weekly payment for the work they perform. This develops a sense of individual responsibility and provides a

material incentive to return to some form of regular, paid employment. Hopefully, this program will be extended and expanded. A proposal has been developed to establish a new vocational training and rehabilitation program in the area of furniture construction. Patients would develop competence in welding, upholstering, cabinet-making, and other marketable job skills. The patients would be paid for their work and the items manufactured could be used at the Hospital and also by other Federal units.

In the field of educational rehabilitation, a new program has been initiated for adolescents, who show a growing need for special programs and attention. The weekly 2-hour sessions provide a time and place for adolescents to meet together in a therapeutic setting. Meanwhile, the Hospital's clinical social workers continue to direct their efforts primarily toward community placement of patients into foster homes, as a major alternative living arrangement for chronic patients. We placed 326 such patients last year. At this rate, the movement of patients needing maximum support would have substantially reduced the total Hospital population, had there not been a dramatic rise in admissions.

Saint Elizabeths has, for over a century, demonstrated leadership and a receptiveness to innovation which have resulted in a richly deserved international reputation. The Hospital was among the first to recognize the relationship between physical and mental

illness, and to provide psychiatric facilities for the criminally insane; it was the first known hospital in the country to establish a psychology laboratory, and it is still the only public mental institution in the country accredited for rotating medical internship.

Dedication to progress is a predominant theme in the history of Saint Elizabeths, and it is, therefore, well situated to lead the next revolution in the treatment of the mentally ill. Continued improvement in treatment can only result from the creative application of knowledge gained through research and from high caliber professional staff inspired by the prospect of participating in the most exciting, innovative period in the Hospital's history. This is a time of great hope, Mr. Chairman, and, with the support of the Congress, we intend to transform that hope into reality: To eliminate overcrowding, understaffing, and outmoded, hazardous, crumbling facilities - to bring the Hospital back into the community to stand as a visible model for similar institutions throughout the country.

In conclusion, Mr. Chairman, the request for Saint Elizabeths Hospital is $38,876,000 for 1970 as compared with an operating level of $39,832,000 in 1969, a decrease of $956,000. This net decrease is made up of an increase of $1,100,000 for patient care and community service activities, and a decrease of $2,056,000 for the Hospital's research and training activities, the funds for which are now budgeted in the Mental Health appropriation following establishment of the National Center for Mental Health Services, Training and Research.

Mr. FLOOD. Proceed.

GENERAL STATEMENT

Dr. YOLLES. Since last year when I defended the budget or presented the budget for St. Elizabeths Hospital for the first time, we have done a careful study of the hospital's needs and resources. We have appointed three task forces to look into conditions at the hospital. These task forces have worked in collaboration with officials from the District of Columbia as well as outside professionals concerning themselves with creating the Community Mental Health Center for Area D of the District of Columbia, evaluating the security buildings for the hospital's criminally insane, and projecting the disposition of patients discharged from the hospital.

If you would glance at the chart on page 58, it shows the results of the study that was done.

Mr. FLOOD. What do you mean by "disposition of patients"?

Dr. YOLLES. In releasing them from the hospital, where would they, and could they, be placed? This study was done in 1967. You will note that approximately 3,000—specifically, 2,884—patients, or 52 percent of the population then in residence, could be released from the hospital if we had the facilities in the District of Columbia to move them to, and if we had the staff to prepare the necessary outplacements.

I would also point out that about 46 percent of the patients in the hospital have been there for more than 10 years. That is a rather startling figure.

Mr. FLOOD. Many twice that long?

Dr. YOLLES. Yes, sir. About 31 percent have been there 20 years or longer. The hospital as such was reorganized in February of 1968 and was made part of the National Center for Mental Health Services, Training, and Research, as one division of this new national center, where we attempt to combine research, training, and service efforts. We know from long experience with mental hospitals that you attract the highest caliber of personnel when you have research programs and training programs going on concurrently with service activities.

Mr. FLOOD. Shouldn't this entire project be in one caption?

Dr. YOLLES. Yes, sir. These three divisions are headquartered on the campus at St. Elizabeths. As a matter of fact, we have moved our NIMH intramural training programs to the newly created Seymour D. Vestermark Division of Intramural Training.

PATIENT-STAFFING RATIOS

Our main problem is staffing deficiencies. The hospital still operates, after a fashion, with a ratio of 72 staff to 100 patients. The acceptable minimum is 100 staff to 100 patients. Many hospitals in the country have far higher staff-to-patient ratios. Ratios in the State of Colorado, for example, go much higher than the staff-to-patient ratio of 1 to 1.

Mr. FLOOD. Are there other mental hospitals in the United States which have as high a patient-staffing ratio as that?

Dr. YOLLES. As 0.7 to 1?

Mr. FLOOD. Any others?

Dr. YOLLES. There are some that have as low a one as that. That 0.7 staff to 1 patient includes groundskeepers, maintenance workers, laundry workers, and so forth.

Mr. FLOOD. Do you want to achieve a staffing level of one employee to each patient?

Dr. YOLLES. Minimum.

Mr. FLOOD. How do you arrive at that figure?

Dr. YOLLES. This has been a longstanding standard in the mental health field. It was recently abandoned. The present standard is 1.5 staff to 1 patient.

Mr. FLOOD. Will you supply for the record a list of the 10 public mental hospitals in the United States with the highest patient-staffing ratio?

Dr. YOLLES. Yes, sir.

(The information follows:)

Public mental hospitals in United States with highest patient-staffing ratio [1]

	Employees per patient
1. Eastern Pennsylvania Psychiatric Institute (Philadelphia, Pa.)	5.11
2. Malcolm Bliss Mental Health Center (St. Louis, Mo.)	3.66
3. Lafayette Clinic (Detroit, Mich.)	3.33
4. Illinois State Psychiatric Institute	3.30
5. Western Missouri Mental Health Center (Kansas City)	3.14
6. Larue Carter Memorial Hospital (Indiana)	2.67
7. Hawthorne Center (Northville, Mich.)	2.63
8. New York State Psychiatric Institute (New York, N.Y.)	2.61
9. Moccasin Bend Psychiatric Hospital (Chattanooga, Tenn.)	2.17
10. Tinley Park Mental Health Center (Illinois)	1.92

[1] Includes only hospitals with a patient population in excess of 100.

Dr. YOLLES. In addition to facing this problem of 0.7 staff to 1 patient, we must also cope with an increase in the number of outpatients we see at St. Elizabeths. The number has gone from 500, 10 years ago, to over 1,800 today. This necessitates much more staff and diverts the staff from resident patients in the hospital. In addition, there have been many more admissions to the hospital, from 1,600 in 1959 to nearly 4,000 in 1968. This means an additional drain on the few staff that we now have available. I do not intend to go into a full catalog of the deficiencies of the hospital. They are many, Mr. Flood. There are really very serious deficiencies.

WASHINGTON STAR ARTICLES ABOUT ST. ELIZABETHS HOSPITAL

Mr. FLOOD. Have you been reading the stories—of course, you have; it is almost rhetorical—in the Star? The interesting thing about this, I have been sitting on the Defense Appropriation Subcommittee since it was organized 20 years ago, and every year about the time that we begin to hold our hearings stories appear in the news media about the sighting of Russian planes over Alaska or something of that sort. I notice that just about the time that we start to hold hearings the news media locally break out with stories about St. Elizabeths.

Mrs. REID. There was one last night.

Mr. FLOOD. Yes, ma'am.

Dr. YOLLES. Part of a series.

Mr. FLOOD. Since they point up some of these things, would you want to insert those in the record or would you rather say what you have to say? They are well written.

Dr. YOLLES. Yes; I will supply the articles for the record. They are extremely well written, Mr. Flood. I take no issue with them. There

are some misstatements in interviewing people in the hospital. I take no issue with that. I would like to point out to the committee that all of those articles are vast understatements of what is happening there. Yesterday's article, look at the picture of the bathroom. We have a similar picture in the chart book that you have. That does not tell the story.

(The information follows:)

QUIET CRISIS AT ST. E'S—WASHINGTON'S HUGE MENTAL HOSPITAL IS SUFFERING GROWING PAINS

(By Judith Randal and Walterene Swanston, Star Staff Writers)

The pretty young woman sat in the same spot in the admissions office, peering at her small, dark face in the mirror of her compact and applying layer upon layer of red lipstick. She sat there most of the afternoon.

Off in another corner of the gray-green room at St. Elizabeths Hospital her husband twisted his hands and quietly explained to a hospital attendant that his wife was sick again.

She had been sick like this before, he said—once in 1961 after her brother killed himself in front of her, 3 years later when her father died suddenly, and again last January.

Each time he had brought her here and she had been committed, treated and released, but her injured mind hadn't mended completely.

When she had herself committed in January, he said, she stayed 2 weeks before her doctor suddenly released her. The family wasn't told she was to be released, so she left the hospital on her own and they hadn't seen her for more than a month.

He found her at their bank trying to cash a check earlier that cold February day, he said, and promptly asked the police to help him bring her here to have her committed so she couldn't leave until she was better.

SIT TOGETHER AND WAIT

Now they saw together in the little room, waiting for records from previous commitments to be found, for the admissions psychiatrist to talk to her, for the vehicle to come to take her to the building where she will live until her mind has healed.

The lipstick process was interrupted from time to time. Directly across the aisle from the young woman, a withered woman whimpered and sobbed uncontrollably as her daughter tried to keep her quite. Two young male drug addicts talked about what would be expected of them in the drug "cure" program they would begin that day. Nursing assistants bustled about, collecting information. Two policemen brought in a middle-aged woman who had showed up at the White House gates demanding to see the President. An old lady came in all alone to have herself committed. And a well-dressed young man sat very close to his girl friend, tightly clutching her hand, his head on her shoulder.

They all sat waiting, watching one another.

Day after day, people who can no longer deal with a mentally ill friend or relative turn to St. Elizabeths, the mammoth mental institution stretching out on a tree-dotted hill overlooking the Anacostia and Potomac Rivers in Southeast Washington.

A PART OF HISTORY

The hospital has been a part of Washington's history for nearly 115 years. In that time, it has grown from a few scattered buildings to an institution larger than many American cities.

Its 125 buildings are sprawled over 320 acres. Some 5,600 patients live there, while another 1,500 are receiving outpatient care by visiting clinics there once a month.

St. Elizabeths has enjoyed an international reputation for the kind of care it provides—and for pioneering in some fields of mental health care. It was the first public hospital to use psychodrama, dance therapy, and extensive behavioral and clinical studies programs, including ones for resident psychiatrists. The hospital also has several excellent research and training programs underway.

There is a lot that is good about St. Elizabeths. But the focus of these articles

will not be on the hospital's strong points, but rather on its weak ones. A wildcat strike last fall by most of the hospital's 1,500 nursing assistants brought many of these weaknesses into the open.

During that last 20 years, the hospital has been going through a quiet crisis—a crisis caused mainly by growth and the fast-changing concepts of mental patient care and treatment.

TROUBLE SIGNS NOTED

Former Health, Education, and Welfare Secretary John W. Gardner was one of the first officials to spot the trouble signs.

On August 11, 1967, Gardner announced a plan to convert St. Elizabeths into a national demonstration for the conversion of a large, old-style institution into a modern community based mental health facility.

The move was begun by plans to link various parts of the hospital with community mental health centers run by the District of Columbia. There were to be four of these, to serve the census tracts known respectively as area A, area B, area C and area D, and each area was to have its own division at St. Elizabeths.

More than 15 months later, former HEW Secretary Wilbur J. Cohen transferred administration of St. Elizabeths from a division in his office to the National Institute of Mental Health (NIMH) and St. Elizabeths became the National Center for Mental Health Services, Training and Research.

In making his announcement, Cohen noted a trend in the country toward community mental health facilities:

"Large custodial hospitals no longer adequately meet the needs of patients, families, and communities. We can no longer merely fit new methods to old patterns of treatment."

HOSPITAL OVERCROWDED

Dr. Sherman Kieffer, recently appointed to head the center, is one of the first to agree that St. Elizabeths has both problems of quality and quantity.

To begin with, the hospital is badly overcrowded. It was built to house 3,989 patients but has 5,600. Some of its 155 wards are so overcrowded that patients' beds line the hallways; rooms designed for one person have three; children under 18 are put in wards with adults because there is no place else to put them; young patients who possibly could be saved if they got thereapy are put in wards with elderly chronic patients who get only custodial care.

Dr. Kieffer has estimated that fully half the patients in St. Elizabeths don't need to be there. But it is hard to find enough good foster homes or outside care programs to release them to, he says.

Even at that, the number of patients in the hospital is diminishing every year because, as Kieffer puts it, "There is a bug in the air to try to keep the people out of St. Elizabeth if they can function outside."

He expects the community mental health centers—once they are all working—to help reduce the number of in-hospital patients further.

NO GREAT BIG PRISON

The hospital could use some new buildings to replace old ones, Kieffer says, but he doesn't want to build a great big prison.

What he prefers would be two multipurpose buildings on the campus which would each house 500 patients, even though such buildings might be a compromise for him.

"A modern concept of mental health care is not to put large numbers of patients together in one building, but we need more space," he says.

Kieffer thinks the hospital should be more of a part of the community, especially since it is to house a community mental health center. He says he plans to pull down at least some of the walls surrounding it simply to bring it out into the community.

The hospital also has shortages of staff on nearly every level. It is difficult to keep nursing assistants because the pay scales are too low. Since St. Elizabeths is a Federal institution, applicants must take the civil service tests to work there and pass subsequent ones to get promoted.

Kieffer says that many of the employees simply can't pass the tests and therefore stay in the GS–3, GS–4, and GS–5 positions they start at, despite the fact that they render compassionate and high quality care.

One nursing assistant who says he has been at the hospital for 23 years and is only a GS–5, complains that some of the men in his ward only get fed because another young patient voluntarily helps out.

MANY FACILITIES ANTIQUATED

Half the patients are housed in pre-Civil War buildings. Most of the others have antiquated facilities—no air conditioning; improper heating, wiring, and plumbing, and little space for the patients who do not have to spend their time in bed.

Gardner, realizing that giving NIMH control of St. Elizabeths could cause a problem between the District's Department of Public Health and NIMH, tried to work out a solution before the problems became too acute.

As District health officials were quick to point out at the time, 60 percent of the patients in St. Elizaeths are residents of the District and 82 percent of the operating costs and 85 percent of the building costs are paid by the city government. Such statistics would warrant giving the District control of the facility, the critics pointed out.

QUIET PRESSURES BUILD UP

Gardner's attempted solution was to give NIMH interim control of the facility as an initial step toward future transfer of St. Elizabeths to the District of Columbia, and he carefully pointed out that the development of the hospital would be worked out in collaboration with the District government.

Gardner defended the decision to give NIMH control by noting "NIMH is the focus of national leadership in the mental health field. It has the staff and other resources necessary to mount a national demonstration at St. Elizabeths of new and better approaches to mental health services.

But quiet pressures have been building up between the public health department and NIMH despite Gardner's efforts. Some plans NIMH had for the hospital have been dropped because of opposition from District Health Director, Murray Grant's office.

Shifts in plans are nothing new for St. Elizabeths, which was created by an act of Congress in 1852 after mental health crusader Dorothea Lynde Dix convinced the Hill that the District should have a facility for the insane.

In its early days, it was called the "Government Hospital for the Insane," and—according to Miss Dix—was designed to provide "* * * the most humane care and enlightened curative treatment for the insane."

In the years it has taken St. Elizabeths to fill up its hilltop hospital, administrators have taken an intense pride in the facility's progressive attitudes, its growing and changing concepts of patient care and treatment and research and training programs.

Yet the very fact that it has grow and changed has caused problems.

Some of the changes mean that new buildings become obsolete almost as soon as they are built; that new programs don't function properly because of staffing problems; and that the quality and amount of care changes more and faster for some patients than for others.

Since Miss Dix's day, the idea of what constitutes humane care and enlightened treatment has changed considerably. Though St. Elizabeths has tried to keep up with the advances, it has not been easy.

Ironically, many of the problems arise because the hospital is too large physically. The distances between the administrative offices at NIMH, the hospital's on-campus administrative offices, and the division offices make communications breakdowns almost standard.

One group of staff members, for example, came to work one morning last month to find workmen removing part of their ward furniture. The space, it developed, was being given over to an entirely different service. No one had told them it was going to happen, they complained. Other staff members claim they have little control over programs that they ultimately have to run.

Because of the size of the campus, staffers charge that too much time is lost simply getting themselves and their patients around to the different treatment services.

The hospital itself is more complete than many cities. It has practically everything—from highly technical machinery for physical as well as mental illness to a laundry, greenhouse, firehouse, and shoe repair shop.

The patients are committed by voluntary admission, or by Federal and District courts for pretrial examinations or treatment.

SOME PROBLEMS MEDICAL

Some patients have medical problems as well as mental, and the hospital has an expensive, well-equipped medical-surgical unit and a physical and medical rehabilitation center to care for them.

Others are alcoholics or diabetics and there are programs for their rehabilitation and care.

Some of the patients have been in the hospital for more than 50 years and will die there; 1,500 have been in more than 25 years, and 2,500 longer than 15 years.

When they are admitted, many expect they will never get out again. Most do get out eventually, returning to their homes or to foster homes.

With its myriad problems, St. Elizabeths' future is not at all certain. The new HEW Secretary, Robert Finch, is interested in it and shortly after he took office, toured the hospital. And Congress, this week, will consider the facility's budget for the next year.

Whatever progressive changes NIMH and Congress make, they cannot come too soon for the young woman who spent the cold day last month in a corner of the admissions room more concerned with her next layer of lipstick than with the quiet crisis of a mental institution too big for its own good.

. . . . . .

"Half the patients are housed in pre-Civil War buildings that have antiquated facilities, no air conditioning, improper lighting and little space . . ."

. . . . . .

". . . Fully half the patients in St. Elizabeths don't need to be there. But it is hard to find foster homes or good enough outside programs to release many of the patients into."

. . . . . .

"Large custodial hospitals no longer adequately meet the needs of patients, families, and communities. We can no longer merely fit new methods to old patterns of treatment."

QUIET CRISIS AT ST. ELIZABETHS—PATIENTS GET LITTLE PREPARATION FOR OUTSIDE LIVING

(By Judith Randal and Walterene Swanston, Star Staff Writers)

A patient at St. Elizabeths has a lot of things going for him—a protective environment, an administration that is eager to try the latest treatment methods and a dedicated staff of doctors, nurses, nursing assistants, auxiliary therapists, and social workers who really care. But he is also the victim of promises easily given, but impossible to fulfill under present conditions.

Recently, for example, Dr. Ludwig Tramer, deputy mental health minister from Israel working under the visiting scientists programs with the National Institute of Mental Health (which now runs St. Elizabeths) has been surveying the hospital seeking to determine how many of the long-term patients really need to be there. More than 70 percent of those in the chronic or geriatric wards, he has found, could be integrated into some sort of socially protective form of living.

Said another way, this means that the hundreds of "burned out" schizophrenics or alcoholics—those who have grown old at St. Elizabeths—and the countless others sent to the geriatric wards because they are 65 or older upon admission have no real need of a mental institution per se, but do need the emotional shelter of a foster care or nursing home.

The pressure is now on at St. Elizabeths to empty the words of such people. But unfortunately, although the hospital has eight people on its social service staff involved in foster home placements, the District has only one social worker to keep track of patients living in such homes once they are formally discharged.

Besides, even the St. Elizabeths' foster home staff faces an enormous task. It not only has to find the homes—those operated by whites are in especially short supply—but also to train their owners and to motivate patients to whom the hospital has long been home to live in the outside world.

In addition, says Mrs. Jessica Epstone, who is in charge of this program, "we have had to reassure the community that these patients are in control of their acting out behavior as long as they take their medication. It's been a big selling job."

Money is also part of the problem. If a patient needs public assistance—and many, if not most, of these elderly people do—the District will pay $116 a month toward maintenance, $100 of which goes to the home, and $16 to the individual. For those who need more care or supervision the going rate is $125.

This, says Dr. Robert N. Butler, a psychiatrist specializing in geriatrics who is a consultant to both NIMH and St. Elizabeths, "is transporting older people from the frying pan into the fire. Most of these nursing homes or personal care homes are quite terrible. I define them as places that don't have nurses and certainly don't qualify as homes."

Frances Carter, head nurse in two chronic wards for women in the facility's Richardson Division serving the quadrant of Washington known as area C (which includes all of Southwest, part of Northeast and that part of Southeast west of the Anacostia River) reports from having visited some of the homes that they are "dusty, musty, lacking in recreational facilities, poorly lighted, and generally run down."

"The beds are often as close together as in our most crowded wards," she adds, "with only one chair and one dresser for two people, and the ladies often have to work so hard for their keep that they can't get back here to clinic.

"Many patients here at St. Elizabeths also do chores, sometimes for pay, but only as much as their treatment program calls for. If they could come in whenever they wanted to—could get a little reassurance when their voices are bothering them—they could stay out for good. This way they leave us only to come back sick."

Mrs. Carter is describing those able to return to the community, if just for a little while. Visiting St. Elizabeths, you meet dozens of others not beyond being rehabilitated if it were possible to build up their confidence and properly attend to their physical and emotional needs. Without such provisions, however, study after study has shown that older people uprooted from familiar surrounding, however dreary, have soaring mortality rates.

What the staff calls "institutionalitis" is the major problem. After you have been in the hospital since 1904, or 1928, 1936 or even 1966, the world outside becomes a fearful place. It's been years since you've handled money; years since you've had relationships with others. Your ties to the community are gone, your family no longer considers you its own, if indeed any of your family remains.

But you could be prepared for outside living and there are many at St. Elizabeths who would be eager to help you—if they had the time.

Why don't they? Conditions in two chronic wards of the Richardson division—which actually are better than many places in the hospital—tell the story. Here, 96 women are cared for by one registered nurse and two nursing assistants during the day. There is even less help in the evening and at night.

Of these patients, 22 have organic brain syndromes and must be taken to the toilet and bathed. There are three toilets, all without doors, one tub and no washing machine.

In addition, several women require continual medical attention because they are diabetic, blind, have heart conditions or progressive neurological disorders such as Huntington's chorea. Miraculously, there are no unpleasant smells and no bed sores.

The physician in one of the wards is Dr. George Negron. He is doing a Navy residency in psychiatry and is only here for 3 months. "That long I can handle, but more I don't think I could stand," he says. "People are deluding themselves that these spasmodic efforts (at placing patients in foster homes) are going to do any good. It's going to mean a lot more staff, a lot more money."

Negron shows you around his ward with its dayroom and sleeping quarters. A television set is always going and some patients watch half-heartedly, but others are curled up in chairs with their eyes closed. He finds one woman, an epileptic, asleep on the green linoleum behind a row of metal lockers. "Time to get up, time to get up," he says, trying to arouse her, but to no avail.

"This is the epitome of custodial care," he comments. There are so many things that could be done to get them out of their psychotic little worlds. But it's impossible to do them with the present staff. Most of these patients are too regressed.

"With only two occupational therapists for Richardson, patients have to be motivated to go to them and few of these people are. And if it weren't for the drugs (tranquilizers for the most part) things would be worse. I keep thinking that this ward could very well be handled by one patient if you just put the others in cages and hosed them down once a day."

At that, things are better than they once were. The hospital as a whole has only two dance therapists. Neither of them comes here and there just isn't enough staff to take patients who are fearful or likely to wander off to the dance studio, psychodrama hall or other facilities available on the grounds to those who otherwise can get to them. But efforts are made to treat patients as individuals and to give them dignity.

Alice Adamson, a nursing assistant who has started a weekly sewing class for the patients, has worked here 17 years. She can recall when patients didn't know what it was to wear hard-heeled hard-soled shoes or flowered percale dresses, weren't permitted to work and ate and drank from tin plates and cups.

In those days, she said, disturbed patients were secluded in rooms without beds and left strictly alone, often on cement floors. No patient ever left the grounds. Last summer, 90 of the women went on a picnic to Sandy Point beach; 25 even went in the water and even the most disturbed "behaved like perfect ladies." And from time to time the outside world arrives in the form of recreation programs conducted by volunteers.

Nevertheless, feelings of frustration and downheartedness are rampant, particularly since it was announced in November that the hospital is to be reorganized after a prior reorganization little more than a year earlier.

"Most of the ideas they (NIMH) have we've had for years," complains one doctor, "but they don't even want to talk to us. All they are interested in is telling us what to do. When someone from Chevy Chase (NIMH headquarters) came out here to make the reorganization announcement, a psychologist got up and said he felt as if he were working at a small company that had suddenly been bought by a large corporation. The applause went on for fully 2 minutes."

Nor is it only fear of being ignored that is disturbing the staff. One change said to be in the offing is tearing down the walls. "Look at the neighborhood we're in," people say, "it would be downright dangerous and would cost hundreds of thousands of dollars besides."

Furthermore, NIMH has announced that St. Elizabeths is to be turned into a model mental health center for the Nation. But those who work here have the impression that efforts are to be concentrated on the Dix division, which serves the 145,000 people of the District's area D (everything east of the Anacostia River south of East Capitol Street)at the expenses of the rest of the hospital.

In fact, this is partially already the case. Per-patient expenditures for Dix in the last quarter of 1968 were $26.50 each day. For Richardson they were only $14.20 and in several other parts of the hospital they fell as low as $11.48. But in the William Alanson White unit where NIMH research is conducted, average daily patient costs were $52.

"What worries me," says Dr. Julian Jurand, director of Richardson, "is that the administration will think that because we've struggled along this far, we don't need any help." The six other doctors who assist him in caring for 900 patients—one of the doctors a psychiatrist, one part-time, one a psychologist and three Public Health Service officers—echo his apprehension.

"Plans for Dix call for one registered nurse for every 12 patients and two nursing assistants for every five patients," said Dr. John Kachmarick at a recent Richardson staff meeting.

"Imagine what we could do with that. And they're going to publish these openings which, in effect, will be pirating from the rest of the hospital. It's a step forward for a quarter of the Washington population and a step backward for the rest—particularly since we understand there will be no more money here for patient care until 1970 at least."

One of the things there is no money for is increased staff for the some 280 Richardson patients on convalescent leave" who are supposed to come back twice a month for clinic visits, but who often need to be followed up with home visits into the community.

Another is a special program for youngsters. The official line is that children are not to hispitalized, but cared for as outpatients by the community mental health center at D.C. General Hospital, which works in tandem with Richardson. But there are some young people who would run away were they not confined at St. Elizabeths.

About a half dozen of these youngsters—all teen-age girls—presently live in Richardson patients on "convalescent leave" who are supposed to come back twice here for many years. It's an old St. Elizabeth's problem: There is simply no other place for them to go.

Nor is it confined to Richardson. In Que division—which serves the "B" quadrant of Washington (parts of both Northeast and northwest—for example, a

single mentally retarded patient is so large and so aggressive that one nurse or nursing assistant must watch her continuously lest she become assaultive.

"It just means that much less help for the rest—particularly bad as most are new admissions who are very sick," says a nurse. "But what else can we do? In summer we can put her out on the porch but then of course, everyone else has to stay indoors and with no air conditioning it gets pretty hot."

The teenagers in Richardson, however, are among the hospitals more fortunate patients. There is no child psychiatrist here, even as a consultant, but Dr. Jurand is not a man to see a problem and ignore it and the young Public Health Service doctors who come here for 2 years at a time fined themselves inspired by his example.

"You understand," say one of these, a tall North Carolinian named Robert Abernethy, who is responsible for more than a hundred patients in addition to the girls, "that I am not a psychiatrist and have no formal training in child psychiatry. But we couldn't just let these children languish, so out of desperation we've done the best we can."

Abernethy's first idea was to have the girls admitted to the youth center, a combination school-therapy unit on the hospital's grounds that used to be a unit for tuberculous patients and is itself somewhat makeshift. It turned out, however, that the youth center operates in conjuction with the psychiatric residency program in another part of the hospital and that the Richardson girls and two boys who have recently joined them could not be accommodated.

At this point Abernethy recruited volunteers—staff people who would be willing in the midst of their other responsibilities to set up a recreation program for the youngsters, help them gain confidence in their own potential for self-control and learn the rudiments of reading, writing, and arithmetic which most of them now lack.

A nurse was found (the mother of nine children); a recreational therapist put other duties aside to take the girls and boys bowling and on trips; a teacher in the educational rehabilitation unit on the grounds arranged for classes 2 hours 5 days a week, and Dr. Lourdes Ortega—a psychologist who is an expert on behavioral therapy—arranged to spend an hour a week counseling the staff actually working with the children.

With her counsel, an incentive program has been arranged whereby the girls earn poker chips for good behavior which they may exchange for privileges such as clothes from the commissary, movies, or a weekend at home. Local college and university students come in the evenings to act as tutors.

Despite overwhelming handicaps, the program has worked remarkably well. The children who when they first came to the hospital had been acting out their emotional disturbances by continually trying to run away have apparently found in Richardson a source of strength. Last month, for example, when an older woman had wandered away from the ward, it was one of the teenagers who had most often "eloped" from other institutions who voluntarily went out on the grounds and gently led her back.

Other staff members also realize the possibilities of such programs.

Dr. Ortega, for example, found a group of nuns willing to try the poker chip system to train severely retarded women. Miraculously, patients, who had always gone naked if not dressed and had eaten like animals, were taught to take pride in clothing themselves, to eat like human beings, and even to earn money by making the charming pinatas which are sold in Georgetown shops.

But what is to become of the program now is unclear. Dr. Ortega applied to NIMH for grant assistance, but the proposal was turned down last year. Meanwhile, units from all over St. Elizabeths are trying to send their retarded patients to this ward.

Another makeshift arrangement is made necessary by a shortage of psychologists and psychiatrists, social workers, and other trained professionals to conduct individual or group therapy. Student nurses who come from other hospitals for psychiatric training are assigned on a 1-to-1 basis to work with carefully selected patients—often the only individual attention such people get. Groups of these students are then invited to meet weekly with a registered nurse.

Or nursing assistants may be recruited to conduct group therapy. But these, too, are in short supply, particularly the men who (like all nursing assistants) after they reach the GS–5 level find it hard to advance. If they were registered nurses, the Government would pay for training that would permit them to achieve higher status. But as nursing assistants, they are simply out of luck.

Yet, as Dr. Jurand points out: "Nursing assistants are the most valuable members of the treatment team, since they are with the patients most of the

time." The result is that what few men there are, are more likely to be found working in the parts of the hospital that care for prisoner patients than on the other wards because these services offer extra pay. Yet prisoner patients—mostly sociopaths—are usually far less dangerous to manage than many acutely phychotic patients who have not committed crimes.

The bright side of the picture, and there is one, is that a new wind of change has swept St. Elizabeths. "Today, on the day the patient enters the hospital we think about the day he or she is going to leave," is heard again and again.

Patients, both old and new, are given increasing responsibility for their own treatment and behavior. A woman in one Richardson ward used to be kept in a padded cell because she was dangerously suicidal. A few years ago Dr. Jurand told her that she would have to be on her own because there weren't enough staff members. She hasn't tried to kill herself since.

Similarly, fresh arrivals are brought in to meet the staff, told of the suggested therapy, and then asked what they think of the ideas. "Somehow," says Jurand, "the patient has to be involved in planning his treatment; otherwise it is doomed to failure."

The tragedy is that so little is available of the things that might truly help. For those unable to muster real initiative, St. Elizabeths poses the dangers of an out-and-out dead end.

* * *

"Most of these nursing homes or personal care homes are quite terrible. I define them as places that don't have nurses and certainly don't qualify as homes."

* * *

"There are many things that could be done to get them out of their psychotic little worlds. But it's impossible to do them with the present staff . . ."

QUIET CRISIS AT ST. ELIZABETHS—HOSPITAL'S "DUMPING GROUND"

(By Judith Randall and Walterene Swanston, Star Staff Writers)

Sometimes the best way for a patient committed to St. Elizabeths Hospital to get well is to get out of St. Elizabeths.

At least that's the opinion of Dr. Robert H. Robertson, director of Detached Service at the sprawling mental institution.

Robertson is preoccupied with getting the patients out of the wards and back into their own or foster homes.

Robertson supervises 13 wards containing 800 men whose average age is 57 and whose average length of stay in the hospital is 27 years.

They are men transferred from all parts of the hospital—"whenever another service gets pressed for space," Robertson says.

Robertson says that over the years, Detached Service has become St. Elizabeths' "dumping ground." It has seven buildings. The newest was built in 1900, the oldest in 1879.

His patients range from uneducatables and persons recovering from a major illness or surgery to prisoner-patients sent over from John Howard Pavillion (the maximum security section for the criminally insane) and out-of-State patients who will stay only a few days.

Some go into the city every day to work; others just sit and stare, tied into their ancient wheelchairs with old bedsheets.

As a result of the diversity of ages and problems, the 13 wards in detached form a curious blend.

None has strictly one kind of patient. The man transferred from John Howard, who must stay under lock until the hospital superintendent or the courts give him permission to leave, stays in the same wards with the senile patient who needs the protection of a locked ward to keep him from wandering off.

Having patients with ground privileges and those with no privileges in the same locked ward does not make for a smooth operation, Robertson says.

"For one thing, we either have a staff member tied up all day opening or closing the door for people who want in or out, or we just leave the doors unlocked altogether," he says.

Recuperating patients are in wards with young, active, deeply disturbed patients simply because there isn't room to separate the two types.

And, at one time, children under 18 were also in the wards, Robertson says.

The kind of care and treatment also varies widely within a ward. Some patients get only custodial care; others get extensive medical care and special diets, while still others get group, occupational, vocational or physical therapy.

Detached Service has five doctors—four psychiatrists and one M.D.—a recreational therapist, an occupational therapist on call, and a social worker. But, like all other services in the hospital, there's a shortage of nurses and nursing assistants, Robertson says.

The slim staff has its hands full. "Our patients participate in psychodrama, there is one group therapy session on every ward every day. Some work on jobs on the grounds and others have jobs in the city," Robertson says.

On-ground jobs include hospital maintenance, working in the laundry, with the ground crews or in the employees' cafeteria.

Outside jobs include work in doctor's homes or offices, car washes, and a few stores off the campus. Some jobs on the campus pay up to $2.50 a week, while others pay nothing, Robertson says.

Last Monday, Detached became an admitting service for nonresidents which means that 20 additional patients a month will be admitted to its wards, a change which will have "a tremendous effect," Robertson says.

"For one thing, we have gotten a new psychiatrist and have been promised a new social worker and will probably get some additional staff members," he explains.

"When you become an admitting service and are getting new patients, you get more activity."

Detached used to have more psychiatrists, therapists, and social workers, he says, but when other areas were building their admitting programs, part of his staff was "stolen."

On a recent tour of the Detached buildings, Robertson, a tall, lean man with a graying crew cut, talked almost casually about his problems and those of his patients.

He pointed out scores of old men in the cavernous, ill-lighted tunnels which connect most of the buildings on the east side of the campus.

"I can remember when there used to be a hundred men who stayed down in these tunnels," he said. "They used to bring their mattresses down here and sometimes their girl friends.

"We tried everything to get them to come up and stay in the wards, but they always come back down here."

Now, some of the corridors which wander off the main tunnel shafts have been sealed to prevent the men from burrowing too far into them.

Robertson, pointing out a darkened wing off the tunnels, remarked, "One of the patients hanged himself on a rafter over there not too long ago."

In a room off the tunnels, Robertson pointed out a group of about 25 people all busily putting together small cardboard boxes and stuffing them with stationery hole reinforcements.

He explained that they were part of a program run by the Department of Vocational Rehabilitation and were being taught to do some very menial chores for which they were being paid 80 cents an hour.

The program lasts about 13 weeks, after which some go into the city to work. Others never quite master the tasks.

Robertson said he used to get patients from John Howard who would simply kick down one of the doors in the old buildings when they wanted to get out.

"Those old doors have been replaced with reinforced ones now, and the prisoner patients are in locked wards for some time before they can leave them," he said.

Of the 800 men in Detached, 580 spend their nights on the premises. The rest are on convalescent leave.

"We're anxious to get them out to be able to treat the ones who need to stay here," Robertson says.

So far, Robertson says they have found 180 men who could go out to foster homes if the homes were available.

"There is a lot of resistance to letting some people out. Not on the part of the staff but on the part of family and friends who just don't want the person back," he says.

Robertson says detached wards are "stable and quiet, quieter than the city at night," even though they have about one major incident a month.

"Of course we have our problems—suicides and other unpredictable acts," he continues.

Pointing to a charred corner just inside a doorway, he explains that the day before a patient tried to burn the place down.

"Fortunately, even though the building is terribly old, there was some reinforcement which kept the fire under control," he dryly notes.

One ground floor ward was finally abandoned, he adds, because it was just too bad to let patients stay in any longer.

Cracked and peeling walls, windows that don't close properly, poor lighting and heating are common in most of the wards. Bathroom facilities are inadequate—"the plumbing in all these old buildings is overworked," Robertson put it—"and some of the fixtures leak badly while others are rusted through."

"Once, when I was making rounds in the ward, a patient came up to me and said he wasn't going to the bathroom for a week," Robertson recalls.

"When I asked why, he took me by the hand and led me to the bathroom.

"I couldn't blame him for not wanting to go in there."

* * *

"* * * We either have a staff member tied up all day opening or closing the door for people who want in or out, or we just leave the doors unlocked altogether."

* * *

"Once when I was making rounds in the ward, a patient came up to me and said he wasn't going to the bathroom for a week. When I asked why, he took me by the hand and led me to the bathroom. I couldn't blame him for not wanting to go in there."

* * *

"When they wanted to get out, they'd simply kick down one of the doors."

QUIET CRISIS AT ST. ELIZABETHS—THE DANGEROUS PATIENTS

(By Judith Randal and Walterene Swanston, Star staff writers)

In an earlier day, he was known as the "Bad Man of Swampoodle," notorious in the District area for his crimes of violence.

By the time he turned 50, Dallas O. Williams had spent half of his life in one kind of institution or another, including 8 years at St. Elizabeths Hospital, the Federal mental institution spread out on a promontory overlooking the Anacostia River in Southeast Washington.

Williams was once one of the criminally insane patients in John Howard Pavilion, the institution's maximum security section and had been arrested for more than 100 crimes and convicted of at least 10 in 29 years.

John Howard is one of the three buildings used for the criminally insane or potentially dangerous patients. The others are West Side Service, a medium security unit for men, and Cruvant, a minimum security service for women and some men transferred from John Howard.

Among the patients in the three facilities are those committed by the District of Columbia court of general sessions or U.S. district court for pretrial mental examinations; those committed by the courts who have been found mentally incompetent to stand trial, and those who have been found not guilty of crimes by reason of insanity.

According to Dr. Mauris Platkin, clinical staff director at John Howard, the number of persons requesting pretrial examinations from district courts has risen significantly in recent years. In the past, many such defendants were sent to D.C. General Hospital for those tests, a practice which has now all but stopped. Thus, the burden of making the examinations has fallen virtually entirely on the already hard-pressed St. Elizabeths.

The examinations are given to determine if a defendant is mentally competent to stand trial, if he was sane at the time of the alleged crime, or if, following a trial, he must be committed to a mental institution for treatment.

They usually take 60 days.

"The courts used to allow 120 days for the examination," Platkin says, but have since cut the time in half.

"It takes all of the 60 days sometimes to get the man's records from schools, the service or from jails, prisons, or the FBI if he has been in trouble before."

The staff often has to write for the man's records from out of State since only 50 percent of those committed for the examinations are from the District, he continues.

A training officer in another part of the hospital says the pretrial examination could be done in 3 hours if the staff were available. He adds that the 60-day confinement, as a result, amounts to a pretrial sentence.

But Platkin says his staff—as it is organized now—needs the time to do a thorough job. Some men feign insanity during the examination period to avoid jail or prison sentences, he adds, though conceding. "It's hard to put on an act 24 hours a day for 2 months."

The examinations consist of interviews with psychologists, with physicians to determine if the defendant has any brain damage and with psychiatrists to determine personality disorders.

In most cases, a defendant is found competent to stand trial if he understands the charges against him well enough to help with his defense, Platkin says.

If the man is sent to trial and found not guilty by reason of insanity, he can be sent back to the hospital for treatment.

But some doctors object to this procedure on the grounds that the examination psychiatrist might tend to overlook clear signs of mental disorder and rule some patients competent to stand trial simply because there might be no room for him to remain in John Howard Pavillion.

Platkin says if a man is found competent to stand trial and he "freaks out in court, he can still get mental treatment" in a prison hospital.

Once a man gets sent to John Howard by the courts for an indefinite commitment, he must remain there until hospital psychiatrists and the courts feel he is ready to be released.

Until that time, he stays in John Howard Pavillion, a five-story brick structure built in 1959 which has capacity for only 390 men.

Platkin says that the number of men in John Howard fluctuates between 370 and 385, and thus there is no overcrowding.

But some doctors at the hospital feel that there is no overcrowding only because patients are transferred from John Howard to Cruvant, West Side and Detached Services before they are ready for less security.

Scattered over 12 wards, the patients in John Howard range from murderers and rapists to housebreakers and auto thieves. All of them—even those confined for pretrial examinations—get some kind of therapy but not enough, according to several doctors.

Dr. George Weickhardt, acting chief of services for John Howard, points out, "We spend most of our time here with the patients sent to us by the courts for observation or by appearing in court. We don't have time to treat the patients."

Even though the men he deals with from day to day need to be in a maximum security unit, Weickhardt says he is not intimidated by them.

"Criminals are not people walking around looking for throats to cut. They generally need some provocation," he notes.

"They're not all bad people; some have had a bum steer.

"Most of the people who come here are not sick psychologically, but socially."

Nevertheless, John Howard's treatment programs are geared to psychological problems rather than social.

A staff of three psychiatrists, two psychologists, a social worker, occupational, vocational, recreational and physical therapists work with the patients.

There is a shortage of nursing assistants at John Howard, although the problem is less acute there than in other parts of St. Elizabeths. For one thing, because the nursing assistants at John Howard receive hazardous duty pay, the service is able to get and keep more male nursing assistants than other divisions which do not have the extra pay.

Patients have well-equipped woodwork and publications shops at their disposal and vocational classes which include typing, barbering and tailoring.

They also enjoy a wide variety of recreational therapy programs, such as organized team sports and a theater group. Platkin adds. Most of the John Howard patients are between 20 and 30.

Some of the less severely disturbed patients in nine of the 12 wards participate in a patient government association and bear at least some of the responsibility in setting up codes of conduct for themselves, Weickhardt says.

A few of them even have court-ordered permission to leave the grounds to work during the day and return to the hospital at night, but the overwhelming majority must remain in the building at all times.

Although there have been but two escapes by prisoners from John Howard, elopements was once the single most perplexing problem facing the service.

Escapes from East Side are more frequent and still pose a problem, according to Dr. Stephen Klinger, director of the service.

"Whenever a patient leaves without permission, we must classify him as an eloper, even though he is gone for a few hours," Klinger says.

West Side is in the oldest building on the grounds, Klinger says, and houses both prisoner and civilly committed patients.

Most escapes from his service come after patients are given ground or city privileges, Klinger says, adding that they simply walk away.

Patients in West Side are somewhat older than those in John Howard and are sometimes transferred from John Howard after they have been in the hospital a long time.

The majority of patients there, however, are committed by the District of Columbia court of general sessions, generally for misdemeanors, or pretrial examinations.

When John Howard opened in 1959, West Side was dissolved. It reopened in 1960 as a rehabilitation service for patients released from John Howard.

In 1965, it became the admitting service for persons committed from the local courts. Ninety percent of the patients in West Side come in for the 60-day pretrial examination. Two of its eight wards have to be reserved for those who come in for the examinations.

"We are overflowing," Klinger says. "It is difficult to keep up with the patients being sent in for observation."

He adds that the overflow sometimes hampers the treatment programs in other wards.

The most active ward in West Side is one which he calls a "therapeutic community" where patients are involved in making decisions concerning their own treatment.

The community has been in existence for 5 years, and meets daily and Dr. Klinger says astounding results have occurred.

"But if the two wards for observation cases are full, we have to make room for the new patients somewhere. It sometimes mean we have to put patients in our therapeutic community who don't belong there and they tend to be disruptive to the program," he points out.

Klinger says there is enough to keep the patients in his wards busy during the day—with psychodrama, occupational therapy, industrial training programs—but not enough to do at night.

His service has a shortage of staff, he says. He tries to help out by personally taking care of patients in one ward on a day-to-day basis.

He, too, spends a great deal of time in or preparing for courts, and says he has managed to work out a system which only keeps him in court two afternoons a week.

But the big problem, doctors from John Howard and West Side feel, is that too much of their time is spent with the pretrial examinations—at the expense of other patients who need treatment.

If the time they spend preparing for court could be reduced, they say, they could have time they need to treat patients.

A solution could be worked out with the courts, Klinger says, which would set up a private agency in the city to handle the examinations without committing the defendant to a hospital, thus leaving St. Elizabeth's doctors free to treat.

That, perhaps, would help prevent cases like that of Dallas Williams.

By a quirk of the courts, the "Bad Man of Swampoodle" was released from St. Elizabeths in 1963.

He was quickly rearrested and charged with committing two murders. Now 53 years old, he is serving a life term at the Lorton Reformatory.

* * *

"We are overflowing. . . . Sometimes we have to put patients in our therapeutic community who don't belong there and they tend to be disruptive to the program."

* * *

"Criminals are not people walking around for throats to cut. They generally need some provocation. . . . Most of the people who come down here are not sick psychologically, but socially."

QUIET CRISIS AT ST. E'S—MONEY IS THE ROOT OF THE PROBLEM

(By Judith Randal and Walterene Swanston, Star Staff Writers)

"There's a philosophy at St. Elizabeths that no patient should get more than any other patient. Under the guise of this kind of democracy, nobody gets anything."

This sentiment, spoken bitterly by Dr. Ralph Wittenberg who recently resigned as chief of the Residency Training Program which prepares young M.D.s for certification as specialists in psychiatry, illustrates the dilemmas imposed by a shortage of staff and money.

As Wittenberg sees it, the problem is particularly acute for a resident because assigning him to a typical St. Elizabeths ward would swamp him with work, discourage him and get him into bad habits.

This would be particularly wasteful, he says, with the present group of trainees who are handpicked by the federal government. These young doctors—who are given deferment from military service because of their special promise—are regarded as the cream of the neophyte psychiatrist crop.

"No matter what you might tell them in a lecture, what they would see day-to-day would make a greater impression than all the pious mouthings about the way things should be on the wards."

Yet training officers have discovered that the establishment of special wards for the education of residents—better equipped and a little more generously staffed than most facilities at St. Elizabeths—has been an uphill battle that is never really won. There is a widespread feeling on the hospital grounds that the existence of these wards is evidence that Peter is being robbed to pay Paul.

As has been explained in earlier articles in this series, St. Elizabeths is undergoing a quiet crisis that seriously threatens both its future and the present quality of its patient care. Important roles in the crisis are played by the National Institute of Mental Health (NIMH) which runs the hospital and the District Health Department which pays most of the costs.

The overall excellence of any mental hospital depends in large measure on the excellence of its training program, which, in turn, affects the caliber of staff it can attract. Attempts to establish a children's service are a case in point.

As is true in most of the nation, there is a severe shortage of psychiatric facilities of all kinds for the treatment of disturbed children and adolescents in the Greater Washington area.

Dr. Reginald Lourie, director of psychiatry at Children's Hospital and medical director of the Children's-Hillcrest Center who has also served as a consultant to St. Elizabeths, estimates that there are at most about 100 beds available for children and adolescents in the entire metropolitan area. But many of these, he explains, are used for short-term care—often only overnight, and some are private rather than public facilities.

They are, he adds, "soaked up like water by a dry sponge. Compared to Britain, which has a full range of psychiatric services for children and adolescents, the situation in this country is a disgrace."

Training officers at St. Elizabeths—recognizing this lack—had hoped to establish a residential ward for children and thereby lure a child psychiatrist to the staff. Indeed, money had been authorized for this purpose before NIMH took over the hospital, but the stipulated facilities—and the services they would have provided—never even began to take shape. Congressional support was eventually withdrawn.

For a time, nevertheless, training officers thought their plan would succeed. But this proved to be unfeasible because of resistance from within the administration and because space that could be devoted exclusively to children simply couldn't be found.

About a dozen adolescent boys are housed in a ward in the Dix Building where they are part of the residency program, but the ward is also used for other purposes. For this and other reasons, there is still no child psychiatrist on the St. Elizabeths staff.

The hospital's inability to attract people is evident from top to bottom, although the situation could ease somewhat as the ceiling on professional civil service salaries is raised. As one expert put it: "Salaries are not competitive and the word on the psychiatric pipeline is that the place has gone downhill."

After a search of many months for a new superintendent, it became necessary to select a Public Health Service officer, Dr. Louis Jacobs, who will soon be eligible for retirement. There are reliable reports that a younger man who had turned a Washington State "snake pit" into a high quality mental hospital had agreed to accept the post, but the Department of Health, Education, and Welfare was so slow in formalizing the arrangement that he took a more prestigious and better paying job in the New York State mental health system.

The story of the child psychiatrist is repeated time and time again further down the ladder, particularly in the category of "nursing assistant" where the

situation is critical. Nursing assistants are the men and women in constant contact with patients. Many consider them the most important members of the treatment team.

The shortage of these people is so severe and the turnover so high that authorities have considered sending a scouting team into the poorest areas of Virginia to sign up recruits.

This personnel crisis stems from a combination of factors:

Low pay: Particularly for men, nursing assistant salaries are not competitive with pay in other jobs available to high school graduates with experience at the hospital. At St. Elizabeths the highest civil service rating which most nursing assistants can attain is GS–5 which pays a maximum of $7,456 a year. Many receive far less, yet most shoulder heavy responsibility and even conduct group therapy sessions and dispense (but do not prescribe) drugs.

Working conditions: Here complaints fall into two categories, tangible and intangible. The assistants' lavatory, locker, and eating facilities are inadequate at best and in many cases nonexistent.

Another grievance is overwork. Some night-shift assistants are the sole custodians of 100 or more disturbed patients. Even during the day, the scarcity of assistants makes it impossible to put modern-day treatment methods into practice. Many psychiatrists now think, for example, that men and women should mingle in their day-to-day activities. But at St. Elizabeths there isn't sufficient staff on hand to permit this.

Employee tensions: The relationship between registered nurses and nursing assistants is strained by the combination of two problems also common in the business world—black versus white and man versus woman. Most of the nurses who supervise nursing assistants are white, while most of the assistants are black and those who resent the relationship most are black men.

Following a wildcat strike by a group of nursing assistants last November, the National Institute of Mental Health (NIMH) decided to survey the situation prior to recommending possible remedies. These recommendations have not yet been formalized, but Ralph Reeder, NIMH Chief of Personnel Management, agrees that many of the grievances seem legitimate.

In addition to those mentioned, Reeder points out that the civil service classification system blocks access to career ladders for experienced nursing assistants who might aspire to become registered nurses.

The assistants resent this bitterly because registered nurses who seek advanced degrees may receive tuition subsidies and time off for study at other institutions, whereas the aides they supervise do not. The reason for this apparent injustice is that Government regulations encourage advancement within a job category but not between what are construed as two different fields.

Still another problem, particularly among men, is that those trained at St. Elizabeths find that they can get considerably more money at the Lorton Reformatory, the D.C. jail, the District Police Department or the Children's Center. Rating the assistants who care for prisoner patients at the John Howard Pavilion—the unit for the cirminally insane—a full civil service grade above other assistants has helped to stem the tide of departures from there. But it is resented elsewhere in the hospital, where the attrition rate continues to be high. Some wards for men have no male attendants.

"A mentally ill patient is an unpredictable individual at best," says Reeder. Whether he is more unpredictable if he has committed a crime is questionable."

Besides, he points out, John Howard is a maximum security building in contrast to the other wards where the only smybols of authority a nursing assistant has are his uniform and his keys. Yet it is not unusual for a patient hiding a gun or knife to arrive at St. Elizabeths and be admitted. Even if unarmed, severely disturbed patients are often dangerous to themselves and others.

Given the rigidity of the civil service classification system, it sometimes seems that St. Elizabeths would be better off run by the District Health Department than by NIMH. However, turning the hospital over to the District, whose own health department has more than enough to do anyway would deprive it of the resources of the Public Health Service, because it would no longer be a Federal institution with access to NIMH prestige and expertise. Then, too, the District lacks the "porkbarrel" advantages of other jurisdictions with representation in Congress.

At the root of St. Elizabeths troubles are two related problems: money and a conflict of authority between the NIMH, a Federal agency, and the D.C. Health Department. NIMH operates the hospital, but the District pays most of the cost

of running it. Consequently, the Health Department feels it should have a greater voice in the hospital's operation than NIMH thinks it wise to concede.

"The District Health Department and NIMH have used each other in the most cynical way as an excuse for inaction," says one doctor familiar with conditions at St. Elizabeths. But the situation is also complicated by what the St. Elizabeths staff feels to be arrogance, on the part of NIMH and by crippling laws and redtape.

On Wednesday, for example, some 50 nurses were asked to leave their duty posts in the early afternoon and come to a meeting with Dr. Jacobs, the superintendent. There they were told—among other things—that the Administration Building and the home of Dr. Luther Robinson, the first assistant physician, were to be air conditioned at Government expense.

"Not only has our tranquilizer budget for this month about run out," says a physician working in one division of the hospital, "but there will be many older patients this summer who will die from the heat in the wards of this hospital. When it takes just about an act of Congress to get a table lamp for the dayroom when one becomes defective, this kind of thing makes you sick."

Indeed, upgrading patient facilities is both one of St. Elizabeths major problems and a symbol of the tug-of-war between the District and NIMH. Under a law passed in 1955, the District must repay 85 percent of the cost of any new building at the hospital within 40 years. The result, despite a preponderance of antiquated, inefficient, and overcrowded structures, wholly unsuited to modern psychiatric treatment, is that construction on the sprawling hospital grounds has been at a virtual standstill for nearly 15 years.

The few buildings that have gone up since this bill was passed were authorized under previous legislation. Meanwhile, since most of the older buildings are without elevators, young crippled or blind patients must often be housed in one-story structures with senile, severely regressed old men or women. Nearly all the floor space is taken up by portable commodes and beds. It would be impossible to conduct recreation or therapy programs for them there, even with adequate staff.

When medicare went into effect in July 1966 it was hoped that more money would be available for the care of patients admitted after their 65th birthday. In fact, only $91,000 of hospitalization and physician expense was reimbursible under medicare in the fiscal year that ended last June 30, the latest date for which figures are available. Besides, observers report that inflation and other factors have combined to keep conditions for elderly patients much the same as ever.

As public mental institutions go, St. Elizabeths is fortunate to have more to spend than most. Its average per day patient expenditure is about $19 whereas the nationwide average is about $10.

Neverthless, experts familiar with state hospitals across the country feel that many hospitals spending about the same amount per patient do a better job. It is hard to tell why, but St. Elizabeths large sprawling grounds, antiquated buildings, and enormous numbers of patients are thought to be largely to blame.

Medicaid is another possible source of funds, but the District has yet to implement this legislation for the medically indigent in mental institutions. In any case, city officials believe that only patients over 65 could be covered. The Health Department and HEW are reported to be negotiating a contract to activate medicaid at St. Elizabeths, but meeting the law's requirements will probably necessitate a redeployment of the hospital's social workers and these, too, are in short supply.

Dr. Murray Grant, Director of the District Health Department, may have some answers others lack, but if so, he is keeping them to himself. He has been consistently unavailable to many NIMH officials and has repeatedly refused to grant interviews about St. Elizabeths to the Star. Those at St. Elizabeths who have to deal with him variously describe him as "the devil incarnate" and a "problem all by himself."

Another problem growing out of the uneasy truce between the city and Federal governments, but typical of many other communities, is the isolation of St. Elizabeths from a health care system which is itself fragmented and badly coordinated.

The hospital does have ties to the District's community mental health centers for outpatient care, but these, too, are overtaxed. Besides, no one really knows what the needs of the emotionally disturbed in Washington really are.

"I suggested such a survey to NIMH 2 years ago," says Dr. Robert N. Butler, a psychiatric consultant to the Federal Government, "but nothing has ever been done about it."

Given time, will NIMH be able to transform St. Elizabeths into what it ought to be?

Long-range predictions are not optimistic. "Every year," says Mike Gorman, director of the National Committee Against Mental Illness, "the Department (HEW) sends St. E's $200,000 to $300,000 more. But that's not going to do it. It's really going to take $6, $8, or $10 million and considerable capital investment for NIMH to do the job.

"Coming out and saying a new day has been proclaimed—calling St. E's a model mental health center when the salaries are lousy and the toilets worse—isn't going to change a thing."

* * *

"Not only has our tranquilizer budget run out, but there will be many older patients this summer who will die from the heat in the wards of this hospital. When it takes an act of Congress to get a table lamp for the dayroom when one becomes defective, this kind of thing makes you sick."

* * *

"The District Health Department and NIMH have used each other in the most cynical way as an excuse for inaction."

* * *

"Coming out and saying a new day has been proclaimed—calling St. E's a model health center when the salaries are lousy and the toilets worse—isn't going to change a thing."

Dr. YOLLES. We recently had the opportunity to take the Deputy Mayor of the District of Columbia through St. Elizabeths Hospital. I might interrupt myself at this point to invite the members of this committee to visit the hospital. Believe me when I say the situation that exists there is understated in those articles. I would invite you all to see that.

Mr. FLOOD. You didn't encourage these stories?

Dr. YOLLES. No. As a matter of fact, I did not. It is purely coincidental that Judith Randal was interested in the hospital at this point in time. I would invite all members of the committee to see it. Dr. English was with us when we took the Deputy Mayor there. Those pictures don't tell the story.

Dr. ENGLISH. No picture could, Mr. Chairman, because you would have to see it. You have to see those patients. I really think that might be a way of bringing across what we have. We learned, incidentally, while we were there, that Mrs. Randal was there, which gave us some forewarning that this story was coming out. I think there is a fourth and fifth tomorrow night. In my judgment, they not only understate the conditions in that hospital but it amazes me to find a hospital with buildings that go back to before the Civil War.

Mr. FLOOD. They certainly are well-written articles.

Dr. ENGLISH. They are not sensational, Mr. Chairman.

Mr. FLOOD. No. I agree.

STAFFING AND FACILITIES PROBLEMS

Dr. YOLLES. The final comment I would make on the staffing problem is that no hospital, certainly not any supported by the National Institute of Mental Health, and certainly not a hospital which aspires to be a national demonstration, should admit any patient if it can't offer the fullest hope of recovery to that patient. I do not think we can offer this hope today at St. Elizabeths Hospital.

Mr. FLOOD. Of course you can.

Dr. YOLLES. We not only don't have the wherewithal to render optimum care today, we are woefully deficient in staff to give the appropriate care. For example, individual psychotherapy, which is the mainstay in most hospitals around the country and in most community mental health centers, was offered to a total of 200 patients last year, out of an inpatient population of 5,438. This is not the fault of the staff. The staff has exerted herculean efforts, but they cannot do it all by themselves. The hospital is grossly understaffed. Let me go on from that.

The second problem is the physical plants. It is still a disgrace. Because of conditions that existed in one of the buildings, we had to take patients out of that building and cram them together in other wards, in spite of the fact that the hospital is already 65 percent overcrowded. Some of those wards should never be used for patients, because the ceilings are falling down and it rains in on some of the patients. What is so startling is that this is a Federal hospital. This is supposed to be the model for the Nation at the present time. Two-thirds of the patients are in buildings that were built over 85 years ago, and there are 700 patients in buildings that were built 114 years ago.

Mr. Chairman, I cannot speak strongly enough on this point. God help us if there is a fire. In two of the oldest buildings there is no sprinkler system. The wood is magnificent. The mahogany framing in the doorways and walls is just magnificent, but it is as dry as tinder after 114 years. That place would go up like a ball of cotton. Those buildings have to be replaced.

PROPOSAL FOR CONSTRUCTION OF NEW BUILDINGS

Mr. FLOOD. What are we going to do about it?

Dr. YOLLES. We had proposed to——

Mr. FLOOD. Proposed to whom?

Dr. YOLLES. We had proposed to the Bureau of the Budget to reprogram some of our appropriated 1969 funds for planning purposes to plan three new buildings to replace the most dreadful buildings there. That proposal was returned to us by the Bureau of the Budget to seek concurrence of the District of Columbia. A 1955 law requires the District of Columbia government to pay some 85 percent of the costs of new buildings, amortized over a period of 40 years. We recently received a letter from the Deputy Mayor saying he was somewhat concerned about our plans for replacing the buildings. He stated that he was concerned about his budget over the years and that he couldn't go along with the construction plans at this point in time.

Mr. FLOOD. How recent was that letter?

Mr. MILLER. March 7 of this year.

Mr. FLOOD. Do you have a copy of that letter?

Mr. LEWIS. We should make clear that the Deputy Mayor said he was giving me a response to my inquiry as to his reaction after the tour which we made. His response was a temporary one because he is

going out of the city for a week. He said he would be back in touch with us. I didn't want the implication to be left that he was giving us a turndown. It was not that. The discussions are continuing.

We do have a copy of the letter, however. We are continuing to discuss that with the Mayor and will probably during the next week be talking——

Mr. FLOOD. Discussing what?

Mr. LEWIS To see whether or not the Mayor will go along with the plans which we have, which Dr. Yolles presented, for replacing the buildings.

Mr. FLOOD. This is the minimum you asked for?

Dr. YOLLES. The three buildings that we proposed are two general-purpose buildings to replace the vintage 1853 buildings which house the 700 patients and——

Mr. FLOOD. Should we bulldoze down the whole place and start somewhere else, replace selected ones of the existing buildings, or what?

Dr. YOLLES. Let me put it this way. Just as soon as we replace those buildings which are 114 years old we will have to go after the ones that are only slightly younger that exist on the campus. There was a proposal made some 6 years ago to tear down one of the buildings and put up a new building. This again was held up because of the three-way discussion between the Bureau of the Budget and the District of Columbia. That building was never built. I am concerned about this, especially for those 700 patients housed in those vastly archaic buildings at the present time. Regardless of what happens, those buildings need to be replaced. I am concerned that this not drag on for another 10 years.

ROLE OF THE DISTRICT OF COLUMBIA

Mr. FLOOD. Why should there be any doubt about it? Where is the catch?

Dr. YOLLES. I am not in a position to know what the District of Columbia is thinking at the present time. As Mr. Lewis indicated, we do not have their final answer on this but we have a preliminary indication that they are reluctant to go along with our proposal.

Mrs. REID. Mr. Chairman?

If you were to set priorities, where would you place this in your overall program?

Dr. YOLLES. As a high priority, very high, as far as the St. Elizabeths Hospital is concerned.

Mrs. REID. What is the total amount for which we would ask for planning?

Mr. LEWIS. About $1.9 million.

Dr. YOLLES. Planning.

Mr. LEWIS. That is involved in the reprograming.

Dr. YOLLES. This is reprograming from existing funds.

Mr. SHRIVER. Who has to be convinced, the District of Columbia government?

Dr. YOLLES. Yes, sir. The District of Columbia.

Mr. SHRIVER. I remember back when I was in the legislature in my State of Kansas when we had a problem in our mental institutions.

The legislature didn't know until somebody pointed out to them what the problem was. I remember when we went down to the local theater and saw a movie called Snake Pit. We marched over and voted the money. Maybe somebody does not know.

Mr. FLOOD. There is not a corporal's guard in this house, Mr. Shriver, who are aware of what you are just hearing.

Mr. SHRIVER. I agree with that.

Mr. CARDWELL. I think, Mr. Shriver, it is important to get this problem in perspective. The Bureau of the Budget has held for quite a while now that the District must be an equal partner in basic decisions concerning St. Elizabeths Hospital. The District's budget accounts for the bulk of the day-to-day operating expenses of the hospital. I think it is fair to say, and I would like to hear what Dr. Yolles says about this, that there is probably a fundamental difference developing as to the long-range role of the hospital between the Department of Health, Education, and Welfare and the District of Columbia. The Bureau of the Budget is the intermediary, saying to each: "You must come to a mutually satisfactory agreement."

Mr. SMITH. What is the final cost of the building that you are talking about?

Dr. YOLLES. $34,727,000. Three buildings are involved—two general-purpose buildings, to replace some of the older buildings, and a replacement for the medical and surgical building, which is very archaic. The cost for renovation of that building would be almost equal to replacing it.

Mr. SMITH. This is $50,000 per patient for just those three buildings, without being concerned with the other buildings; is that within the range of normal expenditure?

Dr. YOLLES. For mental hospitals, yes, sir.

Mr. LEWIS. One of the important things is that there has been no building—Dr. Yolles has the figures there—because of the difference in view. There has been—it has involved the District and HEW. There has been no building of any consequence that has gone on at St. Elizabeths for a number of years. I don't know how many.

Mr. SMITH. Have you considered starting all over, and building a whole new complex?

Mr. CARDWELL. There are a number of buildings and St. Elizabeths which continue to be adequate, for treating mentally ill patients.

Mr. SMITH. You would end up with that kind of expenditures just for this part of the budget. Would you still have a sufficient operation there?

Dr. YOLLES. It must be pointed out, and you have the photos in the chart book, that there are excellent buildings which have been built, the last one built in 1963. Regardless of what you do on a long-range building program at St. Elizabeths—and there must be one developed—you will have to replace the oldest buildings that are there and put patients in new buildings. The patients that are there cannot afford to remain in those buildings. Two of the new buildings will be general-purpose buildings that can be used for any purpose whatsoever in the long-range building plan of the hospital. In any building plan, these would be necessary. We have been stalled on dead center for a long time.

In terms of what Mr. Cardwell mentioned a moment ago, the role of the Bureau of the Budget in the middle here has simply resulted—

and I am now speaking of history in terms of when Dr. Cameron was the superintendent—in nothing happening, because in effect the District was exercising a veto.

Dr. ENGLISH. Mr. Chairman, this touches on the area of my concern. No. 1, that the first thing which Dr. Yolles asked me to do as a new administrator in HSMHA was to go with him and the Deputy Mayor to visit St. Elizabeths, so we could see for ourselves exactly what the problem was. We did.

Mr. FLOOD. Isn't that what they call the shock treatment?

Dr. ENGLISH. That is exactly what it was. I thought that I had seen enough as a psychiatrist around the country and in developing nations of the world to shock me. But I was shocked, Mr. Chairman.

The second thing that shocked me was that I think, in the context of the discussions that we have had earlier today, the Federal Government is taking a leadership role in most areas in relationships with the States, but I have yet to see a State hospital in the United States that is equal to the conditions that you will find at St. Elizabeths in the District of Columbia.

No. 3. About a year ago, as a matter of fact on November 9, 1968, on the first page of the Washington Post was the announcement of the National Institute of Mental Health role in St. Elizabeths. This was greeted in the press with a great deal of anticipation, not only on the part of the staff at St. Elizabeths, but the patients there, and a lot of people in the District and around the country who are concerned with this hospital, with bringing the resources of the National Institute of Mental Health into play, with the success it has had in upgrading institutions like this all over the country. This legitimately raised expectations.

My own personal hunch on why these articles are appearing is because after the period of time that has gone, the question is: What has been the impact of NIMH's role there?

It is not understood yet. You cannot play with the critical role the District has. I don't think that becomes clear as you look at the publicity turned out earlier, and I think myself that this has to be understood by the Congress because I am afraid that a year from now we could be up here describing not much more having happened about something as basic as these buildings. These buildings are, I think, a very legitimate concern on Dr. Yolles' part because it is on the public's mind now.

Mr. FLOOD. What are you going to do about it?

Dr. YOLLES. All that I can do is to continue as best I can to try to convince the District of Columbia of our position. So long as the Bureau of the Budget maintains the position——

Mr. FLOOD. In other words, you say the power of veto rests with the officials of the District of Columbia?

Dr. YOLLES. In effect, sir, yes.

Mr. LEWIS. Mr. Chairman, you will recall when I was introduced as having been formerly with the Bureau of the Budget, I said I was Chief of the Health and Welfare Division.

Mr. FLOOD. I mentioned at the time you had lived that down.

Mr. LEWIS. That is right. I am not sure I am living it down during this afternoon's session. I do want to get a perspective and I do not know that the word "veto" is right. I think Deputy Mayor Fletcher,

with whom I have personally talked about the hospital, has not personally seen the conditions.

Mr. FLOOD. Why not take him out and show him?

Mr. LEWIS. We did have a 2-hour visit.

Mr. FLOOD. Why not the mayor too?

Mr. LEWIS. I will suggest this myself to Tom Fletcher when I talk to him again.

Mr. FLOOD. Tell him you were talking to me and I suggest it.

Mr. LEWIS. The question of the location of St. Elizabeths in the structure, whether it should remain in HEW or whether it should be transferred to the District is a matter of concern that involved the Bureau of the Budget, HEW, and the District. It was a joint review and the White House, I believe, was involved, and the eventual judgment was reached that it would remain in HEW. This was when John Gardner was Secretary. It was further decided, in remaining in HEW, that it should be placed within the framework of the National Institute of Mental Health, so that the kind of conditions outlined here could in the long run be remedied and the institution could be a national demonstration center. That was the basic judgment.

Mr. FLOOD. How could this follow if the right of veto, in effect, exists in the District?

Mr. LEWIS. That is why I wish to go on to explain that there was no change made in the basic financing arrangements which exist by law with reference to St. Elizabeths.

One, the District reimburses the Federal Government for the cost of its patients under a certain formula which amounts to approximately 80 percent, I believe, of the annual operating budget of St. Elizabeths.

Secondly, under the law the District reimburses again according to formula for the cost of capital construction, and therefore the $30 million or thereabouts, or any figure which is used for rebuilding at St. Elizabeths, is of concern to the mayor and deputy mayor.

I think at this point in time the Bureau of the Budget does not sit in the middle. There has been an arrangement and the District and HEW will have to accommodate each other. At this point the District has not accommodated. We have a plan which essentially we have outlined to the mayor. We have not received from the deputy mayor his judgment that this is the right way to proceed. If we are unable, and you asked what is the next step, and——

Mr. FLOOD. When is he going to express an opinion?

Mr. LEWIS. I had hoped we would have it before the hearings, Mr. Chairman. I hoped we would have agreement with the District. We do not have it.

Mr. FLOOD. Now you do not have it, what are you going to do?

Mr. LEWIS. Try to get it next week. As soon as the hearings are over, I will be back in touch with Mr. Fletcher.

Dr. ENGLISH. I can tell you this: that the Secretary himself is very personally concerned with this problem and had he not been called to the White House the day of our visit he would have been with us. He intended to visit the hospital also, and I think we can expect some help from him in this matter.

Mr. FLOOD. We expect to hear from you.

Mr. LEWIS. I think the key point I wish to leave on the record, Mr. Chairman, we do not intend to push the problem to the Bureau of the Budget. We intend to resolve it between ourselves and the District

Mr. FLOOD. All right. Proceed, Doctor.

SUMMARY OF BUDGET

Dr. YOLLES. In conclusion, Mr. Chairman, the request for St. Elizabeths Hospital is $38,876,000 for 1970 as compared with an operating level of $39,832,000 in 1969, a decrease of $956,000. This net decrease is made up of an increase of $1.1 million for patient care and community service activities, and a decrease of $2,056,000 for the hospital's research and training activities, the funds for which are now budgeted in the "Mental Health" appropriation following establishment of the National Center for Mental Health Services, Training, and Research. In effect, a transfer from the hospital's appropriation to the other appropriation and not an actual decrease.

Mr. FLOOD. You want 104 additional jobs for 1970?

Dr. YOLLES. Yes, sir.

Mr. FLOOD. We talked about the patient-staffing ratio. How many years will it take you to reach the one-to-one patient staffing ratio at that rate?

Dr. KIEFFER. 1974.

CHARACTERISTICS OF PATIENT LOAD

Mr. FLOOD. How many patients do you have that have been there for more than 1 year? You have told us about the ones there for 10. And I suppose some are there twice that.

How many do you have right now that have been there more than 1 year?

Dr. YOLLES. Six months or less, there is a total of 1,016. Between 6 and 11 months, 545.

Mr. FLOOD. Are these patients receiving custodial care rather than psychiatric treatment?

Dr. YOLLES. They are receiving all the psychiatric treatment the staff can afford them. The acute admissions get perhaps better service than some of the patients on the back wards.

Mr. FLOOD. How many could be taken care of in a nursing or foster home if such places were available?

Dr. YOLLES. We have estimated on the basis of the 1967 study that some 3,000 patients could be taken care of in foster homes or nursing homes if they were available in the District of Columbia.

Mr. FLOOD. 3,000 out of how many?

Dr. YOLLES. Out of some 5,200 patients in the hospital at the present time.

Mr. FLOOD. Should there be 5,200?

Dr. YOLLES. No, sir, there should not be 5,200 in the hospital at the present time.

Mr. FLOOD. How many should there be?

MAXIMUM DESIRABLE SIZE FOR HOSPITALS

Dr. YOLLES. If I can quote the figures of the Joint Commission Mental Illness and Health, they said that no hospital in the United States should be larger than a thousand beds total.

Mr. FLOOD. A thousand?

Dr. YOLLES. A thousand beds, yes.

And in fact, they came out very strongly and said that not one single bed should ever be constructed in a hospital that already has a thousand beds, and the optimum was 500. Actually, I would suspect in the next 5 years we would hope to come down to, if we could possibly move these patients out, a population of about 2,000, and then move from there.

Mr. FLOOD. The Veterans' Administration never builds beyond a thousand; do they?

Dr. YOLLES. I do not believe so.

Mr. FLOOD. Medical, surgical, or neuropsychiatric; they never go beyond a thousand.

Mr. LEWIS. Generally VA hospitals are built so the psychiatric facility is now part of the general hospital. They have been building hospitals with a 240-bed neuropsychiatric section.

Mr. CARDWELL. The problem is that St. Elizabeths Hospital was built prior to the development of these new concepts of treating the mentally ill.

Mr. LEWIS. In recent years the VA has not been building straight psychiatric hospitals.

Mr. FLOOD. How many patients are paid for by medicare or medicaid.

Dr. KIEFFER. $125,000 comes in each year for medicare, none of them are paid by medicaid.

Mr. FLOOD. Have your operations been affected in any degree by the employment restriction of the Revenue and Expenditure Control Act of 1968?

Dr. YOLLES. Yes, sir. There was a loss of some 209 positions at St. Elizabeths Hospital as a result of that.

Mr. FLOOD. We will probably have more to say about this under the circumstances.

Mrs. Reid?

Mrs. REID. Thank you, Mr. Chairman. Dr. Yolles, I have heard and read these stories about St. Elizabeths and they seem outrageous and frightening, and apparently are just as outrageous and frightening in reality. Sometime I would like to go there and see for myself.

Dr. YOLLES. I would be delighted to escort you personally. I would like to show you some of these things.

Mrs. REID. Thank you.

RECURRENCE OF MENTAL ILLNESS

Based on your studies and the experience at St. Elizabeths, have you developed any meaningful statistics on the incidence of recurrence of mental illness among those previously discharged as rehabilitated; can you tell how many former patients returned for treatment, for instance?

Dr. KIEFFER. We do not have any significant figures, primarily because of some of the deficiencies that have been alluded to before. One of the positive impacts that we anticipate with the creation of the new research division, which is one of the three parts of the National Center for Mental Services, Training, and Research, is that we would be able to launch studies of this nature.

One of the techniques the hospital uses right now is the convalescent leave system, in which patients are discharged from the hospital to outpatient status. They are given medication and other outpatient services. They can return to the hospital whenever they need to, so the families know there is inpatient service available.

We would like to achieve the goal of being able to care for some of these people in the community, assuming that we can mobilize sufficient resources in the community to help strengthen them when they get back. We do not have any specific studies we can cite in direct answer to your question.

INDUSTRIAL THERAPY

Mrs. REID. With reference to your pilot programs of rehabilitation of patients through industrial therapy, it seems to me this is certainly a most worthy objective. I suppose there, too, you cannot expand or extend this program.

Dr. KIEFFER. We would like to expand this program in the direction of creating facilities that would provide meaningful employment and meaningful job skills. What we have in mind is to open a furniture factory, such as the one that exists at the Lexington center, in which furniture is manufactured by the patients. It is a training project in which patients working in an area like this, especially males, can market their skills after being released from the hospital.

The problem has been, not only at St. Elizabeths Hospital but in hospitals throughout the country, that what goes under the guise of industrial therapy has been labeled, and not too unmeaningfully, by many people as slave labor. Some justify or rationalize this by saying there is nothing wrong with patients helping to maintain their own care areas, participate in their care, and so on. If we did not have this patient labor, we probably would have to close the mental hospitals down because we do not have enough employees to supply these services.

In order to expand meaningful vocational training opportunities, we also will have to augment the staff with specialists in this area. We are fortunate to be able to work closely with the District of Columbia Department of Vocational Rehabilitation which assigns eight of their people to the hospital. These rehabilitation counselors help train the patients and place them in meaningful vocational pursuits. There is a liaison with the community in that sense.

SHORTAGE OF STAFF

Mrs. REID. You have spoken several times about the staffing deficiencies. Do you feel there is a special difficulty in securing trained personnel to staff a mental health institution, vis-a-vis, a general hospital, or is it because of the conditions at St. Elizabeths. It certainly is a problem which is more than a budgetary problem, I gather.

Dr. YOLLES. Dr. Kieffer can speak to this because he has had the recent experience of having to recruit for the new national center.

Dr. KIEFFER. There are many factors in a total reply to your question. All of the factors you mention are certainly important. I think one of the benefits reaped by this new decision to create the Center at St. Elizabeths and to bless us, if you please, with the National Institute of Mental Health prestige and know-how, is that I have had some success in being able to recruit the kind of a person that this kind of organization has sorely needed for some time.

One of the other assists that has came along has been the recent increase in salary ceilings of some of the professional people following the increase in congressional salaries, and so on. The pay increase expected in July has also been a positive recruitment factor.

The principal problem we have of course is the effect of the Revenue and Expenditure Control Act. It is literally impossible to continue to develop certain aspects of the program and to stay within the current employment ceiling. It is just impossible to do it. If there is some relief in the ceiling, of course accompanied by the dollars it takes to support them, I think the outlook would be much more positive.

Another item I would like to speak to which was relatively popular in the newspapers a few weeks after we took over, had to do with the "strike" which was really a sick-out, where a group of——

Mrs. REID. A what?

Dr. KIEFFER. Sick-out. It is illegal to strike against the Federal Government, so a number of the employees called in sick. For all intents and purposes, this was a strike.

Mr. FLOOD. Quite a number of them?

Dr. KIEFFER. Quite a number of them in one of the units described in yesterday's paper, as a matter of fact. The interesting thing there is that, in addition to the complaints that they have related to their salaries, I think it should be pointed out that many of them are not related to salary alone, but are related to other conditions in the hospital that Dr. Yolles referred to, such as not having places for them to eat or to change their clothes.

The fact that the employees have to work many weekends and overtime, because of the employment ceiling on the hospital, contributes to their problems—and ours.

I could go on with other things that have an impact on the conditions of employment which lend themselves to these kinds of disturbances among the employees. These disturbances are nontherapeutic for the patient because the mood and total atmosphere created by employee complaints is anything but conducive to improving the patients' mental health.

Mrs. REID. I imagine you're familiar with this attitude but a woman approached me whose son had been at St. Elizabeths for several years I guess, and she was terribly concerned about the conditions there and felt that I should see them but said that if I went I probably wouldn't be allowed to see what was actually going on, as though the people at St. Elizabeths do not care. And this is the attitude that the public has, I think. It is not the fact?

Mr. LEWIS. We will take you into the buildings which are 114 years old.

Dr. YOLLES. This is the public's explanation of why it continues that way. It is totally erroneous. Possibly the explanation as to why conditions remain this way is that these conditions have not been shown to the appropriate authorities.

Mrs. REID. That is all, Mr. Chairman.

PATIENTS REQUIRING MINIMAL PSYCHIATRIC TREATMENT

Mr. FLOOD. Mr. Casey?

Mr. CASEY. You stated over 3,000 of these patients could be cared for in a convalescent or nursing home.

Dr. YOLLES. Or a foster home.

Mr. CASEY. What type buildings do you propose to build; the three new ones? Would two of them be hospital facilities?

Dr. YOLLES. Yes, sir. These would replace the 114-year-old buildings which we described.

Mr. CASEY. But they would be hospital buildings and for the care of these people that just need custodial care?

Dr .YOLLES. No. This is a different group which we would move out of the hospital into the community, into nursing homes or foster homes. Many of them need more than custodial care in the sense they need to be put in a situation where they can be self-reliant. If they had nursing home facilities, they could spend part of their time outside. If they were in foster homes, they could be working in many cases and come back to these homes at night. Many of them need some sort of support in the community. They do not have to be in the hospital full time, 24 hours a day.

Dr. JACOBS. I would say the system of outpatient services connected with the hospital would be certain to keep these people who were out in these foster homes and nursing homes under our supervision. We do not propose to cut them off.

Mr. CASEY. As I understand, you do not have any foster homes.

Dr. KIEFFER. There are some in the community. I would like to speak to that just a minute.

The girl who is in charge of the foster home program told me last week that suddenly there has been a sharpened interest on the part of residents in the District with rooms in their homes who are becoming interested in taking people into their homes under the foster home care plan. Since its inception several years ago, we have placed over 2,000 such patients in over 250 homes, and in fact they now have a waiting list for them.

One of the problems that we have is that in order to avoid doing exactly the kind of thing for which we have criticized other people, in terms of using the hospital as a dumping ground, is to avoid dumping them into inadequate homes. It takes a considerable amount of staff effort and concern to accomplish what is referred to as working up the patient for discharge to foster home care, and then a certain number and special kind of staff to follow these people once they are in the foster homes to make sure they are not neglected, or that the people managing foster homes have not gone into this program primarily for monetary reasons.

Mr. CASEY. Who pays for this?

Dr. KIEFFER. The Welfare Department pays for the foster home care, but the investment of the hospital to make a foster home placement possible is considerable.

Mr. CASEY. How are your patients admitted? Is it voluntary or by court order or what?

I know criminal cases are by court order. How about the others?

Dr. JACOBS. Voluntary patients comprise a larger and larger number of patients. Many of them are self-committed, which means they come in accompanied by a relative, by the police, or by some other agency of the community, but after a short period of time they come before the local Mental Health Commission, which then decides whether they should stay in the hospital or not. Then of course the criminal patients, which is about 10 percent of our operation, are admitted by court order.

Mr. FLOOD. Do you bill a voluntary patient if and when possible?

Dr. JACOBS. Yes; when we can. All of them.

Mr. CASEY. On those committed by the Mental Health Commission—is that the way it is done?

Dr. JACOBS. Yes.

Mr. CASEY. Do you receive a lot of senile patients, not mentally ill patients? Does the Commission use you as was said a while ago as a dumping ground for senile patients?

Dr. JACOBS. I am afraid this is difficult in many cases to determine and there are considerations as to what else you can do with them, and so on. We do, however, receive a good many of those.

Mr. FLOOD. Terminal cases, most of them?

Dr. JACOBS. We hope they are not.

Mr. FLOOD. Of course they are.

Dr. JACOBS. Many of them will stay with us, yes, until death.

Mr. CASEY. My experience was at one time that children get tired looking after old dad and say well, he is mentally ill and send him to the State hospital to get him off their hands.

Dr. JACOBS. Yes, we receive those.

Mr. CASEY. Do you try to place them in a foster home or nursing home?

Dr. JACOBS. Yes; after we determine that they really do not need psychiatric care and they can be up and about to a considerable degree, and there will be no real problem of physical care, just a minimal amount, we try to get them in foster homes.

Mr. CASEY. I notice you had 1,898 residents 65 years and over.

Dr. JACOBS. Yes.

Mr. CASEY. And, of course, I think a lot of these are folks that Dr. Yolles and his staff cannot do anything for other than look after them.

Dr. KIEFFER. We have 279 that are over 85 years old.

Mr. FLOOD. Of course, Mr. Casey makes a very valid point which we encounter all over the country. There are many, many young people, with their virtues and their high IQ's and standards of living, culture, and so on, who just dump the old man and the old lady into some institution and walk away, like you walk away from a bad odor. This is being done to an appalling degree all over the country at all levels of income.

Dr. KIEFFER. The problem is, as has been said before, in hardly any of those situations it is difficult to find some symptom that would appear to qualify them for admission to a mental hospital. I think the

phenomenon that you describe happens among the upper middle class group although they go to different hospitals. I think if you extrapolate from there to the general economic and social culture groups we deal with in the Anacostia area, it is easy to understand that this will happen with much greater frequency than in the general population. In addition, they do not have the means to take care of them at home.

Dr. YOLLES. It is also true, Mr. Flood, this is a phenomenon that has been developing around the country. I was thinking while you were talking about the new breed since World War II, that we had a laboratory situation in the State of Hawaii where we have a large Japanese population who, for long periods of time, had always considered keeping the elders in the family. It was only a few years ago when I was out there looking at the Kaneoe State Hospital, talking with the staff they said they are watching a transition in the families of Japanese extraction, who are now putting their elderly parents in State hospitals.

Mr. FLOOD. This is not peculiar to the Japanese. In most of our national groups in this country since World War II, this is becoming a general practice.

I have in mind a dozen so-called national groups who have had fierce pride for centuries in taking care of the older people, and now there is a complete reversal of this. It applies to all national groups at all economic levels, rich and poor alike.

Mr. CASEY. The difference, Mr. Chairman, is that if they take their parents and elderly aunt, whoever it may be, to the nursing home, they have to pay the full charge.

Mr. FLOOD. Did I not make that point? I thought I did.

PROPOSED BUILDINGS

Mr. CASEY. The thing of it is that I was wondering about the cost of these buildings because it costs more to build a hospital type building than a nursing home. These buildings you are contemplating are the hospital type.

Dr. YOLLES. These are for acute care of patients coming into the hospital. We will always have to have hospital buildings for acute care regardless of how many geriatric persons we can discharge to the community. While we were talking I was looking at my material here, and I would like to quote one study we have supported under our hospital improvement program dealing with geriatric patients at Mendota State Hospital in Madison, Wis.

Using grant funds, the hospital started on a program offering day care services, family counseling, therapeutic recreation and outpatient services to geriatric patients, and they continued to return two-thirds of their geriatric population patients to the community in 3 months. This is a State hospital. Over half of all geriatric admissions were considered suitable for participation in this program. Forty-six percent were fully returned to the community on their own, 25 percent under medical or psychological supervision.

So, it can be done. It does not have to be the end point for all of these old folks. There are many old folks that come into a hospital who are declared to be senile psychotics because they are depressed. We can treat those individuals just as we can treat any other depressed individual and return them to their family.

Mr. FLOOD. I am sure of that. But they do not want them returned.

Dr. YOLLES. That is quite true also.

Mr. FLOOD. They want to wash their hands of the problem.

Dr. YOLLES. Wherever we have had an active program we have forced them to be responsible individuals. It is very easy to dump him in a State hospital, in loco parentis, the local State hospital will take care of you for life.

Mr. FLOOD. In fairness to many of these people that do not have that unfortunate attitude, the reputation down through the years of nursing homes and foster homes with the average man in the street has been very, very bad. Some with reason and some without. Many, many with good reason. When they talk to you about putting these people in the foster or nursing home, many of these good young people are shocked and afraid to send them there. They are afraid of these places. You know that?

Dr. YOLLES. I know that. I have had a personal experience just this last year with my mother, who is presently in a nursing home. I am constantly amazed and shocked. This is one of the very best in the State, only again in terms of the psychiatric program, the psychological overtones, and what they can do for these patients other than let them sit like lumps of clay. This is in a good one. So that there have to be many efforts made to develop programs in nursing homes and to supervise foster homes to have the appropriate type of programing in these institutions. It is not enough to say we are going to take patients out of the State hospitals and put them in these nursing homes. There is much that has to be done in that area and we intend to work in that area as well.

Mr. CASEY. They have a good one in Houston, a brandnew one and well run. The minimum cost is $450 a month.

Dr. YOLLES. That is reasonable.

Mr. CASEY. I am sure it is.

That is all.

Mr. FLOOD. Thank you, gentlemen.

JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Saint Elizabeths Hospital

Amounts Available for Obligation

	1969	1970
Appropriation	$11,396,000	$10,405,000
Proposed transfer from "Community Mental Health Resource Support" for increased pay costs	1,984,000	---
Comparative transfer to "Office of Administrator, Salaries and Expenses"	-15,000	---
Reimbursements:		
Other accounts	646,000	629,000
Trust fund accounts	125,000	125,000
Non-Federal Sources	25,696,000	27,717,000
Total obligations	39,832,000	38,876,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
79	Clinical and Community Services	3,825	$37,776,000	3,925	$38,876,000	+100	$1,100,000
79	Training and Education	45	1,436,000	--	---	-45	-1,436,000
79	Research	44	620,000	--	---	-44	-620,000
	Total obligations	3,914	39,832,000	3,925	38,876,000	+11	-956,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions....	3,914	3,925	+11
Full-time equivalent of all other positions.....	204	37	-167
Average number of all employees.....	3,996	3,816	-180
Personnel compensation:			
Permanent positions.....	$28,143,855	$28,080,450	-$63,405
Positions other than permanent.....	973,445	169,000	-804,445
Special personal service payments.....	39,000	39,000	---
Other personnel compensation.....	1,945,700	1,693,600	-252,100
Total personnel compensation.....	31,102,000	29,982,050	-1,119,950
Personnel benefits.....	2,334,200	2,322,000	-12,200
Travel and transportation of persons....	103,800	117,750	+13,950
Transportation of things.....	48,000	51,000	+3,000
Rent, communications and utilities.....	371,000	404,300	+33,300
Printing and reproduction.....	35,000	36,500	+1,500
Other services.....	592,000	548,400	-43,600
Supplies and materials.....	4,206,000	4,400,000	+194,000
Equipment.....	728,000	792,000	+64,000
Lands and structures.....	357,000	261,000	-96,000
Insurance claims and indemnities.....	1,000	1,000	---
Subtotal.....	39,878,000	38,916,000	-962,000
Deduct charges for quarters.....	-46,000	-40,000	+6,000
Total obligations by object.....	39,832,000	38,876,000	-956,000

Summary of Changes

1969 estimated obligations	$39,832,000
1970 estimated obligations	38,876,000
Net change	-956,000

	Base		Change from Base	
	Positions	Amount	Positions	Amount
Increases				
A. Built-in				
1. Annualization of:				
a. Pay increase costs	--	$1,984,000	--	$444,000
b. Social Security increases	--	48,000	--	2,000
2. Average salary adjustments	--	---	--	230,000
Total built-in increases	--	---	--	676,000
B. Program				
1. Improvement of inpatient treatment and community mental health programs	3,825	37,776,000	104	527,000
Decreases				
A. Built-in				
1. One less holiday (Inauguration Day)	--	443,600	--	47,000
B. Program				
1. Transfer of training activities	45	1,436,000	45	1,436,000
2. Transfer of research activities	44	620,000	44	620,000
3. Transfer of four "Clinical and Community Services" positions	3,825	37,776,000	4	56,000
Total program decreases	--	---	93	2,112,000
Total changes requested	--	---	11	-956,000

Explanation of Changes

Built-in increases

1. Annualization of personal service costs includes:
   a. General Schedule pay increases effected in July, 1968, and Wage Grade adjustments approved in November, 1968.
   b. An increase of one-half of one percent in the employer's share of contributions under the Social Security Act which became effective in January, 1969.

2. Increases in the average salary of filled positions during 1968 forced a reduction in average employment during 1969, in order to fund the additional personal service costs. Funds requested will provide no new positions, but will make possible the restoration of average employment to previously budgeted levels.

Program increases

1. Proposed increases in 1970 are for strengthening the Hospital's inpatient treatment program and expanding outpatients services, particulary as they relate to the operation of a community mental health program. The increase of $527,000 will support the first year costs of 104 additional permanent positions, and meet the increased requirements for drugs and medicines.

Built-in decreases

1. Fiscal year 1970 has one less holiday than the preceding year (Inauguration Day). A decrease in personal service cost estimates has been reflected for this purpose.

Program decreases

1. Pursuant to a recent reorganization, the 1970 budget reflects a proposed transfer of the "Training and Education" activity from the "Saint Elizabeths Hospital" appropriation to the "Mental Health" appropriation to provide consolidated funding for the training activities of the National Center for Mental Health Services, Research and Training.

2. As part of the reorganization cited in the preceding item, the Hospital's Research activity is proposed for consolidation under the "Mental Health" appropriation.

3. Four research-oriented medical and ancillary positions are proposed for transfer from the Hospital's Clinical and Community Services activity to the Intramural Research activity of the "Mental Health" appropriation in 1970.

Explanation of Transfers

	1969 Estimate	1970 Estimate	Purpose
Proposed transfer from:			
"Community Mental Health Resource Support, National Institute of Mental Health"	$1,984,000	---	For additional costs due to 1969 pay increases.
Comparative transfer to:			
"Health Services and Mental Health Administration, Salaries and Expense".....	15,000	---	To support the provision of financial management services to the Hospital.

Salaries and Expenses

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$3,813,000	$3,805,000	$3,805,000	$3,805,000
1961	4,424,000	4,572,000	4,572,000	4,572,000
1962	5,085,000	5,240,000	5,240,000	5,105,000
1963	5,974,000	6,332,000	6,332,000	6,332,000
1964	10,178,000	7,816,000	7,816,000	7,852,000
1965	9,429,000	9,216,000	9,216,000	9,620,000
1966	10,084,000	10,217,000	10,217,000	10,290,000
1967	9,073,000	9,906,000	9,906,000	10,171,000
1968	9,044,000	9,028,000	9,028,000	10,749,000
1969	11,077,000	11,077,000	11,077,000	11,396,000 1/est.
1970	10,405,000			

1/ Difference between estimated appropriation and House and Senate allowance is due to changes in estimated patient load.

NARRATIVE JUSTIFICATION

Introduction

A definite role for St. Elizabeths Hospital was established with its transfer to the National Institute of Mental Health in August of 1967. Following a period of intensive assessment by the Institute, the activities of Saint Elizabeths Hospital were reorganized on October 30, 1968, to create the National Center for Mental Health Services, Training, and Research. The goals of the National Center are to (1) provide a national demonstration of the conversion of a large mental hospital into a modern, community-based mental health facility; (2) develop a coordinated and intensified program to produce trained mental health personnel, and (3) accelerate research on mental illness. The National Center is organized in three divisions, representing each of the following budget activities:

1. Clinical and Community Services: This activity provides resources for the Saint Elizabeths Hospital - Division of Clinical and Community Services, which conducts the therapeutic and rehabilitative programs of the National Center. In addition to the traditional program, the Hospital is cooperating with the District of Columbia to establish a comprehensive community mental health center and a neighborhood health center on its campus for residents of the greater southeast area of the District of Columbia (Area D). The neighborhood health center will serve only those residents of the immediate vicinity of the Hospital.

2. Training and Education: This activity provides resources for the Seymour D. Vestermark Division of Intramural Training, which conducts multi-disciplinary clinical training of professional and ancillary personnel engaged in mental health programs. Beginning with fiscal year 1970, it is proposed that this activity be transferred to the "Mental Health" appropriation of the National Institute of Mental Health for consolidation with other resources for the Division of Intramural Training.

3. Research: This activity provides resources for the Winfred Overholser Division of Clinical Research, which carries out coordinated research programs and projects to obtain new knowledge of the causes of mental disorders, and of the factors bearing upon their treatment and possible prevention. The Research activity is also proposed for transfer to the "Mental Health" appropriation to provide consolidated funding of intramural research activities under the general direction of the Institute.

General Statement

Saint Elizabeths Hospital-Division of Clinical and Community Services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	3,825	$31,566,050	3,925	$32,304,050	+100	+$738,000
Other expenses	...	6,249,950	...	6,611,950	...	+362,000
Subtotal	3,825	37,816,000	3,925	38,916,000	+100	+1,100,000
Deduct charges for quarters	...	-40,000	...	-40,000	...	...
Total	3,825	37,776,000	3,925	38,876,000	+100	+1,100,000

It is clear that the additional resources required for the Hospital to achieve the goal of national leadership in the mental health field are of such magnitude that the task must necessarily be phased over a period of several years. Studies and analyses undertaken during recent years indicate that the Hospital is approximately 50 percent understaffed, and that staffing ratios of at least one employee per inpatient and one employee for every three outpatients represent the minimum level required. The Hospital proposes to achieve the desired staffing levels in several annual increments. An increase of $165,000 is requested in 1970 to provide 104 new permanent positions. In recognition of normal delays in recruitment, particularly with respect to the scarce medical and nursing categories, the funding request provides for filling these new positions on the average of about 20 percent of the first year.

The budget projects a reduction of 200 in the average inpatient load, from 5,200 in the current year to 5,000 in 1970. This reduction is projected despite an anticipated further increase in the number of admissions (from 4,291 in 1969 to 4,565 in 1970), and in the total number of patients treated (approximately 11,500 in 1969 and 11,600 in 1970). An outpatient load of approximately 2,825 is anticipated in 1969 and 1970 including a projected patient load of 1,000 for the Community Mental Health Center and the neighborhood health center.

Despite past reductions in the average daily patient load and modest increases in staffing, the actual amount of treatment time available to each patient is dwindling, due to substantial increases in the number of individual patients treated. The extent of this trend can be shown by comparing the number of patients treated with the average permanent employment levels in the Clinical and Community Services activity:

	1966 Actual	1967 Actual	1968 Actual	1969 Estimate	1970 Estimate
Average permanent employment.....	3,522	3,576	3,716	3,716	3,779
Patients treated....	9,711	10,034	11,166	11,500	11,600
Average employment (man-years) per patient treated...	.36	.36	.33	.32	.33

Although the number of inpatients has decreased by 20 percent over the last decade, the total number of patients on Hospital rolls has declined by only 4 percent during the same period. Furthermore, the number of difficult, long-term cases may remain static, or even increase, unless additional treatment personnel are made available.

Another important consideration in the request for increased staffing is the emerging role of the Hospital as an integral part of the community mental health program plans of the District of Columbia - particularly with respect to the southeast portion of the city designated as Health Area "D". Having operated principally as an inpatient facility through the years, Saint Elizabeths must currently divert staff and resources from its inpatient treatment activities in order to meet the growing demand for outpatient and other community services.

Built-in increases

Several increases are necessary to provide full year funding in 1970 of costs which were funded for only part of 1969. Before the Hospital can effect any expansion of its program, it is necessary to take steps to retain those

improvements achieved in recent years. An amount of $444,000 is requested in 1970 to cover the full-year cost of General Schedule and Wage Grade pay increases implemented in 1969. Second, the employer's share of mandatory payments under the Federal Insurance Contributions (Social Security) Act increased from 4.4 to 4.9 percent on January 1, 1969, requiring an increase of $2,000 to provide full year funding in 1970. An additional $230,000 is required in 1970 to compensate for increases in the average salary of graded positions. These built-in increases are partially offset by a $47,000 reduction in personal services costs resulting from the fact that there is one less paid holiday (Inauguration Day) in 1970.

Obligations for items other than personal services are expected to increase by an estimated $362,000 in 1970. Most of this amount ($208,000) is required for drugs, medicines and medical items. Drugs and medicines have been in particularly short supply in recent years, as the number of patients treated has increased. This situation has frequently required the Hospital to reprogram funds to purchase drugs, to the detriment of other activities.

An increase of $30,000 is requested for the purchase of equipment for laboratory, medical, surgical and dietary functions. The remainder of the program increase ($124,000) is required for a variety of items including communication and utilities, consultant fees, travel, and other miscellaneous administrative costs.

At the present time, one of the Hospital's clinical divisions (William A. White Division) is utilized as a demonstration area for the newest techniques in the treatment of mental illness. Particular emphasis is placed upon the somewhat specialized field of drug therapy - a program area currently being investigated by the National Institute of Mental Health. In the interest of a more efficient organizational and fiscal structure, the Hospital proposes to transfer the four medical and ancillary positions, which are more of a research than clinical or service classification from its own Salaries and Expenses appropriation to that of the National Institute of Mental Health.

FY 1970 New Positions

Grade	Position Title	No. of Positions	Cost
GS-14	Medical Officer	11	$217,481
GS-13	Medical Officer	2	36,498
GS-13	Engineer, Planning & Const	1	14,409
GS-13	Psychologist, Supervisor	1	14,889
GS-12	Budget Analyst	1	12,174
GS-12	Chaplain	1	12,174
GS-12	Psychodramatist	1	12,174
GS-12	Psychologist	1	13,392
GS-12	Social Worker, Clinical	1	12,174
GS-12	Statistician	1	12,174
GS-11	Social Worker, Clinical	1	10,203
GS-11	Nurse, Clinical Specialist	2	21,086
GS-11	Personnel Staffing Spec	1	10,203
GS-11	Safety Officer	1	10,203
GS-10	Nurse, Asst. Supervisor	1	9,917
GS- 9	Dietitian, Chief	1	8,462
GS- 9	Social Worker, Clinical	2	16,924
GS- 9	Management Analyst	1	8,462
GS- 9	Nurse	11	102,388
GS- 9	Psychologist	1	8,462
GS- 9	Statistician	1	8,462
GS- 9	Teacher for Deaf	1	8,462
GS- 8	Hospital Recreation Spec	1	7,699
GS- 8	Medical Technologist	1	7,699
GS- 8	Physical Therapist	1	7,699
GS- 8	Therapy Dietitian	1	7,699
GS- 7	Inhalation Therapist	1	6,981
GS- 7	Nurse	6	48,876
GS- 7	Procurement Clerk	1	6,981
GS- 7	Social Worker Representative	1	6,981
GS- 7	Secretary	1	6,981
GS- 6	Voucher Examiner	1	6,321
GS- 6	Nursing Assistant	2	12,642
GS- 6	Nurse	6	45,528
Wage Board			
WG-12	Electronics Mechanic	1	7,717
WG-11	Equipment Mechanic	1	7,363
WG-10	Welder	2	14,020
WG- 8	Barber	1	6,531
WG- 8	Housekeeping Aide, Foreman	2	13,062
WG- 7	Cook, Intermediate	1	5,470
WG- 7	Food Service Foreman	1	5,470
WG- 7	Grounds Mtce, Worker	2	12,522
WG- 7	Housekeeper	1	6,261

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FY 1970 New Positions

Grade	Position Title	No. of Positions	Cost
WG- 6	Food Service Foreman.....	1	5,034
WG- 6	Hospital Worker.....	2	12,064
WG- 5	Automotive Equipt. Oper.....	2	11,524
WG- 5	Food Service Leader.....	5	22,880
WG- 5	Housekeeping Aide Leader.....	2	11,524
WG- 5	Laborer-Driver.....	1	5,762
WG- 5	Tumblerman Helper.....	1	3,723
WG- 4	Assorter-Shipper.....	1	3,619
WG- 4	Housekeeping Aide Leader.....	1	5,262
WG- 3	Housekeeping Aide.....	3	14,226
WG- 3	Laborer-Wall Washer.....	1	4,742
WG- 3	Stretcher Bearer.....	4	18,968
	Totals.....	104	950,604

REIMBURSEMENT DETAIL

	1969 Estimate	1970 Estimate	Increase or Decrease
Reimbursements for services performed (patient care):			
Veterans Administration	$70,200	---	-$70,200
U. S. Soldiers Home	84,300	$93,200	+8,900
Public Health Service (Indians)	28,100	23,300	-4,800
U. S. Nationals	323,000	357,200	+34,200
U. S. Prisoners	140,400	155,300	+14,900
Soc. Sec. (Medicare payments)	125,000	125,000	---
Subtotal	771,000	754,000	-17,000
Payment received from Non-Federal sources:			
Patient care:			
District of Columbia	25,631,000	27,652,000	+2,021,000
Officers' board	2,920	2,920	---
Cafeteria sales	60,042	60,042	---
Sale of scrap	2,038	2,038	---
Subtotal	25,696,000	27,717,000	+2,021,000
Total reimbursements	26,467,000	28,471,000	+2,004,000

	1969	1970	Change
Per diem rate:			
District of Columbia	$15.95	$17.94	+$1.99
Other	19.23	21.27	+2.04

STATEMENT OF AVERAGE DAILY PATIENT POPULATION
(In-Hospital)

Reimbursable	1968 Actual	1969 Estimate	1970 Estimate
Public Health Service (Indians)	4	4	3
D. C. (Residents)	3,441	3,051	2,756
D. C. (Vol. and Non-Protesting)	557	739	880
D. C. (Prisoners)	561	568	547
D. C. (Jury Trial)	74	66	59
U. S. Soldiers Home	13	12	12
Veterans Administration	52	10	---
U. S. Nationals	46	46	46
U. S. Prisoners	21	20	20
Reimbursable Totals	4,769	4,516	4,323
Nonreimbursable			
U. S. Army	118	105	93
U. S. Coast Guard	10	9	8
D. C. Nonresidents	347	387	405
U. S. Marine Corps	9	8	7
U. S. Navy	43	38	34
Public Health Service	8	8	7
Virgin Islands	103	99	95
Miscellaneous	31	30	28
Nonreimbursable Totals	669	684	677
Total Patients	5,438	5,200	5,000

FRIDAY, MARCH 21, 1969.

HEALTH SERVICES RESEARCH AND DEVELOPMENT

WITNESSES

DR. PAUL J. SANAZARO, DIRECTOR, NATIONAL CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT
DR. ROBERT R. HUNTLEY, ASSOCIATE DIRECTOR
LYMAN MOORE, EXECUTIVE OFFICER
DR. THOMAS McCARTHY, DEPUTY DIRECTOR
MRS. DIANE H. CARVEY, FINANCIAL MANAGEMENT OFFICER
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

HEALTH SERVICES RESEARCH AND DEVELOPMENT

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 Actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	1,612	2,348	2,819
Positions other than permenent	95	215	225
Other personnel compensation	3	20	20
Total personnel compensation	1,710	2,583	3,064
Personnel benefits: Civilian employees	181	219	256
Travel and transportation of persons	302	222	250
Transportation of things	22	33	38
Rent, communications, and utilities	101	86	109
Printing and reproduction	19	40	60
Other services	4,402	9,561	11,105
Supplies and materials	100	41	50
Equipment	97	60	88
Grant, subsidies, and contributions	23,736	28,077	29,955
Total obligations	30,670	40,922	44,975
PERSONNEL SUMMARY			
Total number of permanent positions	234	222	238
Full-time equivalent of other positions	14	22	23
Average number of all employees	160	211	250
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794

PROGRAM AND FINANCING

[In thousands of dollars]

	1968 actual	1969 estimate	1970 estimate
Program by activities:			
1. Studies, training, and systems development:			
(a) Grants and contracts	25,641	37,362	40,672
(b) Direct operations	2,755	2,703	3,312
2. Program direction and management services	369	857	991
Total program costs, funded [1]	28,765	40,922	44,975
Change in selected resources [2]	1,905		
Total obligations	30,670	40,922	44,975
Financing:			
Receipts and reimbursements from: Social Security Trust Fund	−4,075	−4,320	
Comparative transfer to other accounts	8,359	23,857	
Unobligated balance available, start of year		−17,513	
Unobligated balance transferred to other accounts		6,000	
Unobligated balance available, end of year	17,513		
Unobligated balance lapsing	1,802	985	
Budget authority	54,267	49,931	44,975
Budget authority:			
Appropriation	54,234	49,931	44,975
Transferred to other accounts	−1		
Transferred from other accounts	34		
Appropriation (adjusted)	54,267	49,931	44,975
Relation of obligations to outlays:			
Obligations incurred, net	34,952	60,459	44,975
Obligated balance, start of year	60,636	43,986	50,335
Obligated balance, end of year	−43,986	−50,335	−40,333
Adjustments in expired accounts	−1,907		
Outlays	49,695	54,110	54,977

[1] Includes capital outlay as follows: 1968, $97,000; 1969, $60,000; 1970, $88,000.

[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, none; 1968, $1,905,000; 1969, $1,905,000; 1970, $1,905,000; 1968 excludes undelivered orders related to obligations comparatively transferred to other accounts.

Mr. FLOOD. Now we have Health Services Research and Development. Paul J. Sanazaro, the Director of the National Center for Health Services Research and Development will be the witness.

Do you have anybody here we do not know?

Dr. SANAZARO. This is Mrs. Diane H. Carvey, my budget officer, and Dr. Robert Huntley, Associate Director for Program Development, and Dr. Thomas McCarthy, my deputy, and Mr. Lyman Moore, my executive officer. The others you have met.

Mr. FLOOD. Dr. McCarthy, you are new.

Dr. MCCARTHY. Yes, sir.

Mr. FLOOD. How new?

Dr. MCCARTHY. Since the first of May on this job.

Mr. FLOOD. You have a statement, I see, Doctor; how do you wish to proceed?

Dr. SANAZARO. I would prefer to read the statement, if I may.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. FLOOD. Very well. We will place your biographical sketch in the record and you may proceed.

(Biographical sketch follows:)

BIOGRAPHICAL SKETCH

Name: Paul J. Sanazaro, M.D.
Position: Director, National Center for Health Services Research and Development.
Birthplace and date: Sanger, California, September 27, 1922.
Education: A.B. University of California, Berkeley, Summa cum laude, 1944. M.D. University of California School of Medicine, San Francisco, 1946.
Experience: May 1968 to present, Director, National Center for Health Services Research and Development. 1962–1968, Director of Education, Association of American Medical Colleges. 1955–1962, Assistant and Associate Professor, University of California School of Medicine, San Francisco. 1953–1955, Private practice.

GENERAL STATEMENT

Dr. SANAZARO. Mr. Chairman and members of the committee, I appreciate this opportunity to report to you on the evolving program of the National Center for Health Services Research and Development. As you know, we are a very young organization—having been established May 1, 1968, as a new unit of the Health Services and Mental Health Administration. The purpose of the National Center is to serve as the national focus for health services research and development, and to act as a catalyst for new ideas and methods for improving health services. This is a role similar to that which the National Institutes of Health has long served for biomedical research.

The ultimate goal of the National Center for Health Services Research and Development will be to aid the practitioners and institutions that provide health services in improving the distribution and quality of services and to make the most effective and economical use of manpower, funds, and facilities. As the first step toward achieving this goal, we are giving immediate and highest priority to these major problems of the health services field: rising costs, unequal utilization of services, and differences in availability and quality of services. We are also emphasizing the development of sound methods for evaluating the results of health services provided under different arrangements and different systems of financing.

In attempting to deal with these problems in a meaningful way, it has quickly become apparent that we must first acquire a more substantial base of knowledge. We lack basic information needed even to understand present shortcomings, much less anticipate problems of the future. Therefore the Center is also giving a high priority to development of the basic research capability of the relevant social, engineering, and computer sciences. In parallel with this, we are establishing mechanisms for assuring that the research findings are implemented.

LEGISLATIVE AUTHORITY

The Center discharges its responsibilities under two legal authorities. One, section 301 of the Public Health Service Act, authorizes the support of basic research and research training grants throughout the entire Public Health Service. The other, section 304, was enacted by the Congress in November 1967. It was created by combining two existing sections of the Public Health Service Act: section 624, which previously authorized the Hill-Burton in-hospital research and dem-

onstration grant program, including experimental construction, and section 314(e)(3), originally a part of the comprehensive health planning and services legislation. Section 304 permits funding for research, experiments, or demonstrations and related training, and includes projects for research and demonstration in new careers in health manpower and new ways of educating and utilizing health manpower.

Under these combined authorities, the Center supports health services research, development, demonstrations, and training through both grants and contracts.

STRUCTURE AND STRATEGY

The initial staff and financial base of the Center were appropriated in 1969 within the "Community health services" account in the amount of 116 positions and $22,941,000. In addition, other on-going research and development projects previously budgeted under "Community health services" and "Chronic disease" were transferred to the Center, making a total base of 222 positions and $40,922,000 available in 1969.

Our first order of business was to unify and redirect these to the new purposes and new philosophy of the Center now organized into seven functional units: Health Care Institutions, Health Care Organization and Delivery, Health Economics Analysis, Health Care Technology, Health Manpower Utilization, Social Analysis and Evaluation, and Health Care Data.

To supplement our full-time staff, each program has the benefit of advice from technical advisory groups drawn primarily from the academic community.

We have developed the Center's programs out of an extensive and continuing series of discussions and consultations with leaders of the health professions, health care and health-related institutions and agencies, financiers and consumers of care, and outstanding research talent of the academic, industrial, and business communities. Because the Center is the national focus for health services research and development, one of the most important functions is the building of effective working relationships with other programs, organizations, institutions, agencies, and professional bodies whose collective interests and action determine the nature of health services in our country.

During its first year, the National Center has increased its support of Health Services Research Centers. These are long-term, large-scale research efforts in which strong, multidisciplinary teams in academic or institutional settings are attacking major problems in health services in close conjunction with operating programs. Seven of these are now funded. The areas under study include improving the organization of personal and community health services, the evaluation of medical care, hospital administration and data systems, the health care planning process, and methods of measuring the effectiveness of medical care. These Centers serve as a channel for the growing commitment of universities and other soundly based research organizations to significant health care problems in the community.

We have also established a number of intramural task forces to develop our long-term strategy of research in priority areas. Task forces are now working on the problems of health care for the disadvantaged, the costs of medical care and the evaluation of multiphasic health screening. At the present time approximately 10 percent

of our grant and contract funds are directed to the problems of costs and the disadvantaged. We intend that this figure be approximately 30 percent by the end of 1970.

In this necessarily very general statement I have briefly described the basic guiding principles of the Center and the directions in which we are moving. For 1970 we are requesting 238 positions and $44,975,000 to carry forward in an orderly fashion the work which we have begun this year. This is an increase of 16 positions and $4,053,000 over the amount available for obligation in 1969.

Mr. Chairman, I shall be happy to answer any questions you or the committee may have.

AUTHORIZED POSITIONS

Mr. FLOOD. Now you are asking funds for the annualization of positions that were authorized in 1969?

Dr. SANAZARO. Yes.

Mr. FLOOD. As a matter of fact, you have fewer positions than you had in 1968.

Dr. SANAZARO. Mr. Chairman, we were not in existence in 1968.

Mr. FLOOD. You were as far as we are concerned. This may be a new organizational unit but it is composed of old activities. You have fewer positions than you had in 1968 for these activities. Do you know what I mean?

Dr. SANAZARO. Yes, sir.

Mr. FLOOD. This, I assume, is because of the Expenditure Control Act.

Dr. SANAZARO. As the result of the Expenditure Control Act, there were a number of positions eliminated from those that had originally been authorized, and there is the further control on filling vacancies which has resulted in a very limited increase.

Mr. FLOOD. So you have fewer now than you had in 1968? Nose count.

Mrs. CARVEY. Yes; we actually lost not only 65 new positions appropriated in 1969, but 12 from our base.

Dr. ENGLISH. Mr. Chairman, I am glad you are pointing this out.

Mr. FLOOD. It is unusual for me to do that; you usually do it.

Dr. ENGLISH. That is why we appreciate it. We talked to you about the problems in the patient care area, but we have not mentioned that there have been some special hardships, too, in these relatively new efforts which have come into existence during this period of control.

NEED FOR ADDITIONAL FUNDS

Mr. FLOOD. All right, I will resume my role as the devil's advocate then.

You currently have a $41 million program and you are asking for $4 million more. Why isn't this current appropriation an adequate investment in health services research and development? What are you going to do with $45 million you could not do with $41 million?

Dr. SANAZARO. Mr. Chairman, the Center did not come into being in a total vacuum. As we indicated, section 304 of the Public Health Service Act brought together the Hill-Burton demonstration and research provisions and the comprehensive health planning and services

section 314(e)(3), and there were approximately $20 million of obligated funds in those two accounts which were transferred into the Center.

Also, when the Center came into being in May of 1968, it carried on the functions of research which had been sponsored in the Medical Care Administration Unit of the old Bureau of Health Services, and also transferred into it were the health services research and development programs of the National Center for Chronic Disease Control.

So in essence, the so-called free money out of the total of $41 million was considerably less than $10 million.

Furthermore, in view of the research grant cycle which, built on the NIH model, has three annual target dates, since the Center came into existence we have received approximately $25 million of research grant applications. These had been programed and were in the process of submission before the Center was established.

Mr. FLOOD. That was all true with regard to the $41 million for 1969. Why can you not do the same thing with the $41 million in 1970? Why must you have $4 million more in 1970? You have not told me that yet.

Dr. SANAZARO. The point I wish to establish is that the $41 million was not $41 million of new money, that the free money for this new organization was actually quite limited. The original philosophy behind the establishment of the Center was that in proportion to the total expenditures for health services in the United States, a significant research and development effort would in fact be mounted. This is what we are directing our next year's attention to. Recognizing that basic research as it has been conducted through the research grant mechanism is essential to provide new knowledge and understanding, we also recognize that to bring about change the research findings must not lie fallow but must be combined with new scale efforts in a way that has never been attempted before.

Mr. FLOOD. I am sure you have not said a word that is not true, but why can you not do the same good job with $41 million in 1970 that you are doing in 1969?

Dr. ENGLISH. To put it in perspective, Mr. Chairman, you could look at it this way: We have a $53 billion health expenditure in the country in 1969——

Mr. FLOOD. That is very exciting, and what has that to do with my question?

Dr. ENGLISH. By 1975 it is going to be a hundred million.

Mr. FLOOD. I am not talking about 1975. I am talking about 4 million for 1970.

Dr. ENGLISH. That is the sum total of the free money in this new Center that Dr. Sanazaro has to direct to the concerns this committee was talking about in the area of medical care cost, and in evaluating new methods of delivering medical care as more people are being brought into the system. In effect he has only $4 million of free money.

CONTROLLING THE RISE IN MEDICAL CARE COSTS

Dr. SANAZARO. Mr. Chairman, I have indicated that at present about 10 percent of the funds are going to what we have identified as the two priority areas and we are trying to increase this very significantly.

In the area of costs, which was the major concern of the Gorham report, control of costs was listed as one of the justifications for establishing the Center.

Mr. FLOOD. I know about the Gorham report.

Dr. SANAZARO. As Dr. English has indicated, the expenditures for medical care were $53 billion in fiscal year 1968. The amount of health services research and development directed to finding out the cause of this inflation is far less than 1 percent. In fact it is less than one-tenth of 1 percent.

We propose to mount a program which is much more systematically directed to the question, Why are we having this unusual degree of inflation of medical care prices? We propose four basic points of attack.

Mr. FLOOD. I think that is wonderful.

Dr. SANAZARO. May I ask if the chairman is interested in hearing the nature of the attack on the cost problem?

Mr. FLOOD. Sure. Nobody is more interested. I am exhibit A.

Dr. SANAZARO. The first is an approach which has been widely suggested; namely, increasing the productivity of the medical care industry. We are proposing several types of studies

The first is to clarify the ways in which technology can, in effect, substitute for manpower and extend services. Examples are the use of computerized equipment in intensive-care units of hospitals, supplanting physicians and other highly trained personnel; in rural areas to substitute for scarce physicians by integrating television, radio communications circuits, and computer technology.

Second, is to use less highly trained personnel where possible. One project involves the use of medical corpsmen returning from the military service as assistants to physicians, to determine how well they will be accepted by the public and whether they can perform creditably. In addition to the use of new kinds of manpower, and new technology, there are new ways of organizing health services. By combining personnel and facilities differently, perhaps we can deliver more services with the resources that we have.

This is the point that Dr. English was making in stating that one of the prime considerations of his administration is increasing the capacity of the medical care industry.

The second approach to the cost problem is to find out what the effects are of different methods of financing on the availability and utilization of health care. Here we have the longstanding controversy as to whether prepayment for medical services brings about less unnecessary use of services.

We are proposing a rather critical study of this question: What differences does prepayment of medical services make in the use of services, physicians' attitudes, and the quality of care, as compared with the free-for-service method?

We are also examining the same questions with respect to nursing homes since nursing homes increasingly will consume a large proportion of our health care dollars.

Our third approach is to look at the matter of attracting new sources of capital into the health care system. If the only current sources have to provide the capital for operations and for construction, then obviously demand will continue to exceed supply.

So in two specific instances we are working out studies, one in an urban center, to determine what incentives there might be to attract private capital into both the operation of services and the construction of facilities, especially in the area of the disadvantaged.

The other approach is to determine whether public service corporations can substitute for the usual municipal system of health care and attract private capital into what has been up to now a public responsibility.

The final approach, final only in this listing but first in our thoughts, is the mounting of large-scale research and development projects to deal directly with some of the already identified sources of inflation in medical care.

For example, you have had discussed before you many times the fact that if there were alternatives to hospitalization for acute care that undoubtedly the cost would be less. The fact of the matter is that there are so few opportunities to test this in actual practice that we do not know whether this is a fact or a hope. We intend to develop a series of cooperative studies with a consortium of private insurance firms to encourage them to underwrite a different type of policy, to support care in the full range of alternatives: before hospitalization, after hospitalization, and instead of hospitalization.

Secondly, we wish to interest some large group practices that are predisposed to this approach in experiments with comprehensive prepayment and capitation reimbursement. Our intent is to compare this with the traditional fee for service approach in a purely voluntary fashion, involving physicians, institutions, and insurance carriers.

Here again we want to see what happens to use of services and the costs in these areas.

We would like to install in a large number of hospitals in the United States a standardized hospital discharge form that for the first time will enable us to relate the actual costs of hospitalization to diagnoses and patient mixes. At the present time we have gross unit costs or per diem costs, but we cannot relate the differences that we observe across the country to any standardized series of diagnoses or types of hospitalized patients.

Finally, although much has been said about the advantage of mergers, joint ventures and shared facilities, the number of studies of such facilities is too small to place any reliance on them, and we would like systematically to explore the full potential savings of this on a fairly large scale, perhaps using some of the already existing arrangements as, for example, in an Appalachia multicounty demonstration.

Dr. Huntley has been involved in these and can speak to them further if necessary.

These four approaches to the problem of medical care costs are simply not possible under existing funding and personnel restraints. They would account for a large portion of our increased funds in fiscal 1970.

HEALTH CARE FOR THE DISADVANTAGED

A second priority is health care for the disadvantaged. Other units throughout government have the primary responsibility for supporting the operating programs, for innovating with respect to health care for the disadvantaged, and it is not the function of the National Cen-

ter to evaluate whether those programs are worthy or whether they are effective. That is their responsibility.

In speaking of our interests in health care for the disadvantaged, we are concentrating primarily upon a national evaluation of what is required in the way of medical services and what is in fact being delivered.

Secondly, we're interested in supporting and exploring those developments that are most likely to prevent the installation of a fixed dual system of care, a two-track system. We fear this might be the result if increasingly the "neighborhood health center" becomes the focus of care for the disadvantaged rather than the extension of existing facilities, existing services in the various urban centers.

And third, when we speak of the disadvantaged we are not speaking only of the ghetto population, we are speaking of those who are disadvantaged with respect to access to care. Large portions of the United States are disadvantaged in this way even though they are socially, economically, and culturally advantaged. We wish, therefore, to determine the best means of bringing first quality medical services to the rural disadvantaged population. None of these approaches are possible within the existing funding and personnel restraints.

STUDIES OF HEALTH MANPOWER

Mr. FLOOD. Your budget justification says you are going to do studies on the utilization of health manpower. Is not the Bureau of Health Manpower doing the same thing? How do your activities differ from theirs?

Dr. SANAZARO. We are focusing upon the utilization of new kinds of manpower.

Mr. FLOOD. What is the Manpower Administration in the Department of Labor doing along this line?

Dr. SANAZARO. They are providing training funds.

Mr. FLOOD. How do your studies differ from the Bureau of Health Manpower?

Dr. SANAZARO. Our studies have a national perspective. One of our concerns is the extreme fragmentation of training programs and the unusual diversity of new kinds of personnel that are being created. The Nation may be creating a new kind of chaos; there may be such incoordination, for example, in State licensing requirements, in requirements for supervision, that although we will have invested a great sum of money in creating these new personnel they will not fulfill their purpose, which is to extend the productivity of the physician or reduce medical care costs.

So we are directed more to the systematic analysis of the implications of such extension.

Secondly, we are also emphasizing the importance of defining the requirements for training much more objectively than has been done in the past.

Very often, as you know, training programs are established on the basis of what a professional group is willing to relinquish. This is quite different from performing an objective functional analysis of what is required in certain areas of service, then devising a training program based upon those findings. These I would think are the distinctions in approach.

Mr. FLOOD. It is strange that Labor or the Health manpower people have not thought of that, is it not? Why have they not been doing that?

Dr. SANAZARO. I do not know.

Dr. ENGLISH. I think the difference is that the kind of work which Dr. Sanazaro will be involved in in the health manpower field is sort of on the cutting edge of new technology in manpower, which, if it works out satisfactorily, could be supported on a much larger scale by the Labor Department funds, for example, and/or by the Bureau of Health Manpower.

I think the reason Dr. Sanazaro has been able to get the talent he has is the concern in the country at large, and particularly among the profession, about the need for R. & D. in areas like manpower and medical care.

As a matter of fact, at some of the discussions that I have attended, I have heard some pretty distinguished people in medicine in this country say that if we had launched an R. & D. effort 10 years ago relatively sized in comparison to the size of the industry in this country, we might not be having the kind of difficulty we are now having. We would have known more how to avoid the kind of difficulty Mr. Raspberry cited in his column.

The kind of thing I think Dr. Sanazaro can do in the manpower field is illustrated by the project alluded to. There are many people who feel you cannot use medical corpsmen coming back from the services in the medical care system very well. The local physician, for example, does not find them acceptable; it is a great idea but it really does not work. From some of the discussions I had with people at the Center, it is indicated that one of the reasons for this is that very often the medical corpsman has been trained to work with the physician at a university without the involvement of a local physician.

A new effort which Dr. Sanazaro is considering the support of is the actual involvement of a local practitioner in a rural area in the design of a training program for a medical corpsman who would eventually work with him.

Also, the medical corpsman would be placed as an intern in his office for a year or so, so they can get the feel of how the situation can work out.

Finally, at the end of that internship period, there would be the option for a local doctor to employ this person as a part of his health effort in his practice. I think that is a new approach. I have not heard of that kind of approach being supported by anyone.

I think if that kind of pioneering effort looked like it was working in a particular region, the Bureau of Health Manpower, the Department of Labor, and other health manpower sources could put in the funds that would implement this on a larger scale. I do not think they would like to do this until you have this kind of research first.

MEDICAL SYSTEMS DEVELOPMENT LABORATORY

Mr. FLOOD. Tell us a little more about the work of the Medical Systems Development Laboratory. Your justifications say it "is making substantial progress on the application of electronic techniques to health care diagnosis and treatment."

Tell us something about that.

Dr. SANAZARO. The laboratory has for the past several years been refining and perfecting the technique of long-range transmission and remote computer-based interpretation of electrocardiograms. Obtaining accurate interpretations rapidly has often been a problem in the rural areas. And now the equipment has been devised which makes it possible by telephone transmission to send a tracing hundreds of miles and to receive a correct analysis of that tracing within a matter of seconds.

This basic principle, the use of modern electronic equipment and the computer to substitute for physicians in analyzing the presence or absence of possible heart disease, is now being extended to problems of lung diseases, and other measurements that can be made in the laboratory.

This laboratory also has an interest in perfecting equipment for the intensive care unit. As you know, these are extremely expensive and still very cumbersome. In this, the laboratory constitutes an in-house consultative resource as well as a working unit.

UNIVERSITY HEALTH SERVICES RESEARCH CENTERS

Mr. FLOOD. You are supporting Health Services Research Centers at seven universities in 1969. You propose four more in 1970. How many of these centers do you think we need, what will be the annual cost of each center, and where are the ones located now.

Dr. SANAZARO. I do not know what the ultimate number might be. The reason for this is that these are entirely new ventures which have no precedent. We cannot fully grasp their potential but believe that they are important and that they should be supported for a period of years.

For this reason I cannot estimate their ultimate cost. But the present programs, seven of them, suggest the kind of gains that we may expect in the future.

One of these is, and I think Dr. English listed them for you before, at the University of California at Los Angeles under Dr. Lester Breslow.

Mr. FLOOD. Suppose you list them again here.

Dr. SANAZARO. This center is concerned with the outcomes of medical care. It is unusual in that it uses the other campuses of the University of California as satellite centers, and also has a direct tie-in with the California Medical Association and the State and local departments of health.

The center is working with these units to develop better measures of the results of medical care.

Another unit is at the Kaiser-Permanente installation in Oakland and San Francisco working on a computerized medical information system.

The third unit is at Kaiser-Portland studying preponderantly the effects of organization of services, personnel and facilities on the delivery of care to the disadvantaged, and also performing definitive studies on the effect of that organization on the economics of care and on patient utilization and acceptance.

The fourth center is a joint venture between Northwestern University and the American Hospital Association. The American Hos-

pital Association has a research and education trust which for a number of years has been conducting studies, and now this is linked up with the Northwestern University, to perform definitive analysis of hospital operations.

The fifth center is that at the American Rehabilitation Foundation in Minneapolis. It is doing research on the planning process in health services.

Mr. FLOOD. Have you people been reading Horace Greeley?

Dr. SANAZARO. We are moving east, sir. The sixth center is at Harvard.

Mr. FLOOD. Good.

Dr. SANAZARO. It is part of the new complex at Harvard which is, among other things, studying comprehensive prepaid medical care for a broad, general population. This unit at Harvard is concerned with the vexing problem of evaluation of health services, how to judge their value or their effectiveness.

The final center which is funded is at the University of North Carolina. Its focus is the use of manpower and organization to provide community health services in a rural setting.

I would like to make clear the nature of these centers and how they differ significantly from other research centers.

The requirement that they have a high level, multidisciplinary staff that is productive in research is the same as for other centers. There are two differences. First of all, they direct their efforts to one particular aspect of health services or health services research; they focus upon one particular area rather than diffuse their efforts across the whole area of concern.

Second, these centers are tied into an actual operating program; they are not doing their work within the ivory tower but are actually studying the delivery of health services in the community, or in physicians' offices. Most importantly, there is a commitment as far as possible to apply the results of the research in the service operation to determine whether the research will actually lead to improved operations, reduced costs, or greater efficiency.

REVIEW OF GRANTS AND CONTRACTS

Mr. FLOOD. Most of your money is going out in grants and contracts?

Dr. SANAZARO. Yes.

Mr. FLOOD. I am an old hand at Defense appropriations. I know something about grants and contracts. What system do you use in approving such projects? Do they all have to be approved by panels of outside consultants, advisory councils like the NIH research grants?

How do you do this?

Dr. SANAZARO. Yes, sir; for research grants that is the method we use. For contracts we are using a modified form of review. We ask people that we identify as the foremost experts in the field to give us their advice regarding whether what is proposed in the contract is likely to deliver the results that we are seeking.

Mr. FLOOD. It is the NIH system then?

Dr. SANAZARO. For the research grants; yes.

Mr. FLOOD. Every subcommittee of the Appropriation Committee this year is paying very particular attention to unobligated balances.

You have a beauty, $17,513,000 carried forward from 1968 to 1969. Where is it, under a rug someplace?

Dr. SANAZARO. That is a bookkeeping artifact, sir.

Mr. FLOOD. A what?

Dr. SANAZARO. It is not a real figure. It does not represent $17 million of the Center's money.

Mr. FLOOD. It is not the kind of artifact you would find underground?

Mrs. CARVEY. This $17,513,000 refers to the mental retardation grants which were carried under the Community Health Service appropriation in 1968 and 1969. In 1969 these are shown in the estimate as a comparative transfer to the Social and Rehabilitation Service. They are not part of the center.

STUDIES OF HEALTH MANPOWER

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. How much money is there in this budget for manpower studies?

Dr. SANAZARO. At the present time it will approximate a million dollars.

Mr. SHRIVER. How much is in the Department of Labor budget in in the same area on manpower?

Dr. SANAZARO. I do not know, sir.

Mr. LEWIS. I do not believe it is comparable to the Labor Department unit, MDTA, or demonstrational research area. They do not actually devote much effort to the field of health manpower as such. There is a general authority, as the chairman knows, for demonstration projects in manpower, and as you know, their concentration has been on the hard-core problem and not on a particular industry as such.

Mr. SHRIVER. You mean they do not have training for nurses?

Mr. LEWIS. Under MDTA they have refresher training for those already established. They have had under MDTA, in collaboration with the Office of Education, programs for bringing nurses back into practice. These are large-scale programs. 30,000 or 40,000 nurses have been brought back into the manpower stream.

Mr. SHRIVER. They do not have training for practical nurses?

Dr. SANAZARO. Training, yes; sir. General regular training programs, ongoing training programs for practical nurses and refresher training, under the MDTA program, but not for manpower studies, which is what your question was.

Mr. SHRIVER. Yes.

COMMUNICATION OF RESEARCH FINDINGS

Doctor, on page 2 of the statement you say you are establishing mechanisms for assuring that the research findings are implemented. What are these mechanisms?

Dr. SANAZARO. The first is the traditional approach of establishing what we think will be an effective communication mechanism simply for making the results of research available from the research grants and from the contracts.

Mr. SHRIVER. How are you doing that?

Dr. SANAZARO. By publications, summaries, digests, bulletins directed to the people that are most concerned with this, medical groups, hospital administrators, public health groups and so forth.

I say the traditional approach because we do not feel that will ever be the most effective approach to overcoming the barrier.

Mr. FLOOD. You what?

Dr. SANAZARO. I do not feel that will ever be a fully effective approach to overcoming the barrier in communications.

When I listed the approaches to the cost problems, I was suggesting what we feel will be a much more effective mechanism for communicating the findings. That is by involving the highly visible organizations and institutions, the national leaders in the field in actually developing and conducting the projects so that as the project moves along and the results become known, they themselves are automatically informed. As national leaders, they are in a position to pass this on to their associates and organizations informally and in meetings. This will be the critical step in making the investment in R. & D. a worthwhile investment.

If this approach is not taken, if we continue to rely upon the research grant approach, we simply propagate the continuing communication gap.

Dr. ENGLISH. I might say, Mr. Shriver, that is one of the advantages of the reorganization. For example, Dr. Sanazaro, who sits as a member of the senior staff of the entire Health Services and Mental Health Administration, Dr. Olson, who is Director of the regional medical programs, and Dr. Cashman, Director of the partnership for health program, discuss the kinds of problems that require efforts in health services and development. In these meetings Dr. Sanazaro was able to discuss the kinds of things coming out of the research he is doing. It is an internal mechanism which we hope to be able to utilize much more effectively under the reorganization for making sure these findings do not sit in a library somewhere, but are communicated to the profession as a whole. It is a critical part of the strategy of the entire Health Services and Mental Health Administration.

Mr. SHRIVER. That is very important.

UNIVERSITY RESEARCH CENTERS

I think you listed for our chairman a moment ago the seven research centers. Where do you have in mind for the additional four?

Dr. SANAZARO. These centers are funded as research grants and therefore applicants submit their proposal, which is then reviewed by the primary panels and the council. We do not determine where they are to be.

Mr. SHRIVER. Is not part of the purpose of it to assist in support of an institution? Is that not part of the purpose of the National Institutes of Health grants?

Dr. SANAZARO. Not in my thinking, sir.

Mr. SHRIVER. This would be different from the National Institutes of Health grants?

Dr. SANAZARO. Yes.

Mr. SHRIVER. Not for support of an institution?

Dr. SANAZARO. No. The greatest need in this field is for people that can do good work. What we are trying to do is to attract new talent

into this field, R. & D. in health services. That is why we have the requirement that the center be tied into an operating program, and not stay within the walls. This is so important because it involves them in their community in a way that otherwise is not possible.

Mr. FLOOD. Did the University of Pennsylvania complex, the grandad around here, apply?

Dr. SANAZARO. I do not believe they have.

Mr. FLOOD. You have heard of it, have you not?

Dr. SANAZARO. Yes, sir. I do not believe they have applied for this.

Mr. SHRIVER. How much are you requesting for fiscal 1970 for research facilities for the mentally retarded?

Dr. SANAZARO. That is not in our appropriation, sir.

Mr. SHRIVER. Health services, research and development, but the mentally retarded health services is not included in your bailiwick, is that correct?

Dr. SANAZARO. That is right.

Mr. LEWIS. I think you are asking about construction of facilities.

Mr. SHRIVER. I am talking about research?

Mr. LEWIS. I am sorry. The mental retardation program is in the Social and Rehabilitation Service. That is where the research activities are carried out along with construction and staffing grants.

Mr. MILLER. I think the confusion arises because the funds for that program in 1969 are in a parent appropriation out of which the health services research and development appropriation came. But in fiscal year 1970 the mental retardation program is in the Social and Rehabilitation Service.

Mr. SHRIVER. That is what I wanted to find out. It is not exactly a simple setup.

How do you propose to disseminate information gained from these research projects to get wide acceptance of improved methods of health service? I think you have covered that pretty well. Do you have anything further to add?

Dr. SANAZARO. The centers which now exist, the seven, will sponsor a series of conferences in their particular area of interest. Through these there will be a regional impact and the results of these will be published and made available nationally for all interested parties.

Mr. SHRIVER. In your justifications at page 101 you say that a research contract will be funded for a study to determine needed economic incentives for the entry of private capital into the health services field. Will you explain that further?

Dr. SANAZARO. Yes. At the present time there is very little incentive for private capital to come into the health services field since so many of the institutions are classified as not for profit. The question therefore arises, how do you attract new sources of private capital either for construction or services? And it remains a pure research question. We have interested an investigative firm and a major insurance company to explore this problem, and we are providing only a part of the funds to look at this in an inner-city setting.

USE OF RETURNING MEDICAL CORPSMEN

Mr. SHRIVER. How do you intend to go about getting more of these returning veterans, hospital corpsmen and others, interested in entering the health field when they return from the service?

Dr. SANAZARO. There is a great deal of interest on their part and the problem really is the relative lack of opportunity for them. So I think the problem is much more the other way. We must increase the capacity to take them in, but also, most importantly, assure that they will fit into the care system so they can use their skills fully. Right now we do not have these channels.

Dr. ENGLISH. And to offer them some advancement, Mr. Shriver.

There is an example from the poverty program that was particularly interesting to me. The potential there is in the manpower resource which the returning corpsmen represent, in the rural Job Corps centers and the conservation centers. In a rural area there might be only two or three general practitioners for the population that was there before 400 or 500 15- to 21-year-olds with great medical needs would come into that area. In some of those centers we would have a Public Health nurse, but in many of them we placed a returned medical corpsman who very quickly developed a good relationship with the local physician, who was the medical resource at the center, who would see that the students got to his office. They worked very well together. Those men are interested in doing that for a certain amount of time, but they would like to have a career ladder, too.

I think if you can show in the studies Dr. Sanazaro is planning that you can actually make them a member of the physician's team in the hospital, if you demonstrate that and can develop a progression for them with greater chance of advancement, that it will help the health manpower program. Most of them do not stay in. They may stay for a while in something like the Job Corps, but generally they go on to other fields where there is a better career ladder.

Mr. FLOOD. Are you making a distinction between medical corpsmen and male nurses in the Armed Forces?

Dr. SANAZARO. We are concerned with the medical corpsman rather than the male nurse. We are making that distinction.

Dr. ENGLISH. I think the male nurse can be very effectively used in a hospital setting. That would be traditionally where the male nurse would work in the military setting, whereas the corpsman in the military, particularly in Vietnam, is much more of a field resource. It is utilizing the man who has had that kind of training in the field as opposed to in the medical center itself.

That is what we are trying to develop in relationship to the corpsmen.

ACCIDENTAL ELECTROCUTION OF HOSPITAL PATIENTS

Mr. SHRIVER. Last month the National Commission on Product Safety received testimony that 1,200 hospital patients are electrocuted annually while receiving routine diagnostic checks because of faulty or inexperienced hospital personnel. Is this problem included in your responsibility?

Dr. SANAZARO. We have not included it. Certainly if those figures are true, it is an incredible problem.

Mr. SHRIVER. I do not know whether they are true or not except that the National Commission on Product Safety heard testimony to this effect.

Mr. LEWIS. Of course, to the extent that they were facilities that were in any way assisted through the Hill-Burton program, the safety

standards and other standards and criteria in that program would have been involved. I am not aware that there is a general program with respect to those standards in hospitals.

Mr. FLOOD. You certainly should be.

Mr. LEWIS. It would probably be in our area or the Consumer Protection and Environmental Health Administration, in radiological health.

Dr. ENGLISH. Could we submit for the record where the responsibility lies? I know that I heard considerable discussion of this in HEW prior to coming here. I know some things are underway, but I am not exactly sure where the responsibility is. Can we check into it and submit it for the record? I would appreciate it. It is not well defined. I can tell you that it is something we will try to move on.

(The following information was submitted for the record:)

FIRE AND SAFETY PROGRAMS FOR HOSPITALS

The fire and safety programs for hospitals and the equipment used in the diagnosis and treatment of patients are of wide concern, and responsibility for such programs is vested in a number of different agencies and institutions.

The following are the principal agencies and functions:

1. The underwriters laboratories check and test the safety of electronic instruments and equipment.

2. The insurance companies which carry the insurance for the hospitals carry out independent inspections of the plant on fire and safety hazards and practices.

3. The Joint Commission on Accreditation of Hospitals requires all accredited hospitals to meet minimum standards.

4. Professional associations, that is, American Medical Association and American Hospital Association, have conducted scientific and professional symposiums on safety and use of electronic equipment.

5. The Health Facilities Planning and Construction Service (Hill-Burton) has supported studies of the problem and in December 1968 published "Electronics for Hospital Patient Care," a manual explaining the problem and providing technical guidance. Seminars on the subject have been held with State Hill-Burton agencies and hospital groups.

6. "Health Insurance for the Aged—The Conditions of Participation for Hospitals" requires minimum standards for fire and safety.

7. State licensure agencies have standards for fire and safety and their inspectors survey all licensed institutions.

8. Practically all cities and towns have fire and safety standards usually enforced by the fire marshal who conducts regular inspections of patient-care institutions.

The most disturbing problem in this field is the low potential discharge which can occur from highly sophisticated indwelling diagnostic and treatment electronic equipment. It is known such an episode can result in ventricular fibrillation and death. Attempts have been made by professional associations and official agencies to verify the figure of 1,200 deaths annually quoted by Electronic News, January 27, 1969. The problem is recognized, but the order of magnitude given above cannot be documented.

Mr. SHRIVER. Thank you, Mr. Chairman. That is all.

Mr. FLOOD. Mr. Casey?

RISING COST OF MEDICAL CARE

Mr. CASEY. Thank you, Mr. Chairman.

As I understand it, what you are trying to develop through your research is a reduction in hospital and medical care costs; you are trying to find better ways. Is that one of your objectives?

Dr. SANAZARO. Yes, sir.

Mr. CASEY. I notice that you state, primarily, the disadvantaged. You made a distinction between those that were disadvantaged because of the lack of health care being available to them and I guess also those with low incomes. When you talk about the low-income group you are also talking about trying to save the Government money, are you not; the medicare program and the welfare programs?

Dr. SANAZARO. Yes, sir. That is one part of it.

Mr. CASEY. Costs are soaring. I know when I first came here 10 years ago just once in a while I got a letter from somebody with their hospital bill and usually they were stating that they were unable to pay; they were not complaining about the bill. I referred it back to the hospital and they worked something out. Lately—I got one 4 days ago from a man on his bill for his father. He was there 6 weeks and the bill was $8,000. He said his father was able to pay it, but he was alarmed at the amount of that bill—and I was, too.

One item that he was particularly concerned about, said drugs, no itemization or anything, over $1,200. I hope that you have something going that will try to help reduce these costs. I presume you are talking about more efficient management?

Dr. SANAZARO. Yes. That is where we begin. Various committees, national commissions, have proposed solutions. There is serious question whether the regulations imposed by Federal legislation are contributing to hospital inflation, whether reimbursement of costs as presently stipulated by regulation is not itself a major factor in the rate of rise. We would like very much to explore this systematically.

The other problem to be explained is why inflation in the hospital field is so much greater than in the general area of medical care prices? Why is it so much greater than the general consumer price index? It is not at all clear. It seems that we should know but the fact is that we don't.

Mr. CASEY. Who is working on that now? Do you have grants or do you have an in-shop study, or what?

METHODS OF REIMBURSING HOSPITALS FOR COSTS

Dr. SANAZARO. In the past few months we have established relationships with the hospital people, with leaders in the hospital field, and with prominent hospitals that would like to explore this, to participate in a demonstration of what would happen if they were to be reimbursed on average costs rather than on the basis of item costs, as is now required.

Some rather generous predictions have been made of what the effect would be of that. It has been estimated that savings might approach 2 percent just on that change in reimbursement policy. This is one approach that we are thinking of. I have mentioned the experiments comparing capitation reimbursement with fee for service. This might change the distribution of the costs. If you keep a patient out of the hospital, then that patient does not have to pay, but the hospital still has costs. We have to separate these two items.

Mr. CASEY. These are ideas that you have, but is there anything being done about it?

Dr. SANAZARO. We are proposing to initiate large scale research and development on these problems, having people that are influential in the field participate in it along with investigators.

Mr. CASEY. You are going to do that in-shop or give it to some university or hospital center, or what?

Dr. SANAZARO. We will handle that by contract as part of the directed research of our center. This is different from the research grant approach which is to produce knowledge. This is something that we will want to do to solve problems.

KAISER-PERMANENTE PROGRAM

Dr. ENGLISH. Mr. Casey, your concern, if I understand you correctly, is not only in the research and development effort launched in this field, where, frankly, there has not been as much research and development effort prior to the establishment of this center as a $53 billion expenditure warrants.

Your concern is that something happens. If you notice, in two of the research centers which Dr. Sanazaro mentioned, the support is to develop a capacity to do this kind of research. Two of the centers were involved in the Kaiser-Permanente plan. The Kaiser-Permanente health program suggests this for national implementation. There are some lessons here that are important. Let me just give one example.

In the average area, if we talk about the poor—because they are part of the reasons why the medical care costs are going up—as they receive money to buy into the areas of the country where there are not good medical resources, where there is more demand than supply, good medical resources in the poverty program, the approach to do something about that in most parts of the country was to provide some seed money to a community to set up a health care program that would satisfy the new demands. Often that has been called a neighborhood health center. An important part of the Kaiser-Permanente program involves a different situation. A system of health care was established under the auspices of Kaiser that had not only a hospital component but a very well developed ambulatory component into which various people that could afford the premium would buy and receive medical services.

The first interesting thing about that program was that with well-developed ambulatory health care associated with hospital services people went into the hospital less frequently. That has great cost implications. You have a program that can help in keeping people out of the hospital. The question was whether, instead of setting up a health care program, we might buy these poor people into one that was being used by better off people. Kaiser agreed to try that on an experimental basis.

They said, "You will have to pay twice the premium that a middle-class person would because of the unmet health needs of poor people that might not have been receiving health care for many years prior to their entry into a program."

So we pay a somewhat higher premium to buy these people into that program. Through the evaluation that was done, it was found that that combined system of ambulatory health care linked with hospitalization was so effective that at the end of 1 year of operation

you only had to pay the same premium for poor people, despite their unmet health needs, as you did for better off people. The implications of that are tremendous for the cost problem that we face in medicine. That is why I am delighted that two of these centers are going to be intimately involved with the Kaiser program. They will provide the opportunity for further research into the questions that Dr. Sanazaro has been discussing with you. Then I think it is our responsibility to try to get the results of this kind of research out as quickly as we can so that it can be picked up by other medical professions.

POSSIBLE COST ADVANTAGE TO STANDARDIZED BILLING FOR PARTICULAR MEDICAL SERVICES

Mr. FLOOD. You take your car and drive into a garage; something is the matter with your starter.

Dr. ENGLISH. Right.

Mr. FLOOD. Many of them have a fixed price to install a starter. Sometimes it takes them half an hour, sometimes it takes them 2 hours. If there is no trouble in doing the job they make a little extra. If they run into complications, that is too bad for them. No paperwork, no item-by-item anything; it is a fixed fee to put that starter in. With a great many garages this is standard practice for a great many of the more common things that need to be done to cars. It must save a lot of time—and time is money—in bookkeeping and preparing bills.

Why can't you do the same thing with a gallbladder operation? Why do you run into 19 pages of itemized bills? Eliminate all of this paperwork, save the time and expense of both medical and nonmedical people doing that. It takes an awful lot of time and money and an awful lot of people and recordkeeping.

Dr. ENGLISH. I can see what the chairman is driving at.

Mr. FLOOD. That is good.

Dr. ENGLISH. At the same time, I think he and the average American would consider infinitely more carefully who he wanted to take out his gallbladder. There is art involved in this, Mr. Chairman. As you know, you would want to have the freedom to go to a physician in the hospital of your choice and even to pay a little bit more.

Mr. FLOOD. I can pick the garage that I want, too. I like Joe Zilch and I don't like Ed Zilch, but if they are both authorized Ford service agencies their prices are probably identical for many services.

Dr. ENGLISH. In some garages you might pay more because there is a particularly good mechanic there, correct?

Mr. FLOOD. I agree with that.

Dr. ENGLISH. All I say is that we have to have more research into that kind of question. That is what Dr. Sanazaro meant when he talked about research in the field.

Mr. FLOOD. Research that one.

Mr. ENGLISH. Yes, sir.

Mr. CASEY. Doctor, do you have anything to do with the setting of the scales for medicare patients?

Dr. SANAZARO. No, sir.

Mr. CASEY. Are you participating in any of the studies in this field?

Dr. SANAZARO. Only indirectly do we have an association with the Social Security Administration; informal consultation but not direct participation.

USE OF NEW TECHNOLOGY FOR PATIENT CARE

Mr. CASEY. You mentioned taking advantage of computers and other types of engineering developments with reference to health care. Do you have research going on in that field?

Dr. SANAZARO. One of our units in the Center is health care technology. It is expressly concerned with the application of bioengineering and with the adaptation of the computer to collecting and storing information that the physicians or hospitals use, or becoming the basis of the hospital information system, scheduling appointments, tests and procedures and recording them.

Mr. CASEY. You are primarily concerned with the administration end, not the adaptation of new mechanical methods of, say, taking cardiograms?

Dr. SANAZARO. That is correct. The basic engineering research is done elsewhere. We become interested at the point where it might be applied in the actual delivery of care to people.

Mr. CASEY. Recently I was down at the Manned Spacecraft Center and Dr. Barry, who is the chief medical officer for the manned spaceflights, was telling some of us that there was an experiment going on and, I don't recall, I think he said in Minnesota, where they were trying to adopt techniques that they now use in the space capsules of monitoring the astronauts; they now put some of the equipment in ambulances so that before the patient gets to the hospital they have an EKG, pulse rate, and what all, so that by the time he is wheeled into the driveway they are that much ahead.

Are you connected in any way with this operation that he is talking about?

Dr. SANAZARO. Not in Minnesota. I think a number of——

Mr. CASEY. I may have the wrong State. Are you involved anywhere?

Dr. SANAZARO. Yes, we have one project in a rural area I would like Dr. Huntley to discuss.

Dr. HUNTLEY. This is a project that has been developed in consultation with some of NASA's engineers, a State medical society, and a State health planning office which happens to be the Governor's office in this case.

What it basically proposes to do is to——

Mr. FLOOD. What State?

Dr. HUNTLEY. New Mexico.

What it proposes to do basically is to attempt to apply communication technology and transportation technology to get services into a very sparsely populated rural area. They want to be able to use a discharged corpsman who has had some special training to man a satellite station which will then be tied into an emergency room manned 24 hours a day.

The initial triage of a patient who comes in for emergency care in one of these statellite units is determined by what can be measured and transmitted back to the hospital.

Mr. FLOOD. Initial what?

Dr. HUNTLEY. Initial triage—decision about how the patient is going to be moved through the system. It is an old Army word.

Mr. FLOOD. This record is not as clear as you are about those things.

Dr. HUNTLEY. This is the first decision, the first decision the physician will be involved in, and yet the patient may be 150 miles away. And this kind of remote transmission that NASA developed will be used to get certain kinds of information back.

The other advantage is that in this kind of area, advanced transportation techniques, helicopter ambulances and this sort of thing, should be very useful. Those are things we will test.

Mr. CASEY. You are taking advantage of trying to disseminate some of the results of the work that they have done in the space program?

Dr. HUNTLEY. Yes, sir.

Dr. SANAZARO. This will have to be done to deal effectively with the wide open spaces in the United States. I think that you heard yesterday the difficulties even Russia has with having physicians remain in isolated areas.

Mr. CASEY. I do not think we have to keep in mind wide open spaces. I imagine it takes you longer to go across Harris County, Texas, than to drive 50 miles outside of Albuquerque, N. Mex.

Dr. SANAZARO. Our interest here is in technological substitution for scarce personnel.

Mr. CASEY. Or Washington, D.C., at the morning or afternoon rush hour.

Dr. SANAZARO. Yes, sir.

Mr. CASEY. In the use of computers, as I understand it, they are now using them for central storage of medical data of all types?

Dr. SANAZARO. Yes, sir.

ORGAN BANKS

Mr. CASEY. They are beginning to get more into the transplant field, spare parts, so to speak. A couple of ladies in Houston got the idea there was no such bank except a blood bank, bone bank somewhere, and we have had an eye bank started. Recently with heart transplants everybody is looking around for donors and we have people waiting to see if they can find a donor somewhere. They started a living bank where people could sign up not just for eyes but donate the whole works. It spread. It has caught on. We have I don't know how many chapters sprung up in other States but now their idea is that they should have a central clearinghouse or central registry so that when some doctor in New Jersey says, "I need a certain part," he calls this center and they push a button and retrieve who is nearest to them, or where it is available, where it is stored, or what have you.

Would your Department be interested in anything of that nature?

Dr. SANAZARO. Very much so. The principle that you described is also being developed with respect to drug information, poison centers, any situation where information becomes critical in decisions or in life. The fact of the matter is that the computer techniques don't now exist for making that possible. They have to be developed and we are very much interested in promoting that development.

Mr. CASEY. I may say I have been listening to them for a week and they are very articulate and pretty knowledgeable. They didn't start

just last week. They have received quite a bit of support. I think they also need additional guidance for use of their energies. If a woman gets an idea she does not turn it loose. I think that they have a good one.

I believe that is all, Mr. Chairman.

Mr. FLOOD. Mrs. Reid?

Mrs. REID. Thank you, Mr. Chairman.

RESEARCH ON HEALTH PROBLEMS OF DISADVANTAGED

Doctor, you talk at some length about the fact that a substantial portion of your program next year will focus on the problems of costs and care of the disadvantaged. I am wondering if there is a certain figure you have that is in your budget for fiscal year 1970 for health services R. & D., just for the disadvantaged exclusively.

Dr. SANAZARO. That figure would probably approach $4 million.

Mrs. REID. You include in the disadvantaged the low-income people?

Dr. SANAZARO. Yes. Those that are disadvantaged by income, race, culture, geography.

Mrs. REID. You made no reference to the special problems involving high medical costs for the elderly.

Dr. SANAZARO. Medicare in the Social Security Administration has its own program of studies and we are in a different unit. We communicate with them but feel that since they are well endowed to conduct such research it would be inappropriate for us to duplicate it.

USE OF CONSULTANTS

Mr. REID. You also mentioned that your full-time staff is supplemented by technical advisory groups drawn from the academic community. How are these consultants paid?

Dr. SANAZARO. They are paid a standard consultant fee, just as are the members of the primary review panels.

Mrs. REID. On a contract?

Dr. SANAZARO. No. It is on a per diem basis. They are called in to participate at meetings and are paid expenses as well as a fee for attending that meeting.

Mrs. REID. How many such groups are there?

Dr. SANAZARO. Perhaps 10.

If I may amplify the reason for having these groups. This Center is somewhat different from most other Government operations, at least I have tried to make it so. I came here with the full expectation that we were to mount a national effort in health services R. & D., directed to the health problems of all the people.

In order to bring about change in health services as they exist for all the people, we felt it was absolutely essential that we involve all of those groups and individuals that determine what health services are; that is, organized medical and hospital groups, the blues, private insurance firms, dental associations, nursing associations, and so on. They had to be in on this in order that first we identify the problems correctly, not solely from a governmental bias, and second that the proposed solutions be acceptable or deemed feasible by them, by those who know most about it. These groups had to be involved. But in

order to carry out the R. & D. part of it, that is, do research of such caliber that the results can and will be applied widely, we had to bring in experts in research and development techniques. We have them working with the providers of care. That is why we have such a large number of task forces; this is not a Government in-house operation.

RESEARCH EFFORTS OF OTHER AGENCIES

Mrs. REID. Almost every group with whom we have talked here, have had some kind of R. & D. program going. Do you feel that you are doing something which is not being done anyplace else, that you are not duplicating efforts which are being put forth in other departments through R. & D.?

Dr. SANAZARO. There is overlap but we try to take this into account. For example, we have been working informally with the Department of Defense on a fairly major project that they are contemplating. If they carry it out, it will almost eliminate any need for us to engage in any kind of such activities.

Mr. FLOOD. What is that?

Dr. SANAZARO. The former Secretary of Defense stated that with the accumulated experience of the military, it might be entirely possible for them to design a new-generation hospital which would incorporate modern features of design and operation that in themselves might be applied to the civilian sector with great savings in costs. If they undertake this project it would be unnecessary for us to engage in any large-scale effort at that time. Similarly, the Veterans' Administration has a very considerable stake in hospital construction design and staffing. If they undertake very large scale projects of this type, then we would defer to them. Over time, we do intend to become the national focus for such R. & D. because it does require coordination. That coordination does not now exist. There is no means whatsoever of bringing all the information together, sifting it out, seeing what is meritorious and how it relates to the program priorities. We intend to work to that end.

Mrs. REID. That is all.

Mr. FLOOD. Mr. Smith?

Mr. SMITH. No questions.

Mr. FLOOD. Thank you very much.

JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Health Services Research and Development

Amounts Available for Obligation

	1969	1970
Appropriation	$49,931,000	$44,975,000
Trust Fund transfer	4,320,000	---
Comparative transfers to:		
"Salaries and Expenses, Office of the Administrator"	-1,638,000	---
"Comprehensive Health Planning and Services"	-17,374,000	---
"Salaries and Expenses, Office of the Secretary"	-325,000	---
"Mental Retardation", Social and Rehabilitation Service	-11,513,000	---
Comparative transfers from:		
"Chronic Diseases"	+6,901,000	---
"Salaries and Expenses, Office of the Administrator"	+92,000	---
Unobligated balance brought forward	17,513,000	
Unobligated balance transferred to "Mental Retardation", Social and Rehabilitation Service	-6,000,000	
Cutback required by P.L. 90-364	-1,625,000	---
Total currently authorized for obligation	40,282,000	44,975,000
Plus: proposed release of reserves for increased pay costs	640,000	---
Total obligations	40,922,000	44,975,000

Disposition of cutback:

To be used for pay costs in this account	640,000
To be returned to the Treasury	985,000
Total cutback	1,625,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
100	Studies, training, and systems development:						
	Grants and contracts....	--	$37,362,000	--	$40,672,000	--	+$3,310,000
	Direct operations.....	155	2,703,000	168	3,312,000	+13	+609,000
104	Program direction and management services.....	67	857,000	70	991,000	+3	+134,000
	Total obligations.....	222	40,922,000	238	44,975,000	+16	+4,053,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions.....	222	238	+16
Full-time equivalent of all other positions.....	22	23	+1
Average number of all employees.....	211	250	+39
Personnel compensation:			
Permanent positions.....	$2,348,000	$2,819,000	+$471,000
Positions other than permanent.....	215,000	225,000	+10,000
Other personnel compensation.....	20,000	20,000	---
Total personnel compensation.....	2,583,000	3,064,000	+481,000
Personnel benefits.....	219,000	256,000	+37,000
Travel and transportation of persons....	222,000	250,000	+28,000
Transportation of things.....	33,000	38,000	+5,000
Rent, communications and utilities.....	86,000	109,000	+23,000
Printing and reproduction.....	40,000	60,000	+20,000
Other services.....	276,000	388,000	+112,000
Project contracts.....	9,285,000	10,717,000	+1,432,000
Supplies and materials.....	41,000	50,000	+9,000
Equipment.....	60,000	88,000	+28,000
Grants, subsidies, and contributions....	28,077,000	29,955,000	+1,878,000
Total obligations by object.....	40,922,000	44,975,000	+4,053,000

Summary of Changes

1969 estimated obligations	$40,922,000
1970 estimated obligations	44,975,000
Net change	+4,053,000

Increases	Base Positions	Base Amount	Change from Base Positions	Change from Base Amount
A. Built-in				
1. Annualization of positions authorized in 1969	---	---	---	$332,000
2. Within grade and reclassification costs	---	---	---	56,000
B. Program				
1. Grants and contracts.	---	$37,362,000	---	3,310,000
2. Direct operations	155	2,703,000	13	304,000
3. Program direction and management services	67	857,000	3	51,000
Subtotal, program increases	---	---	16	3,665,000
Total increases	---	---	16	4,053,000
Total net change requested	---	---	16	4,053,000

Explanation of Changes

Grants and Contracts

In 1970, a total of $34,437,000 is requested for support for research, development and demonstrations. This includes a program increase of $2,410,000 over 1969 and will permit support of an additional seven grants over the 251 to be supported in 1969. An additional 14 contracts over the 62 to be supported in 1969 are proposed in five priority areas and in the conduct of developmental work in health services technology.

A total of $6,235,000 is requested for the support of research training in 1970. This includes a program increase of $900,000 which will permit support of 8 additional research training grants over the 27 supported in 1969 and 8 additional research fellowships over the 42 to be supported in 1969.

Direct Operations

The 1970 request for direct operations is for $3,312,000. The program increase of $304,000 over the 1969 level will provide for 13 new positions and for other expenses for those activities related to the inhouse and extramural

operations of the National Center. The 1969 level of support is $2,703,000 and 155 positions.

Program Direction and Management Services.

For 1970, $991,000 is requested for program direction and management services. The program increase of 3 positions and $51,000 over the 1969 level of $857,000 and 67 positions, will provide for the additional overhead expenses of the National Center in its second year of operation.

Authorizing Legislation

Legislation	1970 Authorization
Section 301	Indefinite
Section 304	$60,000,000

Public Health Service Act

Research, Research Training, and Fellowships

Section 301 of the Act provides legislative authority for the award of grants for research, research training, and fellowships.

Research and Demonstrations Relating to Health Facilities and Services

Section 304. (a) The Secretary is authorized--

(1) to make grants to States, political subdivisions, universities, hospitals, and other public or nonprofit private agencies, institutions, or organizations for projects for the conduct of research, experiments, or demonstrations (and related training), and

(2) to make contracts with public or private agencies, institutions, or organizations for the conduct of research, experiments, or demonstrations (and related training),

relating to the development, utilization, quality, organizations, and financing of services, facilities and resources of hospitals, facilities for long-term care, or other medical facilities (including, for purposes of this section, facilities for the mentally retarded, as defined in the Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963), agencies, institutions, or organizations or to development of new methods or improvement of existing methods of organization, delivery, or financing of health services.

"(d) There are authorized to be appropriated for payment of grants or under contracts under this section $20,000,000 for the fiscal year ending June 30, 1968, $40,000,000 for the fiscal year ending June 30, 1969, and $60,000,000 for the fiscal year ending June 30, 1970; except that, for any fiscal year ending after June 30, 1968, such portions of such sums as the Secretary may determine, but not exceeding 1 per centum thereof, shall be available to the Secretary for evaluation (directly or by grants or contracts) of the program authorized by this section."

Explanation of Transfers

	1969 Estimate	Purpose
Transfer from: Social Security Trust funds	$4,320,000	To implement Public Health Service functions related to title XVIII of the Social Security Act. In 1970 trust fund transfers are included in "Comprehensive Health Planning and Services".
Comparative transfer from: "Chronic Diseases"	6,901,000	Transfer of grants authorized under Section 301 of the Public Health Service Act and certain direct operating research activities to the National Center for Health Services Research and Development as part of the reorganization of the Public Health Service.
Comparative transfer from: "Salaries and Expenses, Office of the Administrator"	92,000	Transfer of certain research activities previously performed in the Office of the Administrator to the National Center for Health Services Research and Development.
Comparative transfer to: "Mental Retardation", Social and Rehabilitation Service	-11,513,000	Transfer of Mental Retardation activities as part of the reorganization which established the Social and Rehabilitation Service.
Unobligated balance transferred	-6,000,000	
Comparative transfer to: "Salaries and Expenses, Office of the Administrator"	-1,638,000	Transfer of certain administrative and budget functions previously funded by the Division of Medical Care Administration to the Office of the Administrator as part of the reorganization of the Public Health Service.
Comparative transfer to: "Comprehensive Health Planning and Services"	-17,374,000	Transfer of certain activities previously performed by the Division of Medical Care Administration as part of the reorganization of the Public Health Service. Responsibility for the administration of trust funds transferred from Social Security is included in this transfer.

Explanation of Transfers (continued)

	1969 Estimate	Purpose
Comparative transfer to: "Salaries and Expenses, Office of the Secretary"..	-325,000	Transfer of the President's Council on Physical Fitness, previously funded from the Community Health Services appropriation, to the Office of the Secretary.

Health Services Research and Development

	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	24,523,000	22,497,000	24,523,000	24,497,000
1961	27,847,000	22,777,000	27,847,000	27,277,000
1962	25,181,000	23,961,000	24,361,000	24,336,000
1963	28,533,000	26,276,000	26,776,000	26,526,000
1964	31,715,000	28,644,000	30,644,000	29,644,000
1965	32,777,000	25,630,000	33,339,000	33,230,000
1966	98,428,000	75,182,000	82,182,000	82,182,000
Trust fund transfers	2,100,000	2,100,000	2,100,000	2,100,000
1967	125,385,000	134,575,000	140,665,000	138,665,000
Trust fund transfers	3,512,000	3,512,000	3,512,000	3,512,000
1968	64,448,000	51,234,000	61,234,000	54,234,000
Trust fund transfers	4,075,000	4,075,000	4,075,000	4,075,000
1969	59,500,000	42,731,000	42,731,000	49,931,000
Trust fund transfers	4,320,000	4,320,000	4,320,000	4,320,000
1970	44,975,000			

Justification

Health Services Research and Development

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	222	$2,802,000	238	$3,320,000	+16	+$518,000
Other expenses	--	38,120,000	--	41,655,000	--	+3,535,000
Total	222	40,922,000	238	44,975,000	+16	+4,053,000

General Statement

The National Center for Health Services Research and Development has been established as the principal agency within the Department of Health, Education, and Welfare to establish scientific methods of making improvements in the broad field of health services.

The National Center has the general mission of working with the providers of health services to build a research and development capability that will continuously improve these services for the benefit of all the people. This mission will be carried out by providing leadership, jointly with the health professions and public and private institutions, in the identifying of opportunities for widely-applicable increases in effectiveness and efficiency; by providing direct support through grants and contracts to a variety of research, development, demonstration and training projects and programs, and by working with other Federal agencies to find ways of improving existing Federal programs which finance or operate health services.

The 90th Congress enacted Section 304 of the Public Health Service Act which establishes broad authority to support research, development, demonstrations, and related training in all processes and institutions involved in health services. In addition, the National Center will support research and research training under Section 301 of the Public Health Service Act.

Under the reorganization of the Health Services and Mental Health Administration, funds from several appropriations provided the base for support of the National Center in its first year of operation (1969). The 1969 Community Health Services appropriation included $22,941,000 for new Center activities in addition to $11,550,000 for on-going research and development projects. Additional transfers included $6,901,000 from Chronic Diseases and $92,000 from the Office of the Administrator. Responsibility for the grants and contracts being supported from these funds has been assigned among the various programs in the new National Center consistent with the Center's organization.

Needs of Health Services Field

One of the major health areas on which public attention today is focused is the need to improve the delivery of health services. Major problems are rising costs, unequal uitlization of services, and differences in availability and quality of services. These highly visible problems provide the immediate high priorities for the research and development program of the National Center.

A major related need is for a more substantial base of knowledge, and institutions capable of applying this new knowledge creatively. Thus, the Center must also have as a high priority, development of the basic research capabilities in the relevant social, engineering, and computer sciences.

The long-range needs of the health services field are for knowledge, techniques, personnel and institutions, all contributing to achievement of the following objectives: (1) Organization and management of services, rationally based on the needs of defined populations and geographic areas, so that availability and utilization are maximized; (2) Provision of financial resources for capital improvement and operating costs, by mechanisms that will sustain maximum availability and quality; (3) Distribution and utilization of manpower adequate for maximum availability and quality; and (4) Location, design and operation of facilities which efficiently support the provision of necessary services.

Program of the National Center

The National Center has responsibility for developing research plans, demonstrations and programs in the field of health services, that are equal in effectiveness to the accomplishments in the field of bio-medical research over the past three decades. In order to do this, the National Center must be able to give the providers of health services a better knowledge and understanding of the factors which affect their ability to improve health services. The National Center must also devise methods for acquiring this knowledge. The National Center's research strategy begins with support of projects which will provide better understanding of the basic processes for providing health services; proceeds to examine ways to facilitate the incorporation of new knowledge into health services practice and to study ways to remove any barriers to such incorporation; to test and demonstrate the most effective ways to apply new knowledge in improving personal health care and to disseminate widely the results obtained. The vigorous and extensive application of this approach should result in creating future health services which are more effective and efficient.

Three tactical elements are essential in developing the Center's program. These are: (1) The establishment of scientifically valid and precise measures of effectiveness; (2) coordination of the Center's activities with those of other DHEW programs which support research and development in specialized areas or aspects of health services; and (3) extensive and continuing use of consultation and advice from non-Federal scientists, professionals and administrators, and consumers.

The research and development efforts of the National Center are focused on improving the quality and availability of health services. The National Center is concentrating its research and development efforts in five priority areas as well as general supporting studies of the conditions which affect health services. In 1969, most of the ongoing support to universities and other institutions is for research on these conditions. In 1970, it is proposed to increase the support of work in the priority areas.

The first priority area is the financing of health services where projects will be supported on improved ways of financing health care in an attempt to find ways to help curb rising costs of medical care.

The second priority area is in developing methods to improve health care services to the disadvantaged and to evaluate the effectiveness of special programs to meet these needs. Two major objectives of research to be supported in this area are: (1) to assure positive gains in availability, utilization and quality of services for the disadvantaged, and (2) to bring these services into the general system of health services as a positive gain for the whole population.

The other priority areas include establishing criteria for determining the effectiveness of health services, techniques of planning and organizing health services in communities including the more effective utilization of health

personnel and studies of the functions of hospitals and other major medical and health services facilities.

A major continuing program will be the support of Health Services Research Centers at universities having special interest in health services research and development. In 1969, seven such Centers will be in their initial or second year of support and will have completed their planning and initial assembling of multi-disciplinary staff to direct research programs aimed at major problems affecting the organization, financing and delivery of health care services. In 1970, it is proposed to support eleven such Centers in this program for building and increasing national resources devoted to research and development in health services.

Continuing research and development support will be directed to fundamental factors affecting the provision of health services. Examples of the kind of studies which the National Center proposes to support are: Processes of change which permit desired improvements in health services; conditions affecting attitudes of people to health and illness and their motivations to use services; technical processes of medical care and other health services; utilization of manpower and the impact of innovation on manpower categories; the impact of health levels and health services on the economy of the nation and on general social conditions; measures of performance and outcome for health services; long-term conditions for a stable financial base for the capital and service costs of health services; and, the technical information requirements for effective scientific work in the foregoing areas of research and the creation of a data system to meet these requirements.

Preliminary intramural and extramural studies will be made with respect to the potential for systematic expansion in the use of screening and other methods of preventive health services. This work will concern such matters as the development and incorporation into community health services of techniques of case-finding and screening on a population basis, patient record and management information needs of large-scale disease prevention programs, and development of the methods for measuring the effectiveness of these programs in delaying disability and death.

Because of the complex nature of the problems involved and the shortage of trained researchers, further development of multi-disciplinary health service research and training centers will be undertaken in 1970 at selected universities and health care institutions. Training grants and fellowships will increase from 69 to 85, reflecting a concerted attempt to expand the supply of health service research workers.

The Health Services and Mental Health Administration is requesting $44,975,000 and 238 positions in 1970, an increase of $4,053,000 and 16 positions over the 1969 level to support the activities of the National Center for Health Services Research and Development. Under the provisions of Section 304 of the Public Health Service Act, up to one percent of the amount appropriated will be available for evaluation of the programs authorized by such Section.

Research grants and contracts

1969 Estimate	1970 Estimate	Increase
$32,027,000	$34,437,000	+$2,410,000

Estimated requirements

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Research, Development, and Demonstration Grants:						
Non-competing continuations	133	$13,917,000	151	$12,611,000	+18	-$1,306,000
New and renewal grants	111	6,118,000	96	6,770,000	-15	+652,000
Supplementals	(14)	600,000	(15)	600,000	(+1)	---
Subtotal	244	20,635,000	247	19,981,000	+3	-654,000
Health Services Research Center Grants:						
Non-competing continuations	3	1,023,000	7	2,939,000	+4	+1,916,000
New grants	4	1,084,000	4	800,000	--	-284,000
Subtotal	7	2,107,000	11	3,739,000	+4	+1,632,000
Total, grants	251	22,742,000	258	23,720,000	+7	+978,000
Contracts	62	9,285,000	76	10,717,000	+14	+1,432,000
Total, grants and contracts	313	32,027,000	334	34,437,000	+21	+2,410,000

Research grants and contracts are awarded to organizations and individuals to perform research, demonstration and developmental studies aimed at improving health services.

Program grants begun in Fiscal Year 1968 to develop Health Services Research Centers at universities having special interest in health services research and development, are being expanded in 1969. By the end of the fiscal year it is planned to fund seven approved Centers. In 1970, special emphasis will be given to supplemental funding for the seven approved Centers as their programs develop, and to initial funding for four new Centers.

An increasing proportion of the total research support will be by means of contracts to support directed research in high priority areas. Several examples follow.

A study will be funded to determine needed economic incentives for the entry of private capital into the health services field, particularly in central cities. Studies will be made on the relative efficiency and effectiveness of providing health services under fee-for-service and capitation reimbursement, and individual and group practice. Research to develop an improved Index of Medical Care Expenditures will be supported to provide more accurate and reliable current information and trend data on utilization, cost, prices and expenditures for hospital, professional, and drug services.

Manpower studies will include research on ways of extending the effective use of existing manpower, including the technique known as functional task analysis, skill assessment, different combinations of health professionals working in teams,

ways of returning retired nurses to active practice and innovative ways of using discharged military medical corpsmen.

The attachment of small research teams to ongoing service programs for the disadvantaged is of highest priority. Such teams, typically comprising a social scientist and epidemiologist, a statistician and two or three research assistants, will permit the development of more effective scientific evaluation as well as collaborative research with other similar programs. This effort should permit the rapid accumulation of knowledge to assure increasingly effective programs for this segment of the population.

Several projects will be developed in collaboration with the National Center for Health Statistics to provide improved data for planning and evaluating health services.

The $34,437,000 requested for 1970 will provide for an estimated 334 research grants and contracts, an increase of $2,410,000 and 21 awards. These include four new Health Services Research Centers at universities, an increase in research contracts and a small increase in regular research project grants.

Training grants and fellowships

1969 Estimate	1970 Estimate	Increase
$5,335,000	$6,235,000	+$900,000

Estimated grant requirements

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
Training grants:						
Non-competing continuations	16	$1,196,000	14	$1,157,000	-2	-$39,000
New and renewal grants	11	3,611,000	21	4,004,000	+10	+393,000
Supplementals	(5)	150,000	(8)	400,000	(+3)	+250,000
Subtotal	27	4,957,000	35	5,561,000	+8	+604,000
Fellowships:						
Non-competing continuations	20	129,000	12	122,000	-8	-7,000
New grants	22	249,000	38	552,000	+16	+303,000
Subtotal	42	378,000	50	674,000	+8	+296,000
Total	69	5,335,000	85	6,235,000	+16	+900,000

The base of trained manpower for research and development work in health services is small in relation to the magnitude of the problems of organizing, financing and delivering more effective health care services to the people of this country. Urgent priorities of the National Center are training programs which will

increase the supply of competent health services R & D personnel and developmental programs for training new kinds of health personnel.

The program in 1969, as in prior years, has been focused mainly on schools of public health. Training of researchers in such areas as epidemiology and public health practices has thus been stimulated. In 1970, the National Center must stimulate a significant increase in university programs available to give appropriate scientific training for the development of additional health service research workers. Emphasis will be placed on broadening the range of persons being trained for health services research by initiating programs in graduate schools. Not only must additional researchers be trained in health services aspects of economics, sociology, political science, and other appropriate social sciences, but the Center must also expand research training in those aspects of biostatistics, managerial sciences, and engineering and technology which are essential to advance research and development in health services. Also in 1970, the National Center will inaugurate a small number of career development awards to attract highly qualified young and midcareer university researchers into lifetime careers in health services research. These awards will support the salaries of investigators for a period of five years.

In sum, the $6,235,000 requested in 1970 will support a maximum of 35 training grants, an increase of 8, and a maximum of 50 research fellowships, also an increase of 8.

Direct Operations

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	155	$2,026,000	168	$2,442,000	+13	+$416,000
Other expenses.....	--	677,000	--	870,000	--	+193,000
Total.....	155	2,703,000	168	3,312,000	+13	+609,000

The National Center is the focal point in the Department for the appraisal and evaluation of the effectiveness of health services operations, and for developing a program for research and development in the light of this evaluation that is geared to improving the organization, financing and delivery of health services. In addition, the National Center staff have responsibility for the development of research and development programming, specifications and protocols for research determined to be needed, technical evaluation of proposals received, monitoring of contracts, review of results and determination of the next steps needed.

The broad responsibility assigned by the Secretary for appraising health services operations and developing a research and development program for improvements therein, requires a major continuing inhouse staff effort, in addition to that required for administering the grant and contract program. The contract program, which involves directed research, liaison activities with the Health Services Research Centers, and advice and consultation to grantees on the developing research training program, likewise require a heavy involvement of staff time.

In 1969, the initial year of operation of the National Center, the main accomplishment will be to develop a preliminary assessment of existing knowledge about health services operations and research and development activities related thereto. A beginning will be made to reshape the existing program toward a more directed program of priorities geared to the more urgent needs in health services operations

as described earlier. Also, a start will be made on the systematic dissemination and publication of the results of research and development work so as to facilitate its early incorporation into health services practices.

This activity also includes the Medical Systems Development Laboratory, totaling 43 positions and $723,000 in 1970 (the same as 1969), which is making substantial progress on the application of electronic techniques to health care diagnosis and treatment. The beginning of an intramural research effort in health economics, social analysis and health care organization and delivery is provided in both years.

The requested program increase of 13 positions, 8 professional and 5 clerical, and $304,000 in 1970 is essential for the National Center to develop its role further as the Department's focal point in appraisal and evaluation of health services operations and as a catalyst for new ideas and methods in the provision of health services. The high priority for training grants will also require additional staff effort in consultation and advice on the developing research training programs. The $304,000 requested will be used for the new staff and related expenses, including services of other agencies on collaborative projects, cost of data processing services, and for increased use of consultants.

An additional increase of $305,000 provides for built-in changes due to the annualization of positions authorized in 1969 and within-grade and reclassification costs.

Program Direction and Management Services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	67	$776,000	70	$878,000	+3	+$102,000
Other expenses	--	81,000	--	113,000	--	+32,000
Total	67	857,000	70	991,000	+3	+134,000

The establishment of the National Center gave a mission and focus to health services research and development new to the Department. A strong central staff is needed for planning, shaping, directing and evaluating this mission, for integrating the work of the individual National Center components provided for under the previous activity headings and for building effective working relationships with other programs, agencies and organizations who have interests in this field. Thus, in the National Center, this activity provides the resources to plan, lead, and direct the operation of the Center; to guide the development of health services R & D policy applicable to HSMHA and the Department; to develop and maintain appropriate relationships with other agencies concerned with health services and with research and development related thereto; to inform other agencies and organizations of the mission, activities and findings of the National Center; and to provide necessary management services.

The requested program increase of 3 positions and $51,000 is essential for further development of these responsibilities. The 3 positions include a public health program specialist and two supporting positions.

An additional increase of $83,000 provides for built-in changes due to the annualization of positions authorized in 1969 and within-grade and reclassification costs.

New Positions Requested
Fiscal Year 1970

	Grade		Annual Salary
Direct Operations			
Economist	GS-15		$19,780
Public Health Program Specialist	GS-15		19,780
Public Health Program Specialist	GS-13		14,409
Sociologist	GS-13		14,409
Public Health Program Specialist	GS-12		12,174
Statistician	GS-11		10,203
Research Psychologist	GS-9		8,462
Public Health Program Specialist	GS-9		8,462
Grants Assistant	GS-7		6,981
(2) Clerical Assistant	GS-6		12,642
(2) Clerical Assistant	GS-5		11,464
		(13)	138,766
Program Direction and Management Services			
Public Health Program Specialist	GS-12		12,174
Clerical Assistant	GS-6		6,321
Clerical Assistant	GS-5		5,732
		(3)	24,227
Total new positions, all activities		(16)	162,993

FRIDAY, MARCH 21, 1969.

COMPREHENSIVE HEALTH PLANNING AND SERVICES

WITNESSES

DR. JOHN W. CASHMAN, DIRECTOR, COMMUNITY HEALTH SERVICE
KENNETH W. REVELL, ASSISTANT DIRECTOR
RICHARD F. CUMMINGS, ACTING EXECUTIVE OFFICER
DOROTHY B. JOHNSON, FINANCIAL MANAGER
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

COMPREHENSIVE HEALTH PLANNING AND SERVICES

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	5,688	7,020	7,292
Positions other than permanent	5,088	7,032	7,156
Other personnel compensation	27	54	54
Total personnel compensation	10,803	14,106	14,502
Personnel benefits: Civilian employees	1,248	1,520	1,548
Travel and transportation of persons	729	1,055	1,078
Transportation of things	154	196	200
Rent, communications, and utilities	360	320	330
Printing and reproduction	139	160	172
Other services	4,910	3,349	3,989
Supplies and materials	81	4,111	10,117
Equipment	86	87	95
Grants, subsidies, and contributions	124,737	169,136	184,319
Total obligations	143,249	194,040	216,350

PERSONNEL SUMMARY

Total number of permanent positions	663	639	658
Full-time equivalent of other positions	689	872	884
Average number of all employees	1,257	1,505	1,517
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794
Average salary of ungraded positions	$6,001	$6,625	$6,862

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Program by activities:			
1. Partnership for health grants:			
(a) Planning	8,052	20,861	20,000
(b) Formula	57,270	66,032	72,000
(c) Project	43,463	86,600	98,000
2. Migrant health program:			
(a) Grants	7,200	7,200	12,000
(b) Direct operations	787	900	910
3. Standard-setting and resources development	9,315	10,318	11,256
4. Program direction and management services	2,804	2,129	2,184
Total program costs, funded [1]	128,891	194,040	216,350
Change in selected resources [2]	14,358		
Total obligations	143,249	194,040	216,350
Financing:			
Receipts and reimbursements from: Trust funds			−4,320
Comparative transfers from other accounts	−9,788	−15,139	
Unobligated balance available, start of year	−2,500	−2,611	
Unobligated balance available, end of year	2,611		
Unobligated balance lapsing	7,009		
Budget authority	140,581	176,290	212,030
Budget authority:			
Appropriation	140,676	167,104	212,030
Transferred to other accounts	−95		
Proposed transfer from other accounts		9,186	
Appropriation (adjusted)	140,581	176,290	212,030
Relation of obligations to outlays:			
Obligations incurred, net	133,461	178,901	212,030
Obligated balance, start of year	1,341	72,112	104,880
Obligated balance, end of year	−72,112	−104,880	−135,183
Adjustments in expired accounts	56		
Outlays	62,747	146,133	181,727

[1] Includes capital outlay as follows: 1968, $78,000; 1969, $91,000; 1970, $92,000.
[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $169,000 (1968 adjustments, −$1,000); 1968, $14,526,000; 1969, $14,526,000; 1970, $14,526,000.

Mr. FLOOD. Now we have Comprehensive Health Planning and Services under the Health Services and Mental Health Administration. Dr. John W. Cashman, the Director of the Community Health Service will be the principal witness.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

I see that we have your biographical sketch.
Dr. CASHMAN. Yes, sir.
Mr. FLOOD. That will go in the record.
(The biographical sketch follows:)

BIOGRAPHICAL DATA

Name: John W. Cashman, M.D., M.P.H.
Position: Assistant Surgeon General. Director, Community Health Service.
Birth place and date: St. Joseph, Mass., April 26, 1923.
Education: University of Rochester, 1940–43; University of Kansas, Summer 1942; University of Chicago, SB 1944; MD 1946; Johns Hopkins University, MPH 1964.
Experience: Present: Director, Community Health Service; 1968–, Acting Director, Office of Comprehensive Health Planning; 1965–68, Director, Division of Medical Care Administration; 1967–68, Acting Director, Division of Community Health Services (concurrent with Director DMCA); 1964–65, Deputy Chief, Division of Community Health Services; 1961–63, Deputy Director, Peace Corps medical program; 1960–61, resident in public health, Montgomery County Health Department, Rockville, Md.; 1958–60, Chief, Program Services Section,

cancer control program, PHS, Washington, D.C.; 1954–58, private practice of internal medicine, Kansas City, Mo.; 1953–54, chief of medicine, USPHS Hospital, Ft. Worth, Tex.; 1950–53, resident in internal medicine, PHS Hospital, Seattle, Wash.; 1947–50, medical officer, PHS Hospital, Cleveland, Ohio; 1946–47, intern, Kansas City General Hospital.

Membership: American Medical Association; fellow, American Public Health Association.

Special awards, citations, or publications: Recipient of USPHS Meritorious Service Medal; author or coauthor of approximately 15 publications.

Mr. FLOOD. How do you wish to proceed?

Dr. CASHMAN. I would like to read my summary statement.

Mr. FLOOD. Summary statement?

Dr. CASHMAN. The statement that you have in hand.

Mr. FLOOD. Very well.

Dr. CASHMAN. Might I introduce those accompanying me? I am not sure that you have met all of them.

Mr. FLOOD. Certainly.

Dr. CASHMAN. Richard Cummings, my executive officer; Mrs. Johnson, my financial manager; Mr. Revell, assistant director. I am not sure that you have had the opportunity of meeting these people.

Mr. FLOOD. You are the executive what?

Dr. CASHMAN. He is the executive officer. He is in charge of my administrative management.

Mr. FLOOD. Where did you come from?

Mr. CUMMINGS. I have been with the Public Health Service for about 5 years.

Mr. FLOOD. Where are you from?

Mrs. JOHNSON. Iowa. I have been in Government for some time.

Dr. CASHMAN. This is Mr. Revell.

Mr. FLOOD. Where were you born?

Mr. REVELL. Illinois.

Mr. FLOOD. How long have you been with the Government?

Mr. REVELL. I have been with the Public Health Service since 1935.

Mr. FLOOD. You will do.

Go ahead.

GENERAL STATEMENT

Dr. CASHMAN. Mr. Chairman and members of the committee, it is a privilege to come here today and discuss the program of the Community Health Service.

THE COMMUNITY HEALTH SERVICE

The Community Health Service brings together a number of unique and interrelated programs and services designed to meet our national purpose of promoting and assuring the highest level of health attainable for every person.

Planning, financial support, and service programs to help States, local communities, and individuals improve our capacity to deliver health services were brought together in the Community Health Service last fall when the Office of Comprehensive Health Planning was merged with the Division of Medical Care Administration.

We support through grants State and community health planning and health services development. We provide direct technical assist-

ance for designing and developing improvements in the system of health care services. We also seek to achieve high quality patient care both in health institutions and outside of institutions through our professional consultation to the Social Security Administration and State and local agencies in implementation of the medicare program.

With this brief introduction, I would now like to review the programs of the Community Health Service with you.

COMPREHENSIVE HEALTH PLANNING

In many communities we have citizens who are not receiving needed health care. At the same time, there are techniques and sources of care which aren't being fully utilized. We have increasingly serious environmental problems, but there are means of control which have not been implemented. Studies have shown that many patients are being treated in hospitals when they could be treated more effectively by a less costly facility such as a nursing home, home health agency or outpatient clinic. Comprehensive health planning is proving to be a vehicle to reconcile available and potential resources with community need.

Virtually all of the State health planning agencies are now organized and staffed. They have begun to attack the major health problems facing the States. For instance, one State has made a recommendation for State legislation on water fluoridation and a bill has been introduced in the legislature. Another has recommended increased State activity in the long-term institutional care field. A third has called upon the medical and dental societies to help in improving health care services for people in rural areas of the State. As one State director recently told me, "the problems we face are substantial, but we are beginning to have an impact on health care in our State. Be patient with us and we will demonstrate that we can have positive results."

In addition to the State planning agencies, almost one hundred area-wide health planning agencies are in the developmental stage. The work most of these agencies are doing right now in almost entirely organizationtal.

They are getting to know all the health related organizations in the area—and there are literally hundreds in some areas. They are setting up representative councils and task forces. Perhaps most important, they are listening—to the butcher, and the baker, as well as the doctor, the nurse, and the sanitary engineer—anyone who has something to say about health. That is an innovation in a field long given to listening chiefly to itself. It is giving special quality to the health planning they are beginning to launch. One former facility planning agency, for example, after studying the problem of air pollution in its area, initiated action to have local ordinances passed to help protect the area from harmful smoke and gas.

A complementary program of training and studies in comprehensive health planning is building resources for the new and innovative comprehensive health planning program. Trained personnel to staff these agencies and new tools for use by comprehensive health planners are being developed. At this time 65 graduate students are now in interdisciplinary courses specially designed to prepare them for the complex work of comprehensive health planning. The first students will

receive their degrees in June. Some program funds have also been used for short courses—a week or a month—for people already working in comprehensive health planning, and for workshops or seminars, usually put on at night or on weekends, directed specially to people—consumers of health services—who have not participated in community decisionmaking in the past.

FORMULA GRANTS FOR HEALTH SERVICES

The partnership for health program replaced the old system of granting funds to States for programs developed along disease category lines. The new system of a bloc grant for health provides the States the opportunity to determine their own priorities for spending these Federal funds. The States can now decide where and at what level of effort resources should be allocated. Full use of all appropriated funds is now possible. This approach represents the goal of the partnership concept. The increased responsibility on the part of States is inspiring more careful thought and planning for the allocation of resources, and is beginning to result in shifts in program emphasis. For example, Maine has identified dental health problems as a major concern and has been able to shift resources to attack the problem. Some States are beginning to apply resources to much needed programs such as comprehensive family health programs or an information and referral system, which could not have been funded at all under the old formula grant system.

Several State health officers have written to our regional health directors commenting on the value of this approach. For example, one commented that "We can now assign personnel to whatever programs are most needed in this State rather than accommodate ourselves to Federal categorical programs." Another stated, "The categorical grants dictated what health programs a State should have. Under 314(d) the State can now determine its own health needs and priorities."

For 1970, we seek an increase of approximately 10 percent to offset cost increases and permit a modest expansion of State programs or initiation of new projects.

HEALTH SERVICES DEVELOPMENT PROGRAMS

Neither urban or our rural poor get adequate health care. Their level of health is far below the national average. Working to bring health care to those Americans who cannot now obtain it, is the number one priority of the Community Health Service.

The Community Health Service works to increase the availability and improve the delivery of quality comprehensive health services to urban populations, and particularly the urban poor. Our programs benefit the urban poor by encouraging urban outpatient centers for comprehensive health care, supporting adoption of new systems of total health care, stimulating the group practice of medicine, and by working to add supplemental health services to make existing systems more comprehensive. During this past year, under the partnership for health program, the Community Health Service supported more than 700 projects to assist local institutions, agencies and groups to provide

or develop health care services. In 1970, we plan to encourage larger, more comprehensive health service projects to increase the numbers of people served and broaden the scope of services offered. We will also stress working with local groups to solve local problems with direct grant support where appropriate. Recent requests for technical assistance and grant support are reaching our headquarters and regional offices in mounting volume.

MIGRANT HEALTH

For over 30 years, since John Steinbeck's "Grapes of Wrath" Americans have known that migrant farmworkers have unique health problems. Infections, serious tooth decay, venereal disease, nutritional problems, tuberculosis, and many other ailments, while strangers to most of us most of the time, have been constant companions to the migrant farmworkers.

During the peak harvest season last year, approximately 300,000 migrant workers and their families had access to health services in more than 300 counties along their seasonal routes. This service was provided through 115 projects supported by this program. These projects bring the migrant and his family medical diagnosis and treatment, in-hospital care, immunizations and other preventive services, nursing services, and sanitation services to make his camp a healthier and safer one in which to live. As the program grows, so do the number of migrants receiving its benefits.

Funds requested in 1970 will provide support for 10 more projects and make services available to 50,000 more migrants.

We are also supporting projects which are designed to improve the availability and accessibility of health care to residents of rural areas. They range from support of a planning body to develop systems for providing services to families in isolated areas to a demonstration of a "circuit riding" program for the delivery of comprehensive preventive services, provision of medical and dental care, and health education service.

ENVIRONMENTAL CONTROL

Any comprehensive health effort must include study of the factors of an unhealthy environment and plans to change those factors. Rats are a widely publicized threat to the health of our communities. We are currently supporting 15 projects designed to eliminate conditions and practices that breed rats. The Consumer Protection and Environmental Health Administration of the Public Health Service contributes technical assistance in this area.

RUBELLA VACCINATION PROGRAM

When a woman contracts Rubella (German measles) especially during the early months of pregnancy, the chances are one in four that the child will be still-born or will have a serious congenital defect. This serious threat to children warrants a national vaccination program. The newly-developed Rubella vaccine will be licensed by early spring. We appeared before this committee on March 3, to request release of reserved 1969 funds to launch a national vaccination at that time. It will be aimed at the preschool and school-age children who are

most likely to spread Rubella to adults. For 1970 we seek funds to triple the number of children reached before the onset of the severe Rubella epidemic predicted for 1970–71.

QUALITY OF HEALTH CARE

As professional health advisor on the medicare and medicaid programs, the Community Health Service has had a unique opportunity to enhance the national capacity to deliver high quality services through hospitals, extended care facilities, home health agencies, independent laboratories, and other providers of medical care. The standards that govern these programs are not set by us alone there is full participation by professional and voluntary organizations, State and local health departments, and experts in related fields, both inside and outside the Government. Working with the Social Security Administration and the State certifying agencies, we have achieved levels of quality of medical care that were only theoretically attainable before medicare. The application of medicare standards, in the certification process, has upgraded quality of care in hospitals, extended care facilities, home health agencies and independent laboratories. The standards have stimulated improved patient care and administration policies, addition of qualified personnel, and improvement of equipment and facilities.

The Community Health Service staff produced two medicare reports this year, requested of the Secretary by Congress, which have received national commendation and which are expected to prove useful for other standard-setting programs as well as for medicare. They are: the "Independent Practitioners Study" and the "Personnel Qualifications Study."

The purchase of medical care for millions of people, which has occurred under medicare and medicaid, might have affected quality of care either adversely or favorably. We believe that our standard-setting activity has helped to assume quality of care for the entire population, because of the influence it has exerted on all providers of health services.

CONCLUSION

May I conclude, Mr. Chairman, as I began, with emphasis on the national health challenge that confronts the United States today—the urgent need to expand the capacity of the American health care system to respond to the health needs of all the people of this country.

Some see this challenge mirrored in the dramatically rising costs of medical care; some see it in the urgent necessity to reach great numbers of our peeople who are still not receiving adequate health services; some see it in our failure to make full, effective use of existing health resources. All these things are true. Together they constitute the challenge.

We are requesting an appropriation of $212,030,000 plus transfer authority of $4,320,000 from the Social Security Trust Fund resulting in a total request of $216,350,000 for 1970, an increase of $22,310,000 above the 1969 level.

I shall be happy to answer any questions which you, Mr. Chairman, may have, or which any member of the committee may have, concerning our programs and our budget request.

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PROJECT GRANTS FOR HEALTH SERVICES DEVELOPMENT

Mr. FLOOD. Here is something that you can supply for the record. You are asking for a total of $98 million for project grants for health service development. Give us a breakdown, not project by project, but the major categories of how these funds are being used in 1969 with a dollar amount for each category.

Dr. CASHMAN. All right, sir.

(The information follows:)

314(E) PROJECTS GRANTS IN 1969, BY MAJOR CATEGORY

	Number	Amount
314(e) grants	766	$86,600,000
Tuberculosis	75	18,500,000
Venereal disease	58	6,250,000
Neurology and sensory	43	2,720,000
Training	(17)	(800,000)
Projects	(26)	(1,920,000)
Mental retardation	65	4,100,000
Training	(35)	(1,750,000)
Projects	(30)	(2,350,000)
Cancer	370	11,000,000
Training	(200)	(4,000,000)
Projects	(170)	(7,000,000)
Community health	43	8,770,000
Neighborhood Health Center (Model Cities)	20	10,600,000
Rodent control	15	15,000,000
Dental health	2	60,000
Rubella immunization	75	9,600,000

RAT CONTROL

Mr. FLOOD. How much is budgeted for 1969 and 1970 for rat control?

Dr. CASHMAN. Yes, sir.

(The information follows:)

Amount budgeted for rat control:

1969	$15,000,000
1970	15,000,000

RUBELLA VACCINATION PROGRAM

Mr. FLOOD. How much is budgeted in 1969 and 1970 for the rubella vaccination program?

Rubella immunization:

1969	$9,600,000
1970	16,000,000

CONTINUATION COSTS

Mr. FLOOD. How much of the $98 million is required for continuation costs?

(The information follows:)

The amount required for continuation costs in 1970, within the $98 million requested, is estimated at $60.3 million. This excludes renewal costs of tuberculosis and venereal disease projects amounting to approximately $23 million.

COMPREHENSIVE HEALTH SERVICE CENTERS

Mr. FLOOD. Your justification mentions "* * * initiation of model comprehensive health service centers in the ghettos of the Nation's major cities."

How much money is allocated for that specific purpose in 1969?

Dr. CASHMAN. Yes, sir.

(The information follows:)

The amount allocated in 1969 for model comprehensive health service centers in the ghettos of the Nation's major cities is $10,600,000.

Mr. FLOOD. Tell me now, is this the same thing as the OEO Neighborhood Health Center?

Dr. CASHMAN. No, sir, if I may qualify that. It is true that the neighborhood health center is a valuable tool, demonstrated very well by the OEO for delivering primary health care to the poor. We feel that our efforts are not directed solely to the poor population but that the accent would be on a particular geographic region that was lacking in primary care capability. For example, there might not be enough physicians to take care of the population of an area. A neighborhood comprehensive care center would supply a source of primary care not only to the poor but also to people able to pay for their services.

INCLUSION OF ENVIRONMENTAL HEALTH IN COMPREHENSIVE HEALTH PLANNING ACTIVITIES

Mr. FLOOD. In last year's report you remember that this committee made quite a point of urging that environmental health be included in the comprehensive health planning activity.

Dr. CASHMAN. Yes, sir.

Mr. FLOOD. I think that you made it clear in your statement that is occurring?

Dr. CASHMAN. Yes, sir. It is. I would be happy to document for you, for the record, the interest that is occurring in the States in the environmental health field.

(The information follows:)

People's total health needs can be met only if comprehensive health services of high quality are available. This means that the full range of environmental services must be available, as must be all of the personal health services to assure normal development as well as repair and containment of disease or injury processes.

You are aware, Mr. Chairman, that most of our agencies are still in an organizational stage. We are happy to report that about one-half the State agencies have representatives of environmental health interests on the advisory councils. About two-thirds have subcommittees or task forces on environmental health. Of the 50 approved State programs for fiscal year 1969, 27 show definite work activity in environmental health planning, ranging from providing staff work for an environmental health task force, to including assessment of environmental conditions in health status assessment, and specific studies on environmental problems such as air pollution or solid waste disposal. Two other States have scheduled concentration on environmental health planning for next year.

We expect all of the agencies to develop a balanced plan based on their identified needs.

Mr. FLOOD. Do you think environmental health problems are being given adequate attention by the States in their health plans?

Dr. CASHMAN. Yes, sir. I also think it is very important in solving environmental problems that we truly interest the traditional health establishment in the problems of environment, and this is occurring via comprehensive health planning. It is important for these people to recognize the true value of the environment.

Mr. FLOOD. How did you fellows decide on the distribution of funds in the 1970 budget? You have planning, formula, and project grants? How did you decide that? How do you cut up the pie into planning, formula, and project grants? Somebody has to decide that. Who? How?

Dr. CASHMAN. The planning grants refer to the sections 314 (a), (b), and (c) of the partnership for health legislation. 314(a) is for State——

Mr. FLOOD. Who decides the distribution of the funds?

I direct your attention to page 110 of your justifications. You see there in planning grants you have a minus $861,000. On formula grants you have a plus $5,968,000. In the project grants you have a plus of $11,400,000. How do you decide that?

Dr. CASHMAN. The Department provides us a ceiling within which we make our requests. Within the planning part, the $20 million we are requesting——

Mr. FLOOD. How do you decide that?

Dr. CASHMAN. Part of it is on the basis of what we think the need is. For example, what moneys would be required for the State health planning agencies that they might require to carry on their activities for the year. We also have estimated needs for what it would take to help train health planners and also moneys that we think can be sastisfactorily utilized in the support and stimulation of area wide health planning.

Mr. FLOOD. What about the project grants?

Dr. CASHMAN. In our projects, this particular appropriation is one on which there are heavy demands. We have within the 314(e) project grants now over $12 million of approved but unfunded projects.

Mr. FLOOD. I am interested in how you decide this. What is the formula? You have a certain amount of money. How do you decide who gets what? You have a minus in planning and big plusses in formula and project grants. How did you cut up that pie?

Dr. CASHMAN. If I may go back to the history, Mr. Chairman, let us look for a moment at the project grants. As you recall, 314(e) is a composite of seven preexisting project grant authorities. In estimating and planning for each successive year, we try to include what we think is a reasonable amount for so-called cost-of-living or increased costs of maintaining worthwhile projects, plus new priorities that come along. For example, in the last year we had a priority for spending money for rat control projects. We had a priority emphasis on assistance in the model cities. Our total justification comes up with what we think it takes to carry on worthwhile projects, allow for a cost increase, and also to take care of priorities as they arise.

New priorities in this next year will include a rubella immunization program. With regard to that minus figure, that is really more arithmetical than program. For example, in 1969, for the State planning agencies there was appropriated to us $7,375,000. For that same item this year, 1970, we are requesting an increase of $800,000 for a total of $8,175,000. In 1969, for support of areawide health planning, $7 million. We have asked for an increase of $700,000, a total of $7.7 million

in 1970. We were appropriated $4,125,000 in 1969 for training in planning. We did not ask for an increase in that amount.

As one adds this up, we then had appropriated to us in the so-called planning part of page 110, $18,500,000. We are asking in 1970 for $20 million, an increase of $1.5 million. What makes the minus arithmetic is the fact that the money appropriated for the State planning agencies Congress allowed us to spend over 2 years. We had in 1969 a carryover from 1968 of $2,361,000. That gave us, on top of the $7,375,000 for the State planning agencies in 1969, a total of $9,736,000.

The arithmetic shows we had a minus $861,000 because of that carryover.

ADDITIONAL AUTHORIZING LEGISLATION REQUIRED

Mr. FLOOD. According to this budget there is $18 million in your request for 1970, which lacks legislative authority.

Dr. CASHMAN. Yes, sir.

Mr. FLOOD. What program is that?

Dr. CASHMAN. We had hoped, Mr. Chairman, to have introduced by now legislation, renewal legislation for this.

Mr. FLOOD. What program?

Dr. CASHMAN. For the "Partnership for health." That would give us the added ceiling under which——

Mr. FLOOD. Has the legislation been introduced?

Dr. CASHMAN. Not yet.

Mr. FLOOD. You have no idea of its prospects before May or June, do you?

Mr. LEWIS. Mr. Chairman, that $18 million is for the project grants section, 314(e).

Mr. FLOOD. You have no idea if it will pass before June. The answer is no, unless you know something I don't know.

Dr. ENGLISH. Also, the Secretary is reviewing the budget.

Mr. FLOOD. I don't care so much about that. You don't have law and there is none introduced and you have no idea that you will have any by June?

Dr. ENGLISH. That is correct.

Mr. LEWIS. But——

Mr. FLOOD. But what?

Mr. LEWIS. I want to bring in the question of law. The budget before you was based on the expectation that the administration would submit legislation and the Secretary did send——

Mr. FLOOD. That is not my question.

Mr. LEWIS. The Secretary is currently reviewing——

Mr. FLOOD. I know about that.

Mr. LEWIS. Whether this $18 million——

Mr. FLOOD. You don't know whether it will be June, July—or November—when you have law?

Mr. LEWIS. That is correct.

Mr. FLOOD. Certainly you don't. That is the question.

Mr. LEWIS. I want to add—that is correct—the request for the legislation may be withdrawn and it may be when the Secretary's review is completed that the $18 million would be requested in 314(d) rather than under 314(e). No legislation is required under 314(d). It may be

as the new administration reviews the budget that they would prefer to request that amount of money in 314(d) which is the allocation among the States rather than in the project grants. The project grants would require legislation. The block grant, or 314(d), would not require legislation. That may yet come before the committee. That is the only intervention I wanted to make.

REDUCTION IN STATE PLANNING GRANTS

Mr. FLOOD. You have a reduction of $1,561,000 in your budget for grants to States for comprehensive health planning. That makes me ask two questions: Is this because much of the planning is completed or do you expect the States to pick up more of the tab?

Dr. CASHMAN. May I go back to what I said a minute ago, Mr. Flood. We are really asking in this particular activity for an increase of $800,000 to $8.175 million. The States have not completed their planning. They have completed most of their organizational effort. During the next year they must supply 25 percent.

Mr. FLOOD. Take a look at page 121. That is not what this shows. The first line, grants to States.

Dr. CASHMAN. Yes, sir. I was wrong. This $9,736,000 that you see in the 1969 estimate includes not only the 1969 appropriation of $7,375,000 but also the 1968 carryover that I mentioned a bit ago of $2,361,000. We actually have available for obligation in this year $9,736,000.

Mr. FLOOD. You can spend them both. They are both good American dollars?

Dr. CASHMAN. We plan to spend that much this year.

Mr. FLOOD. You have a minus of $1,561,000.

Dr. CASHMAN. We are going to spend all of the $9,736,000 in this fiscal year. In 1970, the States will be required to match 25 percent, so the States will be putting some money in this program for the first time.

Mr. FLOOD. I asked, are the States going to pick up a bigger piece of this tab?

Dr. CASHMAN. They have not been picking up any of the tab up to this point. They start to pick up 25 percent in 1970.

Mr. FLOOD. That is the answer.

Mr. SMITH. With regard to these three categories, where does rat control come in?

Dr. CASHMAN. Rat control is funded out of section 314(e), the project grants, which you will find on page 130, project grants for health services development——

ALLOCATION OF FUNDS BETWEEN FORMULA AND PROJECT GRANTS

Mr. SMITH. The purpose of the new approach was to increase the formula category, was it not? You are doing the opposite, are you not?

Dr. CASHMAN. Would you repeat that?

Mr. SMITH. The purpose of the partnership approach was to increase the block grant approach rather than deal project by project. You are doing the opposite, are you not?

Dr. CASHMAN. We have a great many calls on this particular appropriation. We did have last year $15 million of rat projects——

Mr. SMITH. We gave you extra money to take care of that.

Dr. CASHMAN. We had additional calls on the appropriation to support the model cities effort. When we looked at the total money available to us in terms of appropriations, for 314(e) with the increased cost of doing business, we actually had only $700,000 of free money.

Mr. MILLER. Mr. Smith, I should add, a major portion of the increase in 314(e) is for the rubella vaccine program which was started in 1969 and is coming to fruition in 1970.

Mr. SMITH. How much for that?

Dr. CASHMAN. $16 million in 1970. Our 1969 estimate shows 9.6. The supplemental that we requested the other day for rubella brings the total 1969 314(e) appropriation to $86.6 million.

Mr. SMITH. Is it your intention to in general increase the approach of the partnership formula rather than the project-by-project approach?

Dr. CASHMAN. We certainly feel that the State health departments, and State mental health departments, deserve continuing and additional support in their activities.

I think the State health departments are showing that they are looking at what they have been doing over the last several years. A number of them have not been able to really make substantial changes in what they have done because they felt what they have done is very important and they can document the needs.

However, there are new things now being funded by State health departments, and we would hope they will have the opportunity to do more of the things they think are of high priority.

Dr. ENGLISH. Could we say this, too, because this comes back to the chairman's original question relative to the amounts in each one of the sections of the partnership for health program: I think the fundamental problem is that we are trying to do many things through this relatively new legislation in a very tight budgetary situation.

For example, as a part of the effort it is tremendously important to develop the capacity of the agencies at the State level. This is reflected in the allocation to (a) grants. At the same time we know it is tremendously important to develop the areawide agencies. That is reflected in the allocation for (b) grants. These are going to play a critical role in relationship to the statewide agencies.

We are also learning as that process goes on that health planning, as pointed out in some earlier testimony here, does not have manpower resources in great supply in this country. So you have to try within a tight budgetary situation to put a certain amount into (c) which supports training resources to be developed.

When you take a look at (d), which is the formula grant program to the states, and you take the amount of money that is in there now and see what it means to the average state in terms of money, when that is applied across the states it is a very, very small amount of the total amount of money that the state is spending.

And to really have impact there, you would have to put in considerable sums of money that are not available now within the authorization level. You are trying to increase their capacities but meanwhile you have certain national demands that are both the concern of the state and the Federal Government, such as rubella, and that is part of the reason you see rubella reflected as an important priority in the project grants under (e).

Of the model cities effort to which HEW wants to make a contribution, the mechanism for doing that has to be through project grants under 314 (e) and we still have obligations—ongoing responsibilities—that came under (e) when this legislation was passed.

So there are many things we are trying to do with this piece of legislation in the midst of what is a pretty tight fiscal situation.

Mr. LEWIS. There is only one point the Administrator left out, sir, and that is in administering the block grant under 314 (d) and the project grants under 314 (e), another very important governmental objective is the elimination of a number of separate categories. The objective is to give more responsibility to the States, provide flexibility at the Federal level and eliminate individual categories. It is extremely important as an administrative device, both for the Federal Government, and State and local governments.

Mr. SMITH. In brief, what you are saying is that the States are not able or capable of becoming a partner in this program?

Dr. ENGLISH. No, sir. I think, to the contrary, we are saying it is really a partnership between the Federal Government and the States. But when you look at the amount of money available for the whole legislation it is relatively small compared to the needs. You cannot throw the entire burden on to the States prematurely, they are just beginning to get the planning capacities.

Mr. SMITH. How long will it take them to become able to be a full partner?

Dr. ENGLISH. I think some of the information that Dr. Cashman could give you on what is happening in some of the States now under this program is very encouraging.

Dr. CASHMAN. I would like to read part of a letter from a health officer to one of our regional health directors. It tells him what the value of 314(d) funds were in 1968 to his State:

1. Increased financial assistance to local areas—We increased such sums from approximately $23,000 to about $80,000.
2. Family planning—We are giving attention to this much-needed area for the first time.
3. Accident prevention—Accidents are a leading cause of death in Montana. We are now able to assign a person full time to coordinate accident prevention activities.
4. Stroke rehabilitation—If we can recruit a physical therapist, we will conduct stroke rehabilitation, with particular emphasis to eastern Montana. This service has not been available heretofore.
5. Immunization program—Since this phased out as a special program, we were able to support it with 314(d) funds.

INCREASED FLEXIBILITY

1. We can assign personnel to whatever programs are most needed in this State rather than accommodate ourselves to Federal categorical programs.
2. We can shift from one program to another as needed to meet changing situations.
3. As special projects terminate, we can assimilate them as ongoing programs under 314(d). This has been done to some extent with the immunization program.
4. 314(d) creates a climate for planning for effective and efficient use of funds.

Mr. SMITH. That does not indicate how long it is going to be before we can expect block grants to accomplish the national objective?

Dr. CASHMAN. I think there are some problems that just have to be approached on a national basis.

For example, the whole problem of cost of care, of the resource development and a rational allocation of our resources; these are not questions that can within themselves be answered within one State. But there are States that have unusual problems, unique perhaps to them.

For instance, Montana with accident prevention. I gave the example of Maine as using one-fourth of its 314(d) money next year, the first time they have been able to get sizable resources to really go into their dental problems. By 1975 they fully expect to have a great reduction in childhood caries in Maine because of a statewide program. It shows they now have the flexibility for manpower and fund utilization to zero in on problems.

Mr. SMITH. They do not have as much flexibility as they would if the pie were cut heavier toward formula and less toward projects, do they?

Dr. CASHMAN. If they had more money, it would certainly give them more freedom to make decisions in terms of allocation for their own needs. This might or might not reflect national priority.

Mr. SMITH. There is no discretion to the States on this. I thought we left some discretion in the States. That was the difference, was it not, between the Reuss amendment and the original proposal?

Dr. CASHMAN. I cannot answer that except the money was always in the 314(e).

Mr. LEWIS. The discretion for the States was whether to apply for the grant, sir, but I have no recollection at all of it ever being considered as part of a block grant.

Mr. SMITH. Their only discretion is whether or not to apply?

Mr. LEWIS. Whether or not they want to, that is right, and whether the applications would pass technical merit when evaluated.

Mr. FLOOD. Under this approach, if this is a national priority—I am not really criticizing it, but under this approach their applying or not applying did not reduce their formula grant?

Mr. LEWIS. No, sir. And if they want to use formula grant money for rat control, they can do that.

Mr. SMITH. They could increase the amount for rat control?

Mr. LEWIS. Yes, sir. There is nothing to prevent that.

PLANNING GRANTS

Mr. SMITH. Why do you think the project grants for areawide health planning should be increased when the State planning grants are being decreased?

Dr. CASHMAN. As I said, the decrease is arithmetical and does not represent a program decrease in the appropriation for the State planning agencies.

We do expect during this next year many areawide planning agencies that are now really only in the organizational status to become operational, and they will require additional funds.

We also feel we will have many more applications from potential areawide applicants. There will be no increase in the number of State applicants, however.

Mr. SMITH. What is the relationship of all of these State and area planning activities to the planning going on in the regional medical programs? Is this coordinated?

Dr. CASHMAN. I was just out to Columbia, Mo., about 3 weeks ago with Dr. Chadwick of Dr. Olsons staff, where the regional medical

program of the University of Missouri hosted a seven-State meeting which talked about the relationship between OEO, regional medical programs, and areawide comprehensive health planning. This is not the only place in the country in which there is close relationship between the regional medical program people and comprehensive health planning.

About the regional medical program—in Memphis, for example, the advisory board for the regional medical program there also serves areawide comprehensive health planning, and we find across the country that these programs do share members of boards.

USE OF STATE FORMULA GRANTS

Mr. SMITH. Do you have a breakdown showing for what purposes the States are using these formula grants.

Dr. CASHMAN. Are you talking about the State grants for health services or are you talking about the planning grants?

Mr. SMITH. The formula.

Dr. CASHMAN. Yes, sir. Excuse me. We can suppy you with information about how the State uses the Federal money plus the State money that matches it but this is not always very meaningful because it may change from year to year. Even though the State may continue to do the same thing, it may not charge the same activities to the grant in successive years. The Federal grant supplies only 3 or 4 percent of the total State health budget, and it is difficult to get a real picture of just what each State does. I would be happy to supply you a listing of the kinds of things they are using their money for plus our Federal money.

Mr. SMITH. I thought it might be helpful, too, if we could see whether or not they are changing their emphasis.

Dr. CASHMAN. Yes; I would like to document that for you.

(The information follows:)

FEDERAL, STATE, AND LOCAL FUNDS BUDGETED IN STATE PLANS UNDER SEC. 314(d)

	Fiscal year 1968	Fiscal year 1969
Appropriated funds	$60,250,000	$66,032,000
State and local funds	[1] 250,381,456	[1] 261,312,221
Total	310,631,456	327,344,221
Health program area:		
Alcoholism	55,500	663,888
Cancer	4,472,806	3,445,526
Chronic diseases	19,382,750	13,364,070
Communicable diseases	26,153,218	23,966,936
Dental health	3,071,293	3,719,957
Environmental health	20,668,002	28,025,189
General health	8,230,251	8,351,676
Laboratories	16,819,993	23,319,273
Licensure and improvement of standards	386,330	1,972,371
Local health services	93,636,395	99,650,649
Nutrition	374,476	427,472
Training	597,275	4,535,942
Heart disease	4,353,811	3,096,117
Home health services	2,620,090	1,695,060
Management services	22,472,200	22,451,109
Mental health	87,337,066	88,658,986

[1] This amount represents the States matching requirement plus the amount the States have chosen to show in their 314(d) plan.

Dr. CASHMAN. I think a very heartening thing which I should have thought about when you asked a while ago if we thought the States were good partners is the effort that they are making now to plan for the expenditure of all of their funds. We have been working with a Subcommittee on Management of the State and Territorial Health Officers on what we call the POME concept of identifying problems and laying out objectives, determine the methods to be used to accomplish these objectives and then to develop data to evaluate to know whether or not they reach their objectives. This is very, very crucial and the States are finally in the position for some rational thinking.

HEALTH SERVICES FOR THE POOR AND RURAL AREAS

Mr. SMITH. Under OEO and other programs, we have directed our attention to the delivery of health services to the poor and to the rural areas. Has this caused them to also use some of their formula funds?

Dr. CASHMAN. As you know, 70 percent of the State formula grants must be used for services in local areas.

Mr. SMITH. I am talking about what kind of local areas. Have they started to emphasize delivery of service to the poor and rural areas?

Dr. CASHMAN. More services to local areas and rural areas. Of course the great accent, one of our great needs is the fact that there are a lot of people who are not getting services and the States are also aware of this.

Mr. SMITH. Does the allocation of their funds indicate that they are moving toward trying to provide additional services for the poor?

Dr. CASHMAN. Yes, sir. Let me give you a couple of examples.

There are local areas in Oregon that have not had any opportunity for public health nurse supervision. The State is now providing this.

In Alaska they were able to develop, establish, and develop home health agencies in two local areas where they did not have them before. In Nevada there is a 15-county rural area that never had available any physical therapy services. Nevada has done this with its money.

In Utah they thought enough of it they established a bureau of local health services.

Mr. SMITH. I would be interested to know whether the States, generally speaking, are moving into what has now become apparent as a void and affects the whole State and the whole community, or are they also doing what is being done through other programs.

Dr. ENGLISH. That is a most encouraging development that is going on, Mr. Smith. I think in talking to you about particular instances, we do not want to generalize too much. This is an evolutionary process.

One of the critical things that we see developing in some parts of the country—for example in the State of Michigan, there is a program which was funded by the OEO called the (5–CAP) Michigan project. That was a historic development, I think, because it was a health program for the poor involving models of care in rural areas where there were relatively few doctors, relatively few resources, but where the initiative came from a State health department. And I think that if you watch the interaction there, without going into detail, what you see is that a limited part of the State is now being covered, but the manpower that is involved in the development of the primary health care program in the rural area is having a tremendous impact on the State planning process.

The problem that the State has, whether it is under formula grants, under project grants, or from OEO funds, is the financial base to implement what they are beginning to see as a worthwhile approach in the (5–CAP) Michigan area.

I think we are going to see, as medicare and medicaid funds coming into the State increase, where the experience they have in relatively small programs involved in medical care will help them to use medicare and medicaid funds better. You see this kind of process where States are taking the initiative.

In Denver, where you have a citywide health program for the poor now, this was developed largely at the initiative of the city health department. It is very interesting to see the ingenuity that can be used at the level of a city or an areawide agency level. What they did there is interesting in terms of gamesmanship at the local level in utilizing a relatively short supply of funds. But it shows the promise of planning.

In Denver OEO funded one neighborhood health center for one part of the city. It was under the auspices of the health department, Dr. Sam Johnson was in charge. He learned that the Children's Bureau was going to fund another health care program in another part of the city, but it was just going to be for children and youth. Each said why could not both agencies get together and work it out in such a way that both of these centers could be comprehensive family health care centers.

Pooling the money in that way they could take care of all the poor people in the city of Denver and have OEO pay for the adults and the Children's Bureau pay for the children, and develop some outreach from this program and have the whole city covered, something that neither OEO nor the Children's Bureau could do alone.

You can imagine the bureaucratic efforts it took for that local synthesis, but it was done. Now, under Dr. Cashman, the Public Health Service is involved too and is contributing to the process, and I think it is a symbol of the kind of flexibility that can come out of the responsiveness of a variety of Federal programs we are trying to gear in a more comprehensive health approach.

It is very interesting to see what can happen when that kind of thing goes on, but it is also instructive to see the diversity in approach in Denver as compared to other places, compared to rural areas, for example.

STATE EFFORTS RELATED TO OEO HEALTH CENTERS

Mr. SMITH. Is there any State where the State, through the help of the formula grant, has taken over the community health centers that were started by OEO?

Dr. ENGLISH. In this sense, sir: They are not helping through the formula grant yet, because if we give you a breakdown for the record of how much money those formula grants bring into each State, you are going to be amazed how relatively small it is and what vast sums it would take, indeed much greater than this authorization permits, to really have the impact that you are thinking of.

The States are helping by seeing that medicare, medicaid, other categorical sources of funds in the target areas of the neighborhood health centers replace OEO dollars there. OEO is the last dollar re-

source you see and instead of adding on to a local effort, the OEO dollars make up for what the local efforts cannot provide. The States have been extremely helpful in trying to get other sources of funds like medicare and medicaid into the long-range support of a much more comprehensive rather than a categorical approach, which is an important part of the philosophy of this program.

Another thing I would like to emphasize, in relationship to one of your earlier questions, is that this is indeed a partnership. I do not think it in anyway permits the Federal Government to relinquish its responsibilities and put on the States, under the block grant, a lot of things they cannot take care of with the resources they presently have available, particularly in relationship to national needs.

So I think it is going to continue to be a partnership, one which, on the basis of a couple of years of efforts shows considerable promise.

MIGRANT HEALTH PROGRAM

Mr. SMITH. You have $4,810,000 additional money for the migrant health program. You said in your statement that you are going to increase the number of centers. Is there also to be some money used for some other activity or increase the quality of the ones you already have?

Dr. CASHMAN. We would hope to improve the activities in the centers we now have.

As I mentioned in my statement, our services will be made available to 375,000 migrants.

Mr. SMITH. How much of this is for new centers and how much for increase in the quality of existing ones?

Dr. CASHMAN. Let me give you a rundown on what we expect to come out of this request. We would expect 100,000 more outpatients' visits, we would see 12,000 more dental visits.

Mr. SMITH. Is this in the existing centers?

Dr. CASHMAN. This would be in existing as well as a proportionate share in the new ones. We see increasing our outpatient medical visits 30 percent, dental visits 50 percent, sanitarian visits would go up 30,000 in number and be 25 percent increase. We would be able to hospitalize 8,000 migrants. Now the hospital patient load is about 3,600. An increase in hospital days of 21,000.

Mr. SMITH. Does this mean you were turning some away last year?

Dr. CASHMAN. It means we are unable to take care of all migrants. Despite the fact that what we are asking in terms of overall appropriation is a sizable increase, there is a tremendous unmet need. There are about 900 counties out of the 3,100 counties in the United States that have, during the course of the year, a hundred or more migrants. We are able to have health services in only 317 of these counties. There are nearly 300 counties now that will register between 300 and a thousand migrants that have no health services. So we have a large unmet need.

Mr. SMITH. Where you have these centers, how do you determine which migrants you will take care of and which ones you will not?

Dr. CASHMAN. Our projects are either single or multiple county projects. They may have several clinics or centers within a single project. We attempt to provide care of migrant service in that particular area. In other words, there are large areas of the country un-

covered. Wherever we have a project we would of course endeavor to take care of the migrant needs in that community. Fortunately our dollars are only about 60 percent of what the investment is, because the local communities themselves, either through voluntary effort or through some additional money, supply 40 percent.

Mr. SMITH. You indicated you were turning some away.

Dr. CASHMAN. Not exactly turning them away, Mr. Chairman, but it is the fact our services are not available in all areas where migrants happen to work.

Mr. SHRIVER. Will there be a request for any additional money for the balance of this fiscal year for this program?

Dr. CASHMAN. No, sir.

Mr. LEWIS. We are considering it in the Secretary's review for 1970, but there is no increase contemplated for 1969.

Mr. SHRIVER. I am talking about this fiscal year. The reason I am asking, I had a letter from another Member of Congress and they have fruitpicking problems coming up before the end of this fiscal year. I do not know whether this is an area where you have a center you have been funding, or not, and you had run out of funds for that program for this spring. That is why I asked the question.

Dr. ENGLISH. Mr. Shriver, in an earlier period of questioning I am not sure we did justice to some of the questions which you had about the migrant health program. I think that there are two basic points that we would like to make:

Number 1, even with the new efforts that will be permitted under what we are requesting for 1970, we are still not going to be able to cover all of the migrants who are in a relatively desperate situation and whom we are trying to help; 690,000 out of the million migrants will be left out of the purview of these programs;

Number 2, and I think most important, we are not seeing this as an exclusively Federal problem, and we are not utilizing these moneys as if it were a 100 percent Federal problem. As a matter of fact, the reason these moneys are having the impact they are is because the States and localities are making a contribution to these efforts and we would be very happy to submit to you for the record the percentage of other than Federal moneys that are a part of this.

Mr. SHRIVER. The impression I got was that they are just not capable of doing a great deal, the communities or States or localities, it pretty much was a Federal problem.

Dr. CASHMAN. I think initially there were a lot of barriers—that generally speaking, the community was hostile when a migrant would come in. One of the goals of our migrant health program is to help the communities to recognize their obligation, and I think the very fact they are now really putting up about 40 percent of the ante, shows they are recognizing this responsibility.

There is one project in Michigan where, for example, the physicians have decided not to take any remuneration because they saw the tremendous need for eyeglasses among the kids. So they put the doctors' fees in a box and bought eyeglasses for the youngsters.

In the areas where we have projects going, there really is a developing community concern.

EXPANSION OF BLOCK GRANTS

Mr. SHRIVER. I was interested in hearing the reactions of the State health officials to the favorable impact of the block grant approach in our health assistance programs. With the experience that you have had so far and the reaction you have had from over the country and from the States, do you think this same idea could be expanded in other areas such as in the poverty program?

Dr. CASHMAN. I am not sure.

Mr. SHRIVER. The idea of block grants?

Dr. CASHMAN. I think, Mr. Chairman, with the States looking at the planning process, stating their objectives and how they are going to reach them, and how to evaluate them, they are really trying to find a rational method of looking at their problems and spending their funds. I think with the little leeway they have had in the amount of block grants the number of States that are getting into this is encouraging. They are willing to look at the problems as they see them, give them a priority and——

Mr. SHRIVER. Knowing the communities and people within the district that I represent, I feel they know their needs; they know probably better than we do up here where they should concentrate their efforts and their money.

Dr. CASHMAN. As I said a while ago, it may or may not reflect the national need. That is the virtue of the partnership.

Mr. SHRIVER. Absolutely.

FUTURE COST INCREASES

On page 122 in the justification, it is stated there will be a sizable increase in cost as the implementation phase of the State comprehensive health planning agencies begins. What is meant by that?

Dr. CASHMAN. Up to now it has been a matter of organization, of staffing, of getting the advisory committees and the task forces lined up. Now it is time to get into the business of planning, and this will require some money for some studies. They are going to need money to develop information systems in the States so they really know what their needs are.

The lack of available data for planning is a serious problem. So one of the things they will be needing money for is the development of information systems. Many of the States now are looking at this particular problem. In fact, we met with all of the State agency directors several weeks ago. One of their principal concerns is the development of a system so there will be made available to them the kind of data on which they and their advisory council can look at the problems, assess the priority, know what the resources are and make recommendations. These are a couple of reasons why they will be needing extra funds.

BREAKDOWN OF PROJECT GRANTS FOR 1970

Mr. SHRIVER. You are requesting $98 million for project grants for health services development for 1970? According to the narrative justifications, $15 million will be for rat control projects and $16 million for the rubella vaccination program.

Dr. CASHMAN. Yes, sir.

Mr. SHRIVER. That leaves $67 million for other health services.

Dr. CASHMAN. These will be a continuation of the kinds of things that we have supported before, plus health centers, primary comprehensive health care activities, and other supportive kinds of public health services. The Chairman asked me to submit a rough breakdown of the kinds of things that we have been spending grant funds on. This would be helpful to you.

Mr. SHRIVER. May that be included in the record?

Dr. CASHMAN. Yes, sir.

(The information follows:)

SEC. 314(e) PROJECT GRANTS IN 1970 BY MAJOR CATEGORY

	Number	Amount
314(e) grants	582	$98,000,000
Tuberculosis	74	18,280,000
Venereal disease	44	5,000,000
Neurology andsensory	35	2,600,000
Training	(13)	(800,000)
Projects	(22)	(1,800,000)
Mental retardation		
Training		
Projects		
Cancer	219	8,100,000
Training	(75)	(2,200,000)
Projects	(144)	(5,900,000)
Community health	78	20,170,000
Neighborhood health center	25	12,800,000
Rodent control	15	15,000,000
Dental health	2	50,000
Rubella immunization	90	16,000,000

RAT CONTROL

Mr. SHRIVER. Going back to the rat money, it is my recollection that up to $20 million was provided but it has been decided that $15 million is the amount that is going to be used for this program, although there may be additional applications that may not be funded.

Mr. LEWIS. This was the decision at the Secretary level as to how that would be spent.

Mr. SHRIVER. This was a decision within the Department?

Mr. LEWIS. Yes, sir.

Dr. CASHMAN. The Secretary looked at all the priorities at that time. Of course, the commitment to assist in the model cities was a sizable priority. As I recall also, we did not receive the total amount asked for in the 314(e) category.

Mr. SMITH. We were told earlier by Mr. Cardwell within the fiscal year the entire $20 million will be obligated. Is that correct?

Mr. LEWIS. I do not believe so.

Mr. SMITH. As I recall, he said there is some not obligated yet but it would be within the fiscal year.

Mr. MILLER. Last year we told the Congress that we expected it to be $16 million so we are within $1 million of the figure that we reported at that time.

Mr. SMITH. Will there be more obligated between now and July 1?

Dr. CASHMAN. Not for rat control.

Dr. ENGLISH. We will correct the record if we are wrong, but I believe we will obligate up to $15 million in this fiscal year.

Mr. SHRIVER. For 1970 what is the amount? $15 million?
Dr. CASHMAN. Up to $15 million.
Mr. SHRIVER. I believe that is all, Mr. Chairman.
Mr. SMITH. Mrs. Reid?

COMPLICATION OF EVALUATION PROCESS

Mrs. REID. In reviewing your justifications, I see that in explaining the new formula grant program to increase the flexibility of action of State health and mental health officials as they make use of Federal support, you mention that one price for this new flexibility has been the extraordinary complication of the evaluation process. What special problems does this entail?

Dr. CASHMAN. When most of the formula grants were for categorical programs, it was possible to follow the Federal dollar and evaluate its impact on a problem. Now that the Federal funds go to the State in a block to be used in accordance with State priorities, the Federal partner has fewer strings with respect to how the dollars will be spent. Consequently we cannot evaluate programs without going into the total State program. This means that the evaluation has to be a joint effort, with the State as an equal partner. Where we could previously devise an evaluation technique for application nationally, we must now develop a technique to fit each State's individual program.

AREAWIDE PLANNING AGENCIES

Mrs. REID. On page 3 of your statement, you say that in addition to the State planning agencies, there are almost 100 areawide health planning agencies in the developmental stage. It is still not clear to me what constitutes an "area" in this sense. Are these all within State boundaries? Do they cross State boundaries? How are they coordinated into the overall State plan?

Dr. CASHMAN. The State comprehensive health planning agency formally approves the application for the conduct of areawide comprehensive health planning. In operation, the two planning processes are mutually supportive. Through continuing communication and sharing of information, problems unique and common to various areas of the State will be identified and accordingly the differing patterns that can be expected throughout the country, benefit from the differing statewide and areawide planning perspectives that can be brought to bear upon them.

The "area" of an areawide comprehensive health planning agency is chiefly determined by a combination of service area and political jurisdictions. The "area" which is ultimately approved must be a logical grouping of cities, towns, and/or counties. These "areas" often cross State boundaries such as the areawide planning agencies serving the St. Louis, Mo., area and the Binghamton, N.Y., area.

SCHOOLS GIVING GRADUATE TRAINING IN COMPREHENSIVE HEALTH PLANNING

Mrs. REID. You say also on page 3 that interdisciplinary courses in comprehensive health planning have been initiated and the first students will receive their degrees in June. At what graduate institu-

tions are these courses being offered? I think a list might be useful for the record.

(The information follows:)

University locations for graduate training in comprehensive health planning:
Johns Hopkins University, Baltimore, Md.
University of California, Berkeley, Calif.
University of California at Los Angeles, Los Angeles, Calif.
University of Hawaii, Honolulu, Hawaii.
George Washington University, Washington, D.C.
University of Puerto Rico, San Juan, P.R.
University of Cincinnati, Cincinnati, Ohio.
Cornell University, Ithaca, N.Y.
New York University, New York, N.Y.
University of Southern California, Los Angeles, Calif.
University of North Carolina, Chapel Hill, N.C.
University of Michigan, Ann Arbor, Mich.
University of Colorado, Denver, Colo.

MEDICAL CARE FOR RURAL AND SMALLTOWN RESIDENTS

Mrs. REID. As to your comments on page 6, I find in my area of the Midwest the problem of availability and accessibility of adequate medical care for rural and smalltown residents is a growing one, particularly for older citizens who do not always have transportation to travel to larger population centers where most medical centers are located today. It seems that the smalltown general practitioner is rapidly becoming a thing of the past. I am interested, therefore, in your current studies in this area and what you call a "circuit riding" program. How would it work?

Dr. CASHMAN. A model plan is being developed involving the use of mobile medical and dental units, in a circuit riding technique, for the delivery of family centered, primary medical and dental health services to the southern, rural poor.

Circuit riding means the operation of a mobile medical and dental unit in a three- or four-county area within a single State. The mobile units will have four or five designated places in the county areas where they will stop as they travel continuously around the circuit. It is anticipated that mobile health units will care, on a rotating basis, for say three or four counties and concentrate on cross-road communities as target areas. Each cross road may influence 10,000 people. Within the counties, there will be a headquarters base at which there would be permanent staff of qualified professionals including possibly a physician, a dentist, a public health nurse, health education supervisor, nutritionist, et cetera.

Health and related services will be provided to the economically disadvantaged who have very little or no access to medical and dental care or who for one reason or another do not receive what is considered to be a reasonable amount of such care.

ERADICATION OF RUBELLA (GERMAN MEASLES)

Mrs. REID. Assuming that the new rubella vaccine is in ample supply and your immunization program plans proceed on schedule, when might we expect that rubella would be eliminated as a national health threat?

Dr. CASHMAN. Assuming the rubella immunization program proceeds as planned, we estimate it will take approximately 5 years to search out and destroy all pockets of the disease.

MIGRANT HEALTH PROJECTS

Mrs. REID. With reference to migrant health projects, I see in your justifications that the community share of the cost of these projects amounts to approximately 40 percent on a national basis. What part of his health care, if any, does the migrant worker patient pay? What part the State, et cetera? This is not clear to me.

Dr. CASHMAN. The Migrant Health Act authorizes the Public Health Service to "pay part of the cost" of projects but does not stipulate any fixed matching or sharing formula for communities, States, or migrants, themselves. On the average for all 116 projects in the United States, contributions to project operations from other than migrant health grant sources amount to approximately 40 percent of total care.

These contributions are in kind and in cash from a variety of sources. They include contributed services, supplies, transportation, rent, utilities, and equipment. The contributions are made by public agencies such as State and local health departments, departments of welfare and social services, cooperative extension offices, departments of education, and State universities. They are also made by a wide variety of individuals and voluntary groups such as Catholic charities, State and local councils of churches, TB and health associations, Cancer Society, Lions Clubs, Red Cross, medical schools, Planned Parenthood Federation, Salvation Army, St. Vincent de Paul Society, growers and their associations, crewleaders, and migrant workers and homemakers. The identifiable cash contribution of migrants to the costs of their own hospitalization during 1968 amounted to nearly $70,000.

Mrs. REID. Thank you, Doctor.

RELATIONSHIP OF "HEALTH RESOURCES DEVELOPMENT" AND "CENTER FOR HEALTH SERVICES RESEARCH AND DEVELOPMENT"

Mr. SHRIVER. On page 137, you are requesting $1,880,000 for health resources development. What is the working relationship between this program and the efforts of the National Center for Health Services Research and Development?

Dr. CASHMAN. Prior to the establishment of the National Center, the old Division of Medical Care Administration was the only division broadly concerned with the financing, organization, resource development, utilization, and quality of care. There was then, as you may recall, in the old division a small research line item. This was taken out when we established the National Center for Health Services Research and Development. With that went the R. & D. part of that division. We look upon ourselves as a partner with Dr. Sanazaro and his people. We want to implement findings as they come off the line in research.

Mr. SHRIVER. This development is in addition to that?

Dr. CASHMAN. Let us assume that Dr. Sanazaro just said a neighborhood health center had developed something which looked like one

of the answers to primary care. We would take this concept out into individual communities and help in the implementation and technical consultation and elaboration of this concept for the delivery of that kind of care. Our development is not development de novo, but we take established research and implement the findings of research.

Mr. SHRIVER. That is all.

Dr. ENGLISH. A striking example of the way some of these funds are helping is in an area where a neighborhood health center is developed but where the poverty indices deprive people of help in the program even though they need it. Dr. Cashman may help to supplement this, though it is tied to a more total community program.

Mr. LEWIS. Could I make one brief statement?

I am very concerned that the word partnership not be tied just to section 314(d). The Partnership for Health Act embraces, conceptually, the planning relationship between the Federal Government and the States. It includes not only the development at the State level, but, very importantly, the area level as well.

I woud like to be sure the record is clear that the partnership, although I know your question came out with reference to the formula, does embrace the total range of activities.

Dr. ENGLISH. Those agencies are going to be critical to this whole effort. Their development is one of the most promising things on the scene in relationship to the way the agency is going to develop for a whole State area.

Dr. CASHMAN. We would like to add that in this partnership are also the providers of health care and the consumers. It is not just the State-Federal Government partnership but it is the Government, the private, and volunteer provider section and the consumer.

Mr. SMITH. Thank you, gentlemen.

Dr. ENGLISH. Thank you, Mr. Chairman.

JUSTIFICATION MATERIAL

Comprehensive Health Planning and Services

Amounts Available for Obligation

	1969	1970
Appropriation	$167,104,000	$212,030,000
Trust fund transfer	---	4,320,000
Unobligated balance brought forward	2,611,000	---
Comparative transfers to:		
"Salaries and expenses, Office of the Administrator", Health Services and Mental Health Administration	-102,000	---
"Office of the Comptroller, salaries and expenses"	-36,000	---
"Office of the Secretary, salaries and expenses"	-97,000	---
"Environmental control"	-2,000,000	---
Comparative transfer from: "Community Health Services"	17,374,000	---
Cutback required by PL 90-364	-292,000	---
1968 State Planning Grant Reserve required by PL 90-218	-250,000	---
Total currently authorized for obligation	184,312,000	216,350,000
Plus: proposed release of reserves for increased pay costs	128,000	---
Rubella Immunization Program	414,000	---
Program supplemental proposed for separate transmittal: Proposed transfer of reserves created by PL 90-364 from "Community Mental Health resource support"	9,186,000	---
Total obligations	194,040,000	216,350,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
121	Partnership for health grants:						
	(a) Planning..	--	$20,861,000	--	$20,000,000	--	-$861,000
	(b) Formula...	--	66,032,000	--	72,000,000	--	+5,968,000
	(c) Project...	--	86,600,000	--	98,000,000	--	+11,400,000
132	Migrant health program						
	(a) Grants....	--	7,200,000	--	12,000,000	--	+4,800,000
	(b) Direct operations	50	900,000	50	910,000	--	+10,000
134	Standard-setting and resources development...	457	10,318,000	476	11,256,000	+19	+938,000
143	Program direction and management services....	132	2,129,000	132	2,184,000	--	+55,000
Total obligations...		639	194,040,000	658	216,350,000	+19	+22,310,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions	639	658	+19
Full-time equivalent of all other positions	872	884	+12
Average number of all employees	1,505	1,517	+12
Personnel compensation:			
Permanent positions	$7,019,700	$7,292,000	+$272,300
Positions other than permanent	7,032,300	7,156,000	+123,700
Other personnel compensation	54,000	54,000	---
Subtotal, personnel compensation	14,106,000	14,502,000	+396,000
Personnel benefits	1,520,000	1,548,000	+28,000
Travel and transportation of persons	1,055,000	1,078,000	+23,000
Transportation of things	196,000	200,000	+4,000
Rent, communications and utilities	320,000	330,000	+10,000
Printing and reproduction	160,000	172,000	+12,000
Other services	897,000	916,000	+19,000
Project contracts	2,452,000	3,073,000	+621,000
Supplies and materials	4,111,000	10,117,000	+6,006,000
Equipment	87,000	95,000	+8,000
Grants, subsidies and contributions	169,136,000	184,319,000	+15,183,000
Total obligations by object	194,040,000	216,350,000	+22,310,000

Summary of Changes

1969 estimated obligations	$194,040,000
1970 estimated obligations	216,350,000
Net change	+22,310,000

Increases	Base Pos.	Base Amount	Changes from Base Pos.	Changes from Base Amount
A. Built-in:				
1. Within grade reclassification costs	---	---	---	+$114,000
B. Program:				
1. Planning grants	---	$20,861,000	---	-861,000
2. Formula grants	---	66,032,000	---	+5,968,000
3. Project grants	---	86,600,000	---	+11,400,000
4. Migrant health grants	---	7,200,000	---	+4,800,000
5. Health care	62	1,992,000	+ 8	+607,000
6. Health planning	12	204,000	+ 6	+183,000
7. Review and approval	72	1,257,900	+ 5	+59,000
8. Program direction and management services	132	2,129,000	---	+40,000
Total Program Increases	---	---	+19	+22,196,000
Total change	---	---	+19	+22,310,000

Explanation of Changes

Planning grants

The program decrease of $861,000 is attributable to a carryover from 1968 of $2,361,000 available for obligation in 1969 for grants to States for comprehensive health planning. The decrease is the net effect of a reduction of $1,561,000 in grants to States for comprehensive State health planning and an increase of $700,000 in project grants for areawide health planning.

Formula grants

An increase of $5,968,000 is requested for grants to assist States in attacking those health problems they consider of greatest importance. By law, at least 15% of the funds must support mental health activities and 70% must be made available for the provision of health services at the local level.

Project grants

An increase of $11,400,000 is requested to support grants to cover part of the cost of providing services to meet health needs. Within the total funds available, up to $16,000,000 will be used for a nationwide immunization program against rubella (German measles), $2,500,000 for additional neighborhood health service projects, and $2,500,000 to stimulate and support new public health programs ranging from group practice to laboratory improvement programs.

Migrant health grants

An increase of $4,800,000 is requested to permit the establishment of approximately 18 new migrant family health service centers and the expansion of the centers now in operation. The increase will provide ready access to personal health care for approximately 50,000 more migrants, and will provide inpatient hospital service for approximately 4,400 more patients.

Health care services

An increase of 8 positions and $607,000 is requested to support projects for planning, community organization and development of comprehensive health care centers. It will provide for alternative approaches to be employed in the organization and delivery of health care to areas where the neighborhood care center concept may not be possible because of geographic or other social constraints. These alternative approaches will include mobile clinics serving several small rural communities, regional systems of ambulatory nursing care, and new directions for school health programs.

Health planning

An increase of 6 positions and $183,000 is requested to provide for better integration of Federal, State and local resources so that the health status of the individual can be improved.

Review and approval

An increase of 5 positions and $59,000 is requested to permit more effective conduct of the grant review and processing activity. The new positions will be placed in those Regional offices with the greatest anticipated workload in 1970.

Program direction and management services

An increase of $40,000 is requested to permit full employment of existing positions. No program increase is requested.

Authorizing Legislation

Legislation	1970 Authorization
Public Health Service Act	
Section 310--Grants for Family Health Service Clinics for Domestic Agricultural Migratory Workers	Indefinite
Section 314(a)--Grants to States for Comprehensive State Health Planning	$ 15,000,000
Section 314(b)--Project Grants for Areawide Health Planning	15,000,000
Section 314(c)--Project Grants for Training, Studies, and Demonstrations	7,500,000
Section 314(d)--Grants for Comprehensive Public Health Services	100,000,000
Section 314(e)--Project Grants for Health Services Development	80,000,000

PUBLIC HEALTH SERVICE

Title III--General Powers and Duties of Public Health Service

Part B - Federal-State Cooperation

Grants to States for Comprehensive State Health Planning

"Sec. 314. (a) (1) AUTHORIZATION.--In order to assist the States in comprehensive and continuing planning for their current and future health needs, the Surgeon General is authorized during the period beginning July 1, 1966, and ending June 30, 1970, to make grants to States which have submitted, and had approved by the Surgeon General, State plans for comprehensive State health planning. For the purposes of carrying out this subsection, there are hereby authorized to be appropriated $2,500,000 for the fiscal year ending June 30, 1967, and $7,000,000 for the fiscal year ending June 30, 1968, $10,000,000 for the fiscal year ending June 30, 1969, and $15,000,000 for the fiscal year ending June 30, 1970.

Project Grants for Areawide Health Planning

"(b) The Surgeon General is authorized, during the period beginning July 1, 1966, and ending June 30, 1970, to make, with the approval of the State agency administering or supervising the administration of the State plan approved under subsection (a), project grants to any other public or nonprofit private agency or organization (but with appropriate representation of the interests of local Government where the recipient of the grant is not a local Government or combination thereof or an agency of such Government or combination) to cover not to exceed 75 per centum of the costs of projects for developing (and from time to time revising) comprehensive regional, metropolitan area, or other local area plans for coordination of existing and planned health services, including the facilities and persons required for provision of such services; except that in the case of project grants made in any State prior to July 1, 1968, approval of such State agency shall be required only if such State has such a State plan in effect at the time of such grants. For the purposes of carrying out this subsection, there are hereby authorized to be appropriated $5,000,000 for the fiscal year ending June 30, 1967; $7,500,000 for the fiscal year ending June 30, 1968; $10,000,000 for the fiscal year ending June 30, 1969; and $15,000,000 for the fiscal year ending June 30, 1970.

Project Grants for Training, Studies, and Demonstrations

"(c) The Surgeon General is also authorized, during the period beginning July 1, 1966, and ending June 30, 1970, to make grants to any public or nonprofit private agency, institution, or other organization to cover all or any part of the cost of projects for training, studies, or demonstrations looking toward the development of improved or more effective comprehensive health planning throughout the Nation. For the purposes of carrying out this subsection, there are hereby authorized to be appropriated $1,500,000 for the fiscal year ending June 30, 1967; $2,500,000 for the fiscal year ending June 30, 1968; $5,000,000 for the fiscal year ending June 30, 1969; and $7,500,000 for the fiscal year ending June 30, 1970.

Grants for Comprehensive Public Health Services

"(d) (1) AUTHORIZATION OF APPROPRIATIONS.--There are authorized to be appropriated $70,000,000 for the fiscal year ending June 30, 1968, $90,000,000 for the fiscal year ending June 30, 1969, and $100,000,000 for the fiscal year ending June 30, 1970, to enable the Surgeon General to make grants to State health or mental health authorities to assist the States in establishing and maintaining adequate public health services, including the training of personnel for State and local health work. The sums so appropriated shall be used for making payments to States which have submitted, and had approved by the Surgeon General, State plans for provision of public health services, except that, for any fiscal year ending after June 30, 1968, such portion of sums as the Secretary may determine, but not exceeding 1 per centum thereof, shall be available to the Secretary for evaluation (directly or by grants or contracts) of the program authorized by this subsection and the amount available for allotments hereunder shall be reduced accordingly.

Project Grants for Health Services Development

"(e) There are authorized to be appropriated $90,000,000 for the fiscal year ending June 30, 1968, $95,000,000 for the fiscal year ending June 30, 1969, and $80,000,000 for the fiscal year ending June 30, 1970, for grants to any public or nonprofit private agency, institution, or organization to cover part of the cost of (1) providing services (including related training) to meet health needs of limited geographic scope or of specialized regional or national significance, or (2) developing and supporting for an initial period new programs of health services (including related training). Such grants may be made pursuant to clause (1) or (2) of the preceding sentence with respect to projects involving the furnishing of public health services only if such services are provided in accordance with such plans as have been developed pursuant to subsection (a). For any fiscal year ending after June 30, 1968, such portion of the appropriations for grants under this subsection as the Secretary may determine, but not exceeding 1 per centum thereof, shall be available to the Secretary for evaluation (directly or by grants or contracts) of the program authorized by this subsection.

Family Health Service Clinics for Domestic Agricultural Migratory Workers

Section 310. There are hereby authorized to be appropriated not to exceed $7,000,000 for the fiscal year ending June 30, 1966, $8,000,000 for the fiscal year ending June 30, 1967, $9,000,000 each for the fiscal year ending June 30, 1968, and the next fiscal year, and $15,000,000 for the fiscal year ending June 30, 1970, to enable the Surgeon General (1) to make grants to public and other non-profit agencies, institutions, and organizations for paying part of the cost of (i) establishing and operating family health service clinics for domestic agricultural migratory workers and their families, including training persons to provide services in the establishing and operating of such clinics, and (ii) special projects to improve health services for and the health conditions of domestic agricultural migratory workers and their families, including necessary hospital care, and including training persons to provide health services for or otherwise improve the health conditions of such migratory workers and their families, and (2) to encourage and cooperate in programs for the purpose of improving health services for or otherwise improving the health conditions of domestic agricultural migratory workers and their families.

Explanation of Transfers

	1969 Estimate	Purpose
Transfer from:		
"Community Mental Health resource support".....	$9,186,000	To make funds available for project grants to State and local health departments to begin a national immunization program against German measles (rubella).
Comparative transfers to:		
"Office of the Comptroller, salaries and expenses".....	-36,000	To support indirect costs related to grant programs at the department level.
"Office of the Secretary, salaries and expenses".....	-97,000	To support Office of the Secretary grant activities.
"Salaries and expenses, Office of the Administrator", Health Services and Mental Health Administration.....	-102,000	To support field liaison staff and the financial operation transferred to the Office of the Administrator.
"Environmental control".....	-2,000,000	Transfer of 314(e) project grant funds to Radiological Health.
Comparative transfers from:		
"Community Health Services"....	17,374,000	Transfer of Community Health Services activities as part of the reorganization of the Department of Health, Education, and Welfare.

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1967	$ 4,500,000	$ 4,250,000	$ 4,250,000	$ 4,250,000
1968	163,628,000	140,676,000	140,676,000	140,676,000
1969	195,383,000	165,604,000	168,604,000	167,104,000
1969 proposed supplemental	9,600,000 1/			
1970	216,350,000 2/			

1/ The 1969 supplemental includes a proposal that $414,000 be released from reserves in this appropriation.

2/ Includes $4,320,000 transfer from Social Security trust funds.

Comprehensive Health Planning and Services

	1969 estimate		1970 estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	639	$15,626,000	658	$16,050,000	+19	+$424,000
Other expenses	-	178,414,000	-	200,300,000	-	+21,886,000
Total	639	194,040,000	658	216,350,000	+19	+22,310,000

General Statement

Consistent with the intent of the Public Health Service reorganization to bring functionally related programs together, this appropriation now combines the health planning and service functions of the Partnership for Health program with the professional and technical health services activities, including professional support to the Medicare program, previously funded in the Community Health Service appropriation.

Increased demands for health services and continuing shortages of resources to meet them require the initiation of sophisticated comprehensive planning and programming systems. The range of problems to be met requires, as never before, a fully flexible means of response. Through the Partnership for Health program, the Federal government provides technical and financial support to the States and communities so they can carry out needed comprehensive health planning and initiate health programs designed to meet their own specific needs. The Federal-State-local partnership for health is moving the decision-making process closer to the people to be served.

Planning Grants

	1969 Estimate	1970 Estimate	Increase or Decrease
Grants to States for comprehensive health planning....	$9,736,000	$8,175,000	-$1,561,000
Project grants for areawide health planning.....	7,000,000	7,700,000	+700,000
Project grants for training, studies, and demonstrations.....	4,125,000	4,125,000	---
Total.....	20,861,000	20,000,000	-861,000

A. Formula Grants for State Comprehensive Health Planning Agencies

Formula grants, authorized under Section 314(a) of the Public Health Service Act are awarded to States, based on population and per capita income, for comprehensive health planning. The purpose of comprehensive health planning is to provide a framework in which total health needs and resources can be analyzed and alternative courses of action recommended.

During 1968 and 1969, the organizational base for health planning has been substantially completed in all of the 56 eligible States and territories. A director of comprehensive health planning has been appointed in 50 of the 56 agencies. The 1969 level of support enabled the States to recruit and maintain basic staff, cover the cost of advisory councils, initiate some surveys, and acquire and develop preliminary information essential to making improved decisions. The state planning agency in West Virginia, for example, is representative of one type of arrangement. There, the State Comprehensive Health Planning agency has employed a professional staff; held various meetings and seminars with private and voluntary agencies; established a 33-man Advisory Council; initiated discussions with potential areawide comprehensive health planning agencies throughout the State; and begun to define their needs with regard to collection of Statewide information. In a slightly different approach, the New Mexico State Comprehensive Health Planning Agency has hired professional staff, appointed a 47-member Advisory Council, and begun work through various subcommittees and ad hoc task forces on issues of importance in the areas of private medical practice, the voluntary health field, health education, health manpower, environmental health, health facilities, and health insurance. Orientation seminars have also been held, and a system for data collection and analysis has been initiated.

By 1970, the organizational development and initial survey stages in comprehensive health planning should be nearing completion for most State agencies. Sizable increases in staffing can be anticipated as they begin to stimulate planning to meet their established needs. Statewide goals and objectives will be formulated and developed. Most States will have an increased burden of

staffing in maintaining the subcommittees, task forces and ad hoc study groups now being organized. Preliminary studies and designs for information systems should be nearing completion, with a sizable increase in cost as the implementation phase begins.

On the basis of the formula, 32 smaller and middle-sized States will each receive the minimum allocation of $80,000. The other 18 larger States will receive larger amounts, based on population and need, ranging to $550,000. In 1970, the States will be adding to the Federal allocations an additional 25 percent from State funds to help support their expanded planning requirements.

B. Project Grants for Areawide Comprehensive Health Planning

Through the areawide health planning agency, a community's diverse health interests have a unique opportunity to begin development of a cohesive and efficient areawide health system. Such groups as private health practitioners, hospitals, medical schools, voluntary health agencies, local governments, consumers and specialized planning groups can now work through an institutionalized forum to reach agreement on their local priorities for facility, service and manpower development.

Program activity in 1968 and 1969 has supported approximately 93 areas in developing and organizing areawide health planning agencies and in initiating comprehensive health planning programs. Most of the 93 organizations are still developing the particular pattern of inter-agency and community relationships that will be most effective in their own areas for the conduct of planning. Their patterns vary according to local interests, competence and medical-political involvement. In San Francisco, California, for example, a federation concept has evolved. Operating under the Bay Area Comprehensive Health Planning Association, nine county-level planning councils are beginning to plan comprehensively for improved health status of that areawide population. In Rochester, New York, a merger between two voluntary health organizations has taken place. The Regional Hospital Planning Council and the Monroe County Health Council have combined to form an areawide comprehensive health planning agency which will serve an 11-county area. In Lansing, Michigan, the Ingham County Health Department has been designated by the community to plan for a 3-county area. In 1970, most agencies will expand their planning activities by collecting data on available health resources, assessing the health needs of the community, identifying gaps in, or mal-distribution of, resources and developing alternative recommendations to improve the areawide health system through reallocating available resources or acquiring new resources.

The increase requested for 1970 will be used to support expanded planning activity in most of the 93 areas now developing planning organizations and to assist in initiating planning organizations in 20 new areas.

C. Project Grants for Training, Studies and Demonstrations for Comprehensive Health Planning - Section 314(c) of PHS Act

The success of State and areawide planning will hinge to a large extent upon the availability of personnel skilled in health planning, and upon the development of new methods and techniques for the conduct of health planning. Grants to public and non-profit organizations for support of training, studies and demonstrations to improve comprehensive health planning are an integral and essential part of the national comprehensive health planning effort.

In 1968 and 1969, five types of projects have been supported for the improvement of comprehensive health planning: (1) graduate degree programs in health planning; (2) development of graduate curricula; (3) continuing education programs for those now engaged in comprehensive health planning; (4) training of consumers so they can serve more effectively as members of advisory councils and health planning bodies; and (5) studies and demonstrations of new and improved techniques and methodologies in comprehensive health planning.

In 1970 we will maintain approximately the same balance of program activities. This level of activity will provide support for about 200 students in graduate education programs, 1,000 in continuing education programs and 750 in consumer education.

Comprehensive Health Planning and Services

Allocations of Grants to States for Comprehensive State Health Planning

	1968 Allocation	1969 Allocation	1970 Estimate
Alabama	$ 98,300	$ 150,000	$ 169,000
Alaska	47,500	73,800	81,800
Arizona	47,500	73,800	81,800
Arkansas	56,600	85,800	98,200
California	309,900	485,400	537,500
Colorado	47,500	73,800	81,800
Connecticut	47,500	73,800	81,800
Delaware	47,500	73,800	81,800
District of Columbia	47,500	73,800	81,800
Florida	130,900	200,900	221,300
Georgia	110,200	166,100	185,100
Hawaii	47,500	73,800	81,800
Idaho	47,500	73,800	81,800
Illinois	174,400	270,100	299,900
Indiana	92,200	142,300	162,500
Iowa	54,800	80,600	90,600
Kansas	47,500	73,800	81,800
Kentucky	83,100	124,400	136,400
Louisiana	93,000	140,800	155,700
Maine	47,500	73,800	81,800
Maryland	64,300	100,700	112,600
Massachusetts	94,200	145,100	157,400
Michigan	148,500	230,000	263,800
Minnesota	71,600	108,000	119,900
Mississippi	77,200	115,700	126,600
Missouri	90,300	143,200	158,400
Montana	47,500	73,800	81,800
Nebraska	47,500	73,800	81,800
Nevada	47,500	73,800	81,800
New Hampshire	47,500	73,800	81,800
New Jersey	113,700	178,000	197,800
New Mexico	47,500	73,800	81,800
New York	297,200	459,100	493,800
North Carolina	130,700	193,300	215,800
North Dakota	47,500	73,800	81,800
Ohio	194,400	299,800	337,800
Oklahoma	57,300	88,800	97,600
Oregon	47,500	73,800	81,800
Pennsylvania	225,000	343,000	376,600
Rhode Island	47,500	73,800	81,800

Allocations of Grants to States for Comprehensive Health Planning (cont.)

	1968 Allocation	1969 Allocation	1970 Estimate
South Carolina	74,800	111,100	124,700
South Dakota	47,500	73,800	81,800
Tennessee	102,900	152,900	170,200
Texas	245,400	374,600	409,800
Utah	47,500	73,800	81,800
Vermont	47,500	73,800	81,800
Virginia	99,400	152,400	168,000
Washington	54,700	84,000	95,400
West Virginia	47,500	73,800	81,800
Wisconsin	81,500	123,400	136,800
Wyoming	47,500	73,800	81,800
Guam	47,500	73,800	81,800
Puerto Rico	88,500	132,900	147,200
Virgin Islands	47,500	73,800	81,800
American Samoa	47,500	73,800	81,800
Trust Territory of the Pacific Islands	---	73,800	81,800
TOTAL	4,750,000	7,375,000	8,175,000

Formula Grants to States for Health Services

	1969 estimate		1970 estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	---	$58,000	---	$58,000	---	---
Other expenses	---	65,974,000	---	71,942,000	---	+$5,968,000
Total	---	66,032,000	---	72,000,000	---	+5,968,000

The passage of the Comprehensive Health Planning and Public Health Services Amendments of 1966 (P.L. 89-749) marked a turning away from restrictive categorical Federal support for dealing with health problems. Health grant assistance prior to the passage of the Act was provided through a complex variety of formula grants relating either to particular diseases or to some other limited segment of public health. Grants to State health and mental health authorities to assist in establishing and maintaining the full range of public health services are now made under this new authority. A single formula grant, allocated on the basis of State population and per capita income, provides a flexible means for helping a State meet health needs which it determines to be of the highest priority. The only restrictions under this authority are that 15% of the funds must support mental health activities, and 70% of the funds must be made available for the provision of health services at the local level. The plans of State health and mental health authorities for carrying out these programs must be in accord with the State comprehensive health planning agency's plan.

The new flexibility does not mean that the States have dropped the programs supported under the former categorical system. To the contrary, much of the money is still being spent in these same important problem areas. However, the flexibility allows a State to program funds according to the kinds and magnitudes of problems it has determined, rather than according to fixed categories with fixed levels of funds only for such categorical activities. Wyoming and Montana were formerly unable to use all of the categorical grants in the chronic disease area. However, since funds are no longer restricted, these States have been able to expand their other existing public health programs. Maine has identified dental health as one of the State's priority problems and has made great improvements in dental health by concentrating funds in this area.

It would have been exceedingly difficult for States to respond to many broad based problems upon which they can now readily act. For example, in Worcester, Massachusetts, $50,000 have been allocated to the development of a Comprehensive Family Health Program, as part of the Model City effort. In one Connecticut community, an information and referral system for social and health services has been established in a low income neighborhood. In East St. Louis, Illinois, a community health program is educating a group of disadvantaged area residents to become knowledgeable about all available health resources. Once trained, these residents serve as "Health Guides" for their neighbors. A mental health unit will provide regular psychiatric screening, evaluation and referral services in the Hough area of Cleveland. Montana is beginning development of a family planning service program.

The 1970 request of $72,000,000 constitutes an increase of almost $6 million. This will allow the States to continue support for the kinds of programs described above, cover the increased cost of personnel and materials, and support a modest increase in overall state health activities.

Up to 1 percent of the amount appropriated for formula grants may be used for evaluation of programs supported by the grants pursuant to Section 8(a) of Public Law 90-174.

Comprehensive Health Planning and Services

Allocations of Grants for Comprehensive Public Health Services

	1968 Allocation	1969 Allocation	1970 Estimate
Alabama	$1,279,400	$1,334,700	$1,469,800
Alaska	378,500	371,800	371,800
Arizona	590,500	735,500	781,600
Arkansas	847,500	884,300	971,300
California	4,118,800	4,598,700	5,099,100
Colorado	631,500	779,000	849,500
Connecticut	694,200	936,300	1,012,200
Delaware	377,600	415,000	432,600
District of Columbia	413,500	470,000	490,700
Florida	1,855,500	1,840,200	2,035,800
Georgia	1,411,200	1,518,200	1,674,400
Hawaii	411,300	473,000	502,000
Idaho	439,100	484,900	508,700
Illinois	2,547,200	2,719,800	3,011,400
Indiana	1,348,100	1,483,200	1,648,500
Iowa	884,800	959,800	1,040,800
Kansas	731,100	857,200	925,600
Kentucky	1,169,400	1,189,200	1,292,000
Louisiana	1,195,000	1,312,300	1,438,900
Maine	484,600	556,000	585,400
Maryland	893,300	1,155,100	1,267,500
Massachusetts	1,385,800	1,546,400	1,678,300
Michigan	2,086,500	2,274,900	2,560,000
Minnesota	1,078,000	1,171,600	1,282,200
Mississippi	1,028,800	1,050,700	1,131,200
Missouri	1,313,900	1,438,100	1,572,000
Montana	429,500	478,600	497,500
Nebraska	562,000	648,400	688,600
Nevada	390,200	397,800	413,200
New Hampshire	409,200	468,500	490,100
New Jersey	1,614,400	1,872,800	2,065,900
New Mexico	490,700	569,500	607,500
New York	4,253,900	4,391,700	4,771,200
North Carolina	1,588,300	1,690,900	1,873,500
North Dakota	426,600	471,300	488,500
Ohio	2,628,600	2,785,500	3,112,500
Oklahoma	865,300	961,100	1,037,900
Oregon	632,500	785,500	845,000
Pennsylvania	3,143,200	3,101,700	3,422,700
Rhode Island	428,200	513,200	537,400

Allocations of Grants for Comprehensive Public Health Services (cont.)

	1968 Allocation	1969 Allocation	1970 Estimate
South Carolina	938,500	1,063,500	1,171,100
South Dakota	434,300	479,200	493,800
Tennessee	1,371,300	1,388,900	1,530,800
Texas	3,012,800	3,135,400	3,455,900
Utah	469,400	568,500	604,800
Vermont	388,100	406,100	418,500
Virginia	1,307,700	1,466,200	1,606,700
Washington	847,100	1,014,700	1,132,200
West Virginia	694,900	809,500	866,200
Wisconsin	1,192,300	1,307,600	1,427,900
Wyoming	381,500	377,800	385,400
Guam	306,200	310,900	314,300
Puerto Rico	1,092,700	1,162,400	1,266,500
Virgin Islands	266,800	265,700	265,700
American Samoa	88,700	265,700	265,700
Trust Territory of the Pacific Islands	---	317,500	309,700
TOTAL	60,250,000	66,032,000	72,000,000

Project Grants for Health Services Development

	1969 estimate		1970 estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	---	$7,334,000	---	$7,458,000	---	+$124,000
Other expenses	---	79,266,000	---	90,542,000	---	+11,276,000
Total	---	86,600,000	---	98,000,000	---	+11,400,000

The project grants authorized under Section 314(e) of the Partnership for Health legislation provide an effective mechanism for stimulating and supporting a full range of public health activities to meet special needs. It allows the Federal government to be more responsive to changes and new developments in the relative priority and urgency of competing health needs. In 1970, priority attention will be given to improved personal health services for the poor, improved environmental conditions through control of rats, and a national effort to control the effects of a predicted rubella (German measles) epidemic.

Proposals that are designed to improve the accessibility of health care to the poor within their communities and projects for attacking the primary causes of sickness and mortality in these communities will be stimulated and will receive special support. Our highest priority remains the initiation of model "comprehensive health service centers" in the ghettos of the Nation's major cities. The incidence of nearly every major disease in the country remains shockingly high among the deprived of our central cities. The problems of infant mortality, tuberculosis, alcholism and dental disease are only a sample of the total. Special attention to the health needs of the Nation's poor is an essential factor in breaking the poverty cycle.

An integral part of comprehensive health services is the improvement of those environmental conditions preventing normal development. Rat infestation and attacks by rats on humans are glaring indicators of totally unsatisfactory environmental conditions. Projects begun in 1969 must be continued in 1970 if the Federal government is to sustain the rat control effort and if the conditions that foster rats are to be corrected. Control of rats requires effective cooperation between several Federal agencies and the grantees. Consultation and advice concerning survey methods and community educational and motivational activities will be necessary. Technical assistance by the Environmental Control Administration in the Consumer Protection and Environmental Health Service include advice concerning the use of rodenticides and other killing measures, sanitation procedures, rat proofing, and code enforcement.

In addition to the provision of technical support to the grantees, coordination of the combined program activities of a number of Federal agencies which impinge on the rat control program is essential. Steps to coordinate this program with other appropriate Federal agencies, such as the Department of Housing and Urban Development, are now being taken.

The guidelines for rat control procedures presented by the Environmental Control Administration are used as the basic criteria to determine the acceptability of a proposed program, and the technical review of the applications will be conducted by that Administration. The employment of ghetto residents under these rat control projects is an important additional objective of this program. These projects will continue to receive priority attention in 1970. It is expected that projects will be proposed and funded at approximately a $15 million level.

It has been predicted that in 1970-71 the United States will experience a major rubella epidemic. The real threat of German measles is the danger it poses to the susceptible pregnant woman. Approximately 25 percent of adult women who contract German measles in the first trimester of pregnancy will give birth to children with severe congenital defects. Since the German measles vaccine is not recommended for widespread use in adult women, the large group of preschool and school children who are responsible for spreading the German measles to adults must be immunized.

With the expected licensure of the newly developed German measles vaccine in Spring 1969, an intensive nationwide German measles program has been proposed and would be initiated during the last quarter of 1969. With funds requested in 1969, about 75 grants will be awarded to State and local health departments to initiate German measles immunization activities. This nationwide effort will build upon programs established under the Vaccination Assistance Act. The program will be expanded in 1970. Emphasis will be placed on reaching the groups of children who are primarily responsible for the spread of German measles - those who congregate in schools, day care centers, headstart programs, etc. In addition, high priority will be given to developing the intensive surveillance activities that are necessary to assure the most effective use of the new German measles vaccine. Extensive efforts are being directed toward informing the public and the health professions about the new vaccine, its appropriate use and promoting its acceptance. It is expected that this national program will provide immunization for two million children directly and will promote the immunization of approximately six million additional children in 1969. It is estimated that for 1970 projects totalling about $16 million will be proposed and approved to provide immunization for 5 million children directly and to promote immunization of another 15 million.

Up to 1 percent of the amount appropriated for project grants may be used for evaluation of programs supported by the grants pursuant to section 8(b) of Public Law 90-174.

The allowance of $98,000,000 requested for 1970 would permit the continuation of individual project grants and would allow continued support for those 20 comprehensive health services projects supported in 1969. It would also permit (1) the initial support of comparable comprehensive health service activities in the ghettos of approximately 5 other major cities, (2) continuation of the 13 rat control projects supported in 1969, and (3) the expansion of the nationwide German measles immunization program.

Migrant health program

	1969 estimate		1970 estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Grants	---	$7,200,000	---	$12,000,000	---	+$4,800,000
Direct operations:						
Personnel compensation and benefits	50	602,000	50	612,000	---	+10,000
Other expenses	---	298,000	---	298,000	---	---
Total	50	8,100,000	50	12,910,000	---	+4,810,000

Grants

Projects supported under this activity provide services to migrant agricultural laborers and their families. The purpose of this program is to raise the level of migrants' health to that of the general population. The grants provide for a wide range of direct health services: medical, nursing, and dental care, hospitalization, and sanitation services. The major emphasis of the program is to assure that migrants can eventually be served as part of the comprehensive system of health care in rural communities.

Several examples of Migrant Health projects typify the kinds and extent of services rendered to domestic agricultural migrants. In Texas, the Hidalgo County Health Department operates the largest home base area medical project for 45,800 people. This project provides outpatient medical and dental care, hospitalization, nursing care and health education services, and sanitation services on a year-round basis. In southwest Michigan, the Tri-County (Berrier, Cass, and Van Buren) Associated Health Departments Migrant Health Project annually experiences one of the most acute influxes of migrants in the entire nation. Medical services are provided for a total of 30,000 persons from April to October in three locations: four nights per week at two, and one day a week at one of the family clinics. Forty-four physicians provide medical care including immunization and health education. Nursing care and sanitation services are also provided. Another year-round project is run by the Santa Clara County Medical Society in California, where the excellently planned and high quality medical, nursing, and social services reach as many as three hundred persons a month during seasonal peaks, at clinics run three nights per week.

The increase of $4,800,000 requested in 1970 will enable progress toward the goal of raising the level of migrants' health to that of the general population by: (1) increasing the quality of out-patient care; (2) increasing the number of migrants reached; and (3) increasing the quality and utilization level of inpatient hospital care.

An intensified program of early case-finding, out-of-hospital medical care, and a predischarge planning for post-hospital care will continue in each project area. This increase will permit the establishment of approximately 18 new migrant family health service centers and the expansion of the 255 such centers now in operation. Approximately 130 projects in 38 States and Puerto Rico will be supported in contrast with the total of 120 in 36 States in 1969. The number of migrants living and working for 6 or more months of the year in counties which provide ready access to personal health care is approximately 325,000. This will

be increased in 1970 to 375,000. The total number of patient visits for medical care is expected to grow to 310,000 in 1970 compared to 210,000 in 1969. Dental visits will increase from 28,000 to 40,000. Approximately 150,000 sanitation inspections and follow-up visits will occur in 1970, an increase of 30,000 over the previous year. The inpatient hospital component will provide hospital care for approximately 8,000 patients in 1970 as opposed to 3,600 in 1969. This will be an increase of approximately 21,000 hospital days for a total of 50,000 in 1970.

The community share of the cost of projects amounts to approximately 40% on a national basis. Without this local contribution the scope of the program would be substantially reduced.

Direct Operations

The program provides technical consultation and assistance to migrant health projects and to other organizations which can contribute to the improvement of health services for migrants. Consultation on health matters is available in the areas of medical care, nursing, health education, hospital administration and sanitation. Staff members also provide consultation on statistical reporting, project evaluation, general project administration, involvement of migrants themselves and of other individuals who can contribute to sound project operations, and cooperation with community agencies both public and voluntary.

In 1969 emphasis is being placed on continued cooperation with other Federal agencies that do, or potentially could, provide assistance to migrant families. Such agencies include the Office of Economic Opportunity, the Departments of Labor and Agriculture, and other components of the Department of Health, Education, and Welfare. Outside of Federal agencies, work will continue with church groups, hospital and medical associations and other local organizations concerned about improving service and using resources effectively.

A conference will be held in 1969 to bring together those people providing health services to the migrants in the Mid-Continent area. Such an opportunity to exhange ideas and solutions to problems has proved most valuable at the Eastern and Western Regional Conferences held in 1968. One of the major problems identified was the lack of knowledge by home base personnel about conditions in the distant areas where their migrants work. This resulted in an exchange of personnel between the Puerto Rico home base area and eastern shore projects in Maryland and Virginia.

In 1970, emphasis will be placed on methods of integrating services for migrants into the comprehensive system of health care in rural communities.

Standard-setting and resources development

	1969 estimate		1970 estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits..	457	$ 5,931,100	476	$ 6,166,100	+19	+$235,000
Other expenses..	--	4,386,900	--	5,089,900	--	+703,000
Total.....	457	10,318,000	476	11,256,000	+19	+938,000

The major emphasis of these direct operating programs is toward providing professional and technical assistance to States, communities, providers of health care, medical and health organizations, and other federal units, and in the development and application of health and medical care standards. They conduct evaluations of comprehensive health planning and services programs and are responsible for the review and approval of the "Partnership for Health" grant programs. Included in this activity are the following programs:

Health Care Services

	1969 Estimate	1970 Estimate	Increase
Positions	62	70	+8
Amount	$1,992,000	$2,617,000	+$625,000

The present fragmentation and overlap of services under existing patterns of health care detracts significantly from the quality and continuity of care while adding substantially to its overall cost. At one extreme are those communities with little or no health care resources or with services so fragmented and unwilling to change their specialized focus that complete health care is not possible for the population. At the other extreme are communities with a multiplicity of services available to meet community needs but where excessive individual searching is necessary before the patient can realize comprehensive health care for himself and his family. The lack of organization of health services compounds the problems of the poor, who have little involvement in determining the kinds of services they receive or little understanding of the methods by which these services are rendered.

In the development and support of systems for the delivery of comprehensive health care for individuals and families, priority is given to those regions, communities, and population groups which do not have adequate access to acceptable comprehensive health care. A substantial proportion of staff effort is devoted to providing effective expert backup for Regional Offices as they assist communities in programming project grants for health services authorized under Section 314(e) of the Partnership for Health Legislation and the Migrant Health grant programs.

During 1969 technical assistance is being given to selected rural communities in developing comprehensive health services. Four contract projects to develop model health services systems will enable rural multi-county areas in Texas, Pennsylvania and South Carolina to organize their total resources, identify gaps in service,

establish priorities, and plan remedial programs. Urban activities in 1969 include the exploration of methods of linking health care programs with the total Model Cities' programs. A significant contract project is being developed in which new community development techniques are being employed to link the poor with local facilities and services. Five teams will work in five different communities, each of which is characterized by a different subculture of poor people. Successes in these attempts to effect communication between the consumers and providers will become the basis for expanded and improved technical consultation and assistance throughout the country.

Another planned contract will support a program for improving the pattern of medical care for residents of an urban poverty area through imaginative financing and organization of ambulatory services. This is a cooperative effort involving the Federal government, a university medical complex and local consumer groups. Upon completion of the project, a primary care program for a population of approximately 5 to 10 thousand people will be operational. Plans for the phased expansion of health care programs to accomodate a larger population will be developed. These plans may then serve as guidelines for other communities.

The requested increase of 8 positions and $607,000 will provide staff assistance and contract funds for stimulation of health services projects and development of associated technical assistance capacity. Projects will be located in communities with greatest need and which request assistance. In 1970 concentration will be on the following areas:

Stimulating the development of new comprehensive health care programs

Aid and consultation will be provided to interested groups in communities, in order to bring that community to the point of operating a health center under long-term grant support, supplemented by reimbursement from the Medicare and Medicaid programs. Contract projects would be supported for an average of two years for planning, community organization and development. As a result of the contract assistance, the comprehensive care centers which result from that support will be better planned, and will have stronger community-based support.

Delivery Systems

In some areas, the neighborhood care center concept may not be acceptable to a population or may not be possible to establish because of geographic or other constraints. Alternative approaches often will have to be employed in the organization and delivery of health care, including mobile clinics serving several small rural communities, regional systems of ambulatory nursing care, and new directions for school health programs. In other areas there are systems providing minimum services to the poor. Assistance will be provided to improve and expand certain components of the services to better serve the community.

Development of New Sources for Continuing Project Support

Consultation efforts will be directed at seeking other sources for continuing support of comprehensive health services projects. In large measure, technical assistance will consist in facilitating the development of prepayment plans, the involvement of insurance

companies and other elements of the private sector of the economy, the stimulation of State and local insurance plans, the improvement of local health department budget planning, and the experimentation with the Social Security Administration in reimbursements to community complexes rather than individual institutions.

The increase also includes $18,000 for within grade costs.

Health Planning

	1969 Estimate	1970 Estimate	Increase
Positions	12	18	+6
Amount	$204,000	$387,000	+$183,000

The efforts of Federal, State and local governments to improve the health status of the individual have fallen short, in part due to the lack of a planning process which links health needs to health resources at the various levels of community health organizations. This results in an inability to identify such organizational problems as gaps in health coverage, deficiencies in financing, and rational alternative arrangements for patient care as opposed to our presently fragmented health system and sub-systems. The development of comprehensive health planning agencies at the State and areawide levels provides a focus where planning and analysis can be undertaken. Through the operation of this planning process, more systematic attention can be given to problems, community health goals, relationships, the development of alternative solutions, and to evaluation. One outcome, will be a more integrated use of Federal, State and local resources to improve the health of people.

All of the 56 State and territorial political jurisdictions of the United States have established comprehensive health planning agencies. Ninety-three health areawide planning agencies funded under this appropriation are also in the developmental or early operating stage. The Health Planning program provided direction and assistance in the formation of these agencies through the development of policy guidelines and provision of consultation on organizational problems and on setting up of ongoing programs. In 1970, the health planning agencies will become more fully operational. In response to their needs, the Health Planning program will need to provide additional assistance and consultation on (a) use of comprehensive health planning program structures that have proven effective, (b) identification of organizational problems encountered by health planning agencies and the methods used to solve them, and (c) planning techniques that are currently being used or which could be used by State and areawide health planning agencies. These include information systems, cost-benefit analysis and various types of analytical models. Continual analysis and evaluation of the State and areawide comprehensive health planning agencies will be done in order to identify their program strengths and rate of development and to help recognize their needs for further technical assistance. Group meetings and conferences will be held frequently to maximize the interchange of experience of comprehensive health planning agencies and to encourage the involvement of all health interests in the comprehensive health planning process.

Six additional positions and $183,000 are requested to provide these expanded staff services.

Health Resources Development

	1969 Estimate	1970 Estimate	Increase
Positions	63	63	--
Amount	$1,861,000	$1,880,000	+$19,000

Health resources which can provide quality health care to the population are a necessity for every community--urban or rural. Meeting this need in today's society requires that communities, States and the Federal government attempt a variety of approaches in planning for implementing improvements in the resources, as well as in the system of which they are a part.

A vital method of assuring quality health care resources is the setting and maintaining of standards for delivery of services. Through the Social Security Amendments Titles XVIII and XIX, and through licensure requirements established by States, such standards have been established. However, unless these standards are efficiently and effectively applied, they can be a considerable burden both on providers of care who must abide by them and on those Federal and State agencies which must apply them. The Conference of State Licensure Personnel held in Dallas, Texas in May 1968, made many recommendations affecting State agency programs. As a consequence of this conference ad hoc working committees composed of Federal and State representatives are reviewing ways of effecting greater coordination between programs at the State and Federal level. Their primary areas of concern include training and staffing patterns for State agencies; definitions and model regulations; uniform survey forms and guidelines; and implementation of nursing home administrator licensure standards.

Regional Seminars to examine the survey process and to develop regional plans for its improvement will be completed in 1969. Fifty initial State training workshops for State surveyors designed to improve skills of surveyors of hospitals, long-term care facilities, and home health agencies will be completed in 1970. Special emphasis will be placed on techniques of interviewing,consulting, recording and documentation, including the "why" of the Conditions of Participation under Title XVIII, and the Standards of Title XIX.

The provision of quality care and range of services for patients served by hospitals, long-term care facilities, home health agencies, and other health resources requires more adequate health manpower than is currently available. The program will assist States to prepare for the development of more extensive educational programs to improve the quality of administrators of long-term care facilities as required under P.L. 90-248, Social Security Amendments of 1965. A project is currently under way with the Professional Examination Service of the American Public Health Association to prepare examinations for use by the States in licensing nursing home administrators and for the selection of qualified surveyors by State and local authorities.

Utilizing techniques and methods developed by contract projects (Tennessee Hospital Association, Nebraska State Health Department, Louisiana Department of Hospitals) the program will continue to

promote the implementation of close working relationships between hospitals, nursing homes, home health agencies and other community health resources to meet the specific requirements of Social Security Amendments Titles XVIII and XIX.

More efficient methods of delivering quality health services must be developed and promoted if the demand and need for care are to be met. Multi-specialty family-centered group practice has been identified as an important means of achieving such efficiency through more economical use of personnel and resources, in greater convenience to the consumer, desirable benefits to the doctors, and higher quality of care. During 1969 consultation is being provided to existing and developing group practices both directly and through three contracts with national organizations. This program's consultative resources are strenghtened through its working relationships with the Departments of Housing and Urban Development, Labor, and Commerce, as well as the Office of Education and other elements of the Public Health Service.

Projects are being supported to increase the kinds of potential sponsors for group practices. Community organizers have been placed in Nashville, Tennessee, and Providence, Rhode Island, to assist central labor councils in planning and developing group practices for their constituents. The program is also supporting a contract to assist New York City to establish an Office of Group Practice in its Health Department. This represents a major step in the acceptance of the group practice concept.

In a pilot attempt to educate some of the Nation's future doctors in matters associated with new and improved arrangements of community health resources - The University of Vermont School of Medicine, under contract, is currently developing and implementing a plan in which undergraduate medical students will be taught selected elements of geriatric and community medicine. This will include a 12-week required course in the sophomore year, and a 12-week advanced elective course in the senior year. It is anticipated that this program will have national applicability and will be promoted in other schools of medicine during 1970.

No program increase is requested for this activity. In 1970 the consultation contracts will be continued. The increase includes $19,000 for within grade costs.

Health Insurance and Field Operations

	1969 Estimate	1970 Estimate	Increase
Positions	213	213	--
Amount	$4,240,000	$4,284,000	+$44,000

The responsibility of the Community Health Service for serving as the professional health resource to the Social Security Administration in the Medicare program continues to provide on a national basis a mechanism for defining and applying standards of quality for hospitals, extended care facilities, home health agencies, independent laboratories, out-patient physical therapy services, and

portable X-ray services. The development of health standards does not assure that quality care will be delivered since there must be effective application of standards at the provider level with constant review and revision of standards to continually upgrade the quality of health care. This upgrading of facilities and services, in which the States are partners, has benefited persons of all ages. The Medicare standards are being used nationally as a guide to strengthen and make uniform State licensure statutes and regulations for health facilities, and have had an upgrading effect on voluntary accrediting programs.

Particular emphasis in 1969 is being placed on the development of the State agency staff to assure uniformity in interpretation and application of standards. In collaboration with the Social Security Administration, a revised hospital survey report form and surveyor guidelines for uniform application of hospital standards were prepared and have been distributed for State agency use. Continuing emphasis in 1970 will be on improvement of survey methodology to assure uniformity in the application of Medicare standards for these and other providers.

Another 1969 activity is the conduct of two Medicare studies requested by Congress. One study relates to possible coverage, under Part B of Medicare, of services of additional types of licensed practitioners performing health services in independent practice. The other is a study of methods of establishing the proficiency of health personnel whose services cannot be reimbursed under current Medicare regulations. Staff also has major responsibility for staffing the task force of the Health Insurance Benefit Advisory Council's Committee of Evaluation of the Delivery and Use of Services.

Consultation is being provided to Social Security Administration on questions raised by carriers and others concerning covered services under Medicare, appropriateness of fees, termination of provider status, and other Medicare activities. The emergency services provisions of the Medicare program were strengthened in 1969 with the development and issuance of regulations and revised stringent guidelines. Consultation and direct assistance were provided during 1968 and 1969 to the Medical Services Administration, Social and Rehabilation Services, on the development of regulations for skilled nursing homes under the Medical Assistance Program (Title XIX). A reference document defining the characteristics of a skilled nursing home is being prepared in 1969 with the assistance of an inter-agency committee, to be used as a basis for Title XIX regulations for skilled nursing homes and to provide guidance to States. This cooperative relationship will continue in 1970 as new policy issues arise and as revision of the Medical Assistance Handbook is undertaken. During 1968, a system of program reviews was initiated for the evaluation of State agency performance in carrying out certification responsibilities under the Medicare program. A review team composed of representatives of the Bureau of Health Insurance and the Community Health Service central and regional office staffs conducted reviews in 29 States in 1968, with special attention given to problems related to small, rural hospitals and extended care facilities. In 1969, emphasis in approximately 30 States is being directed towards independent laboratories and home health agency certification activity.

The States conduct survey or resurveys of facilities on an annual basis to determine eligibility for participation in Medicare.

Because of the availability of data from the resurvey process and the resulting finite assessment of deficiencies and also because of their involvement in State agency survey activities, Community Health Services Regional Office staff are able to provide more definitive assistance to State agency personnel and consultation to selected providers. Regional Office personnel frequently are asked by State agencies to provide specialty consultation to providers in States where the State agency staff does not include this particular discipline, e.g., medical records librarian or nutritionist. As an example, in two western States, the Medicare certifications of certain hospitals and extended care facilities are in danger of termination, regional office staff have been working with these facilities and State officials in assisting them to eliminate deficiencies by reassessing their resources and modernizing techniques. Regional office staff are also able to consult with State agency staff as a follow-up to Program Reviews, regarding any apparent weakness or deficiency in State agency operation.

In this area of program coordination also, regional office staff are involved in efforts to have services which are provided through State and other Federal sources, coordinated with Medicare activities to the mutual benefit of both programs. An example of this is the participation of the medical staff of the regional office in the conduct of Title XIX Program Review and Evaluation Project visits wherein various members of the Community Health Service staff join the Medical Services Administration Staff in reviewing State operations in the Title XIX Programs, similar to the Program Review Operation for Title XVIII.

During 1970 these efforts will continue generally at the same level. The Regional offices will continue to support the development of more effective State Agency staffs in order to alleviate both general and specific problems of the survey and certification process. Field staff will emphasize the need for State Agencies to closely evaluate utilization review activities to assist hospitals, Home Health agencies and extended care facilities in improving this function.

Each regional office will support the State Agency by providing professional consultation on a continuing basis, and by conducting utilization review training programs for each State agency during 1970.

No program increase is requested for this activity. The increase covers $44,000 for within grade costs.

Analysis and Evaluation

	1969 Estimate	1970 Estimate	Increase
Positions	35	35	--
Amount	$763,000	$771,000	+$8,000

The 1969 evaluation activities are concentrated on health services funded under both the formula and project grant sections of the Act.

Evaluation Measures

The intent of this new formula grant program was to increase the flexibility of action of State health and mental health officials as they make use of Federal support. Old restrictions along health categorical and associated financial lines have been removed and wherever health needs warranted, State programs were broadened or program support was increased beyond levels previously possible. But one price for the new flexibility has been the extraordinary complication of the evaluation process. State plans and progress reports for physical and mental health services may now describe overall State health plans and activities or they may describe only those aspects which are supported by Federal funds.

While adequate for plan approval and individual reporting purposes, a more structured uniform reporting and evaluation system must be developed so that we can in some reasonable way assess impact on a national basis. During 1969, staff and contract efforts, in cooperation with the Association of State and Territorial Health Officers are being devoted to the development of a meaningful and acceptable national evaluation system for formula grant supported health services.

Another major health service evaluation project for 1969 will be designed to compare the advantages and disadvantages of different health strategies in meeting the problems of central cities. A contract will be developed to measure, for example, the different impacts and advantages of several categorical approaches in comparison with multi-service centers which operate under single direction.

Data Utilization

Supportive of overall planning, analysis and evaluation activities is the Community Profile Data Center Activity of the Community Health Services. From this basè comes the information for Medicare analyses, for National compilations of data on the nature, scope and capacity of all health resources and for the development of community health profiles useful in community analysis and planning. During 1969, the resource inventory will be expanded by inclusion of data on rehabilitation facilities and services, pharmacists, up-dating information on official agency services, emergency health services and others.

A community profile is described as a statistical, narrative and visual description of the community which delineates separately and in combination its social, demographic, geographic and economic attributes. In order to expertly define the economic elements for inclusion, a 1969 contract has been let to the University of Southern California which will undertake an analysis of economic factors which seem pertinent to community profiles.

No program increase is requested for this activity. During 1970, evaluation, analysis and data resource activities will continue at the 1969 level emphasizing continuing acquisition of health resource data and application of findings from 1969 evaluation projects and contracts.

The increase of $8,000 requested covers within grade costs.

Review and Approval

	1969 Estimate	1970 Estimate	Increase
Positions	72	77	+5
Amount	$1,258,000	$1,317,000	+$59,000

The grant-in-aid review and approval activities have increased significantly under the Comprehensive Health legislation because of: (1) the novel nature of both the new planning grants and project grants programs; (2) the mandate upon the program to bring about change in the delivery of health services; and (3) the new interest in involving the consumer of health services in public health decisions.

Responsibility for coordinating the "Partnership for Health" grant programs within each region has been assigned to the Regional Health Directors. Accordingly applications for Section 314(a) and (d) formula grants and for Section (b) and (e) project grants are received, reviewed, and approved or disapproved in the Regional health offices. Because their scope is national in nature, all applications under Section 314(c) are reviewed and rated at headquarters. Final funding decisions for all project grants for health services development (Section 314(e)), in which the priority determinations of the Regional Health Office are related to national priorities and needs, are also made at headquarters.

The quality of projects supported and the benefits-per-dollar appropriated that are realized under this program are directly dependent on the review provided the many applications received. In 1969, well over 1,200 applications will be handled under this program. By 1970, the number of applications will increase to 1,500 annually.

Since the categorical limitations have been removed and the health areas which may receive support are now considerably more inclusive, both the number and the complexity of applications for planning and health services grant support have increased annually.

During 1969 our staff will be able to handle the additional workload generated by the new 1969 rat control and immunization programs, only by working extensive overtime. The continued increase in review and approval workload can only lead to delays in processing and awarding grants funds. In view of the continuing growth in program activity, and particularly considering the increased numbers of applications for areawide health planning grants that are anticipated in 1970, the employment of more grants management personnel becomes critical.

An increase of $59,000 and 5 positions for review and processing of new renewal and continuation grants, is requested to permit a more effective conduct of this activity in 1970. The new positions will be placed in those Regional Offices with the greatest anticipated workload for 1970.

Program Direction and Management Services

	1969 estimate		1970 estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	132	$1,700,900	132	$1,755,900	---	+$55,000
Other expenses	---	428,100	---	428,100	---	---
Total	132	2,129,000	132	2,184,000	---	+55,000

This activity includes the Immediate Office of the Director, Program Planning Office, Regional Program Direction, the Office of Administrative Management, Information Office and the Health Services and Mental Health Administration Regional Office Staff.

The immediate office of the Director is responsible for planning, directing, and administering the broad scope of programs of the Service.

The Program Planning Office leads and coordinates program planning, development of objectives, and identifies program problem areas. It explores and develops methods for interrelating various program activities in order to assure an integrated effort and is responsible for the implementation of the program, planning, budgeting system for the Service.

Regional program direction provides the leadership and expertise in directing and coordinating the broad scope of program responsibilities in the regional offices.

The public information office is responsible for the preparation of articles, releases, publications, speeches, exhibits, and other media to communicate the goals, policies, and accomplishments of the Service.

Administrative management is responsible for the development, coordination, direction, and assessment of management activities and for assuring consideration of management implications in program decisions. It directs those management services provided, such as financial and personnel management, contract management, and other administrative services.

The Regional Health Directors and their immediate staffs are responsible at the regional level, for the direction, coordination, and administrative management of the programs included in the Health Services and Mental Health Administration.

No program increase is requested for this activity.

The increase includes $40,000 to permit full employment of existing positions and $15,000 for within grade costs.

New Positions Requested
Fiscal Year 1970

	Grade		Annual Salary
Health care services			
(4) Public Health Program Specialist.....	GS-13		$57,636
(2) Public Health Program Specialist.....	GS-12		24,348
(2) Clerical Assistant.....	GS-4		10,290
		(8)	92,274
Health planning			
Public Health Program Specialist.....	GS-13		14,409
Public Health Program Specialist.....	GS-12		12,174
Public Health Program Specialist.....	GS-11		10,203
Public Health Program Specialist.....	GS-9		8,462
(2) Clerical Assistant.....	GS-5		11,464
		(6)	56,712
Review and approval			
(5) Public Health Program Specialist.....	GS-9	(5)	42,310
Total new positions, all activities.....		(19)	191,296

MONDAY, MARCH 24, 1969.

REGIONAL MEDICAL PROGRAMS

WITNESSES

DR. STANLEY W. OLSON, DIRECTOR, REGIONAL MEDICAL PROGRAMS SERVICE
DR. DONALD R. CHADWICK, DEPUTY DIRECTOR
DR. WILFRED D. DAVID, ACTING DIRECTOR, DIVISION OF CHRONIC DISEASES
DR. DANIEL HORN, DIRECTOR, NATIONAL CLEARINGHOUSE FOR SMOKING AND HEALTH
CHARLES HILSENROTH, EXECUTIVE OFFICER
DONALD G. RIEDESEL, EXECUTIVE OFFICER, DIVISION OF CHRONIC DISEASES
NICHOLAS G. CAVAROCCHI, FINANCIAL MANAGEMENT OFFICER
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION

[In thousands of dollars]

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	7,954	8,324	8,483
Positions other than permanent	313	416	423
Other personnel compensation	38	37	37
Total personnel compensation	8,305	8,777	8,943
Personnel benefits: Civilian employees	1,025	1,166	1,181
Travel and transportation of persons	745	1,072	1,082
Transportation of things	144	112	112
Rent, communications, and utilities	329	428	428
Printing and reproduction	216	200	200
Other services	11,095	14,641	12,373
Supplies and materials	157	155	156
Equipment	93	165	166
Grants, subsidies, and contributions	43,635	92,365	96,000
Total costs, funded	65,745	119,081	120,641
Change in selected resources	1,994		
Total obligations	67,739	119,081	120,641

PERSONNEL SUMMARY

Total number of permanent positions	930	770	783
Full-time equivalent of other positions	52	70	70
Average number of all employees	856	818	827
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794

See footnotes at end of table.

PROGRAM AND FINANCING

[In thousands of dollars]

	1968 actual	1969 estimate	1970 estimate
Program by activities:			
1. Operational and planning grants	43,635	92,365	96,000
2. Development, assistance, and chronic disease control	20,755	24,865	22,762
3. Program direction and management services	1,355	1,851	1,879
Total program costs, funded [1]	65,745	119,081	120,641
Change in selected resources [2]	1,994		
Total obligations	67,739	119,081	120,641
Financing:			
Comparative transfer from other accounts	−19,415	−21,226	
Unobligated balance available, start of year	−25,900	−36,165	
Unobligated balance available, end of year	36,165		
Unobligated balance lapsing	225	217	
Budget authority (appropriation)	58,814	61,907	120,641
Relation of obligations to outlays:			
Obligations incurred, net	48,324	97,855	120,641
Obligated balance, start of year	26,682	51,373	98,460
Obligated balance, end of year	−51,373	−98,460	−122,622
Adjustments in expired accounts	−3		
Outlays	23,630	50,768	96,479

[1] Includes capital outlay as follows: 1968, $93,000; 1969, $165,000; 1970, $166,000.
[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $600,000; 1968, $2,594,000; 1969, $2,594,000; 1970, $2,594,000.

Mr. FLOOD. The committee will come to order.

We will now hear about the regional medical programs.

Dr. Stanley W. Olson, who is director of the regional medical program services, will be the principal witness.

Do you have any new people on board, Doctor, that we do not know?

Dr. OLSON. Let me introduce, if I may, Dr. Chadwick.

Mr. FLOOD. We know him.

Dr. OLSON. Mr. Cavarocchi, our fiscal officer, and Dr. Wilfred David, who is the acting director of the Division of Chronic Diseases.

Mr. FLOOD. You have a statement here, Doctor. How do you wish to handle it?

Mr. OLSON. If I may, I would like to read it.

BIOLOGICAL SKETCH OF PRINCIPAL WITNESS

Mr. FLOOD. Why did you go to Wheaton?

Dr. OLSON. To be perfectly honest, I went there because the girl that I wanted to marry was going to school there.

Mr. FLOOD. That sounds like a good reason. Did it work?

Dr. OLSON. I did marry her.

Mr. FLOOD. You were with Mayo. You are an internist?

Dr. OLSON. Yes, sir.

Mr. FLOOD. We will place your biographical sketch in the record.

(Dr. Olson's biographical sketch follows:)

REGIONAL MEDICAL PROGRAMS SERVICE

BIOGRAPHICAL SKETCH

Name: Stanley W. Olson, M.D.
Position: Director, Regional Medical Programs Service.
Birthplace and date: Chicago, Ill., February 10, 1914.

Education:

Wheaton College, Wheaton, Ill., B.S. (cum laude), 1934.
University of Illinois College of Medicine, M.D. (magna cum laude), 1938.
Intern, Cook County Hospital, July 1938–January 1940.
Resident, Municipal Contagious Disease Hospital, Chicago, Ill., January–July 1940.
Fellow in Medicine, Mayo Foundation, 1940–43.
University of Minnesota, M.S. in internal medicine, June 1943.
Special Mayo Foundation fellowship, Graduate School of Education, University of Minnesota, for studies in higher education, 1946–47.
Certified by the American Board of Internal Medicine, 1948.

Experience:

Director, Division of Regional Medical Programs, U.S. Public Health Service, August 1968 to present.
Director, Tennessee Mid-South Region Medical Program; professor of medicine, Vanderbilt University; clinical professor of medicine, Meharry Medical College, January 1967–August 1968.
Consultant, Missouri Commission on Higher Education, January 1967–June 1968.
Dean and professor of medicine, Baylor University College of Medicine, Houston, Tex., January 1953–June 1956.
Chairman, Dean's Committee, Veterans' Administration Hospital, Houston, January 1953–June 1956.
Chairman, Medical Board, Ben Taub General Hospital and Jefferson Davis Hospital, Houston, January 1953–June 1966.
Professor of medicine and dean, University of Illinois College of Medicine, and medical director of University of Illinois Research and Education Hospitals, Chicago, Ill., March 1950–December 1952.
Consultant to Board of Trustees, State University of New York, 1949 (on leave to Mayo Foundation).
First assistant to Dr. D. C. Balfour, director, Mayo Foundation, October 1946–October 1947.

Association memberships: Alpha Omega Alpha (honor medical society); Sigma Xi (honor scientific society); diplomate, American Board of Internal Medicine; fellow, American College of Physicians; Chicago Institute of Medicine; Houston Society of Internal Medicine, 1953–62; Houston Philosophical Society, 1953 to date (vice president 1961–62, president 1962–63); Nashville Academy of Medicine; Tennessee Medical Association; American Medical Association; Philosophical Society of Texas, 1965 to date.

Honors and awards:

Honorary L.L.D., 1953; Wheaton College, Wheaton, Ill.
Distinguished Service Award, Wheaton College Alumni Association, 1956.
Outstanding Achievement Award, University of Minnesota, 1964.
Alumnus of the Year, University of Illinois Alumni Association, 1965.

Publications:

Olson, Stanley W., Physician Manpower in Missouri. Report to the Missouri Commission on Higher Education, 1968.
Olson, Stanley W., Changing Patterns of Practice. (Presented at Second Congress on the Socio-Economics of Health Care, American Medical Association, Chicago, Ill., March 22–23, 1968), Group Practice (in press).

GENERAL STATEMENT

Mr. FLOOD. Proceed, doctor.

Dr. OLSON. Mr. Chairman and members of the committee, I welcome this opportunity to appear before you on behalf of the Regional Medical Programs Service. This is a new agency which combines the Division of Regional Medical Programs, and operating elements of what was formerly the National Center for Chronic Disease Control. The combining of these two operating activities will facilitate efforts to improve the quality and availability of health care throughout the country.

The task of improving health care involves three essential steps: The first is the generation of new knowledge by fundamental and clinical research. This important activity is carried out or sponsored by the National Institutes of Health. The next step is to take the results of such research, and develop, test, and evaluate new techniques for use

in the delivery of health care. The development of these techniques has been the mission of the National Center for Chronic Disease Control. The final step is to place in the hands of those who provide health care in the local community the new knowledge and procedures developed as a result of the first two efforts. This is the primary mission of the 55 regional medical programs for heart disease, cancer, stroke and related diseases.

REGIONAL MEDICAL PROGRAM GRANTS

The entire country including Puerto Rico and the Trust Territories is now covered by the 55 regional medical programs. Each region's geographical area of activity has been locally defined. Included as regions are single States, portions of them, combinations of States, or sections of adjacent States.

Thirty-one of the 55 regions awarded planning grants since mid-1966 have now been awarded funds to support their first operational activities developed to meet the specific and unique goals of each program. The focus of regional medical programs is on the needs of patients with heart disease, cancer, stroke, and related diseases. Operational activities are designed to meet those needs through research, continuing education, training, and demonstration projects and by developing better methods for the exchange of scientific knowledge between medical centers and community hospitals, practicing physicians, and other health institutions.

Two examples will illustrate how this is already being done:

In Alaska, the treatment of cancer patients has been improved through the installation of the first super-voltage radiation treatment unit in the entire State. This project has been funded jointly by the Washington-Alaska Regional Medical Program and the local community. Because this treatment facility is now available, patients requiring cancer treatment are spared the 3,000-mile round trip to Seattle for such treatment.

RADIATION TREATMENT FOR CANCER

Mr. FLOOD. What is the nature of that treatment?

Dr. OLSON. This is a supervoltage radiation unit. Ordinarily it is called a cobalt unit. There are other types of high-intensity radiation but the cobalt unit is the most common.

Last year it was reported that there were 300 patients who made that trip to Seattle for treatment at a personal cost of about $1,000 each.

Mr. FLOOD. What is the theory of cobalt treatment, to retard the growth of the tumor? You attack only a tumor with it?

Dr. OLSON. It is used primarily for deep-seated tumors, Mr. Chairman.

Mr. FLOOD. Inoperable? Operable? Which?

Dr. OLSON. Inoperable. It is used in both. It is sometimes used before surgery. Frequently it is used after surgery to pick up any remnants of the cancer that might have spread out into the tissues. In some cases where it is not possible to do surgery because the invasion of the cancer into the tissue is too extensive——

Mr. FLOOD. Is there any fall-out danger from it?

Dr. OLSON. There is danger to the personnel who use it and they have to have extensive shielding to make sure that they are protected.

Mr. FLOOD. What is the nature of the shielding?

Dr. OLSON. Usually the shielding, Mr. Chairman, is——

Dr. FLOOD. More than a rubber apron?

Dr. OLSON. The patient usually is in the room alone and observed via television monitor. The operator is outside a two-foot wall of concrete which absorbs the radiation.

Mr. FLOOD. How does the thing operate, like a rifle? Laser?

Dr. OLSON. I think that your first expression, like a rifle, is right because it is focused precisely at the site of the tumor.

Mr. FLOOD. The average treatment is how many minutes?

Dr. OLSON. This depends on the amount of cobalt in the unit itself. Some have a small amount, others have a relatively larger amount. The amount of cobalt determines the length of the treatment.

Mr. FLOOD. Does it simply retard the growth of the tumor or destroy the tumor?

Dr. OLSON. I think the best way to explain this is as follows: X-rays will affect all cells. With low-voltage treatment the cells at the surface on the skin and just below will absorb a large amount of the radiation. On the other hand, high intensity radiation will go right through the overlying tissue and be absorbed deep within the body where the tumor is.

Mr. FLOOD. How do you know the tumor is there, X-ray?

Dr. OLSON. Yes. One must know approximately where the tumor is by X-ray or by direct palpation. For example, in cancer of the prostate one can do this by direct palpation.

Mr. FLOOD. What is the average cost per treatment?

Dr. OLSON. When I was with Baylor University College of Medicine, we had such a unit. It was not a cobalt unit but it was an accelerator, Van de Graafe accelerator. We used to provide treatment for Veterans' Administration patients and this amounted to about $200 for the treatment.

Mr. FLOOD. You mean one treatment?

Dr. OLSON. No. This was a course of treatment.

Mr. FLOOD. How many treatments in a course?

Dr. OLSON. This depends on the individual but I would think that an average would be five to seven.

Mr. FLOOD. Please proceed with your statement.

Dr. OLSON. In North Carolina, a network of coronary care units has been established in several small communities. The hospitals in the seven most western counties of that State have established intensive coronary care treatment units linked to the Bowman Gray School of Medicine. Special telephone lines transmit vital physiological information including electrocardiograms. This important data can be seen and evaluated by the consulting physicians in the medical center who can use it as a basis for advising the local physician at the patient's bedside.

By July 1, 1969, 45 regions will have become operational and grant funds are needed to provide continuing support for their activities as well as to bringing the remaining 10 regions to initial operational status. Among this latter group are several large urban regions which,

because of their complexity, have required an extended planning period.

DEVELOPMENTAL STUDIES

Direct operations of regional medical programs services support studies to develop, test, and evaluate new methods for health care. They include methods for prevention, detection, treatment, and rehabilitation. Two examples can be given of important activities for which increased appropriations are requested . . .

The first is in the area of smoking and health. We have evidence of a growing public interest and willingness to restrict or discontinue the smoking of cigarettes. The increased program emphasis recommended is designed to continue the favorable downward trend in the consumption of cigarettes and to realize thereby a significant improvement in the health status of the public. An additional $400,000 is requested for this important activity in fiscal year 1970.

A national survey of the nutritional status of the population in 10 selected States has been initiated at the direction of the Congress. The study has provided preliminary evidence that the health of the poor is being adversely affected because their food is inadequate both in quantity and quality. Nutritional deficiencies are being uncovered which affect the normal growth and development of thousands of our children. To insure the completion of the survey already started, an additional $700,000 is requested for this activity in fiscal year 1970. Funds will be used for data analysis, for assistance in planning, for instructing families in improved nutritional practices, and for the conduct of more detailed studies of the adverse health effects of malnutrition.

The appropriation request for the Regional Medical Programs Service totals $120,641,000 an increase of $1,560,000 over the funds available for obligation in 1969, and an increase of $37,508,000 over the 1969 adjusted budget authority.

I shall be happy to answer any questions.

Mr. FLOOD. Does the regional medical health program embrace areas other than heart, cancer, and stroke?

Dr. OLSON. The legislation, Mr. Chairman, includes "and related diseases." The legislative history includes reference to such disease as diabetes, emphysema, respiratory disease, kidney diseases, and vascular diseases that are related to heart disease.

DELAY IN STARTING PROGRAM

Mr. FLOOD. I developed a special interest in this regional medical program. I had in mind establishing a center in Philadelphia with a group of satellites. I borrowed a phrase from the Department of Defense. In our defense contracts, especially in the aircraft industry, we would set up the "mother hen" plant, then a series of satellites around it, subcontractors, and sub-subcontractors, and so on. I had in mind, as we did there, setting one up centered in Philadelphia, a great medical area, and then satellites surrounding that one, including Wilkes-Barre and three or four counties around there which is an area which I am especially concerned about, of course.

Nationwide I had the impression this was slow getting off the ground. What was the trouble?

Dr. OLSON. Mr. Chairman, a totally new approach was involved, one which required the establishment of new organizations. I wonder if I could just describe a bit of the legislative history, as I recall it. The original bill was introduced in the Senate. The title of that bill, as I recall, was "Regional Medical Centers for Heart Disease, Cancer, Stroke, and other Major Diseases." The description that you just gave was an accurate description of what was included in that bill. When it came to the House for hearings, there was considerable testimony to suggest that the establishment of a regional medical center bill was not in the best interest of the health care of the people and, instead, the emphasis was put on programs which would relate the medical centers to the local communities. Denied to the program was any authority for construction. Instead the program was to be developed, in the phrase of the legislation, through "cooperative arrangements." It is in my opinion more complex and difficult to develop regional medical programs through cooperative arrangements than it would have been to develop regional medical centers. It is on the basis of cooperative arrangements that the program has been developed.

Mr. FLOOD. And delayed?

Dr. OLSON. There has been more delay than many of us would have liked.

Mr. FLOOD. You think the delay could be attributed to the fact that you are doing business with a lot of prima donnas in medical schools, hospitals, and other institutions?

Dr. OLSON. That might be a fair assumption, having been a dean of a medical school for——

Mr. FLOOD. Then you know whereof I speak.

Dr. OLSON. That comes pretty close to home, Mr. Chairman.

I think that the situation here is this: Most of the regional medical programs have been sponsored largely by the medical centers and the medical schools; 35 out of the 55 sponsors. Five are sponsored by State medical societies and 15 by nonprofit organizations.

Mr. FLOOD. Do you fellows in the field clearly realize that Congress never did intend this to be strictly a show for doctors and administrators and technicians? We meant this to be across the board in the community. It was to enlist the interest and assistance and action and cooperation not just of medical people but of all levels of the community, volunteers, professionals, otherwise.

Dr. OLSON. Yes, this is very clearly our understanding of the regional medical programs.

As you may note from the curriculum vitae, before I came to the Public Health Service I was the director of the Tennessee mid-south program sponsored by Vanderbilt University and Meharry Medical College. The chairman of our regional advisory group was Mr. Tom Kennedy, who was a businessman and very active in the areawide health planning movement as well as very active in the American Heart Association. Certainly the experience that we had in Tennessee was one of great cooperation from lay people as well as from professionals.

Mr. FLOOD. I am glad to hear that. I hope that that would not be lost sight of. I do not know, but I am not clear that that is understood

in the provinces as clearly as you say it is in the Tennessee operation. It may be, but I would like to be reassured that it is that kind of a thing, embracing leading elements of the community identified with these programs and interests rather than just the medical and technical people alone.

Dr. OLSON. We recognize the importance and the significance of this working with all elements within individual regions. There are some differences of opinion but I think that in the main we certainly would substantiate the view that you have outlined.

NUMBER OF REGIONAL MEDICAL PROGRAMS

Mr. FLOOD. There are 31 regional medical programs now in operation. You expect 14 more to become operational by the end of the year. There will be 10 more in 1970?

Dr. OLSON. The latest estimate is that 12 more will become operational by the end of the year and 12 more in 1970.

Mr. FLOOD. That is 55?

Dr. OLSON. Yes, sir.

Mr. FLOOD. Is that the total number that you plan for the entire country as a whole? Is that it? Why not 44 or 66?

Dr. OLSON. We had 54, Mr. Chairman, up until the last meeting of the National Advisory Council. A group in Nassau and Suffolk Counties in Long Island, part of the metropolitan New York regional medical program, applied for and was granted permission to set up a separate program, using the new medical center that is being established at Stoney Brook on Long Island as part of the State University of New York. This is an example of how, under proper circumstances, a region can split off when it is clearly in the public interest to do so.

Mr. FLOOD. I do not think the public knows about these things at all. I do not think the average guy on the average street has the faintest idea what we are talking about or that it even exists. I wonder why that is after several years?

Dr. OLSON. I presume, Mr. Chairman, that the average person is not concerned with it except in the broadest sense.

Mr. FLOOD. Until he needs it?

Dr. OLSON. He sees descriptions of projects that are carried out. For example, Dr. Ross from our cancer program went to Anchorage at the time of the dedication of the supervoltage unit that I just referred to, and he reported that there was a very substantial effort to disseminate information about it so the people in the State of Alaska would know that it had been developed in cooperation with regional medical porgrams.

Mr. FLOOD. I hope that that is true nationwide. I have a miserable sensation it is not, for some reason.

Dr. OLSON. This may be. I think that clearly the programs need to do this because it is for the benefit of the patient. I think they need to understand that.

Mr. FLOOD. Just so that you know, you have a very, very friendly subcommittee on this subject.

Dr. OLSON. Thank you, sir.

CONTINUATION COSTS

Mr. FLOOD. You are asking for $96 million in 1970 to support these regional programs. You say $92 million is needed to meet what you call continuation commitments. What is the nature of these continuation commitments? That is not a very medical term, it is bureaucratic.

Dr. OLSON. Yes, sir. When we make a grant or award to a region, it is in support of—first of all—its planning activities which include the acquisition of information about the region, establishing relationships with the hospitals, physicians, and other health agencies. This planning process is a continuous one. If we are to sustain the progress that is being made in improving the care of patients with heart disease, cancer, and stroke, this needs to be a continuing effort.

In addition to that, when a region becomes operational, then the region requests funds for specific projects which are usually of 2 or 3 years duration. In order to do this and have some assurance that the project can be completed, the National Advisory Council may recommend continuation awards subject to congressional appropriation of the funds.

Mr. FLOOD. You would not like to see in the average middle-sized city, because of the domination of one personality—maybe in the medical association, dean of a medical school, someone like that—you would not like the idea of one hospital taking over the whole show; that would destroy it, would it not? We would not like one institution to just take over the whole thing.

Dr. OLSON. No, sir. I think if that were the case, it clearly would not be in the spirit of regional medical programs.

Mr. FLOOD. Certainly not.

How long is this commitment for support? How many years?

Dr. OLSON. Generally the applications which come in request 3 years of continuation support. Sometimes 3 years are recommended, sometimes only 2, and occasionally only 1.

Mr. FLOOD. Three seems to be a target, is it?

Dr. OLSON. Three, I would think, is the average recommended by the Council.

Mr. FLOOD. What will be the amount of the continuation commitment if we give you this $96 million now?

Dr. OLSON. My guess, sir, would be that we would try to spend these funds to bring the remaining regions into an operational status. We believe that the 12 regions that will not have been so designated by the end of this fiscal year will surely become so in the next fiscal year. The likelihood then would be that the continuation requirements would be at the level of $96 million.

ULTIMATE COST OF THE PROGRAM

Mr. FLOOD. Off the top of your head, if you have talked about it, what do you see as the ultimate total dollar level of the regional medical programs, if and when they are fully operational?

Dr. OLSON. We certainly have talked about that and talked about it a good deal. As you have noted, I have been with the program only

since August 1968, and at that time I reviewed the discussions which had gone on prior to that time in relation to the question you have raised. It was estimated at that time that the requirement for optimal operation of regional medical programs would be of the order of $400 million to $450 million. We have recognized that it may take some time before we can increase the amount of money available for the program to anything like that amount. We feel that with the $96 million we can certainly maintain the program for the next year.

As we get more experience with the regional medical programs we may be able to give a better definition of the future amounts needed. The original amounts were estimated.

Mr. FLOOD. This thing is going to work; we are going to really have 55 regional medical programs?

Dr. OLSON. Yes, sir. This is our clear intention.

DESCRIPTION OF BASIC PROGRAM

Mr. FLOOD. At this point in the record suppose, in three or four paragraphs, you tell us just what you do at the mother hen center and how you spread out to your satellites. What service do you render them? What do you intend to render? When this thing is fully operational and going full blast, 55 centers all over the country, what does the mother hen radiate out from her center to the provinces?

Dr. OLSON. Yes, sir.

(The information follows:)

Regional medical programs and the regionalization of health frequently are described in terms of the medical center as the hub with spokes radiating out to the rim or community and its local hospitals, physicians and other health resources. If one accepts that "model" it is important to recognize that regional medical programs are concerned with the whole, the entire wheel if you will, and not solely or even primarily the hub or medical center. For while the medical center is both a reservoir of knowledge and skills and the source of new and improved patient care techniques, most patients are treated in their community hospitals by local physicians.

One might better and with greater fidelity to the real world, view the individual patient as the hub and the hospital and the physicians and other health resources in his community as the connecting spokes with the rim or medical center. In terms of this "model", regional medical programs are seeking to improve the quality of care the patient receives in the community through his hospital and physician; and to encourage centers to assume responsibility together with his hospital and physician for the quality of care every patient in a region receives and not just those it directly treats.

Thus, regional medical programs support the outreach by the medical center to physicians, and nurses and other health personnel in the community through continuing education. For example, some medical schools have established facilities for the production and distribution of tapes and films. In other places there are television broadcasts to community hospitals, and personnel from the medical center often go to local hospitals to conduct courses and provide consultation. In addition, the medical school functions as a center where both physician and allied health personnel can return for short-term study and practical clinical experience.

Regional medical programs support a variety of other activities which seek to relate the medical center to the community. Computer linkages between medical centers and community hospitals have been established to aid in and upgrade diagnosis and treatment. Telephone linkage facilitates the reading of electrocardiograms at the medical center by skilled cardiologists with the results transmitted back to the practicing physicians in the local area. Experi-

mental programs are underway to develop and test centralized automated record keeping, interconnected library services and multiphasic screening. Through such technology RMP helps to make scarce resources not present in the community or which smaller hospitals would be unable to support by themselves more broadly available.

The medical center also serves as a referral center to which complex cases which require specialized facilities and highly trained personnel may be sent. Patients requiring these services go to the medical center for treatment and return to their community for follow-up care. Regional medical programs have supported limited patient care demonstrations in the medical centers in appropriate circumstances. More often efforts are made to upgrade the capabilities of community hospitals with back-up by the medical center so that the patient may be served as close to home as possible.

The involvement of the medical center in regional medical programs is only part of the story. In addition to these two-way relationships between the medical center and the community, regional medical programs encourage interaction and coordination among providers of care at the local level. For example, projects are supported to improve services in blood banks, long-term care facilities, laboratory services and rehabilitation units. In this way regional medical programs is fostering decentralization of many services and facilities that previously were not available or adequate at the community level.

All these activities are designed to improve the quality of care the patient receives. They also are aimed at enhancing the capacity for health care in the region and its communities by encouraging efficient utilization of resources and avoiding expensive duplication. This requires the maintenance of the regional planning process which RMP has established and in which practicing physicians, community hospitals, and the public as well as the medical center are active and equal participants.

Dr. OLSON. I would anticipate, Mr. Chairman, that when the program has become fully operational, we would have identified within the regions the major intermediate-sized communities and hospitals and have established firm relationships between the medical center and those intermediate-sized institutions to make sure that the facilities for the diagnoses and treatment of the patients with heart disease, cancer, and stroke are fully modern, and that the knowledge to carry out these advanced procedures is available to the members of the medical staffs.

Mr. FLOOD. Do you have in mind intensive-care units?

Dr. OLSON. Yes, sir. Intensive-care units, such as for coronary care. We are beginning to get some experience with intensive-care units for stroke. In the field of radiation therapy, to which I alluded earlier there are certainly services which the medical center can provide. These have to do with advice on radiation physics. Also in some instances computer technology can assist the local doctor in improving his radiation therapy.

Mr. FLOOD. Do you have electronics hardware at the center radiating into the provinces to these other hospitals? Will they have receiving sets to take advantage of this?

Dr. OLSON. We are working on a number of these. If they are successful other regions will want to adopt them.

Mr. FLOOD. Do you arrange, if and when necessary in the opinion of the attending physician, for care and treatment in the large centers?

Dr. OLSON. This comes under the general heading of what we would call continuing education. We believe that the physicians in community hospitals ought to be thoroughly familiar with what the facilities of the medical center are so that when they believe it is necessary to refer a patient they can do so promptly.

FUTURE FUNDING REQUIREMENTS

Mr. FLOOD. Is there a possibility that—that often happens around this town; I have seen it happen in many areas—we are building up appetites or false hopes for Federal funds which we would never be able to satisfy? We are not creating a credibility gap, are we?

Dr. OLSON. I would put it this way: During the first 3½ years now of regional medical programs, we have created a substantial expectation—not in the minds of the public as such—but in the minds of——

Mr. FLOOD. I am not speaking of the public now.

Dr. OLSON. In the minds of the leaders in the health profession, lay people who have worked very intensively on task forces, and on regional advisory groups, that the program would be able to support specific efforts to improve care. If there is a credibility gap, I would judge that it would arise primarily from failure to carry through with the program.

I understand that there are not unlimited funds. On the other hand, this is a very major program that covers the entire country. There are 55 regions and the amounts of funds that are requested, I think, are the minimal amounts necessary to maintain critical momentum.

Mr. FLOOD. There are no horizons in our opinion as to what can be done with the program. It is just a question of fitting it into that Federal pie, the thing that you see here in the papers when the budget comes up every year. I repeat, there are no horizons, no limits to what can be done, we think. But the rule of reason unfortunately must be applied here on the dollar end of it.

Dr. OLSON. I might make this addition: Clearly implicit in the discussions with the representatives of regions with respect to projects is that the projects are not to be funded on a continuing basis. The projects are designed to demonstrate what can be done, their value to patient care. Then if the demonstration is successful we would expect that the usual health care financing mechanisms would take over.

The illustration of the intensive coronary care unit is a very good one. In other words, if a hospital establishes such a unit, we would expect Blue Cross or other third-party payers to reimburse the hospital for the special kinds of services provided.

SMOKING AND HEALTH

Mr. FLOOD. You are asking for $400,000 for the antismoking program. What are you going to do with that money?

Dr. OLSON. The increase in the smoking and health program is designed to extend the activities to study the behavior of people who smoke, and who would like to stop smoking. We are particularly interested in the efforts at the level of the high school to persuade young people not to take up smoking.

Mr. FLOOD. What evidence is there that your program has been in any way effective, insofar as your activities up to date are concerned, in discouraging smoking among young people? What evidence? What is exhibit A?

Dr. OLSON. We have a number of studies. I think perhaps the most significant one is in San Diego which is a communitywide effort involving multiple community agencies working with the students in

the high schools. The evidence we have is that this is effective. Nationwide, as you know, there is a small turndown in the consumption of cigarettes. It is hard to tell whether it is due specifically to this program but this program is certainly the major one which is trying to organize this effort.

Mr. FLOOD. Could there be such a thing as a cigarette which did not contribute to disease?

Dr. OLSON. There is a good deal of work that is going on in this area. The filter, of course, does remove some of the tar and nicotine, but to date we have not found a completely safe cigarette. Clearly, if we could——

Mr. FLOOD. If there was such a thing ever created, you would not be against it because it is a cigarette?

Dr. OLSON. Then there would be no problem.

Mr. FLOOD. Do you use any of this money for these TV commercials on antismoking?

Dr. OLSON. Yes. We have small contracts to produce spot announcements and some of these have also been supported through the American Heart Association and American Cancer Society.

Mr. FLOOD. Could you have the record show the sum total of your contracts for commercial TV?

Dr. OLSON. Yes, sir.

(The information follows:)

The National Clearinghouse for Smoking and Health has spent $51,083 for commercial TV.

NUTRITION

Mr. FLOOD. Suppose you elaborate a little bit on what you are doing in the field of nutrition. There is quite a press on this. This tragedy in Biafra has contributed to it. Despite the protestations of local politicians, we have hunger in America and not just in the West Virginia hills. It is tucked away all over the place. A shocking amount of malnutrition, if you fellows know what you are talking about. You are getting great news media attention on, as you say, the two phases of outright hunger and malnutrition. What are you doing in this field in the current year? What are you going to do with the $950,000 you are asking for next year?

Dr. OLSON. You will recall, Mr. Chairman, that the Congress directed that surveys be made in 10 representative States. The initial contracts were made with five States in fiscal 1968 and an additional five contracts are being made in fiscal year 1969. The amount requested is to complete those surveys by analyzing and evaluating the data.

Mr. FLOOD. Because of classical States rights and State pride and parochialism, and what not, they may prefer to say these things do not exist, and even if it does it will soon go away.

On these State contracts, can these State people be depended upon to execute them?

Dr. OLSON. In establishing these contracts, Mr. Chairman, we work through the States. In other words, it was the State health departments in most instances that actually carried on the survey. Our role was to provide the funds, provide technical advice, to get certain types of X-ray films, get certain laboratory studies done in central laboratories, but the surveys were done by the States. It was locally deter-

mined and we feel that they have done a good job in trying to uncover actual facts.

Mr. FLOOD. We know about the tub-thumping of the political and social leaders; but the States are bona fide in their intentions under the contracts of executing the programs?

Dr. OLSON. Yes, sir. I think this has been the experience that we have had from all of the States.

UNOBLIGATED BALANCES

Mr. FLOOD. You have an unobligated balance—this is one of our pet hates here—of $36,165,000 at the end of fiscal year 1968. That is carried forward to 1969. You estimate no balance at the end of 1969. That is what you thought when you gave birth to this budget. Is that still a good estimate?

Dr. OLSON. I think that I have some data which would be of interest to you.

We have been attempting to conserve the funds because we knew that regions were coming in for grant requests at different times during the year.

Mr. FLOOD. You had a problem there?

Dr. OLSON. It was not fair to allocate all of the funds at the beginning of the year and have nothing left for those that came in at the end.

As of this time we have $14 million in grant requests that have been recommended by the National Advisory Council which have not yet been paid. We have applications which will be reviewed at the May 1969, meeting of the National Advisory Council. Based upon previous experience with the way the Council reduces requests, we have estimated that approximately $11 million in applications will be unfunded in addition to that, so that unless——

Mr. FLOOD. In addition?

Dr. OLSON. In addition.

Mr. FLOOD. To what?

Dr. OLSON. The $14 million that we already have.

ADVISORY COUNCIL

Mr. FLOOD. What is this Council? Who creates this Council?

Dr. OLSON. This is a council, Mr. Chairman, very much like the advisory councils of the National Institutes of Health. It is created by law.

Mr. FLOOD. Who names these people?

Dr. OLSON. The members are recommended by the Administrator of the Health Service, Mental Health Administration, and appointed by the Secretary.

Mr. FLOOD. Put in the record at this point the names and addresses of the members of this Council and a line about who they are.

Dr. OLSON. Yes, sir.

(The information follows:)

NATIONAL ADVISORY COUNCIL ON REGIONAL MEDICAL PROGRAMS

Chairman: Joseph T. English, M.D., administrator, Health Services and Mental Health Administration, Bethesda, Md.

*Herman R. Branson, Ph. D., president, Central State University, Wilberforce, Ohio.
Michael J. Brennan, M.D., president, Michigan Cancer Foundation, professor of Medicine, Wayne State University, Detroit, Mich.
*Bland D. Cannon, M.D., Division of Neurosurgery, University of Tennessee College of Medicine, Memphis, Tenn.
Edwin L. Crosby, M.D., director, American Hospital Association, Chicago, Ill.
*Anthony R. Curreri, M.D., professor and head, Department of Surgery, University of Wisconsin, Madison, Wis.
Michael E. Debakey, M.D., president and chief executive officer, Baylor College of Medicine, professor and chairman, Department of Surgery, College of Medicine, Houston, Tex.
Bruce W. Everist, M.D., chief of pediatrics, Green Clinic, Ruston, La.
John R. Hogness, M.D., dean, School of Medicine, University of Washington, Seattle, Wash.
*Florence S. Mahoney, 3600 Prospect Avenue, NW., Washington, D.C.
Clark H. Millikan, M.D., consultant in neurology, Mayo Clinic, Rochester, Minn.
Edmund D. Pellegrino, M.D., vice president for the Health Sciences and director of the Center, State University of New York, Stony Brook, N.Y.
Alfred M. Popma, M.D., regional director, Regional Medical Program, Boise, Idaho.
*Russell B. Roth, M.D., vice speaker of the House of Delegates of the American Medical Association, Erie, Pa.
Mack I. Shanholtz, M.D., state health commissioner, State Department of Health, Richmond, Va.
Curtis Treen, United Rubber, Cork, Linoleum, and Plastic Workers of America, director, Pension and Insurance Department, Akron, Ohio.
Florence Wyckoff, vice president, California State Board of Public Health, Watsonville, Calif.

Mr. FLOOD. You estimate the total obligation for 1969 at $119 million. How much did you obligate during the first half of 1969? How much can you pin down for the first half of 1969?

Mr. CAVAROCCHI. We have obligated approximately $24 million for the first 6 months and approximately $39 million through February 28, 1969.

ADDITIONAL POSITIONS REQUESTED

Mr. FLOOD. On page 149 you indicate that not one of your nine program activities is budgeted for any increase in personnel. But for what you call program direction and management services you are asking for 13 jobs. You better have something convincing to sell in that package.

Dr. OLSON. Mr. Chairman, I think the explanation for the increase in these 13 positions in that particular category is this: Of the 13, we want to put seven in the grants review division because of the tremendous increase in the number of applications we must process. We need two in the area of communications and information. We need two in program assistance and two in administration.

DETERMINING PRIORITIES

Mr. FLOOD. Mr. Michel?

Mr. MICHEL. Thank you, Mr. Chairman.

Doctor, you cite as one of these examples the 300 patients from Alaska who don't have to make the trip to Seattle and thereby don't incur the expenditure of approximately $1,000 each for a round trip, let alone what would be involved in the treatment.

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* New members whose official participation will begin with the May 1969 meeting.

I am happy for those 300 patients and those additional that will benefit by this. But the thought occurs to me—the question that comes to my mind is, how many areas and communities are there where there would be 3,000 patients who could be treated by the same mechanism that we have not gotten to?

What I am trying to find out is, do we have any system of priorities here? Could we go to where the "mostest" are first, or do we just from the standpoint of satisfying ourselves for geographic purposes spend 10 times as much per person on a couple of projects rather than going to where most of the people are and treat them, and get the best average treatment cost among many, many patients that need this kind of treatment?

Dr. OLSON. Mr. Michel, I would answer your question in this way: The local regions, the 55 regions have been delegated the authority to determine what their own priorities are; in other words, the priority in the Washington-Alaska region may be quite different from the kind of priority locally determined in Illinois or Tennessee.

Mr. MICHEL. Are there going to be any more than these 55 regions?

Dr. OLSON. This we cannot as yet determine. We have had one region added this year. It was separated from the metropolitan New York region. It includes the Nassau and Suffolk Counties of Long Island.

Mr. MICHEL. As you get along further in this program, conceivably you are going to have additional regions?

Dr. OLSON. We may have additional regions. It is a little early to determine. For example, the California regional medical program covers the State of California, and is a region with 20 million people. That region is divided into eight areas, and these areas have two and a half million people each, which is the size of a good many complete regions. The California representatives felt there were advantages to keeping these areas within a single program to coordinate the work of the hospital associations, medical associations, and health departments.

Conceivably, they might want to make eight regions, but at the moment they are persuaded they ought to stay together.

Mr. MICHEL. You speak of the equipment and facilities here in this example in Alaska. What is the capacity of that particular facility now? How many patients would they be treating with that outlay of cash and money for equipment and facility? What is the maximum they could be treating?

Dr. OLSON. I wonder if I could make a comment about the 300? That is the number that went to Seattle. The number that could be treated in the cobalt unit in Anchorage, I would judge, would be double that number.

I am reasonably sure the unit could treat 500 patients in a year. Conceivably, they could treat more.

Mr. MICHEL. Obviously there are going to be some of these regions where you cannot come near filling the need. In other words, you would have the capacity, if it is a similar kind of facility and equipment involved, of 500, but there might be twice that many or three or four times as many in an area who need it, but cannot get it.

Dr. OLSON. These units are widespread throughout the country. In many sections of the country the complaint is that there are too many cobalt units, more cobalt units than can be staffed by thoroughly

qualified radiation therapists. Many of the units do not have the scientific backup of radiation physics needed. The problem is not one of distribution. Rather, it is the matter of making sure that those units are operating effectively.

SMOKING AND USE OF NARCOTICS

Mr. MICHEL. The chairman asked you several questions with respect to your interest and your activity in the cigarette business. I am kind of surprised to see you are getting in that act, but that prompts the question. What are you then doing about narcotics?

Dr. OLSON. The field of narcotics is not one of the programs for which we have responsibility.

Mr. MICHEL. Why would it not be if cigarettes are part of your responsibility? How do you separate the two?

Dr. OLSON. I think probably this is an administrative decision and a historical one. You will recall that in the opening statement I made reference to the fact that the regional medical program service was created by joining the division of regional medical programs and the National Center for Chronic Disease Control. The National Clearinghouse for Smoking and Health was a part of the National Center for Chronic Disease Control. The program for narcotic addiction is in the National Institute of Mental Health.

Mr. MICHEL. What is the danger of narcotic addiction and the use of them by youth?

Dr. OLSON. I think it is a very serious problem.

NUTRITION SURVEYS

Mr. MICHEL. Have we any place in the record the 10 States that have been selected in this national survey of nutritional status of the population? What are the 10 States in which these activities are going on?

I think you divided them, five in 1969 and five in 1970. What are the five in 1969?

Dr. OLSON. The ones surveyed in 1969 were Texas, Louisiana, and New York. New York has one for New York State, and one for New York City, Kentucky and Michigan are the remaining States. The contracts we expect to let are for West Virginia, California, Washington, South Carolina, and Massachusetts.

Mr. MICHEL. And let me get clear in my mind, these are contracts with the States?

Dr. OLSON. Yes, sir.

Mr. MICHEL. Do you suppose the State is going to level with you and tell you if they have been deficient in not seeing that their welfare agencies have been providing the proper kind of food and diet for these people?

Dr. OLSON. The contracts are generally made with the State department of health, or in some instances with a university in the State. The experience we have had up to the present time is that these surveys have been carried out in a very objective manner. Our staff participates in supervising the contracts. We do, as indicated before, certain of the examinations centrally so that the complex determinations

are done in the best laboratory. We believe the findings up to the present time are as objective as we had expected they would be.

Mr. MICHEL. Do they have any guidelines in conducting this survey? If we had a survey out in Illinois, would they be inquiring whether my kids were getting the right kind of nutritional diet?

Dr. OLSON. The technique used, Mr. Michel, is to survey districts from the lowest 20 percent of the economic areas of the State, and I presume that if you lived in one of those areas, and sometimes there is a range of economic status in these areas, the sampling technique would and does take in the upper income as well as the lower.

Mr. MICHEL. Up to this point it would seem to be a presumption upon the part of everybody that because you are in a certain income level, therefore you are going to suffer from a lack of a balanced diet and getting the nutritional requirements you need.

As a matter of fact, in some affluent homes, I will bet you dollars to doughnuts it could be found some of the kids are suffering from the same malady simply because of the lack of supervision of what they are eating.

Dr. OLSON. This is what we have found. We have found instances of this kind. The percentage is smaller, but there are clearly instances of this nature.

Mr. MICHEL. None of the money going into your shop in this area is going to be for telling us what a nutritious diet is, is it? We know that already, do we not? We have been anteing up money on that Agriculture Subcommittee for I do not know how many years on what was a nutritious diet and we have been publishing I don't know how many booklets every year on what you should and should not eat, what the best buys are. That is something we have been doing for 25 years or more. It did not take a few politicians popping off about the problem to get you people stirred up in this thing to finally decide what a nutritious diet is.

Dr. ENGLISH. If I could make one comment.

Mr. MICHEL. I would like to have it because as the chairman indicated, everybody is in the act and we are talking about some elementary things that if we did not know them 50 years ago we should have thrown in the sponge.

Dr. ENGLISH. I think yours is an important point which has been a part of the public interest in this problem as well. When the first group of physicians went to a certain area of the country and reported findings like rickets, kwashiorkor, severe anemia in children based on malnutrition, it was difficult for almost everyone to believe, and that is why the Congress mandated the surveys that have been done under Dr. Olson's direction: To insure the proper scientific approach to this problem. The States have been most cooperative in this effort.

I think the findings themselves indicate the cooperative relationship with the States.

One thing the Department has reported is that for a family of four it takes a minimum of $100 a month to provide an adequate diet in most parts of the country. There are a large number of people whose total income is only $1,200 a year. When that is the case, you can see how food would be one of the things that would be left out of the budgeting one can do with that level of income. So we are beginning to understand how in some parts of the country you could have this degree of malnutrition.

To answer your question, I think we do know what is an adequate diet, but we are learning some of the problems many people have in achieving that level of diet; the fact that many of the food distribution programs like the food stamp program and surplus commodity program do have breakdowns because of certain local difficulties. Let me cite one example I saw myself, where a surplus commodity storage house might be very, very far away for many of the people who would need assistance from surplus commodities and who had no means of transportation to get to it.

I think it is that kind of problem that is being discovered and other sources of funds are necessary to get at the heart of this problem. I think we know what the adequate diet is now, but it is a question of how to get this diet to the people.

NEW REGIONAL MEDICAL PROGRAMS

Mr. MICHEL. There is an item here of $3,635,000 increase to support three to five new operational programs. Have we had spelled out in the record what these are specifically?

Dr. OLSON. Those three to five new programs, Mr. Michel, will come from the group of 12 regions which are not likely to attain operational status by June 30, 1969. We know which regions those are. We keep in touch with them, and we fully expect they will make application for operational activities during fiscal year 1970. If you would like it for the record, I could list these regions for you.

Mr. MICHEL. Will you do that?

(The information follows:)

The following 12 regions which will make application for operational activities during fiscal year 1970 are:

(1) Arizona.
(2) Illinois.
(3) Louisiana.
(4) Mississippi.
(5) Nebraska-South Dakota.
(6) Nassau-Suffolk (New York).
(7) North Dakota.
(8) Northeastern Ohio (Cleveland).
(9) New York Metropolitan (New York City).
(10) Puerto Rico.
(11) Virginia.
(12) West Virginia.

Mr. MICHEL. I think that is all, Mr. Chairman.

Mr. FLOOD. Mr. Natcher?

UNOBLIGATED BALANCE

Mr. NATCHER. Dr. Olson, our chairman asked you a number of questions, and two of the questions he asked you I did not quite understand your answers.

Mr. Chairman, with your permission, I would like to reask these two questions.

Dr. Olson, you have an unobligated balance of $36,165,000 at the end of fiscal year 1968 that carried forward to 1969, but you estimate no balance at the end of 1969. This is what you thought when you made up the budget. Is that still realistic?

In answering that, Dr. Olson, I want you to tell the committee why it was that you only obligated half of your money apparently and you had unobligated a balance of $36,165,000. Dr. Olson, explain that in such a way that I can understand it if you will, please.

Dr. OLSON. Yes, sir.

If we go back in the history of the development of the regional medical programs, Mr. Natcher, it is evident that the majority of the planning grants were made from the period of July 1966 to June of 1968. By June of 1968, all of the 54 regions at that time had planning grants. They have used the planning grants to survey the needs of the region, to establish relationships with the various health institutions in the region, and to decide needs in the area of heart disease, cancer, stroke, and related diseases, and then to make application for funding operational activities.

As of July 1968, we began to get a veritable flood of applications from the regions for funds to move from planning to operational status. The amounts needed for planning were relatively small in comparison with the amounts needed for operational activities. We have on hand at the present time a substantial number of grant applications that have been recommended by the National Advisory Council but which up to this time have not been awarded. We expect that by the end of 1969, even if we awarded the full $92 million, there will still be an excess of $13 million in approved applications that we could not award because of lack of funds. This is the year in which we have shifted from an excess of funds to a shortage of funds.

Mr. NATCHER. Now, Doctor, you estimated the total obligation for 1969 at $119 million. How much did you actually obligate during the first half of 1969?

Dr. OLSON. Do we have that?

Mr. CAVAROCCHI. We have obligated approximately $24 million during the first 6 months of the year.

Mr. NATCHER. So you only obligated then approximately one-quarter. Is that right?

Dr. OLSON. The $24 million is less than a quarter.

Mr. NATCHER. A little less than a quarter. Now here in your justifications, Dr. Olson, on page 148 you show an unobligated balance brought forward of $36,165,000 into the fiscal year 1969. That is correct, is it not?

Dr. OLSON. Yes, sir.

Mr. NATCHER. You brought that forward into 1969?

Dr. OLSON. Yes.

Mr. NATCHER. Together with your transfers, you take the $36,165,000 away from the $119,081,000; is that correct? You deduct that, is that correct?

Dr. OLSON. I am not sure I——

Mr. NATCHER. I am just going to get you down to $82,916,000. Turn to your justifications there, page 148.

Dr. OLSON. Right.

Mr. NATCHER. Do you see those figures there?

Dr. OLSON. Yes, sir.

Mr. NATCHER. "Unobligated balance brought forward," $36,165,000. Total available for obligation $119,081,000. Do you not have to sub-

tract that $36,165,000 from your $119,081,000 to give you the $82,916,000 that was actually appropriated for 1969, Doctor.

Dr. OLSON. I will have to depend on my fiscal experts here——

Mr. NATCHER. Doctor, they have left you. They are being real mum.

Dr. OLSON. We have 2-year authorizations in this program, and as such, the $36 million is available for obligation through the present fiscal year.

Mr. NATCHER. In other words, Doctor, I am definitely of the opinion that you really jumped this up $35 or $40 million. Go ahead and explain it to us.

Dr. OLSON. In the first place, the money, as I understand it, is 2-year money and the carryover is a legal procedure with respect to this particular program. So that the amount available in the carryover which, as you have indicated, is $36,165,000 plus the appropriation of $56 million for grants which gives us a total of $92 million for grants. We will have more than that in approved recommended grant requests. I think what is confusing is the amount that is obligated up to the present time.

Mr. NATCHER. Yes. In other words, up to the present time you have obligated how much, Doctor?

Dr. OLSON. $30 million in grants.

Mr. NATCHER. Now you are requesting in your statement to the committee a total of $120,641,000; is that correct?

Dr. OLSON. Yes, sir.

Mr. CARDWELL. Could I interject? I think maybe I can help a bit.

Mr. NATCHER. Go ahead, Mr. Cardwell.

Mr. CARDWELL. The issue I think you are driving to has to do with the regional medical program itself the major constituent component of the recently established regional medical programs service. For the sake of this discussion I would suggest you confine the term "regional medical program" to the $56.2 million in fiscal year 1969 appropriations for regional medical program grants plus the $36 million in carry-forward balance from fiscal year 1968. That gives you $92 million roughly for obligation in fiscal year 1969 for grants. Yet you have really asked is how much of that $92 million has been obligated as of January. I think they told you $30 million has been obligated for grants.

Mr. NATCHER. How much new money was appropriated last year for the regional medical programs?

Dr. OLSON. $61,907,000 of which $56,200,000 was for grants.

Mr. NATCHER. And what do we add to that to give you the $119,081,000?

Mr. CARDWELL. We add the balance brought forward, the $36 million you referred to.

Dr. OLSON. And then the transfer of the entire chronic disease budget a second major constituent component for the regional medical programs service, which is $21,916,000, then there are some minor deductions shown on 148.

Mr. CARDWELL. I think your question is very proper and I would like to help get to the heart of it, but this is a consolidation appropriation in which we put several things together. The issue that you raise really, I think, is an important issue as it relates to only the

regional medical program and that would be the $62 million shown on the top of page 148, plus the unobligated balance of $36 million.

In 1968 the comparable appropriation was $58,814,000. Your question is, what happened. We have hurriedly gone from about $59 million.

Mr. NATCHER. That is correct.

Mr. CARDWELL. To $98 million.

Mr. NATCHER. That is correct.

Mr. CARDWELL. And can you do it.

Mr. NATCHER. That is the money in between those two figures, Mr. Cardwell. If you will explain that to me, we will be halfway around the base. Either one of you gentlemen.

Dr. OLSON. Mr. Natcher, I think the one item we have not entered into the record at this time is the amount of continuation requirements that we know we have for grants that were awarded in previous years which will have to be expended by June 30, 1969. That figure is $41 million. These are continuation requirements which come in before the end of the fiscal year.

EFFECT OF A REDUCTION IN REQUEST

Mr. NATCHER. Dr. Olson, assuming just for the purpose of argument that this committee approves the figure of $61,907,000 for the operation of the regional medical programs, how would you be seriously affected? Just carrying it back to the figure of last year.

Dr. OLSON. Yes, sir.

Mr. NATCHER. You see, Doctor, here in your justification you show 1967 estimates, $45,024,000, appropriations for 1967, $45,004,000; 1968, $64,314,000 estimates, appropriations $58,814,000. Then you come down to the figure of $61,907,000 for the fiscal year 1969. Why is that not the amount necessary to fund your department, Doctor?

Dr. OLSON. I think the answer to that, Mr. Natcher, is that having the 2-year authority on the funds, the Department has released these funds to the program in recognition of the fact that this was the year in which there really was a demand for funds which had not existed prior to this time. In other words, the planning program was a relatively slow, methodical effort. I think the regions did go into their needs in a very comprehensive way, and as a result the request for funds that we had anticipated might come in fiscal year 1968 did not come in until this current year. I can assure you that we have requests on hand, and recommendations by the National Advisory Council for grant awards and that we can obligate the full amount. Many will go unfunded if we do not have the full amount. Even if we do have the full amount for grants of $92 million, there will still be $13 million we will not be able to fund.

Mr. NATCHER. Doctor, are you not assuming a lot there?

Dr. OLSON. The information is based upon the grant applications that are on hand in the division.

Mr. NATCHER. Dr. Olson, you had an unobligated balance brought forward in 1969 of $36,165,000. Do you have any unobligated balance brought forward in fiscal year 1968? Give us that figure.

Dr. OLSON. That is the figure I recall of $36,165,000.

Mr. NATCHER. $36,165,000. Is that right?

Mr. CAVAROCCHI. 1968 to 1969?

Mr. NATCHER. 1967 to 1968.

Mr. CAVAROCCHI. I think it was $25 million.

Mr. NATCHER. Are you guessing at that or do you know that?

Mr. CAVAROCCHI. I am guessing at it.

Mr. MILLER. I am sure it was over $20 million.

Mr. NATCHER. Can you give us something half accurate?

Mr. CAVAROCCHI. It was $25,900,000, sir.

Mr. NATCHER. Dr. Olson, is it not true that in your section, regional medical programs, you jumped this program from the figures I have used here, that appear on page 136 of the justifications and estimates up to your present request of $120,641,000? You do not deny those figures, do you, Doctor?

Dr. OLSON. No, sir; those figures are accurate.

Mr. NATCHER. Let me ask you one more time, why can you not use the figure of $61,907,000?

Dr. OLSON. If we did use that figure, Mr. Natcher, we would have to cut back very severely on the program, in fact cut it in half. The $61 million does not include the chronic disease appropriation of $21 million which was transferred into this account or the $36 million carryover in grant funds which brings the combined program to an annual level of operation of $119 million. The regions that are ready to become operational simply could not be funded and all regions would have to be sharply cut back.

Mr. NATCHER. Of course you gentlemen know a lot more about this than I do, but when you present to the committee figures showing unobligated balances brought forward of $36,165,000, that bothers me. I have been on this committee 15 years. That bothers me when you bring in figures like that. That is approximately a fourth of your total request. Is that all right?

Dr. ENGLISH. Mr. Natcher, that was one of the things I looked into.

Mr. NATCHER. It bothered you a little bit, too, did it not?

Dr. ENGLISH. Yes, it did.

Mr. NATCHER. Doctor, just before you start, that was well over half of the appropriation that you had for last year, is not that correct?

Dr. OLSON. Yes, sir.

Mr. NATCHER. Go ahead, Dr. English.

Dr. ENGLISH. What I discovered, as I looked into it, was that one of the unique characteristics of the regional medical program is that it does not function like many programs where in effect goals are set nationally and activities are given and priorities set from the Washington level.

As you well know, when a program operates in that way it is possible to be sure the funds are obligated. This program is very different and I think that is part of the significance of what it can do in this country in the area of medical care. This is very much of a grass roots process as reflected in the regional organizations that have developed, and when you are going to have the evolution of regional councils like this in a grassroots kind of way, getting together medical institutions that may have never spoken to each other before, you are not only asking them to come into communication, but to work together in an area which is fairly competitive, the receiving of grants.

No. 1, that takes time. Second, characteristic of this program is the local character of the effort and the local determination of the initiative. This has caused great resistance on the part of these regions to move until they had made their plan. So we were quite willing to see the money not spent in the year in which it was appropriated in order to spend it well when we were ready.

As I review this situation I must say I am encouraged to see there is that kind of spirit in this program at the national level, and I would agree with Dr. Olson that it has now picked up momentum. By the end of next fiscal year we expect to see each one of these regions operational.

The momentum of this program would be impaired if we were not able to follow through in the continuation of the regional programs now operational. The point I was making is this program operates a little differently from others we have talked about.

Mr. NATCHER. This child has really grown in a hurry. Speaking of Topsy, Topsy was slow in comparison to this program. It that not right?

Dr. ENGLISH. I think you are right

There are 1,000 medical institutions, including every medical school in the United States, and including 800 hospitals that have cooperative arrangements through this program. I think this is a very rapid development. But I will tell you this, Mr. Natcher, the reason we are gratified it has happened is because the need is so tremendous when it costs so much to build new medical schools, to increase the production of medical students out of medical schools, to see them beginning to join together in relationships like this, with the tremendous unmet health needs in the population and the tremendous demand being created for medical services as medicare and medicaid come into being. I think this program has one of the greatest potentials to meet that problem. I think the fact that this has grown in a grassroots kind of development in a relatively short period of time is very encouraging.

Mr. CARDWELL. May I make a comment?

Mr. NATCHER. Go ahead.

Mr. CARDWELL. I think you have put your finger on a very basic issue, and it is an issue that has occurred to several people in several parts of the Government as this particular budget has been reviewed and put together. To me the issue is something like this: The first question you asked, Has the regional medical program reached the point where it can reasonably obligate the funds available this year, the appropriations plus the large balance carried forward? That is all the better question if you look at the history of the program. We have had unobligated balances during every year.

Mr. NATCHER. Over what period of time?

Mr. CARDWELL. 1966 through 1968.

Mr. NATCHER. 1966 up through 1968?

Mr. CARDWELL. Yes.

Former Secretary Cohen raised this question, our office raised this question. It was put before the advisory council and, frankly, everybody who has reviewed it up to this time has come to the conclusion the money can be obligated, the program is ready to move. That breaks into the next question, which I think is the $64 question.

Should you enlarge this program at this rate now?

Mr. NATCHER. That is the thing that bothers me. That is what I am bothered about right now because you know, and I know, downtown they are going to send figures up here that do not correspond with this budget. They are going to ask for reductions and I think they will be right in doing it. So this committee has to consider all of these programs from the standpoint of where it is necessary to grant the request and where we should make reductions.

Mr. CARDWELL. This question has also been examined and I think is going to come under some new examination.

Secretary Cohen concluded, as did President Johnson, this was the time to move this program and it should have high priority. Thus you have the budget before you. Since Secretary Finch came in, he examined the same question with a task force and they took a look at the same question and they came to the conclusion they also would support it.

I must say this was before the announcement of the weekend and the item is coming back for reexamination.

Mr. NATCHER. This one item?

Mr. CARDWELL. This along with a lot of other items. I cannot tell you what items.

Mr. NATCHER. I am not surprised. It has to come back.

Dr. OLSON. This one has to come back with the emergency we have on. I say to you that frankly, it has to come back to this committee.

Mr. CARDWELL. It is perfectly possible the new administration will propose the same budget back to you. I am not saying they will, I am not saying they will not. I do not know at this time, but it is possible they will do it.

Dr. ENGLISH. I can say this to you: I am another one in the long list that looked at this very carefully, not necessarily buying prior judgments of priorities. I can assure you in the review that is going on, we will place this program as one of our highest priorities because we have had a chance to see what it is capable of doing around the country. It has to go through a different developmental period because of the process by which it functions as a program, and I assure you on the basis of the experiences we have had we are going to give it the highest priority as we review it once again.

Mr. NATCHER. I believe you stated to the committee this bothered you some and you took a look at it.

Dr. ENGLISH. Yes, sir.

Mr. NATCHER. Knowing this program as well as you do, and as well as you should, I do not see why you were bothered at all about it.

Dr. ENGLISH. Frankly, what bothered me was to see unexpended balances.

Mr. NATCHER. That is the thing that bothers us on this side of the table.

Dr. ENGLISH. Yes, sir; and the only way I came to understand this was in understanding how different this program is in the sense of what we were talking about before, that it develops in a very different way in terms of what is funded than many other programs, particularly ones that I was experienced with, in the poverty program.

And one can see, therefore, how the situation would develop but I think one can also see, if one studies the program carefully, it is ready now to move and there is no question these funds can be obligated.

Mr. NATCHER. Can you guarantee that? You say it is ready to move. It did not move like we were told it would last year, or the year before.

Dr. ENGLISH. To the best extent one can, in my judgment, yes.

Mr. NATCHER. I asked Dr. Olson, are you assuming a lot, Doctor, and he said no. You are not assuming too much either?

Dr. ENGLISH. No, sir; not on the basis of the review I have made.

Mr. NATCHER. Probably next year you will come back with an unobligated balance. What will you say to my chairman then?

Dr. ENGLISH. I will say I was wrong, but I doubt if I will be in that position next year.

Mr. NATCHER. You will have to throw it from the rooftops.

That is all, Mr. Chairman.

PROGRAM REDUCTIONS

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. You are proposing reduction in the contract programs for heart disease, respiratory disease, cancer, diabetes, arthritis, neurological and sensory disease, and kidney disease.

On page 15 of the justification it is stated that these reductions do not reflect the total effort toward the control of these diseases by the Federal Government.

Will you be more specific as to how much support for these purposes can be expected from the regional medical program grants and the comprehensive health program grants?

Dr. OLSON. If I may, I would like to speak to the regional medical program grants because the comprehensive health planning program is under the direction of the Community Health Service, and perhaps Dr. English could speak to that.

As you know, the primary focus of the regional medical program is on heart disease, cancer, and stroke.

Mr. SHRIVER. Right.

Dr. OLSON. The programs in heart disease and stroke in regional medical programs are extending some of the activities that were originally started with the National Center for Chronic Disease Control.

Specifically, the studies to train nurses to staff intensive coronary care units and stroke demonstration projects. Some of these activities will be picked by the regions and will be supported in their grants.

Then in the area of respiratory——

Mr. SHRIVER. I realize all of these problems are interrelated, but, can you estimate how much of this budget request will be used for heart, stroke, cancer?

Dr. OLSON. I have some specific figures here.

For example, the amount that is going to be allocated by the regions for the training courses for coronary care nurses is $1,903,678.

This will be accomplished through individual medical programs. Mobile coronary care units, of which there are four, will be supported by a total of $442,000. We have feasibility studies for establishing coronary care intensive units in small hospitals. There are four of those, and they come to $194,000.

For the broader field of training both physicians and nurses in cardiology, as well as in coronary projects, there are 20 projects at

$2,741,000. We have a number of similar projects. This year's aggregate of all projects in the field of heart disease is approximately $9 million.

Mr. SHRIVER. What about other programs like arthritis control and diabetes, neurological and sensory diseases, and kidney disease? Do you have a statement for those items?

Dr. OLSON. We do not have it broken out in the same fashion. I can give you some figures on control of respiratory diseases.

There were four pediatric respiratory units started with contract funds in the chronic disease program. There are six additional centers of this kind, smaller than the original ones, but neverthelss serving generally the same areas, which are supported through regional medical program grants.

There are a number of programs in diabetes casefinding. I know of one particular one in North Carolina which has been funded through regional medical programs.

KIDNEY DIALYSIS

Mr. SHRIVER. Are there any promising developments in the matter of reducing the cost of treatment for kidney disease? This has been one of the biggest problems we have heard about in this committee in the years I have been on it.

Dr. OLSON. Yes; this is a matter to which our staff in the kidney disease program has devoted a great deal of attention and this has occupied the administration of health services and mental health as well.

We have responsibility for supervision of 14 programs that were started as dialysis centers on a grant basis and which are continued under the 314(e) project grant category.

We have 12 programs which we refer to as home dialysis feasibility studies. These are projects to train the patients and the supervising physicians in such a way that the patient can have his care in the home.

Mr. FLOOD. What is the outlook for the dialysis hardware for home dialysis?

Dr. OLSON. This is turning out to be a very productive program, Mr. Shriver. The cost reduction is quite substantial. The costs for dialysis treatment in a medical center varies from $10,000 to $25,000 per year. The home dialysis treatments for the same type of patient—in those individuals who can be trained for this purpose—is roughly half that amount.

Under ideal circumstances, it is $4,000 to $6,000 a year.

Mr. SHRIVER. Is the study continuing?

Dr. OLSON. Yes, sir. This is a 5-year study and we are in the third year.

Mr. SHRIVER. How much a year is involved in that?

Dr. OLSON. That is the major portion of the amount that is shown under kidney disease control. The total amount is $4,794,000, of which something just under $4 million is for the home dialysis feasibility study.

NUTRITION

Mr. SHRIVER. In the field of nutrition, are you working with the Department of Agriculture in development of the surveys that have been going on, or is this an independent study of yours?

Dr. OLSON. Dr. Arnold Schaefer, who is the director of the nutrition program, has been working with that Department particularly in identifying nutritional requirements, and trying to provide information as to why some of the present food subsidy programs are not as effective as they might be.

Mr. SHRIVER. Mr. Chairman, that is all.

PROJECT IN SMITHVILLE, MO.

Mr. FLOOD. Mr. Hull?

Mr. HULL. Thank you, Mr. Chairman.

Dr. Olson, I am acquainted with the fine work the regional medical program has done in Smithville, Mo. It is apparent this program has aided our physicians in bringing medical care to the people of Smithville and the surrounding area.

This is part of the excellent program that has been developed in Missouri and I sincerely regret it will be necessary for this program to be substantially curtailed next year. It appears that the budget submitted to us calls for a substantial increase in expenditures in fiscal year 1970——

Mr. FLOOD. Did you say it will be hurt badly?

Mr. HULL. Yes; curtailed, as I understand it.

Mr. FLOOD. Is this in your area?

Mr. HULL. Yes, sir.

Mr. FLOOD. That would be ill-advised, it strikes me.

Mr. HULL. It appears that the budget called for substantial increase in expenditure in fiscal 1970. Why in the light of this increase has it been necessary to curtail some of our important health programs?

Dr. OLSON. Mr. Hull, the situation, as I have tried to outline it, is that in this particular fiscal year we have had more grant requests than we could award—even with the full amount of the appropriation plus the carryover funds, which total $92 million. In order to insure that we can give priority to regions that have not yet had operational funds, we have found it necessary to restrict the award to some of the regions that are already operational.

Mr. HULL. My question is, in your judgment how can the regional medical program use the additional funds requested to accelerate the provision of modern medical services to all of the people of the United States?

Dr. OLSON. The request which we have made for an increase, which is approximately $3.5 million over the total amount available for obligation this year, is to be used primarily to permit those regions which have not yet received operational funds to do so. And each of these regions has formulated plans to establish improved care in their various communities and it is that kind of activity which we would like to support—rather than to support only the regions that became operational earlier.

We think it would not be fair to deny those programs ready to become operational the opportunity to share in the overall benefits because this is indeed a national program. We feel obligated to bring these slower starting programs to operational status when they are ready.

Mr. HULL. Mr. Chairman, I would like to put in the hearings at this point the Smithville project.

Mr. FLOOD. Without objection, that will be done.

(The information follows:)

MISSOURI REGIONAL MEDICAL PROGRAM (MRMP)[1]

THE SMITHVILLE PROJECT

(By H. M. Hardwicke, M.D., and Lester E. Wolcott, M.D.)

Due to many factors, not the least of which has been governmental subsidy, research in the field of medicine has been of such intensity that medical knowledge has almost doubled every 10 years since the turn of the century. It is a most difficult task to keep abreast of the new developments and to apply that part of the new knowledge which will enable the physician to provide better and more comprehensive health care for his patients. Consequently, one of the major problems in medical care programing is continuing education for the practicing physician with the incorporation of the new knowledge and techniques into the practice of medicine. Many sporadic efforts have been made to find a solution to this problem but none has been truly successful.

Two years ago, the Missouri regional medical program took on the solution of these problems as its main objective. It was determined to discover the degree to which current knowledge in the various fields of the health sciences might be combined within the newest techniques of administration and education as a means of increasing the efficiency of practicing physicians and, thus, to improve the health of their patients. A traditional approach to problems of this nature has been the centers-of-excellence concept. Upon careful analysis, such a concept appears to be impractical since physicians in private practice cannot completely transfer the responsibility for their own patients to another party. It was determined therefore, that any attempt to assist practicing physicians must involve a reversal of this centers-of-excellence concept. The primary physician would need to continue to be the ultimate arbiter of his patient's medical care. The Missouri regional medical program would undertake to make available those resources which the physician needed and could incorporate into his practice to the benefit of his patients. Early in the planning phase, it became apparent that an appropriate testing ground would need to be established if this approach were to be evaluated in pragmatic fashion. It was also apparent that certain criteria would need to be met if the test site were to prove valid.

Among the many criteria established, the following seemed of particular importance: (1) The test site must be an area in which high quality medical care is being provided to an expanding population. (2) The test site should be a community hopital (community health center) operating to capacity under efficient administration. (3) Individual physicians and the organized medical staff of this hospital must be interested in upgrading the quality and totality of the care being offered to their patients.

After considerable discussion and preliminary exploration, it seemed that the Smithville Community Hospital and its staff fulfilled the requirements for this test site. There were approximately 20 physicians on the staff who provided care to a medical service area of between 65,000 and 75,000 people. The quality of medical care rendered at the Smithville Community Hospital was of high quality and its staff, both collectively and individually, was interested in developing comprehensive health care services. The medical service area surrounding the Smithville Community Hospital was soon to have an additional 25,000 consumers as a result of the development of the Mid-Continent Airport located

[1] The Missouri regional medical program is supported by a grant from the division of regional medical programs of the Health Services and Mental Health Administration of HEW. This column regarding the Missouri regional medical program does not necessarily represent the views of the division of regional medical programs.

some 10 miles from the hospital. It could therefore be considered an expanding medical service area.

The present hospital facility in Smithville was opened in 1962 and has had an average occupancy rate of 90 percent since that time. In addition, its board of directors was currently planning additions to the hospital in anticipation of the increased population in the medical service area. The average age of the physicians on the staff was 40 and they all conducted their practices in a highly ethical fashion. It was therefore the feeling of the staff of the Missouri regional medical program that the test site described fulfilled the necessary criteria.

Subsequently, the Smithville project was submitted to the advisory council of the Missouri regional medical program. Among other things, this proposal pointed out:

(1) The medical staff did not feel that their time was being utilized in the most efficient fashion possible. (2) The hospital did not offer certain necessary facilities and services for the optimum care of their patients. (3) The use of allied health personnel and supporting services had not been adequately developed. (4) The staff had indicated the need for the assistance of highly experienced and thoroughly trained administrative consultants as well as consultants in the several specialties of medical care which were not currently available in the immediate area.

Specifically, the proposal requested that intensive care services, physical medicine and rehabilitation services, and a home health agency be established. To assist the members of the medical staff in properly utilizing these services, consultants in internal medicine, physical medicine and rehabilitation, orthopedics, and psychiatry were requested.

As a corollary to this proposal, in April 1967 the medical staff established an intensive care service and a physical medicine and rehabilitation service and a chief of the service was appointed. A 15-bed restorative care unit was designated and staffed to provide for those patients in need of rehabilitation. At the same time that this staff organization was being developed, the board of directors authorized a building of approximately 2,000 square feet as an addition to the hospital to accommodate the additional rehabilitation services.

Personnel were recruited and trained at the University of Missouri in the department of physical medicine and rehabilitation. Consultants were made available from the university in the fields of internal medicine, cardiology, psychiatry, and physical medicine and rehabilitation.

Within 3 months after the inception of this project at the Smithville Community Hospital, the board of directors proceeded to plan a 50-bed rehabilitation unit which was to be built adjacent to the present acute hospital. At this same meeting the board gave authorization for the exploratory development of a home care program. It should be noted that the hospital paid for all buildings and all additions while the grant received from the Missouri regional medical program provided partial support for additional personnel and equipment.

The board of directors and the medical staff were aware that in order for comprehensive care to become a reality, the recipients of this care, as well as those who render it, must understand and support its concepts. There was initiated early in the program at Smithville, a survey of the community to determine the level of understanding regarding health and health care on the part of the recipients. It was envisioned that this would establish an information base on which a lay education program could be planned and implemented by the Smithville Community Hospital staff with assistance from the faculty of the University of Missouri as they desired. The possibility of the development of a total community preventive medical program as an outgrowth of this effort is contemplated but is still in its infancy.

The Smithville project is tremendously meaningful as an attempt is being made to develop a model by which modern comprehensive medical care may be made available within the free enterprise concept. Less than a year and one-half has gone by since the initiation of this project. Yet, significant changes have taken place within the Smithville Community Hospital during that time. The medical staff is actively engaged in recruiting consultants whom they feel are necessary to complete their medical resources. Acceptance of the program is increasing and the medical staff is utilizing the services to an ever-increasing degree. It would appear that the first steps have been made at Smithville toward the establishment of community-based comprehensive health care.

It is important to point out that at the present time the rehabilitation services are operating on a self-supporting basis. The home care program is now off the

ground and is only minimally subsidized by the Missouri regional medical program. It is anticipated that this program will be self-supporting within the next 2 months. The 15-bed rehabilitation service has been self-supporting since the first month of operation. The intensive care unit has been utilized both for coronary care and for other intensive care problems. This unit is also rapidly approaching self-support.

Education of the laity has always been an extremely difficult problem. Public and voluntary health agencies have tried all the traditional approaches to this problem and have been unsuccessful, in general. The school of journalism at the University of Missouri is working on this aspect, as one might work on a public relations problem, with a totally different philosophy. In brief, it is a program designed to cause the people to come to understand that good health care is possible only through the recipient's cooperation.

Regular monthly seminars are being held by telephone with members of the faculty of the University of Missouri, which physicians in the Smithville area feel are of value to them. Other techniques in the field of continuing education are being developed and studied.

An attempt is being made to develop a program which will demonstrate that comprehensive health care can be provided within the structure of our medical care system. It has become increasingly evident that the nucleus for comprehensive health services is the physician-patient interrelationship. Any successful comprehensive health care program must maintain the family physician's role in the management of the individual's health care. It has also become more evident that the family physician must have a major role in the development of community health care programs. The history of American medicine and the experiences gained in the Smithville project would indicate that this is the basic concept upon which further research and development should be based.

REDUCTION IN CANCER CONTROL PROGRAM

Mr. FLOOD. Mrs. Reid?

Mrs. REID. Dr. Olson, Mr. Shriver touched on this particular area, but I just want to know a little more about it. In your justification you indicate a program decrease for cancer control; namely, public educational activities. Does this indicate that the saturation point has been reached in this activity or is this program transferred elsewhere?

Dr. OLSON. We do not like to make program decreases of this kind. However, in the establishing of overall budgetary priorities, hard decisions have had to be made. Because of the fact that regional medical programs have been able to fund activities in the cancer area, including educational activities, it was deemed appropriate to make the listed reduction. If there were additional funds, obviously we could use them effectively for this purpose.

PILOT ARTHRITIS CENTER

Mrs. REID. I see that your pilot arthritis center is now in the planning stage and is expected to be fully operational by the end of the year. Tell me a little more about these plans.

Dr. OLSON. Mrs. Reid, we have solicited proposals from 39 institutions throughout the United States that we know to be competent in the area of arthritis. We have received proposals from 12 of these institutions. An advisory group made up of the past presidents of the Arthritis Foundation is working with our staff to review these applications. They will recommend the proposal which will most effectively carry out the intent in establishing this pilot center.

Mrs. REID Will this be research, patient care, or both?

Dr. OLSON. It is primarily designed to demonstrate the highest standards of care for patients with arthritis, using information that

has been developed as a result of research, but not primarily to carry on research as such. It is the application of the findings that is important. The intent is to establish a center and a number of smaller satellite units affiliated with that center so that the demonstration can be carried out at the community level as well as the medical center level. But it is a patient care demonstration.

Mrs. REID. Doctor, I noticed you were graduated from Wheaton College, which is very close to my home, and in fact used to be a part of my district before redistricting a few years ago.

Dr. OLSON. I spent a good part of my childhood in West Chicago and on Saturday afternoon Aurora was the favorite shopping center.

Mrs. REID. I am pleased to see you here, today. Thank you, Mr. Chairman.

TEXAS REGIONAL MEDICAL PROGRAM

Mr. FLOOD. Mr. Casey?

Mr. CASEY. What is the status of the regional medical program in Texas?

Dr. OLSON. The regional medical program in Texas is operational, Mr. Casey. There are three major areas, one affiliated with the medical school in Dallas, one affiliated with the medical centers in Houston and Galveston, and one affiliated with the new medical school in San Antonio.

There is an effort to define the very large area of the State in terms of relationships to these three medical centers.

Mr. CASEY. They are operational?

Dr. OLSON. Yes, sir.

Mr. CASEY. How long have they been operational?

Dr. OLSON. They have been operational since July 1968.

Mr. CASEY. All three of them?

Dr. OLSON. It is a single program with three areas and there are operational activities in all areas.

Mr. CASEY. Will you consider Texas as one of your 55?

Dr. OLSON. Yes, Texas is a single region medical program with three divisions.

PEDIATRIC PULMONARY CENTERS

Mr. CASEY. Where are the four pediatric pulmonary centers you established?

Dr. OLSON. The contracts under the Division of Chronic Diseases support pediatric pulmonary centers at Los Angeles County Hospital, Los Angeles; the Hahnemann Medical College Hospital in Philadelphia; the Tulane University School of Medicine, New Orleans, and Georgetown University School of Medicine in the District.

And then there are six that are funded under regional medical programs. These six are in the New York area, Colorado, Wyoming, California, Georgia, New Mexico, and Washington-Alaska.

Mr. CASEY. What phases of pulmonary diseases do these centers deal with?

Dr. OLSON. The major condition with which most of them are concerned is the very severe respiratory problems developed by children who have cystic fibrosis. You may remember that this is a disease which produces very thick tenacious mucus which the child is unable

to bring up; it obstructs breathing and not infrequently results in death from respiratory obstruction.

The centers provide essentially lifesaving services for children that have this condition.

Then in addition, of course, there are a number of other respiratory problems that arise as a result of infection and allergy.

Mr. FLOOD. Asthma is one of the most glaring and dangerous?

Dr. OLSON. Yes. This is the one I referred to when I mentioned allergies.

Mr. CASEY. You have the four under the Division of Chronic Diseases and then six under a grant program under the regional medical program?

Dr. OLSON. Yes, sir.

Mr. CASEY. How do you do that?

In the regional medical program do you consider this connected to heart, cancer, and stroke?

Dr. OLSON. Yes, sir.

The legislative history of regional medical programs very clearly identifies the interest of the Congress in including respiratory diseases as diseases to be supported by regional medical programs.

Mr. CASEY. By legislative history, you mean the debate we had on the bill?

Dr. OLSON. No, sir.

Mr. CASEY. Testimony at the hearings or what?

Dr. OLSON. I think this was in subsequent hearings, both on appropriations and the legislative extension.

Mr. CASEY. What is the nature of the funding that these particular centers have? Is it operational funds? Are they supposed to be doing research under their contracts? Are they supposed to be giving care?

Dr. OLSON. Mr. Casey, the contracts are particularly designed to demonstrate what is the most adequate method of caring for patients—to provide education to nurses and to physicians who will provide similar care in other institutions. In other words, these are centers for the training of personnel and for the demonstration of the highest standards of care.

Mr. CASEY. What is the length of these contracts?

Dr. OLSON. Two of them were funded in 1968 for 3 years each and two of them were funded in 1969 for 3 years each.

Mr. CASEY. The grants are 1-year grants or what?

Dr. OLSON. I am not sure that I can tell you. In general, these are programs that are recommended for support for 3 years but in some instances it may be for less than this. We almost never extend it more than 3 years.

Mr. CASEY. I believe that is all, Mr. Chairman.

FUNDING PLAN FOR REGIONAL MEDICAL PROGRAMS

Mr. CARDWELL. Mr. Chairman, could I make a request?

Mr. FLOOD. Sure.

Mr. CARDWELL. With your permission and with the committee's indulgence, it might be helpful if you would give us an opportunity to place in the record at the conclusion of this particular appropriation request, a complete discussion of the plan for the regional medical

program for the rest of this year and next year, to show how it was concluded through this budget that the funds could be obligated. I think this is very important and it would be particularly important in the event that the Nixon administration does support this budget request. In that way, the committee would have a full explanation of why various people believed this is a workable plan.

Mr. FLOOD. I think that you should. I am interested in the program and the committee ought to have it.

(The information follows:)

PROGRAM PLANS

	1969	
	Grants	Direct operations
Funds available	$92,364,603	$26,716,000
Obligations, July 1, 1968, to Apr. 4, 1969	−36,181,043	−12,489,000
Estimated requirements Apr. 5 to June 30, 1969 (see below)	−62,895,000	−14,227,000
Estimated deficit, June 30, 1969	−6,711,440	0

ESTIMATED REQUIREMENTS

Grants:	Amount
Continuation requirements	[1] $34,895,000
Applications approved but unfunded (rounded)	[2] 12,000,000
Estimated May Council	[2] 16,000,000
Total estimated requirements	62,895,000
Direct operations:	
Staff support	3,927,000
Contracts	[4] 10,300,000
Total estimated requirements	14,227,000

[1] Continuation requirements, Apr. 4–June 30, 1969:

Region	Amount
Albany	$1,338,000
Arizona	552,000
California	5,310,000
Central New York	903,000
Georgia	1,437,000
Illinois	600,000
Intermountain	2,500,000
Iowa	684,000
Kansas	1,890,000
Maine	1,024,000
Memphis	1,081,000
Michigan	1,975,000
Mississippi	829,000
Missouri	4,500,000
New Jersey	562,000
New Mexico	1,285,000
North Carolina	2,001,000
North Dakota	193,000
Northeastern Ohio	341,000
Ohio State	1,455,000
Oregon	924,000
Puerto Rico	237,000
Rochester	700,000
Texas	2,000,000
Western New York	199,000
Western Pennsylvania	375,000
Total	34,895,000

[2] Approved but unfunded operational applications (new and supplemental) from November and February Advisory Council actions.

Region	Amount
California	$1,274,000
Central New York	209,000
Colorado-Wyoming	140,000
Florida	850,000
Georgia	71,000
Hawaii	40,000

Footnote 2 continued on next page.

Region	Amount
Indiana	$104,000
Intermountain	178,000
Iowa	276,000
Kansas	448,000
Maine	128,000
Memphis	56,000
Metropolitan District of Columbia	1,087,000
Michigan	57,000
Missouri	1,574,000
Mountain States	300,000
New Mexico	34,000
North Carolina	228,000
Northern New England	818,000
Ohio State	141,000
Oklahoma	1,282,000
Oregon	156,000
Rochester	310,000
Susquehanna Valley	578,000
Tennessee mid-South	110,000
Tristate	299,000
Washington-Alaska	275,000
Western New York	637,000
Wisconsin	727,000
Total	12,387,000

[3] Applications totaling $32,000,000 will be reviewed by the May Council. Based on the Advisory Council's approval rate to date, of 50 percent, it is estimated that $16,000,000 will be approved.

[4] Of this amount, $6,000,000 represents the continuation of existing contracts that are scheduled for renewal in May and June. In addition, $1,000,000 will be used for nutrition surveys and $3,300,000 for other new contracts: to train educators at the doctoral level to meet regional medical program needs; to develop operations research and systems analysis approaches to RMP; to conduct regional conferences and seminars to develop new patterns of continuing education based in non-university-affiliated community institutions; to develop guidelines for services, training, and care of patients with heart disease, cancer, and stroke; to initiate the Arthritis Center; to support applied research in pediatric pulmonary centers; and to support activities in the prevention of kidney diseases, including transplantation; epidemiology studies in the area of stroke, and new methods for detection of cancer.

PROGRAM PLANS

	1970	
	Grants	Direct operations
Funds available (obligations)	[1] $96,000,000	$24,641,000
Estimated requirements	[2] 158,000,000	[3] 24,641,000
Deficit	−62,000,000	0

[1] Estimated obligations are as follows:

Grants:	
Continuation requirements	$92,000,000
New operational awards	4,000,000
Total	96,000,000

[2] The estimated requirements of $158,000,000 are computed as follows:

Continuation requirements	$92,000,000
Approved but unfunded in 1969	7,000,000
New operational awards	*14,000,000
Supplemental awards	†45,000,000
Total requirements	158,000,000

*Provides for 12 new awards at an average of $1,200,000 (the current average for new operationals).

†Provides for expansion of programs in the 43 regions that have received their operational awards. From our experience we expect that each of the 43 regions will submit 3 applications averaging $500,000 each for support of additional activities These have experienced an approval rate of about 70 percent. It should be noted that the initial operational award represents only the 1st step of an operational activity designed to accomplish the objectives of the enabling legislation.

[3] Direct operations.—Of the total funds available for direct operations, $11,305,000 will be needed to support contracts to develop, test, and evaluate improved methods for prevention, detection, care, and rehabilitation in heart disease, cancer, stroke, and other chronic diseases. The remaining funds will be needed for staff and related expenses. This staff will provide technical assistance to States; conduct feasibility studies and demonstrations, and epidemiologic studies in 5 field stations; and administer the grants and contract programs.

Mr. NATCHER. Would you yield to me at that point?

I wonder if Mr. Cardwell would furnish to each member of the subcommittee a copy of this long before we read it in the published hearings?

Mr. CARDWELL. Fine.

Mr. NATCHER. We would like to see it.

Mr. FLOOD. No reason why not. Thank you.

Dr. OLSON. Thank you, Mr. Chairman.

(NOTE.—Subsequent to the hearing and prior to printing the hearing record the budget for this item was revised and the following data was submitted to the committee to supplement the data on the preceding pages.)

REGIONAL MEDICAL PROGRAM

PLANNING AND OPERATIONAL GRANTS

In the revised budget for fiscal year 1970, $74 million is being requested for the regional medical program grants, a reduction of $22 million from the January estimate. However, because some $20 million of 1969 money is being placed in reserve the obligations estimated for 1970 have only been reduced by $2 million, from $96 million to $94 million.

The following table summarizes the Department's plans under both the January estimate as well as under the revised budget for both 1969 and 1970 for regional medical programs:

[In millions of dollars]

	January budget (Johnson)	Revised budget (Nixon)	Change
1969 PROGRAM			
Unobligated balance brought forward	36.2	36.2	
Appropriation	56.2	56.2	
Total available for obligation	92.4	92.4	
Obligations	29.4	72.4	20.0
Approved grant applications	[1] (99.1)	(99.1)	
1970 PROGRAM			
Unobligated balance brought forward		20.0	+20.0
Requested appropriation	96.0	74.0	−22.0
Total available for obligation	96.0	94.0	−2.0
Obligations	96.0	94.0	−2.0
Approved grant applications	[2] 158.0	[3] 159.0	

[1] 1969 approvable projects, $99,100,000. It is expected that for 1969 approved grant applications will exceed available funds by $6,700,000 in the January budget and by $26,700,000 in the revised budget. The total of $99,100,000 of approved grant applications consists of: $46,000,000 in continuation requirements, $22,100,000 in new operational awards, and $31,000,000 in supplementals.

[2] 1970 approvable projects, $158,000,000. It is expected that for 1970 approved grant applications totaling $158,000,000 will exceed available funds by $62,000,000 under the January budget. Under the revised budget, it is estimated that grant applications totaling $159,000,000 will exceed available funds by $65,000,000.

The estimate of $158,000,000 consists of $92,000,000 for continuation requirements stemming from 1969 operations, approved but unfunded applications in 1969 totaling about $7,000,000, 12 new operational awards involving $14,000,000, and supplemental approvals amounting to $45,000,000.

[3] Under the revised budget, continuation requirements for 1970 would be reduced by $20,000,000 because of the lower level of operations in 1969, but the carryover of unfunded projects would be increased by a like amount. New operational awards of $18,000,000 and supplementals estimated at $42,000,000 would be expected—in total, $159,000,000 in estimated approvable projects under the revised budget.

JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Regional Medical Programs

Amounts Available for Obligation

	1969	1970
Appropriation	$61,907,000	$120,641,000
Unobligated balance brought forward	36,165,000	.....
Comparative transfers to:		
"Salaries and expenses, Office of the Administrator"	-75,000	.....
"Salaries and expenses, Office of the Comptroller"	-21,000	.....
"Salaries and expenses, Office of the Director, National Institutes of Health"	-594,000	.....
Comparative transfer from "Chronic Diseases"	21,916,000	.....
Cutbacks required by P.L. 90-364	-284,000	.....
Total currently authorized for obligation	119,014,000	120,641,000
Plus: proposed release of reserves for increased pay costs	67,000	.....
Total available for obligation	119,081,000	120,641,000

Disposition of cutback:

To be used for pay cost in this account	67,000
To be retruned to Treasury	217,000
Total cutback	284,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
158	1. Operational and planning grants....		$92,365,000		$96,000,000		+$3,635,000
163	2. Development, assistance, and chronic disease control:						
	(a) Heart disease control	275	5,530,000	275	5,410,000	...	-120,000
	(b) Respiratory disease control	29	1,585,000	29	1,256,000	...	-329,000
	(c) Cancer control	104	2,445,000	104	2,351,000	...	-94,000
	(d) Smoking and health	35	2,100,000	35	2,500,000	...	+400,000
	(e) Diabetes and arthritis control	75	2,121,000	75	1,885,000	...	-236,000
	(f) Neurological and sensory disease control.....	58	1,555,000	58	1,517,000	...	-38,000
	(g) Kidney disease control	50	5,314,000	50	4,794,000	...	-520,000
	(h) Nutrition	16	1,266,000	16	950,000	...	-316,000
	(i) Regionalization activities..	31	2,949,000	31	2,099,000	...	-850,000
	Total	673	24,865,000	673	22,762,000	...	-2,103,000
166	3. Program direction and management services	97	1,851,000	110	1,879,000	+13	+28,000
	Total obligations	770	119,081,000	783	120,641,000	+13	+1,560,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions.....	770	783	+13
Full-time equivalent of all other positions.....	70	70	...
Average number of all employees.....	818	827	+9
Personnel compensation:			
Permanent positions.....	$8,324,000	$8,483,000	+$159,000
Positions other than permanent.....	416,000	423,000	+7,000
Other personnel compensation.....	37,000	37,000	.....
Total personnel compensation.....	8,777,000	8,943,000	+166,000
Personnel benefits.....	1,166,000	1,181,000	+15,000
Travel and transportation of persons....	1,072,000	1,082,000	+10,000
Transportation of things.....	112,000	112,000	.....
Rent, communications and utilities.....	428,000	428,000	.....
Printing and reproduction.....	200,000	200,000	.....
Other services.....	1,067,000	1,068,000	+1,000
Project contracts.....	13,425,000	11,305,000	-2,120,000
Payment to "National Institutes of Health management fund".....	149,000	.....	-149,000
Supplies and materials.....	155,000	156,000	+1,000
Equipment.....	165,000	166,000	+1,000
Grants, subsidies, and contributions....	92,365,000	96,000,000	+3,635,000
Total obligations by object.....	119,081,000	120,641,000	+1,560,000

Summary of Changes

1969 Estimated obligations	$119,081,000
1970 Estimated obligations	120,641,000
Net change	+1,560,000

	Base		Change from Base	
	Positions	Amount	Positions	Amount
Increases				
A. Built-in				
1. Additional costs for within-grade increases	...	.....	...	+$37,000
B. Program				
1. Operational and planning grants	...	$92,365,000	...	+3,635,000
2. Smoking and health	35	2,100,000	...	+400,000
3. Nutrition program	16	250,000	...	+700,000
4. Program direction and management services	97	1,702,000	+13	+150,000
Subtotal, program			+13	+4,885,000
Decreases				
A. Built-in				
1. Non-recurring contracts for the nutrition surveys	...	1,016,000	...	-1,016,000
B. Program				
1. Heart disease control	275	5,530,000	...	-120,000
2. Respiratory disease control	29	1,585,000	...	-329,000
3. Cancer control	104	2,445,000	...	-94,000
4. Diabetes and arthritis control	75	2,121,000	...	-236,000
5. Neurological and sensory disease control	58	1,555,000	...	-38,000
6. Kidney disease control	50	5,314,000	...	-520,000

	Base		Change from Base	
	Positions	Amount	Positions	Amount
Decreases				
B. Program--continued				
7. Regionalization activities.....	31	2,949,000	...	-860,000
Subtotal, program.....				-2,197,000
C. Centrally furnished services from the National Institutes of Health management fund:				
1. Program direction and management services.....	...	149,000	...	-149,000
Total decreases.....				-3,362,000
Net change.....				+1,560,000

Explanation of Changes

Increases:

Operational and planning grants--The increase of $3,635,000 over funds available in 1969 will be used to support from 3 to 5 new operational programs.

Smoking and health--An increase of $400,000 will provide for continuing research on smoking behavior, organized community approaches, school programs and mass communication activity. Increasing attention will be directed toward encouraging young people not to take up smoking and providing assistance to those persons who wish to or must stop smoking for medical reasons.

Nutrition--An increase of $700,000 will support follow-up activities related to the National Nutrition Surveys initiated in 1969. These activities include compilation and analysis of data, publication of findings and technical consultation to the States. In addition, the increase will provide for a full year support of the staff and related expenses.

Program direction and management services--The increase of $150,000 will be used to meet increased requirements for health data; to provide organizational liaison; to permit adequate staffing levels for review and approval of operational grants, and to provide centralized administrative support for the new Regional Medical Programs Service.

Decreases:

Non-recurring costs--The $1,016,000 in non-recurring costs are associated with the Nutrition Surveys funded in 1969.

The program decreases will result in the following reductions in the contract programs:

Heart disease control--Reduced support for nurse training in coronary care, which we expect to be at least partially offset by increased support for nurse training in coronary care within Regional Medical Program grants.

Respiratory disease control--Reduced support for demonstrations of comprehensive care of patients with chronic respiratory diseases, which will also receive increased support from Regional Medical Program grants.

Cancer control--A decrease in public educational activities.

Diabetes and Arthritis control--A reduction in support of demonstration of diabetes case-finding.

Neurological and sensory disease control--A reduction in public education.

Kidney disease control--Reduced activity in the area of the development of early detection techniques for prevention of long-term end-stage renal disease.

Regionalization activities--Reduced support of training of educational evaluators, studies of patient acceptability of various modalities of care, studies of entry points into the health care system, and studies to identify types of curriculum designs needed for continuing education purposes.

The decreases that are noted above for the individual chronic disease programs do not reflect the total effort directed toward chronic disease proposed in this and other Health Services and Mental Health Administration appropriations. It is expected that in some cases, Regional Medical Program and Comprehensive Health Project grants will provide a mechanism for the support of efforts previously supported by chronic disease contracts.

Significant Items in

House and Senate Appropriations Committee Reports

Item	Action taken or to be taken
1969 Senate Report	
The Committee requested a 5-year plan for a comprehensive attack on hypertension (page 28).	A plan is currently being developed and discussed with experts in the medical community.
1969 Conference Report	
The Committee provided a $1,000,000 increase to establish a pilot arthritis center and satellite facility, and for the respiratory disease control program. (Page 10) (The Senate report had directed that particular emphasis be placed on pediatric pulmonary centers. Page 28)	The pilot arthritis center is now in the planning stage and is expected to be fully operational by the end of the year. This year four pediatric pulmonary centers are receiving funds for full year operation. These centers provide for diagnostic services, training of private physicians, and the establishment of satellite clinics. In addition, demonstration courses for the continuing education of private physicians in several selected geographic areas have been initiated.

Authorizing Legislation

Legislation	1970 Authorization
Public Health Service Act Title IX, Education, Research, Training, and Demonstrations in the Fields of Heart Disease, Cancer, Stroke and Related Diseases.....	$120,000,000

PUBLIC HEALTH SERVICE ACT

The Public Health Service Act, Title IX, Education, Research, Training and Demonstrations in the Fields of Heart Disease, Cancer, Stroke and Related Diseases,

Sec. 900. The purposes of this title are--
"(a) Through grants, to encourage and assist in the establishment of regional cooperative arrangements among medical schools, research institutions, and hospitals for research and training (including continuing education) and for related demonstrations of patient care in the fields of heart disease, cancer, stroke, and related diseases;

"(b) To afford to the medical profession and the medical institutions of the Nation, through such cooperative arrangements, the opportunity of making available to their patients the latest advances in the diagnosis and treatment of these diseases; and

"(c) By these means, to improve generally the health manpower and facilities available to the Nation, and to accomplish these ends without interfering with the patterns, or the methods of financing, of patient care or professional practice, or with the administration of hospitals, and in cooperation with practicing physicians, medical center officials, hospital administrators, and representatives from appropriate voluntary health agencies.

Sec. 901. (a) There are authorized to be appropriated $50,000,000 for the fiscal year ending June 30, 1966, $90,000,000 for the fiscal year ending June 30, 1967, $200,000 for the fiscal year ending June 30, 1968, $65,000,000 for the fiscal year ending June 30, 1969, and $120,000,000 for the next fiscal year, for grants to assist public or nonprofit private universities, medical schools, research institutions, and other public or nonprofit private institutions and agencies in planning, in conducting feasibility studies, and in operating pilot projects for the establishment of regional medical programs of research, training and demonstration activities for carrying out the purposes of this title. Sums appropriated under this section for any fiscal year shall remain available for making such grants until the end of the fiscal year following the fiscal year for which the appropriation is made. For any fiscal year ending after June 30, 1969, such portion of the appropriations pursuant to this section as the Secretary may determine, but not exceeding 1 per centum thereof, shall be available to the Secretary for evaluation (directly or by grants or contracts) of the program authorized by this title."

Explanation of Transfers

	1969 Estimate	Purpose
Comparative transfer to:		
"Salaries and expenses, Office of the Administrator"....	$75,000	Transfer of personnel and financial management staff.
"Salaries and expenses, Office of the Comptroller".....	21,000	Transfer of staff to the Division of Grant Administration Policy.
"Salaries and expenses, Office of the Director, National Institutes of Health".....	594,000	Transfer of funds for centrally furnished services from the National Institutes of Health management fund.
Comparative transfer from:		
"Chronic Diseases".....	21,916,000	Transfer of the Chronic Disease Control Program under the reorganization of the Health Services and Mental Health Administration.

Regional Medical Programs

Year	Budget Estimate To Congress	House Allowance	Senate Allowance	Appropriation
1966	$25,000,000	N.C.	$25,000,000	$25,000,000
1967	$45,024,000	$45,004,000	$45,004,000	$45,004,000
1968	$64,314,000	$54,314,000	$64,314,000	$58,814,000
1969	$68,922,000	N.C.	$68,922,000	$61,907,000
1970	$120,641,000			

Regional Medical Programs

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	770	$9,943,000	783	$10,124,000	+13	+$181,000
Other expenses.....	...	109,138,000	...	110,517,000	...	+1,379,000
Total.....	770	119,081,000	783	120,641,000	+13	+1,560,000

General Statement

The Regional Medical Programs Service seeks to assist the Nation's health institutions and professions and through them the people they serve. It assists in transferring the advances of scientific medicine into the health care systems by which those advances are delivered. It is concerned with all aspects of the care of patients with heart disease, cancer, stroke and related diseases. It now also includes the programs of the Health Services and Mental Health Administration for preventing and controlling chronic diseases such as cardiovascular diseases, chronic respiratory diseases, cancer, diabetes, arthritis, chronic kidney diseases, and neurological and sensory disorders. The Regional Medical Programs Service is also responsible for programs directed toward public understanding of the dangers to good health of smoking, and toward efforts to identify the status of the nation's nutritional health and methods aimed at its improvement.

The Regional Medical Program legislation provides for grants to assist in establishing regional cooperative arrangements among the elements of the national and local health establishments so that the health professions and their medical institutions may make available to patients the latest advances in diagnosing and treating heart disease, cancer, stroke and related diseases. Such grant funds support cooperative arrangements for achieving these goals as well as those which will contribute to the health manpower and health facilities of the Nation.

The budget request for 1970 of $120,641,000 is an increase of $1,560,000 over the funds available for obligation in 1969 and an increase of $37,508,000 over the 1969 adjusted budget authority.

Operational and Planning Grants

	1969 Estimate	1970 Estimate	Increase or Decrease
Operational and planning grants.....	$92,365,000	$96,000,000	+$3,635,000

Introduction

The request for 1970 of $96,000,000 is an increase of $39,800,000 over the 1969 appropriation. However, because of the availability of carry-over funds from 1968 into 1969, it represents an increase of $3,635,000 over the actual funds available for grants in 1969.

The Division of Regional Medical Programs is authorized under Public Law 89-239, the Heart Disease, Cancer and Stroke Amendments of 1965 to support activities to insure the application of scientific advancements in the diagnosis and treatment

of these diseases and to make benefits of this new knowledge available to all citizens through the Regional Medical Program serving the area in which they live.

The Programs funded to date comprise a total of 55 Regions. The geographical areas of the Regions are not limited to state lines but are defined and identified by those who comprise the health leadership in the Region. The Regions as currently constituted include combinations of entire states (e.g. Tri-State, headquartered in Boston, includes Massachusetts, Rhode Island and New Hampshire); portions of states (e.g. Intermountain, headquartered in Salt Lake City, includes Utah and sections of Colorado, Idaho, Montana, Nevada, and Wyoming); single states (e.g. Georgia, headquartered in Atlanta, and including the entire state); and portions of states around metropolitan centers (e.g. Rochester, includes the city of Rochester, New York and 11 surrounding counties).

Within the 55 Regional Medical Programs, a variety of organizational structures have been developed to plan, relate and implement specific projects, which together help achieve the general goals of the law and, through them, the specific goals of the Region. Working toward this end are executive and planning advisory committees, categorical disease task forces and subregional area and community advisory committees. All such groups serve under a Regional Advisory Group which, in accordance with the provisions of the law, provide policy direction to the Program Coordinator and the sponsoring agency. The Regional Advisory Group serves as the final reviewing body for projects submitted to the National Advisory Council on Regional Medical Programs for funding by the Regional Medical Programs Service.

Represented in the Regional Advisory Groups are key representatives of the major health institutions, organizations, agencies and groups including hospital administrators, practicing physicians, nurses and other health professions, voluntary health agency directors and executives, medical center officials, medical school deans and faculty members, and representatives of the Region's lay population. To date, nearly 7,000 individuals are working as members of the Regional Advisory Group and its subcommittees and task forces. A breakdown of the voluntary groups indicate that nearly 25 percent are practicing physicians, another 25 percent are medical center and hospital officials, 12 percent represent voluntary health agencies, a total of 15 percent come from public and allied health fields, and 23 percent are drawn from the Regions' other non health-related fields and professions and the general public. In addition, there are now 2,700 full and part-time administrative and professional persons serving as the staffs of the 55 Programs.

Of the 55 Regions awarded planning grants since mid-1966, 25 have now been awarded funds to support the first of their interrelated operational activities, developed during the planning phase, to meet the goals of each Program. These operational activities are designed to provide the means for Regional Medical Programs to accomplish their ultimate objectives of serving all people by...

- Improving the quality and availability of patient care through research, continuing education, training, and demonstration projects;

- Developing better methods for the exchange of scientific knowledge between medical schools and medical centers, on the one hand, and community hospitals, practicing physicians, and other health institutions, organizations, and personnel, on the other; and

- Continuing to develop new and expanded plans for further improvement of the quality and availability of health care, including the systems and the elements of those systems for delivering that care.

Program for 1969 and 1970

In order to establish a measure of the achievements and progress of the 55 Regional Medical Programs to date, their activities must be viewed against the reality that this is a major new program, never tried before nationally and

dependent upon acceptance by the various elements in our health care system of a new kind of voluntary cooperative mechanism.

In the two and one-half years since June 1966, when the first planning grants were made, the 55 Regional Medical Programs covering all of the United States and its people, including those of Puerto Rico and the Trust Territories, have been funded to implement the provisions of the Law.

There is, as was fully expected from the beginning, some unevenness in the rate of development of the Programs. In addition, the measures used by other health programs to indicate accomplishments--the number of lives saved, the number of patients restored to active family life and social productiveness, or the amount of disease prevented--cannot yet be applied to the Regional Medical Programs.

At its meeting in November 1968, the National Advisory Council of the Division of Regional Medical Programs approved the 55th Region for its first planning grant. At the same meeting, the Council recommended funding 7 additional Regions for their first operational activities. The Council also approved supplemental applications for 13 of the Regions which had already become operational between July 1967 and September 1968. In addition to request for other supplemental operational applications, the Council will be called upon in its February and May meetings to decide how many of the remaining Regions which have already submitted applications to become operational may be funded for this purpose during the remainder of 1969. Expected to be reviewed and approved early in 1970 will be the 10 remaining Regions which, as yet, have not reached the point in their development where they are ready to prepare or submit their operational proposals.

Thus, all 55 Regions are moving ahead at varying rates of speed, at differing levels of activity, and with different degrees of success at this point, in terms of achieving their ultimate goals. This points up the fact that demonstrable benefits for patients are limited at the start. However, these benefits should begin to build up at an ever-increasing rate as more and more Regions move further into their operational activities.

Those familiar with the national, regional and local health establishments and their disparate elements, acknowledge that there are good and sufficient reasons for the variations we see. The timetable that measures the development of Regional Medical Programs ranges from starting points for planning beginning in July 1966 to December 1968. Starting points for operational activities extend from June 1967 to sometime beyond July 1969 on the same table. It is a measure of the success of the program that all sections of the country are engaged in the regionalization effort. Success is projected for all of them, although it is slow for some. There are strong indications that these slower Regions are now moving toward their first goals.

The Northeast Ohio Region, which includes Cleveland, for example, was first funded for planning in January 1968. It now has succeeded in building a relationship among the medical school, the medical society and the major clinic of that Region, and is moving toward a successful plan for action. The New York Metropolitan Region which includes New York City, first funded for planning in June 1967, continues to struggle with the task of defining the role of the new Regional Medical Program mechanism for relating its 8 medical schools, its nearly 100 hospitals, its more than 1,000 voluntary and public health agencies, and its tens of thousands of health workers in the interest of the 8 million people they serve. But while the progress in these Regions is slow, the major problems they face appear to be capable of resolution.

Some of the problems of complex metropolitan Regions have been demonstrated to be soluble through the Regional Medical Program mechanism. In Los Angeles, for example, the planning efforts of the people in one of the eight sub-Areas of the California Committee on Regional Medical Programs have resulted in support for the John Drew School of Postgraduate Medicine. This project is already

updating the professional education of practicing physicians and allied health workers in the Watts area. The results will be better health care for their patients with heart disease, cancer and stroke, in sufficient time to help improve the quality of their lives. Another example of an activity in a metropolitan area is a project in Chicago to identify at an early stage persons with hypertension to protect them by appropriate therapy from the effects of sustained high blood pressure, heart failure and stroke.

The Washington-Alaska Regional Medical Program includes a project funded in February 1968 which employs a linear accelerator to analyze samples of toe nail clippings to identify at an early stage those infants and children who will develop cystic fibrosis. The life sentence of chronic pulmonary disease, even emphysema, in these children may be prevented by proper treatment.

A substantial number of the Regional Medical Programs have organized strong programs with the strong support of both the public and private health establishment. Among them are: North Carolina, Georgia, Tennessee Mid-South, Missouri, California, and Washington-Alaska. These Regions are increasingly bringing the concerted attention of the local elements of the health care system to bear on the problems of heart disease, cancer and stroke. Even in these advanced programs which have had up to two years support for operational activities it is difficult to measure results in traditional terms of impact on morbidity and mortality. What is clearly evident, however, is the measurable potential being developed by these Regions which will make better care more widely available. Some examples are...

- A Cancer Information Center has been established through the cooperative arrangements of the three medical schools in the North Carolina Region - Duke University, North Carolina University and Bowman Gray School of Medicine. An immediate consultation by telephone on problems regarding cancer has been made available to all practitioners in the Region. Each school is responsible for providing this service within its assigned geographical area.

- The establishment of a network of coronary care units in the small communities of the Appalachia area in North Carolina. The seven most western counties of the state of North Carolina (referred to as the State of Franklin) are without a major center of excellence. Seven hospitals in this Region will establish coronary care units which will be linked with the Bowman Gray School of Medicine by a direct telephonic communication system for transmission of EKG and other valuable data.

- The treatment of cancer in Alaska will soon be improved by the provision of a super-voltage radiation therapy unit. It has been funded jointly by the Washington-Alaska Regional Medical Program and the local community. This new facility will not only provide a badly needed facility for the treatment of cancer, but it will eliminate the 3,000 mile round trip to Seattle for such treatment for the citizens of Alaska.

- A Tennessee Mid-South Regional Medical Project involving the Hopkinsville Education Center and the Jennie Stuart Memorial Hospital in Hopkinsville, Kentucky, is developing continuing educational opportunities for physicians in that two-state area. Patients in 14 counties will benefit as a result of the medical referral ties to Nashville, Tennessee.

- The Intermountain Region is beginning to provide 24 remote stations with continuous "on-line" computer monitoring of physiologic data in five cooperating hospitals in Salt Lake City and Ogden, Utah. Communications are achieved through monitors at the patient's bedside, with transmitters and receivers tied into a central computer. Data from the remote station is fed to the computer, analyzed, and returned to the bedside station for interpretation by the physicians and nurses involved. Constant "on-line"

monitoring of the patient's central venous pressure, respiratory rate, heart rate, cardiac output, arterial pressures and peripheral resistance can be accomplished. Immediate analysis of such data helps provide better care for patients with acute myocardial infarctions, or those recovering from major cardiac surgery.

- The Northeast Missouri Stroke project provides practicing osteopathic physicians, with consultant service from the University Medical Center, in a program to improve the level of care for stroke patients. The clinic is staffed by osteopaths who are engaged in family practice. Specialists from the medical center offer opportunities in continuing education as well as direct patient consultation.

Other Regions which are in an intermediate stage of development give good evidence that Regional Medical Programs are developing well in their areas. A few examples will illustrate some of their activities:

- Several private clinics, islands of excellence in the midst of sparse medical resources, are becoming involved in Regional Medical Programs by sharing their expert diagnostic and educational facilities with outside physicians. This has occurred in both the Susquehanna Valley and Central New York Regional Medical Programs. The emphasis, in both instances, is for the specialists in the clinics to assist physicians who refer patients to improve their own skills.

- The rehabilitation projects in the Texas Regional Medical Program represent a categorical approach to regionalization. Three medical centers have established relationships with selected communities for which they provide training, consultation, and special treatment services. The aim is to improve and disseminate quality rehabilitative services.

- In New Jersey, a hospital with special facilities, equipment and staff has agreed to provide technical diagnostic services for patients with an artificial cardiac pacemaker. The aim is to reduce the number of pacemaker failures which require emergency treatment and thus improve patient care.

Regional Medical Programs is seeking to establish the matrix for a health care system utilizing existing elements. Supported by funds awarded by the Division of Regional Medical Programs, this organizing effort implements the legislation establishing a Regional Medical Program for heart disease, cancer, stroke and related diseases. The emerging Programs create new linkages among health care institutions. The enthusiasm of regional health leaders involved in Regional Medical Programs and the dedicated efforts of administrative staff offer promise that the infra-structure needed to provide for the efficient dissemination of new knowledge is being created. It is important to note that we are not seeking to create a new system of care. Rather, we are seeking to support existing institutions enabling them to respond promptly with improved services for patients in the community.

During 1970, all Regions will be endeavoring to extend operational activities to include all sections of their Regions to insure the best in modern medical care for heart disease, cancer, stroke, and related diseases may become available to all. From our experience we expect that each of the 55 Regions will submit three applications averaging $500,000 each for support of additional activities.

Of the $96,000,000 requested in 1970 for grant support, it is projected that $92,000,000 will be needed to meet continuation commitments from planning and operational grants awarded in prior years as well as commitments stemming from the 23 new operational programs and the 30 to 45 operational supplements to be awarded in 1969. The balance of $4,000,000 will be used to fund 3 to 5 new operational programs. Up to 1 percent of the total funds appropriated for grants will be available for evaluation of the program as authorized by P.L. 90-574.

Development, Assistance, and Chronic Disease Control

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	673	$8,792,000	673	$8,809,000	...	+$17,000
Other expenses	...	16,073,000	...	13,953,000	...	-2,120,000
Total	673	24,865,000	673	22,762,000	...	-2,103,000
Subactivities:						
Heart Disease Control	275	5,530,000	275	5,410,000	...	-120,000
Respiratory Disease Control	29	1,585,000	29	1,256,000	...	-329,000
Cancer Control	104	2,445,000	104	2,351,000	...	-94,000
Smoking and Health	35	2,100,000	35	2,500,000	...	+400,000
Diabetes and Arthritis Control	75	2,121,000	75	1,885,000	...	-236,000
Neurological and Sensory Disease Control	58	1,555,000	58	1,517,000	...	-38,000
Kidney Disease Control	50	5,314,000	50	4,794,000	...	-520,000
Nutrition	16	1,266,000	16	950,000	...	-316,000
Regionalization Activities	31	2,949,000	31	2,099,000	...	-850,000
Total	673	24,865,000	673	22,762,000	...	-2,103,000

In this activity the aim is to develop, test and evaluate improved methods for prevention, detection, care and rehabilitation in heart disease, cancer, stroke and other chronic diseases; and to promote adoption of the techniques for the benefit of patients through the Regional Medical Programs. These activities include: field trials, feasibility studies and demonstrations; epidemiologic studies; technical assistance to states, Regional Medical Programs and other organizations and public and scientific information and education. These activities are closely coordinated with those of other Federal and non-Federal agencies and institutions to assure the most effective and economical use of available manpower and resources.

Heart Disease Control

The Heart Disease Control Program will investigate methods to reduce death and illness from heart disease and stroke by identifying and bringing to early treatment individuals with high blood pressure, high serum cholesterol, obesity and other predisposing or high risk conditions. Improved care of persons who have already suffered a stroke or heart attack will be sought through the provision of training for specialized staff to operate coronary care units, the exploration of new ways to provide intensive care to stroke patients, and to make available and evaluate the benefits of various forms of care as early as possible during the acute phase of a heart attack. Particularly promising leads will be followed up to evaluate the beneficial role of increased physical activity not only in preventing heart attacks or their recurrence but also in improving the quality and quantity of human performance following such attacks. There will be a decrease of $120,000 in the area of nurse training in coronary care. This activity is however, being supported within the Regional Medical Program grants.

Respiratory Disease Control

The Chronic Respiratory Diseases Control Program will continue activities in established medical centers, directed to the prevention and control of chronic respiratory diseases of children and adults. In 1969, university-based pediatric pulmonary centers are engaged in exemplary programs of teaching, service, and clinical studies. In adult diseases, programs in epidemiology and continuing education of practicing physicians are being carried out. The program is continuing its efforts toward prevention, detection and rehabilitation while developing new information on the qualitative and quantitative nature of this problem. A decrease of $329,000 will reduce support for demonstrations of comprehensive care of patients with chronic respiratory diseases. These activities can however, be supported within the Regional Medical Program grants.

Cancer Control

The Cancer Control Program will promote pilot testing of promising techniques such as cytology as a detection technique for oral cancer and lung cancer; automation of cervical cytology screening; xeroradiography and thermography to complement mamography for breast cancer detection; and flexible endoscopes, improved diagnostic tools for larynx, lung, and gastrointestinal cancer. Public and professional information projects will communicate the results of these evaluations and pilot testing projects to those to whom this is of functional and professional interest. There will be a decrease of $94,000 in the area of public education activities.

Smoking and Health

Recent survey results indicate a growing public interest and willingness to restrict consumption of cigarettes. The National Clearinghouse for Smoking and Health will continue efforts to reduce the number of cigarette smokers by stimulating and supporting National, State, and local activities to help smokers stop, by encouraging youth not to start, and by helping to develop less hazardous smoking practices for those unable to stop. The additional $400,000 being directed in this area in 1970 will be used to place emphasis on continuing research on smoking behavior, organized community approaches, school programs, smoking cessation projects and mass communication activity.

Diabetes and Arthritis Control

As a result of the Surgeon General's Conference on the prevention of disability from arthritis, major emphasis in the arthritis aspect of this program will continue to be devoted to the studies of the efficacy of various therapeutic approaches including synovectomy splinting and other similar new developments, and to promotion of the establishment of early diagnosis and treatment facilities for individuals potentially subject to disablement from arthritis. A pilot arthritis center is now in the planning stage and is expected to be fully operational by the end of the year.

Program activity in diabetes is devoted to research into the epidemiology and natural history of the disease through the continuation of long range projects conducted out of the Boston Field Research Section, and to support for developing and testing of devices which will improve the accuracy and ease of conduct of diabetes screening programs. These programs will bring larger proportions of the diabetic population to proper diagnostic and treatment facilities. There will be a decrease of $236,000 in the area of demonstration of diabetes case-findings.

Neurological and Sensory Disease Control

In the Neurological and Sensory Program, investigation will continue into the clinical usefulness of evoked response audiometry, a technique which permits the audiologist, by observing brain waves, to determine hearing loss in people too

young or too physically or mentally impaired to offer verbal response. Another study, to determine selected speech and neurological characteristics of dysarthria (imperfect articulation in speech) due to neurological lesions will also continue. The program will continue the evaluation of pitch perturbation as a diagnostic and screening tool for laryngeal pathology, both benign and malignant. The computerization of electroencephalographic interpretation offers promise of improving the diagnosis of neurological disorders and the saving of neurologists' time. A project directed toward this end will be continued. There will be a decrease of $38,000 in the area of public education.

Kidney Disease Control

The Kidney Disease Control Program will concentrate on the major problems of improvement of artificial kidney treatment; increased integration of kidney dialysis with transplantation; improved regional planning and coordination of resources for kidney disease control. Twelve centers throughout the country are training patients and their families in the skills necessary to use artificial kidneys in their homes. Analysis of selected aspects of kidney transplantation is underway to speed the formation of systems which must be developed before widespread utilization of surgical transplantation procedures can be employed. Preventive programs seek better knowledge of kidney diseases with emphasis on immediate and long-term reduction or morbidity and mortality from renal diseases. There will be a decrease of $520,000 in the area of the development of early detection techniques for prevention of long-term end-stage renal disease.

Nutrition

The Nutrition Program will continue to provide for the planning of future programs aimed at identifying and assessing the prevalence, location, and causes of malnutrition, including undernutrition, i.e. caloric and nutrient insufficiency, goiter, anemia, and overnutrition, i.e. obesity. Major emphasis initially will be directed toward planning for programs aimed at the most vulnerable population groups--poverty families, preschool children, obese adolescents, pregnant and lactating women, and the aged. These programs will be conducted in collaboration with state and local institutions and other Federal agencies, and will include the identification of federal and local resources available for assisting in immediate and long range remedial action.

In 1969 the remaining five of the approved ten State nutrition surveys will be supported in part by reprogramming of $1,016,000 from the contract funds appropriated in the other Chronic Disease activities. This is a non-recurring cost.

The 1970 increase of $700,000 will provide for support of the follow-up activities related to these surveys including data compilation and analysis, family education activities, publication of findings and technical assistance to the states.

Regionalization Activities

This activity provides assistance to the 55 local Regional Medical Programs in the planning, development and operation of their Programs, develops new knowledge about systems of medical care and new insights into the relationships between the components of those systems, particularly on a regional basis. The descriptive models and other analytical techniques resulting from this work will ultimately be used by Regional Medical Programs to improve the capability and efficiency of their particular systems of medical care. Continuing education assistance is provided to the wide range of health occupations involved in diagnosing and treating heart disease, cancer and stroke. There will be a decrease of $860,000, offset by $10,000 for within-grade increases, in the area of support for training of educational evaluators; studies of patient acceptability of various modalities of care; studies of entry points into the health care system; and studies to identify types of curriculum designs needed for continuing education purposes.

Program Direction and Management Services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	97	$1,151,000	110	$1,315,000	+13	+$164,000
Other expenses	...	700,000	...	564,000	...	-136,000
Total	97	1,851,000	110	1,879,000	+13	+28,000

A program increase of 13 positions and $150,000 will enable the Regional Medical Programs Service to maintain effective communication and information programs which link the local Regional Medical Programs, the Service and the general public; to meet increased requirements for health data; organizational liaison; to provide adequate staffing levels for review and approval of operational grants which are inherently more complex than the planning grants which constituted the major workload until mid 1969; and to provide centralized administrative support for the new Regional Medical Programs Service.

Also included is $27,000 for additional costs for within-grade increases. A reduction of $149,000 for payment to the NIH Management Fund results in a net increase in this activity of $28,000.

New Positions Requested

Fiscal Year 1970

	Program direction and management services	Grade	Annual Salary
	Public Health Program Specialist	GS-15	$19,780
(2)	Public Health Program Specialist	GS-14	33,892
	Administrative Staff Assistant	GS-13	14,409
	Information Specialist	GS-13	14,409
(4)	Public Health Program Specialist	GS-13	57,636
	Information Specialist	GS-12	12,174
	Statistician	GS-7	6,981
	Secretary	GS-5	5,732
	Clerk-Typist	GS-4	5,145
Total new positions		(13)	170,158

COMMUNICABLE DISEASES

WITNESSES

DR. DAVID J. SENCER, DIRECTOR, NATIONAL COMMUNICABLE DISEASE CENTER
JAMES D. BLOOM, ASSISTANT EXECUTIVE OFFICER
LELAND W. SMITH, FINANCIAL MANAGEMENT OFFICER
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION

[In thousands of dollars]

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	19,677	22,031	22,393
Positions other than permanent	1,303	1,771	1,553
Other personnel compensation	465	634	639
Total personnel compensation	21,446	24,436	24,585
Personnel benefits: Civilian employees	2,398	2,643	2,635
Travel and transportation of persons	1,206	1,539	1,574
Transportation of things	376	412	421
Rent, communications, and utilities	1,254	1,187	1,204
Printing and reproduction	170	194	194
Other services	3,813	3,750	3,596
Supplies and materials	3,062	1,834	1,257
Equipment	639	403	353
Grants, subsidies, and contributions	9,055	5,008	2,921
Insurance claims and indemnities	12		
Subtotal	43,431	41,406	38,740
Deduct quarters and subsistence	−9	−9	−9
Total obligations	43,422	41,397	38,731

PERSONNEL SUMMARY

Total number of permanent positions	2,544	2,369	2,374
Full-time equivalent of other positions	248	295	275
Average number of all employees	2,415	2,568	2,575
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794
Average salary of ungraded positions	$6,001	$6,625	$6,862

PROGRAM AND FINANCING

[In thousands of dollars]

Program by activities:			
1. Laboratory improvement	4,521	6,027	6,346
2. Prevention and control:			
(a) Grants	9,730	6,777	2,921
(b) Direct operations	25,534	27,695	27,570
3. Program direction and management services	1,793	1,894	1,894
Total program costs, funded [1]	41,578	42,393	38,731
Change in selected resources [2]	1,844	−996	
Total obligations	43,422	41,397	38,731
Financing:			
Comparative transfers to other accounts	25,492	15,080	
Unobligated balance available, start of year	−2,610	−2,860	
Unobligated balance available, end of year	2,860		
Unobligated balance lapsing	764	344	
Budget authority	69,928	53,961	38,731
Budget authority:			
Appropriation	72,109	62,144	38,731
Transferred to other accounts	−2,181		
Appropriation (adjusted)	69,928	62,144	38,731
Proposed transfer to other accounts for pay increases		−8,183	
Relation of obligations to outlays:			
Obligations incurred, net	68,914	56,477	38,731
Obligated balance, start of year	17,022	25,214	18,861
Obligated balance, end of year	−25,214	−18,861	−12,758
Adjustments in expired accounts	−76		
Outlays	60.646	62,830	44,834

[1] Includes capital outlay as follows: 1968, $639,000; 1969, $403,000; 1970, $353,000.
[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders 1967, $3,235,000 (1968 adjustments, −$18,000), 1968, $5,061,000; 1969, $4,065,000; 1970, $4,065,000.

Mr. FLOOD. The Communicable Diseases people are next.

We have with us Dr. David Sencer. He is the Director of the National Communicable Disease Center which is located in Atlanta, Ga., right?

Dr. SENCER. In the outskirts of Atlanta adjacent to the Emory University campus.

Mr. FLOOD. Do you have any new people?

Dr. SENCER. Mr. Bloom and Mr. Smith have both been here before.

Mr. FLOOD. You have a statement, Doctor. How do you wish to proceed?

Dr. SENCER. If I could read the statement, I would appreciate it.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. FLOOD. We will place your biographical sketch in the record and then you may proceed.

(Dr. Sencer's biographical sketch follows:)

BIOGRAPHICAL SKETCH

Name: David J. Sencer.

Position: Director, National Communicable Disease Center.

Birthplace and date: Grand Rapids, Mich., November 10, 1924.

Education: College, 1942–44: Wesleyan University, Middletown, Conn. College, 1945–46: University of Mississippi. M.D., 1946–51: University of Michigan. Internship, 1951: University Hospital, Ann Arbor, Mich. 1952–54: Internal medicine residency. M.P.H., magna cum laude, 1957–58: Harvard University School of Public Health.

Experience: February 1966 to present: Director, NCDC. October 1964 to February 1966: Deputy Chief, CDC, Atlanta. December 1960 to October 1964: As-

sistant Chief, Communicable Disease Center, U.S. Public Health Service, Atlanta, Ga. February 1959 to November 1960: Program officer, Bureau of State Services, U.S. Public Health Service, Washington, D.C. October 1955 to February 1959: Medical officer in charge, Muscogee County TB Field Research Facility, USPHS, Columbus, Ga. January 1955 to October 1955: Medical consultant, tuberculosis program, U.S. Public Health Service.

Association memberships: American Medical Association, American Public Health Association, American Thoracic Society, American Society of Tropical Medicine and Hygiene, Georgia Tuberculosis Association, Delta Omega.

General Statement

Dr. Sencer. Mr. Chairman and members of the committee, the first time I appeared before this committee under questioning by the present chairman, I admitted that we had made a mistake. We had diagnosed a case of chickenpox as a case of smallpox. This year, nature demonstrated her perversity, but I can report that the Nation's health enterprise—both public and private—responded to this unpredictable turn of events. Last May, we and our advisory committee predicted that there probably would not be much influenza in the United States because of the occurrence of epidemic influenza the previous year—a sound prediction based on information available at that time. However, in July, a new strain of influenza was isolated by the Hong Kong Government virus unit and I don't need to tell you that we have had influenza throughout the United States in epidemic proportions this year.

Hong Kong Flu Epidemic

The story of the 1968–69 influenza pandemic illustrates some of our strong points and, also, some of our weaknesses.

Mr. Flood. What is a pandemic?

Dr. Sencer. A pandemic is an epidemic that sweeps all parts of the world. This happened in 1957–58, and 1917–18 in recent history.

Our strong points might be summarized as our excellent methods of laboratory surveillance and communication, and our ability to be able to respond to national and international needs rapidly.

Let me give you a rundown on events:

(1) Influenza became epidemic in Hong Kong in July. Dr. Chang, of their National Institute of Health, by the 25th of July, had isolated strains of virus from several different sources in Hong Kong and her preliminary typing of these had indicated that they were A2.

Mr. Flood. I understand that the Hong Kong Chamber of Commerce could have done without that publicity.

Dr. Sencer. A number of governments in the Far East could have done without that.

Dr. Chang's laboratory is a member of the World Health Organization network of Influenza Reference Laboratories, of which CDC is the International Reference Center for the Western Hemisphere.

Mr. Flood. Wasn't that an excellent advance notice?

Dr. Sencer. We think it was very good this past year.

(2) Dr. Chang isolated the strains on the 25th of July and submitted them to the WHO Influenza Center in London on the 29th of July.

(3) By mid-August, we had been able to demonstrate that this represented a major change from the A2 strains that had been present in the United States the previous year.

(4) With this information coming from our laboratory, confirmed by findings from the London laboratory, on August 23 strains were furnished to the Division of Biologics Standards at NIH.

(5) By September 6, with this information from the laboratory, and with the confirmation that influenza was also occuring in Singapore and Manila, the Surgeon General was able to ask industry to begin production of the new monovalent influenza vaccine, using the new strain that we anticipated to be epidemic in the United States.

(6) By November 19, the first vaccine reached the market. This is a record of achievement for our Nation's health community. In the span of a few short months, through public and private efforts and cooperation, we were able to identify a new organism, develop a new vaccine, and mobilize productive capabilities to meet this unexpected threat. However, an epidemic did occur so we must examine our deficiencies.

Mr. FLOOD. I was one of the first people to get the vaccine and one of the first people to get the influenza.

Dr. SENCER. This points up some of the shortcomings that I would like to point out.

(1) Vaccine did not become available in large quantities, (2) We are not at all sure that the vaccine was administered to the appropriate people, (3) We do not know how to prevent epidemics of this nature. I point these out as deficiencies, not to cast blame, but to mention problems. Technology is not currently available to more rapidly produce influenza vaccine. The methods we are using today are basically the methods of 1957. We do need methods that will allow the production of large quantities of influenza virus in order that we may then produce more effective vaccines.

In spite of a professional and public educational program that has been going on since 1958, emphasizing that the chronically ill and the aged are the high-risk populations and should receive influenza vaccine every winter, we are not at all sure that the 20 million doses of vaccine produced and distributed by six pharmaceutical companies reached the high-risk population.

Mr. FLOOD. Didn't the industry do an extraordinary job of producing the vaccine in the time they did?

Dr. SENCER. Yes. The vaccine was produced in large quantity.

Mr. FLOOD. We are speaking of the Hong Kong flu?

Dr. SENCER. That is right. I believe in 1957–58, it took over 120 days to reach the production of 5 million doses. This year it was around 87. A very excellent record. We do know, however, that once industry puts it into the distribution channel there are no mechanisms available that would insure that the people with high risk of serious complications receive the vaccine.

Even if we did, we still don't know how to prevent epidemics. In contrast to measles or poliomyelitis, diseases in which we can prevent epidemic spread, we do not know how, or even if, influenza epidemics can be halted or prevented. Large-scale field studies involving the immunization of thousands of people would be necessary to determine the techniques necessary.

Mr. FLOOD. Is the Hong Kong flu infectious and contagious?

Dr. SENCER. Yes; it is. Influenza is a highly contagious disease and is infectious. There are few subclinical cases, although there are some.

GERMAN MEASLES

In the case of German measles we are not faced with these dilemmas. We anticipate the licensing of a new vaccine for German measles this spring. Following licensure the vaccine should become available in large quantities. We are confident that epidemic German measles can be controlled with this effective attenuated live virus vaccine. The mechanism exists for State and local health departments to mount programs to immunize the appropriate population group. The appropriate population group represents a paradox. The high-risk group are pregnant women, where a case of German Measles in the early months of pregnancy frequently leads to serious birth defects—blindness, deafness, congenital mental retardation. But the target population to receive the vaccine will be children. Let me explain. Being a live virus vaccine it does get into the bloodstream in the process of producing immunity. Therefore, the vaccine should not be given to women who could possibly be pregnant, for fear that there could theoretically be some hazard to the fetus. We will then concentrate our efforts on immunizing large numbers of children, not only for their protection now and in the future, but to produce a barrier so that the virus of German measles will not spread to any susceptible young females.

When I say that we have available the mechanism for mounting such a German measles program, I am referring to immunization programs that will be conducted by State and local health departments and supported by grants awarded under the partnership for health. Under the Vaccination Assistance Act this mechanism has been shown to work in the case of regular measles where we have reached an all-time low and have actually had weeks go by in which there were no measles reported in the country.

To indicate that we have no problems in rubella would be misleading; however, we shortly will have good tools available to prevent the disease in children and, thus, to protect young women. However, until this vaccine reaches millions of children, which, to be realistic, will not be accomplished overnight, there will be pregnant women exposed to rubella. It is accepted medical practice in many parts of the country to perform therapeutic abortions on these women, if there is laboratory confirmation that she had been infected with rubella. Some State health department laboratories are now capable of performing this diagnostic service. Also, there are diagnostic kits marketed for use in other laboratories. Unfortunately, in many labs these kits do not always produce accurate results, and at the present time there is no method of assuring accuracy with the level of training of laboratory workers in training in this country.

If it were only rubella that we were concerned with, we could say that the kits will be unnecessary in a matter of a few years. But the kits for rubella are but a symptom of a much larger problem. There are literally hundreds of kits, quick tests, dip sticks, diagnostic aids, on the market at the present time with a complete lack of standards of performance. In a recent study of twelve such kits for determining cholesterol levels—a test used to help determine the risk of heart disease—only two were found to have an acceptable range of reliability. Yet these kits are being advertised for use in private physicians'

offices by untrained personnel. Through the Clinical Laboratory Improvement Act, we are now working collaboratively with professional groups to establish, and enforce, standards of performance in laboratories in interstate commerce. While this does not begin to reach all of the millions of tests that are done throughout the country each year, it is a significant step toward improvement.

MEASLES VACCINE

Mr. FLOOD. To return to red measles, I hold in my hands an article from the Wall Street Journal, datelined Jacksonville.

It reads:

Measles breaks out among 25 children who received vaccine.

Cases in Florida are first of such numbers, agency still trying to determine cause.

When asked whether the outbreak indicated the measles vaccine might wear off after a few years, a medical spokesman for the Communicable Disease Center replied, "It could indicate any number of things, but it's too early to speculate on the indications. We're still trying to determine the cause."

He noted the situation was significant, however, in that it is the first reported measles outbreak of such a large size among vaccinated children.

You are aware of this?

Dr. SENCER. Yes, sir; I think that we can furnish a little more information.

Mr. FLOOD. We will place the article in the record.

(The article follows:)

MEASLES BREAKS OUT AMONG 25 CHILDREN WHO RECEIVED VACCINE

CASES IN FLORIDA ARE FIRST OF SUCH NUMBERS, AGENCY STILL TRYING TO DETERMINE CAUSE

(By the Wall Street Journal Staff Reporter)

JACKSONVILLE, FLA.—An outbreak of measles among 25 children here who previously had received live, attenuated measles virus vaccine (with measles immune globulin) occurred early this winter, the National Communicable Disease Center in Atlanta said.

The outbreak occurred in a private kindergarten between Dec. 20 and Jan. 25. The children affected were from middle and upper income families. Three additional children who hadn't been vaccinated also contracted measles at the school.

Of the 25 immunized children, 24 were vaccinated by physicians in the Jacksonville area and one child was immunized in Virginia. Dates of vaccination ranged from October 1963 through September 1965.

When asked whether the outbreak indicated the measles vaccine might wear off after a few years, a medical spokesman for the communicable disease center replied. "It could indicate any number of things, but it's too early to speculate on the implications. We're still trying to determine the cause."

A physician at the center said the outbreak might have resulted from vaccine not being properly stored.

He noted the situation was significant, however, in that it is the first reported measles outbreak of such a large size among vaccinated children.

A spokesman for Merck & Co., one of the manufacturers of measles vaccine at the time when the children were immunized, said the company could have no immediate comment until it received the official report from the communicable disease center.

The center's report noted that at the time of immunization, 18 of the 25 children were under 12 months of age and seven were from 13 months to 20 months old. "It seems in this particular outbreak that those children who were immunized before 12 months of age just didn't develop the protection," the physician said.

The center's report also stated that although measles vaccine may be given to children under one year old, the vaccination has "maximum efficacy" if given after 12 months of age, according to recommendations by the Public Health Service Advisory Committee on Immunization Practices.

Mr. FLOOD. Comment on this, since you have cleared this up.

Dr. SENCER. I am not sure that we have cleared it up. We can enlarge on what was in the paper. This outbreak occurred in a nursery school of children predominantly from well-to-do families in the Jacksonville area. There were actually 28 cases of measles out of 145 children in the nursery school. Twenty-five of the cases occurred in children who had been previously vaccinated.

Mr. FLOOD. There was also an age problem?

Dr. SENCER. Yes, sir; they were children vaccinated in the early days of the measles vaccine when we were routinely using gamma globulin along with the measles vaccine available at that time. Eighteen of these 25 children were vaccinated before they were 12 months of age. We do not recommend this because these children still have some artificial protection in their bloodstream that is transferred from their mothers. We are actively investigating this with some of our epidemiologists. Since these children did receive vaccine early in life, their mothers' antibodies could have prevented the vaccine from multiplying and producing immunity in the children. This temporary protection has worn off now. Also, as I said, this was given with gamma globulin which further prevents the establishment of good immunity.

Mr. FLOOD. You might develop that for the record.

(The information follows:)

EARLY MEASLES VACCINATION

The measle vaccine available in the United States between 1963 and 1965 was the Edmonston strain vaccine or live attenuated measles virus vaccine. When this vaccine was given to children, between 15 and 30 percent of the children had 1 or 2 days of fever of 101° F. A few had fevers of 103–104° F. In an effort to reduce clinical reactions to the vaccine some drug companies licensed their vaccines to be used with a specific amount of measles-immune globulin. Several studies, some by the NCDC staff, proved this an effective way to decrease vaccine reactions to about 15 percent of those receiving the vaccine, and still obtain a protecting level of antibodies to the disease. However, it was also known at that time that if too much globulin was given, or if the vaccine was given at too early an age, no vaccine "take" would result and no protection would be afforded the recipient.

In 1965 a further attenuated live measles virus vaccine (Schwarz) became available; subsequently other further attenuated vaccines have become available and all of these can be given without measles-immune globulin. Since that time these have become the vaccines preferred by most pediatricians and public health physicians.

Mr. FLOOD. You had us in this committee lulled into a false sense of security with reference to so-called red measles.

Dr. SENCER. I think the fact we used to have 4 million cases a year and now get excited over 25 children indicates that we have come a long way. The fact that we were able to pick this up through our surveillance mechanism indicates that we do not have a false sense of security. We are actively on the watch.

Mr. FLOOD. You are still excited about it?

Dr. SENCER. I certainly am. This is one of the best vaccines that has come into common usage.

Mr. FLOOD. I have here from the Washington Post, March 19, 1969, page 14, dateline London, the headline "London Halts Measles Vaccine Use."

A measles vaccine reportedly used on 5 million children around the world has been withdrawn following reports of encephalitis among some children given the drug. One child has died.

And so on.

We will place that in the record.

(The article follows:)

LONDON HALTS MEASLES VACCINE USE

LONDON, March 18.—A measles vaccine reportedly used on 5 million children around the world has been withdrawn following reports of encephalitis among some children given the drug.

One child has died.

The Department of Health and Social Security has warned local authorities here, who are responsible for mass vaccination, not to use the drug.

An official of the firm which makes the drug, the Burroughs Wellcome Co., said tonight it had suspended supplies of Wellcovax measles vaccine following reports of complications involving the central nervous system.

He added, "Over 1 million doses of the vaccine have already been used in the United Kingdom and a total of more than 5 million in the world as a whole."

The official said one child died shortly after receiving the measles vaccine, but the cause of death had not yet been established.

The firm has been marketing the vaccine for 2 years.

(The Wellcovax vaccine was not believed to have been used in the United States.)

Dr. SENCER. This is a vaccine not used in the United States. It is known as the Beckingham 33 strain. They have not made application for use in the United States. Currently in the United Kingdom there are two vaccines being used, Beckingham 33 and a vaccine produced from the Schwarz strain. The Schwarz strain has been widely used in the United States and is, with other further attenuated vaccines, the vaccine of choice. We have been in touch with the Ministry of Health in the United Kingdom. There were three cases of encephalitis that occurred within 10 days after administration of the vaccine. As you mentioned, one child did expire. The United Kingdom and the drug company concerned——

Mr. FLOOD. They are not sure that was caused by the vaccine?

Dr. SENCER. No. They are saying that this has been done as a precaution. It has been a voluntary removal of the product from the market. They are continuing using the other type of vaccine that we use in this country. We have been maintaining an active surveillance of all reported vaccine-associated illnesses in this country with measles. We estimate that almost 30 million children in the United States have received measles vaccine and we have had reports of 37 reactions that have been investigated. Frequently a child will have fever, even when he does not get vaccinated, and we have been able to find no cause-and-effect relation.

To return to the problem of kits and licensure of laboratories, while we can license labs in interstate commerce, this does not begin to approach all the laboratory work being done, let alone that in private physicians' offices.

We are working collaboratively with the College of Internal Medicine and the Academy of General Practice at the present time to see

if we can develop a method of proficiency testing of doctors, offices, and procedures. With respect to the laboratory in interstate commerce, we have published regulations and this month our personnel, lab examiners, are going out into the field to examine those labs engaged in interstate commerce in all parts of the Nation.

FINDING AND PREVENTING COMMUNICABLE DISEASES

Communicable diseases, however, are not equally spread among people in all parts of this country. They are not distributed uniformly in a geographic sense, or in the socioeconomic sense. Diseases for which we have good methods of prevention and cure—tuberculosis, syphilis—are still drains on our health resources. Although not limited to the poor, the rates of these diseases are significantly higher in the disadvantaged of our Nation. This is not because the poor are different biologically, but because they do not share equally in health programs. Standard methods of health care delivery—the doctor's office, the outpatient clinic, the neighborhood health center, do not necessarily reach out far enough into the community on an epidemiologic basis to identify people with communicable diseases, nor do they necessarily seek out those to whom these diseases have been transmitted. We must "search out and destroy" pockets of disease.

The success of this technique is evident this year in our tuberculosis statistics. The annual rate of decline of new active cases of tuberculosis has been but 3 percent per year for the past 5 years. This year, an encouraging 10 percent. There has been no new drug, but an increase in the appropriate use of isoniazid in treating cases, and more importantly its use in treating infection before it becomes a case. Likewise, syphilis has started down. Again this can best be attributed not to a new drug, but to the epidemiologic application of penicillin to contacts of people with infectious syphilis. While we think we have the tools to conquer tuberculosis and syphilis, we have not as yet perfected our first weapon—adequate diagnosis—in the battle against gonorrhea. The problems of gonorrhea are greater than we had thought. We have a good method of culturing the organism, but only in a fairly sophisticated laboratory. Penicillin continues to be effective against gonorrhea, but there is concern that the organism will soon become resistant to the drug. We have no blood test for gonorrhea yet, but we are now in the field trying out a test which may do to gonorrhea what the Wasserman test did to syphilis.

I said earlier that diseases were not equally distributed geographically. This past year, we had human rabies in Kansas; California virus disease in Minnesota; tularemia in Vermont; plague in Idaho; Venezuelan encephalitis in Florida; all for the first time. This points out the need to maintain, as a national resource, trained infectious disease epidemiologists and laboratorians who are anxious to do battle with the epidemic whenever and wherever it may occur.

Mr. FLOOD. Any smallpox?

Dr. SENCER. Not in this country this year. As you know, we have a very active program working with AID in West Africa in attempting to eradicate that.

Mr. FLOOD. Any in Panama?

Dr. SENCER. No smallpox has been reported north of Brazil this year.

No State can maintain all the competencies that are necessary to combat infectious disease in today's rapidly shrinking world, and the communicable disease center has prided itself over the years in being responsive to the needs as they occur.

PLAGUE

Last year, the State Department asked us to send a team to Indonesia to help combat an epidemic of plague in Java. A person on our staff who had long familiarity with Java told us that the natives believed that when there was plague, the volcanoes were going to erupt. You may have read in the papers 2 months ago that the volcano did erupt after the plague epidemic. I mentioned this not to suggest that we should believe in all superstitions, but to point out that there is a scientific rationale. Plague is endemic in the rodents that live high in the mountains away from people. As the temperature of the ground begins to warm in preparation for a volcanic eruption, the rodent populations move down mountains to mingle with rats that live close to people, transmitting their plague to domestic rats and so to humans. This points out the need to study infectious diseases in their totality. This is what we refer to as the ecological approach.

Mr. FLOOD. There are no volcanoes in Idaho. What happened there?

Dr. SENCER. Plague has been present in the small rodents of Idaho for a good number of years. We have known this. But we have not had any human cases. This is an example that as our population gets more leisure and more involved in the outdoors and hunting, fishing, camping out, they are coming in contact with these diseases which are still present in nature.

We cannot pay attention only to a single factor, but we must consider the interplay of a wide variety of forces. This past year for the first time in recorded history and in metropolitan Denver an outbreak of plague occurred among eastern fox squirrels. Luckily, there was only one human case, but we must continue to investigate this occurrence to discover what happened in nature so that we are now finding plague among common urban squirrels and transmitted by a flea never before associated with plague.

DISEASES OF FOREIGN ORIGIN

That this is a shrinking world is illustrated by the fact that the first case of Hong Kong influenza confirmed in the United States was not in Honolulu, not on the west coast, but on the doorstep of the Communicable Disease Center in Atlanta. Because the world is as one, we cannot be content to depend upon the oceans as protection against disease. We must be ever alert to the occurrence of disease abroad. To this end, our foreign quarantine program has extended its surveillance to all parts of the world through contacts with the World Health Organization and other countries. It is in our own interest to work with others to eradicate disease where this is possible, as with the joint program with AID in which we are now reaching the 75 million mark in vaccinations given in West Africa against smallpox.

COST OF HEALTH CARE

With spiraling costs of health care, all people in health services should constantly be examining their activities to determine how they can bring them to bear on this problem. I would like to point out one of the many ways in which we at CDC are working to conserve the health dollar. Not only is it ironic, but tragic, that people go to hospitals to be cured, only to acquire an infection within the hospital. But beyond the irony is the fact that this costs hundreds of millions of dollars per year in extra hospital costs. It is for this reason that since the problem of hospital infections in the midfifties first became apparent, CDC has been working vigorously with hospitals in methods to improve patient care to prevent unnecessary illness within the hospital. This is brought about not just by investigations of disease outbreaks after they have passed, but by training hospital personnel——

Mr. FLOOD. Isn't the best thing soap and water and elbow grease?

Dr. SENCER. It is not only soap and water and elbow grease, but paying attention to the instruments used in hospitals. Earlier you were talking about pulmonary clinics. One of the biggest problems is that in many of the newer devices for inhalation therapy of chronic asthma and bronchitis, you cannot get to the centers of them to clean them out. How do you develop the appropriate methods of sterilizing these so that a machine being used to treat a person won't transmit a disease to someone else? We have been working in hospitals since the midfifties. We hope that we are beginning to prevent some of the unnecessary illnesses that occur within the hospital.

This is brought about not just by investigation of disease outbreaks after they have passed, but by training hospital personnel in the epidemiology and prevention of hospital infections, of which kidney infection is one of the most common and frequently leads to chronic renal disease. We are working with hospitals to develop more rapid diagnostic techniques, such as the fluorescent antibodies, and we hope to stimulate the concept of hospital surveillance officers.

BUDGET SUMMARY

For 1970 we are requesting a total of $38,731,000. This is a net reduction of $2,666,000 from the amount available for obligation in 1969 and results principally from expiration of the community immunization grants program. Funds appropriated under the partnership for health amendments are available on a competitive basis to support these projects.

Mr. Chairman, I shall be happy to answer any questions you or members of the committee may have.

APPROPRIATION LANGUAGE CHANGE

Mr. FLOOD. You are asking that we add to the appropriation language the authorization for section 328 of the Public Health Service Act. Why do you need that? It was never mentioned before.

Dr. SENCER. This is because of the Laboratory Improvement Act. Excuse me, sir. This is really specific authority covering something that has been going on for quite some time under general authorizations. We have a program where researchers in universities can come and use specialized facilities we may have.

For example, we have a laboratory where it is safe to work with smallpox virus and there is practically no other laboratory in the country where this is possible. So we make available our facilities for someone from a university who might wish to come and work on a short-term basis with us.

Mr. FLOOD. And State health people do the same thing?

Dr. SENCER. We have State and local people come in all the time.

LABORATORY IMPROVEMENT PROGRAM

Mr. FLOOD. You have 2,369 jobs for 1969, you are asking for five more for 1970. How many of that 2,369 are actually filled now?

Dr. SENCER. 2,307, I believe.

Mr. FLOOD. Where has this cutback affected your work most?

Dr. SENCER. The cutback has hurt most in trying to implement the Clinical Laboratory Improvement Act. We have been unable to staff this. We have had to make a request to extend the period for implementation for 6 months.

Mr. FLOOD. The only increase you are asking in the whole budget is $319,000 for a laboratory improvement program?

Dr. SENCER. Yes, sir; we have been placing our highest priority on this program.

Mr. FLOOD. You say on page 9 this is "to meet the initial requirements leading to a full scale program."

Suppose you tell us what you have been doing this year, what you plan for 1970 and what is involved in the full scale program.

Dr. SENCER. What we have been doing this year is two things, sir:

One is the legalistic part of writing the regulations, clearing them with the various organizations concerned, and secondly, and more important, developing some of the tools by which we are going to perform proficiency testing.

How do we send out these specimens to 1,000 laboratories. As an example, one of the——

Mr. FLOOD. Tell us to what extent you are using these automated procedures.

Dr. SENCER. Our laboratories are highly automated.

Unfortunately, many other laboratories think if they get an automated device, they can produce accurate work. It still takes an intelligent, well-trained human being to run these automated devices.

One of the first laboratories we have inspected under the licensing program is in a farmhouse. It is operated on the weekend by a person who has a degree from a nonexistent institution. This is going to be the minority of laboratories. The laboratories that we license are going to be ethical.

But we cannot depend upon automation alone. There must be well-trained personnel who institute proper performance evaluation continuously in their work. Proficiency testing whereby unknown specimens are sent to laboratories is also important.

Mr. FLOOD. Are you still concerned about the fly-by-night second-story laboratories?

Dr. SENCER. I think this concern will vanish within the year.

Mr. FLOOD. Within the year?

Dr. SENCER. I think so, yes. They are not going to be able to be li-

censed and they will go out of business. This was the experience in New York City when they initially introduced their licensure program about 4 years ago.

Mr. FLOOD. Good, I wish you could do it in 6 months, don't you?

Dr. SENCER. I wish we could have done it on the first of the year. But we have been delayed in instituting the program.

REDUCTION IN FOREIGN QUARANTINE PROGRAM

Mr. FLOOD. You have the foreign quarantine program. That is going the other way. You have a decrease of $475,000 and 10 jobs.

Dr. SENCER. This has been brought about by improved management practices in the foreign quarantine program. In spite of the rapid increase in travel, we have been able to find ways of applying epidemiological principles to cutback on the work. We used to require that everyone crossing the U.S.-Mexican border have a smallpox vaccination. We recognize the fact there has been no smallpox in Mexico since 1951, so why make it a requirement? This requirement was met by doing the vaccination at the border. Through discontinuing practices like this we have been able to conserve on man-years of effort and still protect the Nation.

INCREASE IN VENEREAL DISEASES

Mr. FLOOD. You mention the increase in venereal disease and say on page 28 "the number of cases of gonorrhea across the Nation have been increasing dramatically." I have been hearing this story for a long time, during the war the story used to be, don't worry about getting it, just get a shot of pencillin and everything will be okay. Don't worry about it.

I thought that was the end of gonorrhea a few years ago. Now here we go again.

Dr. SENCER. I think the figures speak for themselves.

Mr. FLOOD. What happened?

Dr. SENCER. I think we have been speaking encouragingly about syphilis in the past, but have not been mentioning gonorrhea because we have not had much scientific basis on which to act.

Mr. FLOOD. I asked the Defense people, and all branches of Service, every year the same thing. They had everybody convinced around town that just a shot of penicillin and that will be the end of that.

Dr. SENCER. In terms of treating gonorrhea, yes, with two doses of penicillin, which we think most effective. But the problem is searching out people having silent infection. The male is quite capable of self-diagnosis and obtaining treatment. In the females gonorrhea is a frequently silent infection and the woman does not know she has it until she develops complications.

Mr. FLOOD. You run Pap tests, Wasserman tests, and all kinds of tests on the woman. You cannot find this bug. It has been around a long time.

Dr. SENCER. It certainly has. The bug is a difficult one to work with because it has very specific growth requirements. Its nutritional needs are very specific. One of the big problems that we face today is that if I am in an outlying laboratory and take a specimen, I cannot mail it

in to a central laboratory because it would not survive over a period of time. There is no growth media we can put it in to keep it viable until it gets to a good laboratory that is accustomed to working with the specialized growth media that are necessary for gonorrhea.

In the past we have not had a blood test for gonorrhea. With infection rates as high as they are, we are going to need something more.

Mr. FLOOD. As high as they are right now?

Dr. SENCER. Yes, sir. And increasing.

Mr. FLOOD. And among very young people.

Dr. SENCER. Actually, the age distribution is about the same as it was 10 years ago.

Mr. FLOOD. I thought it was getting younger.

Dr. SENCER. There is still lots of gonorrhea in the teenagers and young adults.

Mr. FLOOD. But no dramatic change in the age brackets?

Dr. SENCER. No dramatic change in the age brackets, no, sir.

We hope that our laboratory in Atlanta has now developed a diagnostic blood test that will begin to give us some indication of who is infected.

Mr. FLOOD. Your program has not been very good, obviously. Do you have any plans for a different approach? The one you are using does not work.

Dr. SENCER. The one that is being used throughout this country has not been working. That is quite obvious.

Mr. FLOOD. What do you do now?

Dr. SENCER. Our approach, Mr. Flood, is to not necessarily abandon what is going on, but to try through research and development to develop better methods of finding those people who are the carriers of gonorrhea so we can attack this pool. We think the blood test, if this works, will be the best method we have at the present time.

Mr. FLOOD. Any target date? This summer?

Dr. SENCER. I hope to be able to report significant progress next year.

Mr. FLOOD. How do we compare with other countries?

Dr. SENCER. In other countries the venereal diseases are not reported as well as here. We do know in Western Europe gonorrhea is on the increase. Scandinavian countries, where they have not admitted to venereal disease in any great amount, are now concerned about gonorrhea.

TUBERCULOSIS

Mr. FLOOD. Now you have $4,937,000 budgeted for venereal disease and $3,549,000 for tuberculosis. TB is going on down and VD is going up. So why should not a much higher proportion of your resources go to VD?

Dr. SENCER. Much of our resources in the past, Mr. Flood, have been through the grants currently funded under "Partnership for health." If you look at the cost of stopping the transmission of VD per case, it is quite inexpensive. But in TB, where you do not have a single shot approach; where you have to develop a program in health departments and clinics where you can be sure people will receive medication over a year's period, this is much more expensive per unit. The estimates you see in the budget reflect only that amount of money spent

through direct appropriations, which is primarily for research and technical assistance. The actual program operations in State and local health departments have been supported by project grants under the partnership for health program.

FAMILY PLANNING

Mr. FLOOD. You are in family planning. Since we started the appropriations hearings we find that almost everybody except the Weather Bureau is getting into family planning all of a sudden. It was taboo just a few years ago. I did not know you were in it, too, until I read page 23 of your justifications.

Dr. SENCER. Yes, sir.

Mr. FLOOD. What do you do about family planning?

Dr. SENCER. I think we mentioned it last year.

Mr. FLOOD. Can there be so many plans about family planning?

Dr. SENCER. We are not so much interested in the planning as we are in evaluating how effective the various programs are. We do this in collaboration with the National Institute of Child Health and Human Development. We are training medical epidemiologists in the techniques of evaluation because the techniques of evaluation are very similar for family planning programs and communicable disease control.

Mr. FLOOD. Evaluation of what?

Dr. SENCER. How effective a particular program is. If you have a program in a community that is trying to encourage mothers to space their children through the use of, say, the loop, and another program in the same community working with one of the synthetic drugs, is there better acceptance of the loop or the pill?

Mr. FLOOD. Evaluators?

Dr. SENCER. Yes. We are not passing out pills, not actually funding or managing any programs. We sort of sit aside as the auditor, if you will.

RUBELLA IMMUNIZATION

Mr. FLOOD. You have $854,000 for immunization services.

Dr. SENCER. Yes, sir.

Mr. FLOOD. In the supplemental you are requesting $9.6 million for the German measles vaccination program.

Dr. SENCER. Yes, sir.

Mr. FLOOD. That is under the Comprehensive Health Planning and Services appropriation. What do you do that they do not do?

Dr. SENCER. Under the former section 317, the Vaccination Assistance Act, we also had grant funds available. The $854,000 that you mention here is direct operations which again is technical assistance and research in different methods of developing immunization programs, that backstops the State and local programs that are going, we hope, to be funded under the partnership for health.

PUERTO RICO FACILITIES

Mr. FLOOD. I understand you have been reprogramed out of the construction money for your Puerto Rican facility. How will that affect

your activities? Who got that money, the Morgantown Facility in West Virginia?

Mr. MILLER. That is correct.

Mr. CARDWELL. The money went to finance the construction of the Morgantown Facility.

Mr. FLOOD. Did you ever get the money?

Dr. SENCER. It had been appropriated, both construction and planning money. We have the final architectural drawings, we have the land, and it comes at a rather embarrassing time just as the Commonwealth was beginning a major push to attempt to eradicate schistosomiasis.

SCHISTOSOMIASIS

Mr. FLOOD. I have an article here from today's Wall Street Journal: "Sterling Drug Unveils One-Shot Protection Against Snail Fever" or schistosomiasis. The product is called Hycanthone.

Suppose the Sterling people actually have a one-shot drug effective for snail fever, what happens to your program in Puerto Rico? You would not need it?

Dr. SENCER. You will still need a way to get this one shot, if it really works, to the people.

Mr. FLOOD. We will put this in the record.

(The article follows:)

[From the Wall Street Journal, Mar. 7, 1969]

STERLING DRUG UNVEILS ONE-SHOT PROTECTION AGAINST SNAIL FEVER—PRODUCT, CALLED HYCANTHONE, IS SEEN AIDING MILLIONS IN UNDERDEVELOPED COUNTRIES

(By Earl C. Gottschalk, Jr.)

NEW YORK.—Sterling Drug Inc. will market overseas as early as July a new one-shot drug for snail fever, a disease that affects as many as 200 million persons, it was learned.

The drug, called Hycanthone, has proved 80 percent to 90 percent effective against the disease in tests with 2,000 persons in Brazil, Venezuela, South Africa, Rhodesia and Egypt. The disease whose medical name is schistosomiasis, is transmitted to humans by snail larvae in water.

It's estimated that half the population of Egypt is infected with snail fever. Present drugs for the disease require patients to go back five to 10 times for continued treatments and this is difficult in underdeveloped countries, Sterling said. Hycanthone is administered in one injection.

It was learned that Sterling has applications to boards of health in "quite a few countries" for approval to market the drug. It's expected that Sterling will market the drug in several countries in the second half of 1969.

According to Dr. Sydney Archer, director of the Sterling-Winthrop Research Institute, Hycanthone, a member of the thioxanthone family of chemicals, can be produced economically on a mass basis through fermentation chemistry. A source said the company expects that treatment cost will be comparable to other effective drugs on the market.

Snail fever isn't a significant health problem in the United States but is prevalent in Latin America, Africa, the Philippines, the Far East, and the Middle East.

Hycanthone was isolated from monkey urine by David Rossi, a research biochemist at the Sterling-Winthrop Research Institute. The discovery was supervised by Dr. Archer and Dr. Emery W. Dennis, director of the institute's biology division.

The World Health Organization says the incidence of snail fever is rising, constituting a grave public-health problem despite many years of chemical, biological and ecological control efforts. The disease flourishes in developing countries because of irrigation and dam-building programs that build up new water areas.

Snails are a host for the disease and give off larvae which penetrate human skin, usually while the person is working, swimming, or wading in water. Then the larvae enter the bloodstream, are carried to blood vessels of the liver, develop to maturity, and migrate to the veins of the abdominal cavity. The disease is chronically debilitating and sometimes fatal. It often seriously injures the liver, intestine, and urinary tracts.

Dr. Archer said studies by independent laboratories showed that the two side effects of Hycanthone were a mild nausea and vomiting.

Sterling Drug, a Manhattan-based manufacturer, has reported two other favorable developments for the company in the past 6 weeks. On January 27, the Food and Drug Administration gave marketing approval to its Sulfamylon cream, a drug to treat severe burns. And on February 5, the FDA approved for marketing the company's tablet form of Talwin, a nonnarcotic pain-killing drug. Sterling says Talwin is the first nonnarcotic pain killer to have the potency of morphine.

Dr. SENCER. There is not much known about this drug at the present time. There is only one clinical report in the literature. The drug is currently being field tested in 10 different countries. We must know more about the side effects and the long term efficacy before we recommend its use in Puerto Rico. Meanwhile, we must continue to interrupt transmission from snail to man.

Mr. FLOOD. We do not have much trouble in this country with snail fever?

Dr. SENCER. Not in the mainland. With the big Puerto Rican migration in New York City, we do have the need for treating people, but we are not concerned with our sanitation being bad enough to allow the transmission on the mainland.

Mr. FLOOD. As far as water, streams and lakes and ponds?

Dr. SPENCER. We do not have the snail vector here. We have a schistosome bird parasite, that will bore into the skin and give you swimmer's itch, but it will not penetrate into the bloodstream and get into the liver.

Mr. FLOOD. Mr. Michel?

GONORRHEA

Mr. MICHEL. One additional question here with respect to the Chairman's line of questioning with respect to the problem of gonorrhea. What has been spent in this past year on that problem, and what do you have in the 1970 budget?

Dr. SENCER. We have around $1 million, including $600,000 recently appropriated, currently going into research, applied research programs, working with State and local health departments to try and find methods of identifying women who——

Mr. MICHEL. This is the 1969 level of expenditure?

Dr. SENCER. Yes, sir.

Mr. MICHEL. How about 1970?

Dr. SENCER. This is constant, no change.

Mr. MICHEL. Do you have some figures on the rate of increase? How many people are afflicted or infected with it now? How many additional people have become infected in the past year, to your knowledge?

Dr. SENCER. The increase has been 14 percent. We estimate there are around 410,000 cases reported this past year, which is up about 50,000 from last year. We know gonorrhea is not well reported, however, so this is just the top of an iceberg.

Mr. MICHEL. What was last year's rate of increase?

Dr. SENCER. About 10 percent, I believe.

Mr. MICHEL. And the amount you were spending then too was a static figure of some $1 million, was it not?

Dr. SENCER. Actually, there was about a $150,000 increase for 1969 and $500,000 in 1968.

Mr. MICHEL. What more do we have to do to get you to really push forward at an accelerated rate in this thing? Is it a lack of money?

Dr. SENCER. I think that you have to balance available resources and what you can expect to accomplish with the amount of money available. One of the efforts that we have been going through this past year is trying to induce more research people to get involved, both in syphilis research and in gonorrhea research. They are unpopular diseases to do research in; there is not the glamour of many other diseases. But to take an established investigator and say you now go to work on gonorrhea, we will give you money, is not necessarily the way we are going to increase the effort.

Mr. MICHEL. What are you going to do about getting these doctors to report this disease?

Dr. SENCER. In 1960 a survey was conducted by the American Social Health Association and American Medical Association to see what percentage of physicians were reporting. We estimated only about 20 to 22 percent of the active cases of syphilis were being reported. This study has been repeated this past year and I regret to say it is the same as it was in 1960.

Mr. MICHEL. That is equally true at least of gonorrhea, I suppose.

Dr. SENCER. Yes. We put on an intensive effort of having our field staff visit physicians to try to encourage them to report, but it is sort of like bouncing your head up against a brick wall. There have been some studies done as to why physicians do and do not report. They tend not to report their regular patients. They tend to report people who walk in off the streets and whom they do not anticipate seeing again.

If a person is of an equal or higher social economic status, they do not report. If they are of a lower status they tend to report better.

We have expended a lot of energy trying to improve physicians' reporting. We are now looking at more subtle ways of trying to get the information, such as automating screening machines so we can screen larger numbers of people automatically through clinics and large municipal hospitals, and thereby identify infectious syphilis without depending on somebody to report the disease.

We think if we can develop better methods of diagnosis of gonorrhea, not just in public clinics but working through maternity clinics, family planning clinics, the whole gamut of public facilities where we can do good diagnosis, we will begin to get at the problem of reporting. I do not think we can put much more effort in trying to convince physicians to report.

Mr. MICHEL. Do you know what the National Institute of Allergy and Infectious Diseases is doing on this?

Dr. SENCER. There is very little extramural work being supported by the National Institute of Allergy and Infectious Diseases. I do not think there is any directly relating to gonorrhea or syphilis. They do have a few grants which impinge upon this because they are working with the same general class of organisms, but there is no direct support of the VD research.

Mr. MICHEL. I note that you are decreasing your budget for community immunization grants because of expiration of legislative authority.

Dr. SPENCER. Yes, sir.

We have a request for a supplemental for rubella immunization under the "Partnership for health," and in the regular 1970 request for the "Partnership for health."

Mr. MICHEL. What was that amount for the supplemental?

Dr. SENCER. The supplemental was $9.6 million, and in the request for 1970 it is anticipated that $16 million while not specifically earmarked for rubella, will be requested.

LABORATORY LICENSING

Mr. MICHEL. How many positions will you require to begin licensure of laboratories?

Dr. SENCER. Last year Congress approved 51 positions for this program and we are requesting 15 additional this year.

Mr. MICHEL. Are all of those 51 filled?

Dr. SENCER. No, sir.

Mr. MICHEL. How many are unfilled?

Dr. SPENCER. Because of the Revenue and Expenditure Control Act, this is hard to say. We have been diverting people from other tasks to these positions. I think we have about 44 people we can identify as working on laboratory licensure at the present time, about 26 are temporarily assigned from other CDC programs and 18 are new hires.

TREATMENT OF STREPTOCOCCUS INFECTIONS

Mr. MICHEL. What kind of progress are you making in finding a drug to treat streptococcus infection?

Dr. SENCER. We have a good drug for that infection. Penicillin is extremely effective. The problem is understanding the mode of transmission to streptococcal infection. There has been a great deal of work done in epidemiology of rheumatic fever, one of the consequences of streptococcal infection. This has been with little attention paid to just how the streptococcus is transmitted from person to person.

We have studies going on at the present time in the Rocky Mountain area and west coast where the disease is a major problem; looking at this from an ecological approach, the total environment, human environment, bacterial, and physical environment, to see if streptococcal diseases spread in schools or in family; just how it is spread so we can begin to attack the transmission rather than the disease.

TUBERCULOSIS

Mr. MICHEL. Could you supply for the record a chart showing the number of tuberculosis patients and the amount spent on it say for the past 10 years?

Dr. SENCER. Inpatients or total caseload?

Mr. MICHEL. Both.

Dr. SENCER. Yes, sir.

(The information follows:)

ESTIMATED HOSPITAL COST OF TUBERCULOSIS IN-PATIENT AND OUT-PATIENT CARE AND NUMBER OF PERSONS TREATED DURING YEAR, UNITED STATES, 1959–68

Year	Direct costs (in millions)	Number of persons treated during year (in thousands) [1]
1959	$372.2	460
1960	344.2	460
1961	335.3	500
1962	321.4	500
1963	321.5	540
1964	315.0	580
1965	318.0	600
1966	320.6	615
1967	321.3	650
1968	319.8	[2] 900

[1] In addition approximately 10,000,000 to 15,000,000 persons were screened each year by either chest X-ray or tuberculin skin test. During the 1st 5 years of the period screening procedures were mainly chest X-rays; in later years the screening procedures were primarily tuberculin testing.

[2] The TB surveillance reporting system initiated during 1968 provided data for the 1st time on the number of persons being recommended for preventive treatment.

DR. DILL'S PROPOSAL FOR MEDICAL EXAMINATION OF VISA APPLICANTS

Mr. MICHEL. What are your opinions and thoughts on the proposal regarding the medical examination of visa applicants that Dr. Dwight Dill sent to us?

Dr. SENCER. We looked into Dr. Dill's proposal at considerable length.

As you know, there is a lengthy history of discussion of this and we have just more recently discussed the proposal with the State Department which has statutory responsibility for examining visa applicants. Dr. Dill is at the present time one of the panel physicians in the Philippines to whom people making application for visas are referred by the American Consulate. He is a very excellent physician, has done very fine work for us. However, the proposal that Dr. Dill makes has some problems as far as the State Department is concerned and as far as we are concerned.

At the present time, the alien examination program in the Pacific other than Manila itself is working very well. In Manila we do have examples of people fraudulently obtaining chest X-rays. This has been limited to one physician and his name has been withdrawn from the panel. We have ways of determining this.

Each embassy has a responsibility for determining what is best for the local situation. There are three methods by which visa examinations can be conducted. One is by a Public Health Service officer, two, through contract physicians where the Public Health Service actually contracts on a fee-for-service basis with a physician, and the third is the panel. This is where the embassy and the consul select from the local practicing medical communities physicians who are qualified to do the examination.

We have methods of quality control of each situation. We have one physician of the Public Health Service in the Pacific area who periodically is monitoring the work being done by the panel physicians.

Dr. Dill states, that in the past there was some political favoritism. In the past year we have reviewed and rectified this, if it existed, with the assistance of the State Department.

We recently went out of contract operations in Canada and we had a very excellent method of selecting panel physicians who were approved by the Ministry of Health of Canada, and their local medical society. We have had the same situation in Venezuela in which we requested the Ministry of Health to furnish us with competent physicians to perform this examination. We think the system as it exists is working.

Dr. Dill's proposal would not save the Government any money since at the present time there is a panel in operation in Manila and at no cost to the Government.

Mr. MICHEL. That is all, Mr. Chairman.

THERAPEUTIC ABORTIONS

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. On page 4 of your statement you said it is accepted medical practice in many parts of the country to perform therapeutic abortions. How many States?

Dr. SENCER. This is not handled by State law, Mr. Shriver.

Mr. SHRIVER. What do you mean?

Dr. SENCER. You cannot take a State as a whole, you go to the community to determine what is accepted medical practice. In all States at the present time there are procedures that, when a woman's health is in danger and when there is concurrence among other physicians consulted, an abortion can be performed.

Mr. SHRIVER. In my own State, they are now talking about legalizing abortion.

Dr. SENCER. Yes; many States in the past 2 or 3 years have been making it easier for an abortion to be performed. Since we know that many abortions are going to be performed, whether legally or illegally, if there are adequate safeguards for good, safe, legal abortions, this is much better than indiscriminate criminal abortions.

Mr. SHRIVER. I know our legislature is now considering this. I have been reading it in our local papers, but I doubt if they get it done.

Dr. SENCER. Your neighbor to the west just passed such a law.

Mr. SHRIVER. I know they did.

PROPER DISTRIBUTION OF VACCINES

Mr. SHRIVER. You mentioned in your statement and you express a concern that 20 million doses of Hong Kong flu vaccine did not reach the high-risk population, chronically ill, and old folks.

Dr. SENCER. Yes.

Mr. SHRIVER. How can you alleviate that kind of a problem?

Dr. SENCER. We have tried exhortation and public and professional education. It has not been completely successful. If I could draw upon history, in 1955–56, when Salk polio vaccine was first licensed, the Public Health Service was given an appropriation to purchase polio vaccine and distribute it to State and local health departments.

No funds were made available to develop programs that would assure that the vaccine went to the people of greatest need. The easiest

way was to give it to school-age children. This was very effective in lowering the total numbers of cases of poliomyelitis, but it also changed the whole epidemiology of polio.

In the mid-1950's, polio had become a disease of middle and upper socioeconomic groups and was moving along toward older children and young adults. By 1960, with polio vaccine being extensively used in the schools and in the private practice of medicine, poliomyelitis had once again become infantile paralysis involving preschool children and a disease of the slums.

In 1962, when the oral vaccine was licensed, the proposal was also made that the Public Health Service should purchase and distribute vaccine. We made a very strong plea and it ended in the Vaccination Assistance Act, not just vaccine provided, but making available to State and local health departments additional resources to organize and develop programs to see that the vaccine reached the people most in need.

I think that if we were serious about doing something about influenza it would take a similar approach of trying to mount intensive programs to seek out groups of people at high risk. All of the people, for example, who have had TB in the past 10 years, or emphysema, in many ways these groups could be found but it would take additional resources at the State and local level.

AID PROGRAMS

Mr. SHRIVER. You mentioned the joint program with the Agency for International Development regarding smallpox vaccination in West Africa. Mrs. Reid and I are on the Appropriations Committee dealing with foreign operations. I am wondering what part of the program costs come from your budget for this and what part come from AID.

Dr. SENCER. None of the overseas costs can come from our budget. We have put in some of the domestic costs because smallpox is also a domestic concern. The vast bulk of the funds are funds appropriated to AID and the African Bureau.

I would like, if you don't mind, to say a word about this program.

So frequently we hear of the programs that do not succeed in foreign aid. This has been a very, very exceptional program, both in terms of vaccinating people and preventing disease, and also in winning some friends for the United States. I was at the World Health Assembly in Geneva this past May. Mali, a country where the East has a great influence, rose and praised the United States for the assistance it was giving the country in the smallpox program. I think the smallpox program is one of the good ones, if you would like to see a good one.

Mr. SHRIVER. We all like to see a few good ones.

Dr. SENCER. I commend this one to you.

Mr. SHRIVER. That does not answer the question. How much is being spent for this purpose?

Dr. SENCER. This is on a participating agency service agreement. It varies from year to year because of commodity purchases. At the peak it was $26 million, but that was a year in which vehicles and heavy equipment were purchased. It is $6.5 million.

Mr. SHRIVER. You said a participating agency service agreement?

Dr. SENCER. These are people that are normally on our rolls to help with the domestic smallpox surveillance. One or two people.

Mr. SHRIVER. I think that you said that you are not permitted to participate in any joint international programs?

Dr. SENCER. No, sir. The only international activities that we can participate in with our own funds are those relating to health research and in the case of foreign quarantine, the assignment of personnel to conduct medical examinations and maintain surveillance of the disease.

Mr. SHRIVER. That is all.

RANKING OF COMMUNICABLE DISEASES IN ORDER OF IMPORTANCE

Mr. FLOOD. Mrs. Reid?

Mrs. REID. Thank you, Mr. Chairman.

Doctor, can you rank the communicable diseases in relation to the Nation's health?

Dr. SENCER. I think this past winter——

Mr. FLOOD. What was the question?

Mrs. REID. I am asking him to rank the communicable diseases in relation to the Nation's health.

Dr. SENCER. Just as we say diseases are not equally spread upon the population, they are not equally important from year to year. Influenza was the single most important communicable disease this past year because of the sudden emergence of a new strain of virus with its potential for killing people prematurely. We do know that the excess mortality this past year was extremely high. When the figures are all in we probably will find that at least 50,000 people will have died prematurely. This year we would have said influenza was of prime importance. Next year, influenza will not be an important disease. I think if you look at the diseases that are with us on a more constant basis in terms of costs, TB is one of the most expensive communicable diseases that we have.

Mrs. REID. Is this still the case?

Dr. SENCER. Yes, ma'am.

In spite of the marked reduction that we have seen in TB, this past year we had 40,000 new active cases reported.

Mrs. REID. In my district, right outside of Aurora, a TB sanitarium has been closed.

Dr. SENCER. That is right. But if you go into downtown Chicago, you will find hundreds of people with active TB who need both outpatient and hospital treatment. Here again TB is concentrating itself in the poor who are not getting good medical service. The rate of transmission in Aurora is practically nothing today. We are concerned about those people who have been infected in the past. TB is a disease where you can get infected as a child and not develop the disease itself, the symptoms and the damages of the disease for many years. We have a reservoir of about 25 million people in this country who have been infected in the past and who are potential cases. We estimate that we could markedly reduce that if we could get isoniazid—a very cheap, inexpensive, very effective drug—to many of these people who are infected but not yet diseased.

After TB, I think you would probably have to say hospital infections

are some of the most costly diseases. We estimate probably $600 million in costs to our economy in hospital infections; the additional hospital time, additional diagnostic procedures for a person who catches an infection within a hospital.

Mrs. REID. Staph infection?

Dr. SENCER. Staph infections were very common. While staph really focused attention on this in the mid-fifties, today the problems are with other organisms, things like klebsiella, pseudomonas—a wide variety of things with ugly-sounding names that cause ugly infections, organisms that in the past did not seem to amount to much. Today with antibiotics these organisms have suddenly come to the fore. We do not have good mechanisms to handle them.

After that, I think the whole problem of venereal disease would have to be considered as one of the most expensive and dangerous threats to our society.

Streptococcus is probably the most prevalent disease after gonorrhea. Luckily, not many of these turn into chronic renal disease or rheumatic fever. Think of the costs of care of a strep throat; there is nothing as frightening as having a child develop a temperature of 105 and get a little pink. Then there is a lab determination. If penicillin is started within 3 hours the child is clinically well, but still there has been a doctor's visit, a 10-day course of penicillin, and at least one lab determination.

ENCEPHALITIS

Mrs. REID. One of the areas to which epidemic assistance was provided against encephalitis last year was in Illinois. Is there any reason to expect a recurrence of that again this summer?

Dr. SENCER. Encephalitis can occur just about any summer, we have found. We have a program trying to solve some of the riddles of this. Encephalitis is a disease that very seldom involves man. It is present in nature just about every year in birds. It is transmitted from bird to bird by a mosquito. Only when the virus reaches a proportionate number of birds and the amount of virus per bird and the mosquito population gets to the right level it spins off into people.

It is not transmitted from person to person but from some reservoir in nature to people. We know that there are some areas in the Panhandle of Texas, for example, Hale County, where there will be encephalitis every year. It is not infectious enough to go through a whole community and make everybody immune all at once. Every year we can anticipate there will be encephalitis in Hale County. I do not want to be gloomy and say southern Illinois will have encephalitis again this year. It was not a large epidemic, largely rural in nature. Until the mosquito control measures are more adequately applied in this area, the potential of encephalitis exists.

Mrs. REID. Thank you, Doctor.

That is all.

Mr. FLOOD. Thank you, gentlemen.

Dr. SENCER. Thank you, sir.

JUSTIFICATION MATERIAL

Communicable Diseases

Amounts Available for Obligation

	1969	1970
Appropriation	$62,144,000	$38,731,000
Comparative transfers to:		
"Environmental control"	-6,446,000	
"Food and Drug Control"	-8,368,000	
"Salaries and expenses, Office of the Administrator", Consumer Protection and Environmental Control Services	-48,000	
"Salaries and expenses, Office of the Administrator	-15,000	
Unobligated balance brought forward	2,860,000	
Cutback required by PL 90-364	-8,730,000	
Total available for obligation	41,397,000	38,731,000

Disposition of cutback:

Proposed transfers to other accounts for pay costs:	
"Patient care and special health services"	2,246,000
"Indian health activities"	2,640,000
"Chronic diseases"	436,000
"Salaries and expenses," Food and Drug Administration	1,589,000
"Assistance to refugees in the United States," Social and Rehabilitation Service	38,000
"Salaries and expenses," Social and Rehabilitation Service	1,234,000
To be returned to Treasury	547,000
Total cutback	8,730,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
14	Laboratory improvement	419	$6,027,000	434	$6,346,000	+15	+$319,000
16	Prevention and control:						
	a. Grants		5,781,000		2,921,000		-2,860,000
	b. Direct operations:						
17	Communicable diseases	763	11,227,000	763	11,370,000	---	+143,000
26	Tuberculosis	202	3,511,000	202	3,549,000	---	+38,000
28	Venereal diseases :.....	314	4,862,000	314	4,937,000	---	+75,000
30	Foreign quarantine	510	8,095,000	500	7,714,000	-10	-381,000
	Total 1,789		27,695,000	1,779	27,570,000	-10	-125,000
31	Program direction and management services	161	1,894,000	161	1,894,000	---	---
	Total obligations 2,369		41,397,000	2,374	38,731,000	+5	-2,666,000

Obligations by Object

	1969 Actual	1970 Estimate	Increase or Decrease
Total number of permanent positions	2,369	2,374	+5
Full-time equivalent of all other positions	295	275	-20
Average number of all employees	2,568	2,575	+7
Personnel compensation:			
Permanent positions	$22,031,000	$22,393,000	+$362,000
Positions other than permanent	1,770,700	1,553,000	-217,700
Other personnel compensation	634,000	639,000	+5,000
Total personnel compensation	24,435,700	24,585,000	+149,300
Personnel benefits	2,642,600	2,635,000	-7,600
Travel and transportation of persons.	1,539,000	1,574,000	+35,000
Transportation of things	412,000	421,000	+9,000
Rent, communications and utilities...	1,187,000	1,204,000	+17,000
Printing and reproduction	194,000	194,000	...
Other services:			
Project contracts	1,661,000	1,623,000	-38,000
Other	2,090,000	1,973,000	-117,000
Supplies and materials	1,833,800	1,257,000	-576,800
Equipment	403,000	353,000	-50,000
Grants, subsidies, and contributions.	5,007,900	2,921,000	-2,086,900
Subtotal	41,406,000	38,740,000	-2,666,000
Deduct quarters and subsistence	-9,000	-9,000	...
Total obligations by object	41,397,000	38,731,000	-2,666,000

Summary of Changes

1969 estimated obligations	$41,397,000
1970 estimated obligations	-38,731,000
Net change	-2,666,000

	Base		Change from Base	
	Pos.	Amount	Pos.	Amount
A. Increases:				
1. Built-in:				
(a) Annualization of 1969 pay raise costs	---	---	---	+$60,000
(b) Net additional cost of within grade increases.	---	---	---	+417,000
2. Program:				
Laboratory improvement	419	$6,207,000	+15	+242,000
Total increases	---	---	+15	+719,000
B. Decreases:				
1. Built-in:				
(a) Nonrecurring equipment	---	---	---	-50,000
2. Program:				
(a) Community immunization grants	---	2,860,000	---	-2,860,000
(b) Foreign quarantine	510	8,095,000	-10	-475,000
Total decreases	---	---	-10	-3,385,000
Net change	---	---	+5	-2,666,000

Explanation of Changes

Laboratory improvement

An increase of $242,000 and 15 positions is requested to meet the initial requirements leading to a full scale program of laboratory improvement by upgrading of public health laboratories and improving through licensure clinical laboratories engaged in interstate commerce. The Clinical Laboratories Improvement Act of 1967 will be further implemented through processing of applications from laboratories which are subject to licensure, on-site examinations, proficiency testing and quality control programs, analysis of information, licensure and re-examination.

Community immunization grants

The decrease of $2,860,000 results from expiration of legislative authority under section 317(a) of the Public Health Service Act for community immunization project grants. These project grants were made to States and other political subdivisions for immunization programs against poliomyelitis, diphtheria, whooping cough, tetanus, measles and any other disease of an infectious nature which represented a major public health problem and which was susceptible to practical elimination through immunization. Funds appropriated under the Partnership for Health Amendments to the Public Health Service Act are available on a competitive basis to fund community immunization projects.

Foreign quarantine

The decrease of $475,000 and 10 positions has been made possible by improvements in the operation of inspection services at ports of entry. At the same time the nation's health defenses have been strengthened through greater utilization of epidemiologic concepts and information in the conduct of foreign quarantine activities to make them more sensitive and effective.

Authorizing Legislation

Research grants - Legislative authority contained in Section 301 of the Public Health Service Act provides for the award of grants for research.

Explanation of Transfers

	1969 Estimate	1970 Estimate	Purpose
Comparative transfer to: "Environmental control" /	$6,446,000	...	Transfer of Aedes aegypti Eradication activities as part of the reorganization of the Department of Health, Education, and Welfare.
"Food and Drug Control"	8,368,000	...	Transfer of Pesticides activities as part of the reorganization of the Department of Health, Education, and Welfare.
"Salaries and expenses, Office of the Administrator", Consumer Protection and Environmental Control Services	48,000	...	Transfer of staff services as part of the reorganization of the Department of Health, Education, and Welfare.
"Salaries and expenses, Office of the Administrator"	15,000	...	Transfer of staff services as part of the reorganization of the Department of Health, Education, and Welfare.

Communicable Diseases

	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	8,175,000	8,140,000	8,275,000	8,157,500
1961 1/	9,578,500	8,578,500 2/	9,578,500	9,578,500
1962	9,778,100	9,778,000	10,028,000	10,000,000
1963	22,662,000	15,492,000	22,892,000	18,892,000
1964	30,613,000	25,405,000	30,405,000	28,405,000
1965	29,995,000	29,974,000	29,974,000	29,974,000
1966	48,347,000	40,347,000	40,497,000	40,497,000
1967	44,230,000	44,220,000	44,220,000	44,220,000
1968	72,272,000	72,109,000	72,109,000	72,109,000
1969	63,407,000	62,144,000	62,144,000	62,144,000
1970 3/	38,731,000			

1/ Excludes amounts for Control of Venereal Diseases which were carried as a part of this appropriation.

2/ Supplemental of $1,000,000 not considered by the House.

3/ Excludes amounts for Aedes aegypti eradication and pesticides transferred to Consumer Protection and Environmental Control Service.

General Statement

The Communicable Diseases appropriation provides funds to plan, conduct, and coordinate (1) a national program, including research, investigations, epidemiological services, epidemic aid, consultation, and surveillance activities, for the prevention and control of communicable and certain other preventable diseases; (2) a comprehensive national laboratory improvement program, including the provision of laboratory technical support for State, local and other groups engaged in medical laboratory practice or administration, and including licensure of clinical laboratories in interstate commerce; (3) a program of continuing education for the practicing health professions on methods and techniques of disease prevention and control; (4) a national program to protect the United States against the introduction of communicable diseases from foreign countries; and (5) a research grants program which includes stimulation of research in neglected or under-emphasized fields.

A major area of responsibility is the provision of technical assistance, professional consultation and information to States and localities on the conduct of their programs which are financed in part through grants from the Comprehensive Health Planning and Services program.

Additional funds requested in 1970 will provide for intensifying our efforts toward expansion of laboratory licensure services; and implementation of field and laboratory surveillance of rubella and the other new vaccines.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Laboratory improvement	419	$6,027,000	434	$6,346,000	+15	+$319,000

The National Communicable Disease Center is engaged in a vigorous program to improve the performance of public health laboratories. These laboratories are critical to successful State and community health programs and yet they suffer from a shortage of trained personnel, lack of standardized procedures, lack of standardized reagents, and insufficient performance evaluation. Where these deficiencies exist the result is poor laboratory performance. The Laboratory Improvement Program is designed to meet these needs by:

1. Developing standardized tests which if properly performed will produce consistently accurate results. In addition, new or modified tests will be evaluated with particular emphasis on those which can be carried out on a large scale and are, therefore, especially suitable for public health use. For example, automated procedures (Autoanalyzer, Robot Chemist) for casefinding of latent diabetes.

2. Training laboratory workers in order to upgrade the general level of competency and to keep public health laboratory personnel abreast of developments in the medical laboratory field.

	1969		1970	
	Students	Student Days	Students	Student Days
Scheduled Courses	580	5,860	625	6,440
Bench Training	175	1,800	190	1,980
Multistate Courses	365	1,625	400	1,780
Intrastate Courses	390	1,560	425	1,710
TOTAL	1,510	10,845	1,640	11,910

3. Evaluating laboratory performance by sending "unknown" specimens for examination. The results are analyzed and used as the basis for recommending changes in procedures, tests, or additional training for the participating agencies. This activity also serves to identify problem areas such as selection of laboratory techniques, performance evaluation, quality control, instrumentation, and interpretation of results where consultation and correction are needed.

4. Providing reference diagnostic services to assist public health laboratories as a back-up laboratory for unusual or difficult specimens on which they need assistance and in the evaluation of their own performance. This includes acting as a referee laboratory for intrastate performance evaluation programs.

1969 Estimate		1970 Estimate	
Specimens	Tests	Specimens	Tests
48,000	480,000	50,000	500,000

5. Evaluating commercially produced microbiological reagents to determine expected results in actual laboratory use. Also, public health laboratories are furnished reference reagents used to check commercial products as well as some diagnostic reagents produced by the Center which are not commercially available.

1969..... 115,000 mls.

1970..... 130,000 mls.

6. Providing consultation in the management of laboratories including organization, manpower utilization, facilities planning, and space utilization and modernization.

General Management - 30 such reviews per year.

Facilities Planning - 30 such reviews per year.

Since it is impossible to provide the full range of these services to all public health laboratories, priority has been given to working with State and territorial laboratories. The State's laboratory should, then, assume leadership for intrastate laboratory improvement programs.

With passage of the Clinical Laboratories Improvement Act of 1967, a new facet was added to the Center's goals to improve the performance of laboratories across the nation. Of the estimated 14,000 laboratories approximately 1,000 are engaged in interstate commerce. The States cannot effectively control the performance of these laboratories many of which offer service by mail. Under the Clinical Laboratory Improvement Act clinical laboratories transacting business in interstate commerce are required to meet standards relating to: (1) the quality and accuracy of laboratory performance; (2) the training and experience of the director and staff of the laboratory; (3) proficiency testing; and (4) the quality of reagents used by the laboratory.

During 1968 and 1969 efforts have been concentrated on laying the ground-work for efficient and effective implementation of the Act. Top priority has been given to the development of realistic standards which form the basis and substance of licensure regulations. With the advice and assistance of nationally recognized experts such standards have been developed and final regulations were published December 31, 1968.

In order to begin licensure of laboratories during 1969, the necessary scientific/administrative resources and organization are being assembled. Laboratories which will be subject to licensure have been identified. An automated system for the administration of application procedures and the

analysis of on-site examinations and proficiency testing results is being developed. Laboratory examiners are presently drafting on-site examination procedures and an on-site checklist. Plans for and a schedule of proficiency testing in 1969 have been developed and distributed to voluntary participants. Personnel are being trained and proficiency testing materials produced or procured in preparation for on-site visits which will be made as soon as regulations are officially published and applications are processed. Licenses will be granted following the analysis of testing results and information obtained from laboratory visits and application forms. Follow-up testing and re-examination will be performed.

During 1970 the cycle of application processing, on-site examinations, proficiency testing, analysis of information, licensure and reexamination will continue and reach the level of full scale operation.

The increase of $319,000 includes $242,000 and 15 positions to strengthen proficiency testing and quality control programs, review of and assistance to State and local licensure and proficiency testing programs, and expansion of proficiency testing services of non-profit professional organizations. With the requested increase the Center will be able to meet the initial requirements leading to a full scale program of laboratory improvement; upgrading of public health laboratories and improving, through licensure, clinical laboratories engaged in interstate commerce. The result will be better health through high quality laboratory performance. It also includes $127,000 for annualization of positions new in 1969, less $50,000 non-recurring equipment.

Prevention and Control

Research grants

	1969 Estimate		1970 Estimate		Increase or Decrease	
	No.	Amount	No.	Amount	No.	Amount
1. Non-competing continuations.....	59	$2,785,000	59	$2,785,000	-	---
2. New grants	13	136,000	13	136,000	-	---
Total	72	2,921,000	72	2,921,000	-	---

The growth of our population, the change to predominantly urban living and new patterns of disease, as well as the persistence of unanswered questions demand that efforts to apply control measures be supplemented by efforts to increase our knowledge of disease control. Considerable research is needed; research directed toward the complex problems of disease control on a community-wide basis has received little emphasis from grant programs in the past.

In 1970, the National Communicable Disease Center will continue to award research grants for projects which support its major program objectives -- the eventual control of communicable and certain preventable or transmissible diseases. Examples of projects which will be supported are field studies related to the epidemiology and control of salmonellosis and encephalitis, evaluation of immunization techniques and their effects on population immunity, development and evaluation of a safe human anti-rabies vaccine, development and evaluation of laboratory diagnostic procedures and evaluation of methods of control of schistosomiasis.

The total amount of $2,921,000 will support seventy-two (72) projects in 1970, the same number as in 1969.

	1969 Estimate	1970 Estimate	Increase or Decrease
Community immunization grants	$2,860,000/1	---	-$2,860,000

/1 Unobligated balance brought forward from 1968.

Legislation provided by Section 317(a) of the Public Health Service Act expired in 1968, but amounts appropriated by that section were specifically made available for two years. Under the Partnership for Health Amendments to the PHS Act, P.L. 89-749, community immunization project grants become eligible for support under the appropriation "Comprehensive health planning and services." These grants made to States and other political subdivisions cover immunization programs against poliomyelitis, diphtheria, whooping cough, tetanus, measles, rubella, and any other disease of an infectious nature which represents a major public health problem and is susceptible to practical elimination through immunization.

Communicable diseases

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Viral, bacterial, and fungal diseases	408	$4,483,000	408	$4,560,000	---	+$77,000

Acute Respiratory Diseases

The sudden appearance of a completely new antigenic strain of A2 virus from the Far East (A2/Hong Kong/68) has necessitated increased surveillance activities at virtually every level of public health practice. Measures of epidemic impact such as school and industrial absenteeism, morbidity statistics in college and school populations, morbidity and mortality statistics from large hospitals and clinics comprise the major source of data included in the surveillance network applied to the population as a whole. This nationwide outbreak of flu resulted in a fourfold increase in requests for laboratory services compared to the epidemic year 1967-68. The degree and extent of morbidity and mortality resulting from A2 influenza as well as newly recognized strains of influenza must continually be assessed so that improved health measures including vaccination can be recommended and implemented.

Acute respiratory diseases cause more illness than any other group of diseases known. These diseases are of particular importance in infants and young children who frequently develop bronchitis, bronchiolitis and secondary pneumonia following acute respiratory viral disease infection. Furthermore, acute respiratory diseases are a major cause of school and industrial absenteeism resulting in significant economic losses. The costs attributable to medical care and loss of time from work during the 1962-63 influenza epidemic are estimated at $2.5 billion. Current studies are presently aimed to seek more information regarding the occurrence and prevalence of viral respiratory agents occurring in communities to determine the nature and extent of illness caused by these agents. Populations have been selected and are being studied intensively to detect the agents commonly

producing respiratory disease and to determine the natural course of the disease in these populations. The populations under study include groups of children in Kansas City and Bethel, Alaska. These populations and the information obtained from present studies will be valuable in evaluating the efficacy of vaccines as they become available. Investigation of the immune response of humans and animals to respiratory infections are being conducted to learn more about susceptibility and resistance to these infections. Surveillance of respiratory diseases is maintained and outbreaks are investigated when they occur.

During the epidemiologic year 1967-68, A2 influenza occurred in epidemic proportions in the vast majority of eastern United States requiring constant systematic surveillance throughout the United States and its possessions.

Infant Diarrheal Disease

Diarrhea in infants is a serious disease and frequently causes death. Although bacteria are an important cause of gastroenteritis, more than half the cases are due to viruses or unknown agents. Current studies include epidemiologic and laboratory studies to characterize the disease and determine the various etiologic agents. A study of children from birth to the age of 3 years is under way on the San Carlos Apache Indian Reservation in Arizona. Specimens are collected from the children at specified intervals and during illnesses. During the 3-year study, each subject should provide information on bacteria and viruses associated with enteric illness. Surveillance of enteric infections among infants and children admitted to five hospitals on the Navajo Reservation are under way and will be continued.

Encephalitis

The prevalence of arthropod-borne encephalitis appears to be on the increase. Major epidemics of St. Louis encephalitis occurred in Houston and Corpus Christi, Texas in 1964 and 1966. The second largest epidemic of Western encephalitis in the nation's history occurred in Colorado and neighboring states in 1965. In 1968 St. Louis encephalitis occurred in southern Illinois. Documented cases of Eastern encephalitis including several deaths occurred in New Jersey during the summer of 1968. Epidemic assistance was provided to areas in New Jersey, Wisconsin, Minnesota and Illinois, during the summer of 1968.

Studies are also being conducted to determine the factors responsible for the endemic and epidemic prevalences of arboviral diseases in selected study areas of Colorado, Texas, and California. Studies to determine the effectiveness of ultra low volume aerial applications of malathion in preventing human infections with the viruses of Western encephalitis and St. Louis encephalitis have been conducted in Hale County, Texas, and results are being evaluated. Evidence has been accumulated during the past year that nestling house sparrows may play an important role in the epidemiology of outbreaks of encephalitis and further studies are planned to determine if this is an important link in the prevention and control of encephalitis outbreaks.

Studies have been undertaken to determine if arboviral antibodies from the mother cross the placental barrier to the fetus, as this information would be valuable in the interpretation of serological results from infants with clinical encephalitis. Studies of the various ecological factors producing amplification of arbovirus in an area which leads to outbreaks of encephalitis will be continued and may enable more accurate prediction of pending epidemics so that preventive measures may be introduced. These field and laboratory activities will be continued to obtain pertinent information and data needed to effectively institute prevention and control measures.

Streptococcal Infections

Streptococcal infection is the most frequently reported disease in the United States. The number of reported cases now exceeds 400,000 per year but estimates are that over 7,000,000 cases occur annually. Streptococcal infections often produce serious sequelae, such as, rheumatic fever, rheumatic heart disease, and acute glomerulonephritis (a severe kidney disease). The prevalence of streptococcal infections in groups of school children have been determined in Colorado and it has been found that certain families are "carriers" of streptococci while others are not. Studies are under way to determine the reasons for increased resistance or susceptibility of the different families. Studies of patients with streptococcal infections are under way to determine why some individuals develop serious sequelae from their infection and others do not.

Smallpox

It is incumbent upon the United States to maintain a high competency of skills in the laboratory diagnosis of smallpox since the introduction of the disease into this country is a constant threat until the goal of world-wide smallpox eradication is reached. In the past, the National Communicable Disease Center did not have this competency. Today the Center does have the competency and will be able to progress with the development and implementation of; (1) studies of immunization levels among high risk groups and when indicated, specific programs to increase immunization to acceptable levels; (2) studies on improving vaccines and vaccination tools and techniques; and (3) professional training for State and local health personnel in the diagnosis and epidemiology of smallpox. The vaccine studies begun during 1968 will be completed in 1970. During 1969 clinical material is being gathered on 800 patients from throughout the United States to assess the relative risk of primary versus revaccination. Additional intensive prospective survey was carried out among 25,000 practicing physicians in 10 States. The results of these studies in addition to information obtained through the National Health Survey during 1970 will support the reevaluation of recommended smallpox vaccination procedures within the United States.

Infectious Hepatitis

Infectious hepatitis, a virus infection of the liver, is of world-wide distribution and at present there are no effective control measures. Efforts to elucidate the etiology of human hepatitis have included examination of a variety of specimens from sporadic cases and attempts to establish valid experimental infections in chimpanzees with selected agents from overt cases. In addition, emphasis was placed on the intensive study of a variety of specimens from patients with acute hepatitis as well as the evaluation of tissue explants and suspensions for virus isolation. Canine hepatitis was studied as a model system to evaluate procedures currently used with human hepatitis.

Although numerous viral agents have been recovered from human cases of hepatitis, the etiologic agent has not been detected. Field and laboratory investigations of human cases will continue, but emphasis will be placed on the use of marmosets as an experimental host for virus isolation and immunologic studies. Until the causative agent is isolated and identified, vaccines for prevention and control cannot be developed.

The increase of $77,000 provides for additional costs of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Biology and control of disease vectors..	60	$986,000	60	$997,000	---	+$11,000

Plague

The annual number of cases of plague occurring in humans in the United States has been small. However, the potential threat of this highly fatal disease is ever present since sylvatic plague is prevalent among wild rodents in the western United States. The recent occurrence of plague in a child in Denver, Colorado, led to the discovery of an outbreak of plague among tree squirrels in that city. Prompt and extensive control measures were instituted and no additional human cases developed. Surveillance as well as special studies of wild rodents are under way on the Navajo Indian Reservation in the Southwest where a plague outbreak occurred in 1965.

Plague continues to be a problem in Southeast Asia and the Center responded to an epidemic aid request for assistance in controlling an outbreak of plague in Central Java and is presently making a study of the plague problem in South Vietnam. Because of the potential danger of introducing plague into the United States from Vietnam and other Southeast Asian countries, NCDC has increased surveillance of rats in seaports. More emphasis will be placed on surveillance and study of enzootic foci in the United States in an effort to define the ecologic factors responsible for these foci. Plans have been made for collaboration and exchange of knowledge with the World Health Organization and other agencies throughout the world on the ecology and control of plague.

Schistosomiasis

Schistosomiasis is one of the foremost disease problems of the world, affecting approximately 200 million people. It is widely distributed, occurring in Africa, Asia, South America, Southern Europe, Australia, and a number of islands in the West Indies, including Puerto Rico and the Virgin Islands. Approximately 15 percent of the population of Puerto Rico is infected with Schistosoma Mamsoni; in highly endemic areas, infection rate may be as high as 50 percent. Field studies in Puerto Rico have shown that chemical and biological control of the snail host is an effective method for reducing the prevalence of infection and can be used to control schistosomiasis. A control program for schistosomiasis in Puerto Rico during the next 5 years has been instituted. Epidemiologic and field studies are under way to evaluate the control program. In addition, laboratory studies to test and evaluate newer molluscicide agents will be continued. Also,

ecological studies of the survival and propagation of the causative agent in streams and bodies of water will be continued. Collaboration and exchange of knowledge of other investigators throughout the world will continue so that effective control measures developed in Puerto Rico can be applied elsewhere.

The increase of $11,000 provides for additional cost of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Diseases of animals transmissable to man...	53	$1,208,000	53	$1,218,000	--	+$10,000

Rabies

Surveillance of those diseases that are shared by animals and man will continue. Special effort will be directed toward obtaining information on the changing patterns of those diseases whose ecology is altered by man's impact on his own environment. Included will be rabies, Q fever, psittacosis and leptospirosis.

Sylvatic rabies continues to be a major health threat in the United States. In order to effectively combat this problem, techniques for control must be developed based on the ecology of the species involved. Investigations of population dynamics of vector species and evaluation of population measuring techniques will be continued. Inter-species relationships affecting transmission will be further defined. Human rabies immune globulin will be tested for efficacy and safety in the field by means of controlled studies in humans. Newer types of human vaccines will be evaluated for immunogenicity in subhuman primates.

We are continuing our rabies control program along the U.S.-Mexico border supported by a Public Health Service contract. The program started in 1966 in Baja, California and it was extended in 1967 and 1968 to all of the cities in Mexico along the United States border. Support and direction for this program will eventually revert to the Mexican Ministry of Health.

Laboratory diagnostic aid and training is provided to all of the Latin American countries through the National Communicable Disease Center Rabies Investigations Laboratory, Lawrenceville, Georgia, designated in 1967 as a WHO Reference Laboratory for Rabies for the Americas.

Salmonellosis

Food-borne diseases constitute one of the most insidious public health problems in the country. The total impact is unknown, but it is estimated that each family is affected at least once a year. Foods may become contaminated in many ways and by a variety of organisms. Salmonellosis, a disease of animals that can be transmitted to man, most frequently results from eating foods which contain or are prepared from infected animal products. The 20,000 cases of human salmonellosis that are reported annually represent only the tip of the iceberg. The estimated true number of cases is at least 2,000,000.

Since there is no specific method for preventing the disease, activities have been focused on 1) the identification of the vehicles of infection; 2) identification of the source and reservoirs of infection; and 3) the training of health workers in known methods of control. A broad surveillance program has been initiated which serves as a principal source of information about the epidemiology of the disease. As many as 275 individual outbreaks, involving more than 22,000 persons have been included in this surveillance effort in a single year. This multiple approach of surveillance, investigation, and training will continue to be the basis for the Center's efforts against salmonellosis in 1970.

The increase of $10,000 provides for additional cost of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Communicable Disease Control, Consultation, Investigations and Demonstrations....	27	$816,000	27	$821,000	---	+$5,000

Despite a dramatic reduction in the reported incidence of most communicable diseases, an intolerable number of deaths and illnesses, attributed to communicable diseases, are occurring in the disadvantaged populations of the United States.

Through consultation, investigation and demonstration the Center offers new combinations of approaches and methods to the unmet public health needs of the community. The communicable disease control demonstrations have improved the capability of local health units in identifying pockets of communicable disease, evaluating the socioeconomic problems involved, reaching the "disadvantaged" populations that are usually associated with high disease incidence and through stimulation of this group obtain their participation in community sponsored corrective action. Community action programs involving this group have taken place against such diseases as tuberculosis, polio, rabies, enteric diseases, hepatitis, diphtheria, smallpox, tetanus, and salmonellosis.

During 1968 demonstration programs were in operation in the nine Public Health Service Regions with 77 communities participating in some phase of activity. In demonstration areas, staff specialists will provide professional assistance in public health education, behavioral motivation, and evaluation. Improved methods for locating disease problems within urban and rural areas have been developed. Field research will be continued to determine the factors of human behavior which prevent certain population groups from participating in disease control activities. Evaluation of the efficiency of program methodology and analysis of masses of community data for ecological clues to control or eradication will continue as an integral part of demonstration activities.

The increase of $5,000 provides for additional cost of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Epidemic services...	74	$1,450,000	74	$1,464,000	---	+$14,000

The Epidemic Intelligence Service program initiated in 1951 has been one of the most meaningful programs of the National Communicable Disease Center in exemplifying the mission of the Public Health Service. Approximately 450 professionals (including physicians, veterinarians, statisticians, nurses, engineers, and microbiologists) have been trained as epidemiologist, and at the same time have provided valuable assistance to Federal, state and local health departments in controlling communicable diseases. Principally, the activities have consisted of maintaining active surveillance of diseases of major importance, including hepatitis, measles, influenza, encephalitis, salmonellosis, tetanus, and diphtheria, as well as investigating epidemics, including poliomyelitis, hepatitis, measles, food poisoning, and influenza. Recently epidemiological studies of leukemia, congenital malformations, and Family Planning activities have been initiated.

The program has played an important role in applying measures that have led to the decrease in incidence of some diseases, such as poliomyelitis and measles, as well as assisting in the control of other diseases, such as diphtheria, plague, hepatitis, and encephalitis.

A measure of the scope of activities is found in the hundreds of field investigations made in FY 1968, including almost 100 formal requests for epidemic assistance. These have ranged from purely intrastate problems, such as hepatitis; to interstate epidemics, such as typhoid fever involving hundreds of people in midwestern states who attended a common gathering; to international epidemics that threatened the United States, such as African green monkey disease, or influenza.

With rising costs of medical care in hospitals, hospital epidemiology of infectious diseases can lead to marked reductions in hospital patient days and expenditures. In 1967, an estimated ten million additional patient days (i.e., a hospital expense of about $600 million) were related to hospital-acquired infections in community hospitals in the United States. Since the lower socioeconomic urban areas experience markedly higher rates for many infectious diseases, Epidemic Intelligence Service epidemiologists will work with inner city hospitals. Evaluations of the community communicable disease problems in the inner city, through the neighborhood health centers as well as the hospital, will receive high priority. Emphasis will be placed on preventive epidemiologic services in the urban inner city.

Because of changing ecology of diseases in the U. S. and abroad and as a natural safeguard to the spread of communicable diseases, well-trained epidemiologists are in constant demand. To meet the need for maintenance of clinical and laboratory competence in rare diseases, domestic and international epidemic aid assistance, national and international communicable disease surveillance, and a smooth implementation of public health programs at local, State, national, and international levels, there exists an ever-increasing need to teach medical and paramedical personnel epidemiology and biostatistics as it applies primarily to infectious diseases.

The increase of $14,000 provides for additional cost of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Training of public health workers	87	$1,440,000	87	$1,456,000	---	+$16,000

Changes in program emphasis, new developments in old programs and newly developed programs present constant problems of training and retraining, and continuing education for public health workers is designed to meet these problems and to speed the flow of information from research centers to its application in the field.

The current explosion of knowledge in the health field has left a large gap between knowledge and practice that can only be filled through in-service education of public health teams and through education of the public. The majority of this kind of teaching in the past has been accomplished by the written or spoken word. The technology of training which has also been developing over the past 10 years has not been adequately used in the health field to meet training needs. Much remains to be done in this area to even begin the task of adequately meeting training requirements.

During 1968, 27 seminars were presented to State public health associations, State chapters of the Academy of General Practice and the Academy of Pediatrics on salmonellosis, immunization, tuberculosis, and viral hepatitis. In addition a new seminar on viral diseases has been developed and was presented. The American Medical Association has requested that the seminar services be made available to their State and local associations, and the first seminar will be offered in FY 1969 to the American College of Chest Physicians. Programmed instruction and home study courses are being offered to public health workers who are unable to attend centralized training programs. Thirty-six student hours of programed instruction were released during 1968. Methods have been sought to improve the basic training of physicians in the diagnosis, epidemiology, and control of the more rare communicable diseases through the provision of teaching library volumes to each school of medicine, osteopathy, and public health in the United States.

During 1969 the Center distributed more than 200,000 pieces of training literature to over 44 states, and loaned epidemiological problems using overhead projectuals to 71 teaching institutions.

In 1970 emphasis will be continued on updating slides, films, overhead projectibles, flip charts, and other common teaching tools and on training more instructors in the use of these simple training devices.

Thus, the Center is continuing its diversified and highly responsive effort to improve the effectiveness of the nation's health manpower devoted to the control of infectious diseases. Training, retraining and continuing education is needed if health workers are to have the capability to control communicable diseases in a time of changing disease trends and changing control methodology.

The increase of $16,000 provides for additional cost of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Community immunization services	54	$844,000	54	$854,000	---	+$10,000

Effective application of vaccines and disease surveillance is a basic communicable disease control measure. The Center is providing national direction, leadership and assistance to States and communities in disease control efforts through: (1) establishing the use of vaccines (measles, polio, diphtheria, pertussis, tetanus) as an integral and continuing requirement of disease prevention and control; (2) developing and providing promotional and educational material to favorably influence public attitude toward immunization needs, especially among the urban and rural poor; (3) conducting vaccine evaluation field studies directed toward improving immunization practices; (4) maintaining epidemic stockpiles of vaccines and jet injector equipment; (5) providing intensive disease and immunization level surveillance; (6) technical consultation and assistance; and (7) training State and local health workers including residents of indigenous neighborhoods.

The Center will continue to assist local motivational and educational efforts. Prototype materials, including a number of forms of audiovisuals, will be made readily available for local use. Residents of densely populated, low socioeconomic, urban areas are at greatest risk to communicable disease, therefore special emphasis will be directed toward motivating residents of these areas to utilize existing health services. Although measles is being eradicated, the need for continued education of the public concerning the necessity for maintaining optimal immunization levels of measles and polio becomes of particular importance in order to prevent its resurgence.

A mumps vaccine has been licensed and a rubella (German measles) vaccine is expected to be licensed before the end of FY 1969. The Center needs to determine the impact of these immunizing agents in community-wide application and epidemic use; therefore special emphasis will be placed on intensifying surveillance activities, particularly for mumps and rubella.

Expiration of legislative authority under section 317(a) of the Public Health Service Act for community immunization grants will permit the redirection of resources to implementing field epidemiologic and laboratory surveillance not just of the disease rubella, but equally important, surveillance of possible adverse effects of the vaccine. Salk vaccine licensure was followed by the Cutters episode; Sabin Vaccine by paralytic effects in some adults; the early measles vaccines by a measles like illness. Especial caution must be exercised in introducing rubella vaccine to insure that no major problems arise. Field investigations must also be launched to determine the most effective approach to large scale immunization of children as a means of preventing adult infection through suppression of virus spread, and systematic sero-surveys initiated to determine duration of vaccine induced immunity.

The increase of $10,000 provides for additional cost of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Tuberculosis	202	$3,511,000	202	$3,549,000	...	+$38,000

The basic objective of tuberculosis control is preventing transmission of the disease from one person to another. Despite progress in control techniques, there is considerable potential for tuberculosis transmission in the United States. An estimated 25 million Americans are infected with tuberculosis, and at least 50,000 of these develop active disease each year.

In 1970 the Center will emphasize the prevention of tuberculosis transmission by developing techniques and promoting programs for:

(1) Identifying people who have tuberculosis or are likely to develop tuberculosis; and (2) assuring that all of those people receive adequate treatment or chemoprophylaxis.

Working in close association with State and local health departments and private and voluntary organizations, the major program elements for 1970 are:

1. Availability of Patient Services. The Center will participate with local programs to provide accessible and acceptable diagnostic treatment and preventive services to everyone who needs them. Tuberculosis is most readily spread among persons living in crowded, poorly ventilated housing. Because of this, poor people account for approximately 65 percent of the tuberculosis problem in the United States. The Center is working with the "Model Cities" and other poverty programs in an effort to improve control of tuberculosis among the poor while striving to strengthen community and Statewide control programs in an effort to prevent spread and reintroduction of the disease.

2. Chemotherapy. Prompt and adequate chemotherapy for all diagnosed cases of active tuberculosis is essential to control. In recent years there has been decreasing need for extensive hospitalization of tuberculosis patients, and greater reliance on effective out-of-hospital or ambulatory services to provide the needed care during long periods of drug therapy and follow-up. The Center will work with State and local health departments in providing improved out-patient clinic services for all patients, with the specific objective of raising to 90 percent the known active cases receiving adequate chemotherapy monitored by X-ray and bacteriologic follow-up examinations at least every six months.

3. Surveillance. The incidence of new active cases is no longer an adequate measure of the nation's tuberculosis problem. As a means of better determining the full burden of this disease in a community, the Center has developed a system of surveillance reporting, keyed to reports on everyone for whom anti-tuberculosis drugs are recommended. This system was field tested in 1969 and will be implemented nationwide during 1970. It is estimated that more than one million persons were identified for preventive treatment in calender year 1968.

4. Chemoprophylaxis. Chemoprophylaxis to prevent cases of infectious tuberculosis from developing among those already infected has become an integral part of tuberculosis control in the United States, and offers the greatest potential for eventual eradication of this disease. As noted above, available data indicate that an estimated 1,000,000 persons are now receiving preventive treatment annually. It is hoped that through appropriate action by State and local health departments that this number will be doubled in 1970.

5. Child-Centered Program. The child-centered program to prevent tuberculosis consists of tuberculin tests for school enterers, seventh or eighth graders, school faculty and other adults in close association with school children. Since tuberculous infection among the young segment of our population is becoming relatively rare, an infected child is a sentinel toward a probable infectious case in his family or near associates. Further transmission can be prevented by treating the source case and protecting the infected with chemoprophylaxis. The Center will continue to refine this program and to work toward its incorporation in tuberculosis control activities across the nation.

6. Training. The Task Force Report in 1963 focused attention on the critical need for special training of medical and paramedical personnel in modern methods of tuberculosis control. Acting on recommendations made by the Task Force, the Center has trained nearly 6,000 professional personnel at courses conducted throughout the United States. The success of the nationwide tuberculosis control effort requires constantly improved training. The Center will work toward meeting this need by continuous evaluation of courses, periodic review of objectives, research, and re-examination of manpower requirements.

Research

Research directed by the Center has significantly altered the course of tuberculosis control in the United States. Chemoprophylaxis trials which began in 1955 established the effectiveness of a one-year course of isoniazid in preventing active tuberculosis from developing among various

segments of the infected population. Long-term observation of some 70,000 persons who participated in the trials and analysis of the extensive follow-up data suggested the possibility that a shorter course of prophylaxis might be as effective as a full year. A new large-scale trial was developed to determine whether isoniazid given for less than one year would also be effective in preventing active disease. At the present time this long-term study has been initiated in eight health departments and will be broadened during 1970 as more patients come into the study from other health departments.

More precise methods to determine the presence of infection with Mycobacterium tuberculosis are critical to the success of tuberculosis control in the United States. The Center's study of young men inducted into the Navy, started in 1958, has led to the development of a comparative skin test procedure to distinguish between tuberculous infection and infection with cross-reacting mycobacteria. Fungus infection as well as mycobacterial infections may be difficult to distinguish from tuberculosis and research is therefore directed toward more precise ways of identifying tuberculosis infection.

A surveillance system for bacteriological examination of newly diagnosed cases of tuberculosis has been established to provide early warning of an increase in primary drug resistant disease. This is of national concern and will be continued as an essential element in the research program.

The increase of $38,000 provides for additional cost of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Venereal diseases ..	314	$4,862,000	314	$4,937,000	...	+$75,000

The National Communicable Disease Center provides leadership and coordination to a joint national, State and local effort to eradicate syphilis and control the spread of other venereal diseases. It is clear that as a result of this partnership the number of people acquiring syphilis, and the number of people suffering its debilitating effects, is decreasing, although syphilis still poses a significant threat to the health of the American people. The number of cases of gonorrhea across the nation is increasing dramatically. Objectives of the Center are to search for solutions to persisting needs in laboratory science and immunology, to continue to assess and develop control procedures and methods of delivering health services, and to provide assistance to State and local health departments in the evaluation and conduct of control programs. This assistance consists chiefly of consultation, epidemic assistance, training of personnel, laboratory services, collection and analysis of data, coordination of efforts to control the substantial interstate transmission of venereal disease, and direct assignment of trained personnel to areas with high incidence. Most direct assignees are stationed in urban areas where the problem is the greatest.

Syphilis

The downward trend in reported infectious syphilis which was established in 1967 is continuing into 1969, and is expected to continue in 1970. The 20,190 cases reported in 1968 represents a 4.3% decrease from 1967. This reversal of the steeply rising trend of infectious syphilis evident in the nation as a whole in 1957 - 1966 period, however, has not been matched in the nation's larger cities where both per capita case rates and actual numbers of people acquiring syphilis have only begun to level off. These victims of syphilis are also victims of a host of other health, social, and economic ills. The Center is directing its resources toward reducing the threat of syphilis to people in the inner cities, and as part of health planning in Model Cities, toward improving health services available in Model Neighborhoods.

The Center is continuing its efforts to develop a test for syphilis which will detect the disease sooner after infection, thus permitting diagnosis and treatment before the patient is capable of spreading the disease to others. The efficacy of automating a screening test for syphilis has been established through pilot studies, and work is progressing in the automation of a confirmatory test. Although still out of reach, recent findings have provided impetus to the Center's efforts to develop a vaccine for syphilis.

Gonorrhea

More cases of gonorrhea were reported in FY 1968 than in any year on record, and the annual rate of increase continues to climb. The 431,496 cases of gonorrhea reported in FY 1968 represents only a fraction of the total number of people acquiring the disease so that the true extent of the problem is not known. It is estimated to be at least 1,400,000. The annual percentage increase in reported cases is shown below:

1957-1964 Average	1965	1966	1967	1968
+4.9%	+6.7%	+8.0%	+12.0%	+14.9%

With the $500,000 appropriated in FY 1968, the Center undertook pilot studies aimed at providing information which is basic to the development of control procedures. These studies were designed primarily to determine the extent of asymptomatic gonorrhea in specific female population groups. With the $157,000 increase in FY 1969, these studies are being expanded and limited studies to determine the effectiveness of various casefinding and prevention techniques will be initiated. In addition to the information which will be provided through these studies, the activities will result in the provision of diagnostic services to an estimated 400,000 people and treatment to those who are infected. Almost all of these people reside in urban poverty areas.

Emphasis in gonorrhea research continues to be on the development of an effective screening test such as the serologic test used in syphilis diagnosis, as it is increasingly evident that such a test will be a requirement of a control program. The increase of $75,000 is for annualization of positions new in 1969, and additional costs of within grade increases.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Foreign Quarantine	510	$8,095,000	500	$7,714,000	-10	-$381,000

Continued efforts are being made to up-date and modernize quarantine and inspection operations to meet the complexities of modern international traffic and the challenge of increasing workloads. The increase in conveyances and passengers arriving from or transitting areas where quarantinable diseases are present, especially smallpox and plague, requires increased vigilance. Protection at our ports of entry must be supplemented by an early warning system which can signal communicable disease problems that develop in other nations and which are potentially dangerous to the United States.

In 1969, an estimated 194,000 aircraft carrying approximately 10 million passengers will require public health inspection services on arrival in the United States. This is an increase of 40,000 aircraft and 2 million passengers as compared with last year. In addition, 150 million persons will be inspected at land border crossings and at seaports.

To meet the phenomenal rate of increase in international air traffic, the National Communicable Disease Center, in concert with the three other Federal inspection agencies, and in cooperation with the air transport industry, developed and tested a new inspectional system at the John F. Kennedy International Airport. The new concept utilizes a cross-trained officer to inspect arriving passengers for all four agencies in a primary inspection area. Necessary monitoring and problem cases detected on the primary inspection are handled in a secondary operations area by specialists of each agency. Data for ongoing evaluation and for further improvement of inspection criteria and procedures are provided by an interagency management information system. This accelerated inspection system has reduced passenger waiting time by fifty percent, even on days when over 2,000 passengers are processed in a single hour. As a result of the success of this program at the JFK International Airport, a new inspection system has been developed that will handle the increasing workloads and provide the same or better protection against importations, without a concurrent increase in manpower. This international air transport inspection program is being reorganized to provide accelerated inspection services at all United States international airports.

In accordance with the International Sanitary Regulations of the World Health Organization, "Pratique by Radio" will be reintroduced on a national scale for all vessels arriving from foreign ports. This is a seldom used procedure at present, although it is currently provided for in the foreign quarantine regulations. Pratique by radio permits quarantine clearance of a vessel based on information received from it prior to its arrival, if the responsible quarantine official for the intended port of arrival is of the opinion that the vessel's arrival will not result in the introduction or spread of a quarantinable disease. Quality control will be maintained by

the application of rigorous sampling and evaluation techniques. Implementation of this procedure will be of economic benefit to the industry, and will permit better utilization of inspectional manpower.

Supplementing the improvements that have been made in the inspectional operation, the Center has been strengthening the depth of our defenses against infectious diseases. An embryonic early warning system is being developed by drawing upon existing resources and competencies of the Center. Visa medical examinations are performed at various locations overseas to insure that the health status of immigrants will not impose a financial burden on our health institutions. While fulfilling this primary responsibility, these examination sites can also serve as sensors to emerging disease problems. Input from other Center personnel stationed at numerous points around the globe adds to both the scope and sensitivity of this rudimentary system.

An epidemiological alert can serve not only to make our quarantine inspection more sensitive and effective, but also to forewarn the nation of impending disease problems. For example, quarantine inspectors working with the Center's EIS Officers were instrumental in finding some of the first cases of a new strain of influenza to reach the United States shores. As was feared, "Hong Kong flu" had spanned the Pacific Ocean and might have gone unnoticed. Instead the nation gained some time in its effort to meet this new threat to the health of our people.

A net budget decrease of $381,000 and 10 positions includes a reduction of $475,000, partially offset by $94,000 additional cost of within grade increases. This reduction has been made possible by improvements in the operation of inspection services at ports of entry. At the same time the nation's health defenses have been strengthened through greater utilization of epidemiologic concepts and information in the conduct of foreign quarantine activities to make them more sensitive and effective.

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Program direction and management services.....	161	$1,894,000	161	$1,894,000	---	---

Included in this activity are funds to support Center-wide program direction and management services. Being a complex organization that is both national and international in scope, it is imperative that high quality staff support be maintained in order to most effectively and efficiently carry out the Center's public health missions. Executive direction of the various communicable disease programs is strengthened by sophisticated planning and analysis in terms of mission accomplishment and managerial effectiveness. In addition, these funds enable the Center to fulfill its responsibility for proper stewardship of resources. Costs of within grade increases are offset by reductions in other objects of expense.

New Positions Requested
Fiscal Year 1970

	Grade	Annual Salary
Laboratory improvement		
(2) Medical officer	GS-15	$42,196
(2) Public health program specialist	GS-12	24,348
(7) Laboratory technician	GS-5	40,124
(3) Clerical assistant	GS-5	17,196
Clerical assistant	GS-4	5,145
	(15)	$129,009

March 25, 1969.

REPORTING INDIVIDUAL CASES OF VD

Mr. FLOOD. I wonder, Mr. Stenographer, if you can do this for me. Yesterday I think you were here when we discussed with the Communicable Disease people the dramatic increase in the rise of gonorrhea.

By coincidence, Mr. Michel, Mr. Casey, and I attended a breakfast this morning of obstetricians and gynecologists, and they called upon me to say something, and I spent some time—since this was Newcastle and I had a lot of coals—letting them have it about their failure to cooperate and report cases of venereal disease, especially gonorrhea.

The president of the organization very frankly admitted this was so, gave as reasons that they were concerned about breaking up families when they made these reports. Also, they complained that when they had regular patients for whom they had a great deal of respect and this kind of thing would happen, they were reluctant to make the report by name because of the clumsy investigations made by clumsy investigators following this.

Also, they were concerned because if the patient was a regular patient and they did diagnose gonorrhea they were afraid if they made reports and this patient knew he would be reported, he might go to some quack for treatment, and this worried them.

I thought the record should show that.

And finally, the outgoing president of the organization stated that he was making a note on the agenda for this meeting today of the legislative committee of the National Association of Obstetricians and Gynecologists. He will make a point to ask this committee to help them in bringing to the attention of the membership today the concern of this committee with this very difficult problem.

Will you put that at the end of the Communicable Diseases report hearing of yesterday?

TUESDAY, MARCH 25, 1969.

PATIENT CARE AND SPECIAL HEALTH SERVICES

WITNESSES

DR. ROBERT VAN HOEK, DIRECTOR, FEDERAL HEALTH PROGRAMS SERVICE
DR. HOWARD D. FISHBURN, CHIEF MEDICAL OFFICER, COAST GUARD
DR. GORDON S. SIEGEL, DIRECTOR, DIVISION OF FEDERAL EMPLOYEE HEALTH
ANDREW J. CARDINAL, EXECUTIVE OFFICER, FEDERAL HEALTH PROGRAMS SERVICE
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
DR. PAUL Q. PETERSON, ASSOCIATE ADMINISTRATOR FOR DIRECT HEALTH PROGRAMS
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

PATIENT CARE AND SPECIAL HEALTH SERVICES

OBJECT CLASSIFICATION

[In thousands of dollars]

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	45,345	51,431	52,738
Positions other than permanent	936	1,001	801
Other personnel compensation	1,890	1,952	1,938
Total personnel compensation	48,171	54,384	55,477
Personnel benefits: Civilian employees	6,236	7,083	7,200
Travel and transportation of persons	912	1,040	1,043
Transportation of things	600	702	704
Rent, communications, and utilities	1,409	1,532	1,518
Printing and reproduction	186	209	214
Other services	6,532	8,297	8,162
Supplies and materials	7,159	7,825	8,520
Equipment	2,049	3,282	2,939
Grants, subsidies, and contributions	1,224	1,285	1,285
Insurance claims and indemnities	203		
Subtotal	74,681	85,639	87,062
Quarters and subsistence charges	−359	−360	−360
Total obligations	74,322	85,279	86,702

PERSONNEL SUMMARY

Total number of permanent positions	6,804	6,492	[1] 6,664
Full-time equivalent of other positions	165	177	140
Average number of all employees	6,328	6,516	6,558
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794
Average salary of ungraded positions	$6,001	$6,625	$6,862

[1] Figure was adjusted to 6,623 too late to be reflected in the schedules accompanying the President's budget.

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

PROGRAM AND FINANCING (In thousands of dollars)

	1968 actual	1969 estimate	1970 estimate
Program by activities:			
1. Operation of hospitals and clinics	65,178	74,804	75,428
2. Medical care for special groups:			
(a) Coast Guard	2,371	2,515	2,655
(b) Federal employees	2,204	3,077	3,707
3. Special health services:			
(a) Rehabilitative services	137	168	168
(b) Payments to Hawaii	1,200	1,200	1,200
4. Personnel detailed to other agencies	902	1,085	1,085
5. Program direction and management services	1,934	2,430	2,459
Total program costs, funded [1]	73,926	85,279	86,702
Change in selected resources [2]	396		
Total obligations	74,322	85,279	86,702
Financing:			
Receipts and reimbursements from:			
Federal funds	−10,380	−13,487	−14,156
Non-Federal sources [3]	−390	−355	−322
Comparative transfers to other accounts	1,438	1,199	
Unobligated balance lapsing	74		
Budget authority	65,064	72,636	72,224
Budget authority:			
Appropriation	63,230	70,443	72,224
Transferred to other accounts	−10	−53	
Transferred from other accounts	1,844		
Appropriation (adjusted)	65,064	70,390	72,224
Proposed transfer from other accounts for pay increases		2,246	
Relation of obligations to outlays:			
Obligations incurred, net	64,990	72,636	72,224
Obligated balance, start of year	4,354	4,893	7,819
Obligated balance, end of year	−4,893	−7,819	−10,219
Adjustments in expired accounts	−171		
Outlays	64,280	69,710	69,824

[1] Includes capital outlay as follows: 1968, $2,030,000; 1969, $3,282,000; 1970, $2,939,000.
[2] Selected resources as of June 30 are as follows:

	1967	1968 adjustments	1968	1969	1970
Stores	635		719	719	719
Unpaid undelivered orders	2,171	1	2,484	2,484	2,484
Total selected resources	2,806	1	3,203	3,203	3,203

[3] Reimbursements from non-Federal sources represent collections from pay patients (42 U.S.C. 221).

Mr. FLOOD. Now we have Patient Care and Special Health Services. Our Witness is Dr. Robert van Hoek, Director, Federal Health Programs Service.

Do you have on board anyone whom we have not met?

Dr. VAN HOEK. I would like to introduce Mr. Andrew J. Cardinal, my executive officer; Dr. Howard D. Fishburn, Chief Medical Officer, U.S. Coast Guard, and Dr. Gordon S. Siegel, Director of the Federal Employee Health Program.

Mr. FLOOD. These fellows have been here before.

Dr. VAN HOEK. Yes, sir; I believe they have appeared before you in the past.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. FLOOD. We will place your biographical sketch in the record. (Biographical sketch of Dr. van Hoek follows:)

BIOGRAPHICAL SKETCH

Name: Robert van Hoek, M.D.
Position: Director, Federal Health Programs Service.
Birthplace and date: New York City, N.Y., July 1, 1927.
Education: City College of New York, 1944–49 B.S.; College of Physicians and Surgeons, Columbia University, 1949–53 M.D.; Postgraduate Training in Radiobiology, Reed College (Portland, Oreg.), 1958–59.
Experience: Director, Federal Health Programs Service, 1968 to present; Deputy Director, Divisions of Direct Health Services, 1967–67; Chief, Office of Research, Division of Direct Health Services, 1967–68; Acting chief, Office of Professional Services, Division of Hospitals, 1966–67; Special Assistant to assistant chief for Professional Services, Division of Hospitals, 1965–66; Program specialist, General Clinical Research Center Branch, Division of Research Facilities & Resources, National Institutes of Health, 1964–65; Trainee in Administration of USPHS Extramural Programs, Grants Associate Program, NIH, 1963–64; Head, Metabolism Branch of Radiation, Physiology Division, Armed Forces Radiobiology Research Institute, National Naval Medical Center, 1961–63; Chief, Department of Biophysics, 1960–61; Nuclear Medicine Officer, Walter Reed Army Institute of Research, 1959–60; Chief, Medical and Chest Section, Wright-Patterson Air Force Base Hospital, 1957–58; Resident, Internal Medicine, Bronx Veterans' Administration Hospital, 1954–57; Intern, Medicine, St. Luke's Hospital (New York), 1953–54.
Association memberships: diplomate, American Board of Internal Medicine; fellow, American College of Physicians; member, American Federation for Clinical Research, Radiation Research Society, American Association for Advancement of Science.
Special awards, citations, or publications: Alpha Omega Alpha Honor Medical Society; letter of commendation from commandant of Walter Reed Army Institute of Research; author or coauthor of several scientific publications.

Mr. FLOOD. You have a statement, I see, Doctor.

Dr. VAN HOEK. Yes, Mr. Chairman.

Mr. FLOOD. How do you wish to proceed?

Dr. VAN HOEK. With your permission, I would like to read the statement.

Mr. FLOOD. Very well.

GENERAL STATEMENT

Dr. VAN HOEK. Mr. Chairman and members of the committee, I think it appropriate to begin the discussion of the patient care and special health services appropriation with a summary of the recent reorganization of Public Health Service activities as it relates to the appropriation and programs under consideration.

As a consequence of the reorganization, the Public Health Service hospital and clinic programs are part of the Federal health programs service, a service within the Health Services and Mental Health Administration. Several changes have occurred in programs which were a part of this appropriation last year. The poison control activities were transferred to the Consumer Protection and Environmental Health Service, and the emergency health services program was incorporated in the former Division of Health Mobilization, now the Division of Emergency Health Services. Therefore, our present discussion will not include these items.

The Federal health programs service now consists of the Public Health Service hospitals and clinics of the former Division of Direct Health Services, the Division of Federal Employee Health, and the Division of Emergency Health Services which has a separate appropriation. Public Health Service medical support to the Coast Guard is also budgeted in this appropriation.

PUBLIC HEALTH SERVICE HOSPITALS AND CLINICS

The Public Health Service hospital and clinic system has the basic responsibility of providing comprehensive health care to specific Federal beneficiaries, such as American seamen, active duty Coast Guard personnel and dependents, Public Health Service commissioned officers and dependents, individuals afflicted with leprosy, and many other categories.

Mr. FLOOD. By the way, at the end of your statement, will you list the name and location of each of your hospitals?

Mr. VAN HOEK. Yes, Mr. Chairman.

To meet this responsibility, to achieve the highest possible quality of health services, and to recruit and retain the most capable staff, extensive training and research activities have been developed. In recent years it has become evident to us that Federal medical programs should not function as isolated entities within a community or a region. Health care, training, and research must be planned and conducted on a total community and/or regional basis so that all resources can be mobilized to meet the needs of both Federal and non-Federal health programs. This concept has been translated into action in three distinct ways: (1) increased participation in programs sponsored by other Federal and local community agencies; (2) increased emphasis on academic and other educational affiliations; and (3) conduct of health services research.

In the first category, no change has been more significant than the burgeoning of community-oriented training programs. These have been organized, in addition to traditional health and allied professional training, as attempts to solve the problems of health manpower shortages and unemployment and have been conducted in cooperation with other Federal agencies, such as the Office of Economic Opportunity and Department of Labor, and local community organizations. As part of these collaborative programs, the hospitals and clinics have provided critically needed health services to target groups, primarily in the form of health screening examinations for disease and disability detection. In addition to the more than 1,200 health professionals who will have received all or some part of their training in our programs during the past year, some 1,500 individuals will have had health-related job training through community-oriented programs. Furthermore, 25,000 will have been provided initial health examinations. With regard to community programs, the most exciting recent development has been our participation in a neighborhood health center sponsored by the District of Columbia Department of Public Health and the District of Columbia Redevelopment Land Agency in Northwest Urban Renewal Area No. 1.

With regard to educational affiliations, the hospital and clinic system has more than 200 affiliation agreements with educational insti-

tutions of all kinds, covering not only education and training of physicians and dentists, but virtually all the allied health professions and technical skills. Moreover, these affiliations involve basic and clinical research activities in our facilities.

In health services research, the Federal Health Programs Service has established a Health Services Research Branch and two centers for such research at the Baltimore and New Orleans hospitals. Research projects encompass such problems as a determination of the health status and health services requirements of our beneficiary populations on a regional basis, health facility planning and design, utilization of health manpower, applications of computer technology in a health delivery system, behavioral studies of patients and physicians in the health delivery setting, and management of our health care system.

The funds requested for fiscal year 1970 are required to continue the management and operation of the Public Health Service hospital and clinic programs at their present level. The budget includes mandatory increases of $811,000 for such items as salaries and contractual costs, and $881,000 to maintain the quality of patient care, to maintain our facilities in anticipation of modernization, and to purchase equipment as part of a scheduled clinic replacement. As a result of decreases, due primarily to nonrecurring costs, the total net increase requested is $617,000.

FEDERAL EMPLOYEES

The Division of Federal Employee Health attempts to meet the problems and needs that arise in protecting the occupational health of the 2,900,000 Federal civilian employees.

Public Law 658, 79th Congress (Aug. 8, 1946), an act to provide for health programs for Government employees, holds the Public Health Service responsible for providing consultation, standards, and evaluation of Federal employee health programs and services.

Legislation also authorizes agencies, after securing Public Health Service consultation, to enter into contractual and reimbursable agreements for the provision of needed health services. The Division is currently operating 70 employee health units, serving over 600 Federal agencies and activities, and 125,000 Federal workers. It is now working on a large backlog of requests for additional consultations and services.

An increase of two positions and $22,000 in appropriated funds is requested to meet the expanding responsibilities in providing evaluation and consultation to participating agencies. In addition, $8,000 is required for mandatory salary increases.

RELATIONSHIP OF MILITARY DRAFT TO COMMISSIONED CORPS

Mr. FLOOD. Do you have trouble getting young men, M.D.'s? I have for the first time since I have been here in 25 years, two letters from young men about to graduate who want commissions in the Public Health Service. Do you have a rash of that sort of thing, particularly since the Vietnam shooting, or is this happening when there is no shooting going on? Are they trying to avoid military service?

Dr. VAN HOEK. After the escalation of the Vietnam war several years

ago, we experienced an increase in the number of applicants for Public Health Service assignments.

Mr. FLOOD. Are they protected if they get into your shop?

Dr. VAN HOEK. Assignments in the Public Health Service fulfill the 2-year selective service or military obligation.

Mr. FLOOD. So if I am graduating from medical college this June and I can get a commission in your outfit, I am home free for 2 years insofar as military service is concerned?

Dr. VAN HOEK. Yes, sir; if assigned to Public Health Service hospitals and clinics, the individual would be fulfilling military obligations.

Mr. FLOOD. Suppose I got a commission in the Public Health Service, could I get trapped and find out I was in Saigon next month?

Dr. VAN HOEK. Yes, sir. Our medical officers have been assigned to Coast Guard duty, which may involve an assignment to Southeast Asia.

Mr. FLOOD. And you are taking casualties in some of your areas?

Dr. FISHBURN. Yes, not too many.

Mr. FLOOD. But you are taking them? You are in the combat zone and you have Public Health medicos in the area?

Dr. FISHBURN. Yes, sir.

Mr. CARDWELL. I think it is fair to point out, Mr. Flood, that the entire commissioned corps depends very heavily on this source of medical officers.

Mr. FLOOD. What source?

Mr. CARDWELL. The source of the would-be draftees who would serve in the Public Health Service in lieu of other military service.

Mr. FLOOD. Why?

Mr. CARDWELL. It is a basic problem of attracting physicians into the Public Health Service, and without that source of supply we would be in serious trouble.

Mr. FLOOD. Very human, but that bugs me a little bit.

Mr. SMITH. Of course, if we were to exempt garbage collectors, cities could more easily recruit plenty of them, too.

Mr. FLOOD. That is right.

Mr. CARDWELL. A share of them stay in and become permanent members of the Public Health Service commissioned corps, which is considered a form of military service and public service.

I really do not think we should cast a shadow over it. I think it is a useful service to the country. I really do not think they come in to escape being shot at as much as they come in for a better opportunity to practice medicine.

Mr. FLOOD. I am sure these two guys were not worried about getting shot at, they just simply want to take advantage of a very fine opportunity to enter graduate work in ophthalmology.

Dr. ENGLISH. I might say too, Mr. Chairman, many of these 2-year men do not stay in the Public Health Service, but as a result of the experience they get working with the Indians or working in one of the hospitals or in a community project, though they may not stay in the Public Health Service we know many of them will get training in community medicine or public health, and they are the young breed of new physicians that are now coming into some of the projects in the urban and rural areas that heretofore it has been difficult to attract physicians to.

Mr. FLOOD. I do not know these boys, but from their records which

were attached to their letters, these are topflight guys. In addition, they have these invitations to graduate work in ophthalmology. If we have young men like that, I think the best should be at the front, and I am proud to say that I think today in Vietnam we have the best we have there. They are topflight people, those medics, no matter what outfit they are in, and I think they should be.

Dr. ENGLISH. I could not agree more.

Dr. VAN HOEK. Both the Department of Defense and the Public Health Service have a critical need for specialists and we have two options: We conduct our own training programs, for example, in ophthalmology, or we defer the individual until he has completed training in a civilian institution.

Mr. FLOOD. I am quoting the Surgeon Generals of Army, Navy, and Air Force, who tell me they have the best they can get in Vietnam.

Dr. ENGLISH. I am not surprised that you keep referring to that, Mr. Chairman, because I think there is some real relationship. For example, if we were able to employ the same sophisticated technology that is used in the service of our troops in Vietnam, say in the rural areas of our country where automobile accidents occur and where the time it takes to get to the hospital is critical. I think that is one of the things we are going to try to do.

The medical care that is being given to our servicemen in Vietnam is probably better than it has ever been in our history and I think we have a lot to learn from what they are doing there.

Mr. FLOOD. What do you think, Dr. Fishburn? You are a career man, a serviceman. What should I do? Should I see if I could help these kids that want a commission in public health?

Dr. FISHBURN. No. I think they should take their chances along with everyone else. The number of applications for a PHS commission greatly exceeds the number of commissions available. We do get top-notch men. When they come into the Service, they have a chance to express a choice of assignment, but they have no assurance they are going to get the assignment they want. They may very well end up in Vietnam. Granted, as compared with service in the Army and Navy, a smaller percentage of them will end up in military duty.

Mr. FLOOD. I am glad you told me that. At first glance a person might think I just had two draft dodgers, but apparently that is not the case.

Dr. FISHBURN. We have about 140 officers on duty with the Coast Guard, of which any one of them may very well be sent to a forward area.

Dr. ENGLISH. There are some other rough assignments too, Mr. Chairman.

As you know, there is a relatively small percentage of physicians in the military at any one time in a combat situation. Some of the assignments that the Public Health Service doctors have in the Federal service, I think are a lot rougher.

Mr. FLOOD. What would they be?

Dr. ENGLISH. Let me give an example in Bethel, Alaska.

Mr. FLOOD. What is tougher than Danang?

Dr. ENGLISH. I would not compare that to combat. But I say compared to some of the other assignments one can receive in the military. In other words, I think what a——

Mr. FLOOD. In other words, with a Public Health Service commission, if they think they are on the gravy train they are out of their minds.

Dr. ENGLISH. I think both Dr. van Hoek and I could give you some examples of very rigorous tours of duty. This gentleman in Alaska is living in a town of about 2,000 people not far from the Soviet Union where it is dark 14 hours of the day, where they are the only medical resource for 15,000 Alaskan natives and where the real hazard in some ways I think is more dangerous than military duty, because the airplanes—I do not know whether you have ever flown in any of those planes up there. You have to fly in a plane to get out to a little village.

I just had dinner this week with Dr. John Lee, who is the area health director for Alaska with the Public Health Service, who came in originally for 2 years but has now made a career of the Service. He is just recovering. He was out there visiting a little outpost in Alaska and the seaplane could not get off the lake and crashed and they were almost killed. Fortunately, he is out of the hospital now.

The point I am trying to make is these are not easy assignments.

Dr. VAN HOEK. We also assign medical officers and other commissioned officers to the Federal penitentiaries in the Bureau of Prisons medical program.

Mr. FLOOD. That is no no gravy train, either.

Dr. VAN HOEK. No, sir. This is an absolutely essential mechanism for providing medical care in that program.

Mr. FLOOD. It must be a lousy job.

Dr. VAN HOEK. It is a very challenging job. There are great problems in terms of the rehabilitation of prisoners and chronic offenders, and the staff is involved now in the narcotic addict rehabilitation as well.

Mr. FLOOD. Go ahead with your statement.

Dr. VAN HOEK. The remainder of the increase represents 70 positions and $600,000 in reimbursements to provide direct occupational health services, eliminating some of the backlog of requests for these services.

COAST GUARD

The Coast Guard medical program operates infirmaries, dispensaries, and sickbays on shore stations, air stations, and on board vessels, in the United States and in remote and isolated areas of the world. The Public Health Service provides the professional staff to operate these activities and provides other medical support through its hospitals, outpatient clinics, and contract medical services.

The proposed budget for fiscal year 1970 requests $2,655,000 in support of medical services to the Coast Guard, an increase of $140,000 and four positions over the fiscal year 1969 operating budget of $2,515,000.

SUMMARY

In summary, Mr. Chairman, the estimate for 1970 totals $72,224,000 in appropriated funds, as compared to $71,437,000 anticipated in 1969, an increase of $787,000.

This concludes my statement on patient care and special health services. I am available to answer questions, and Adm. Howard D. Fishburn, Chief Medical Officer of the Coast Guard, and Dr. Gordon S.

Siegel, Director of the Division of Federal Employee Health, are present to respond to questions about their programs.

(The following was submitted in answer to the earlier request of the subcommittee chairman:)

LISTING OF PUBLIC HEALTH SERVICE HOSPITALS BY LOCATION

General medical and surgical hospitals:

Baltimore, Md.	Norfolk, Va.
Boston, Mass.	San Francisco, Calif.
Detroit, Mich.	Savannah, Ga.
Galveston, Tex.	Seattle, Wash.
New Orleans, La.	Staten Island, N.Y.

Specialty hospital for leprosy patients: Carville, La.

LEPROSY PROGRAM

Mr. FLOOD. How many leprosariums do we have? Just that one?

Dr. VAN HOEK. Just that one. We have the one hospital in Carville, La.

Mr. FLOOD. Do we staff that?

Dr. VAN HOEK. Yes, sir; but the State of Hawaii also operates two leprosariums, partially supported by funds from our appropriation in the amount of $1.2 million.

Mr. FLOOD. Do you have any personnel there?

Dr. VAN HOEK. We have no personnel assigned there. Recently the Governor has appointed a special committee to review the leprosy program in the State of Hawaii and members of my staff, as well as other Public Health Service staff members, have participated in the committee deliberations.

Mr. FLOOD. How long have you had this leprosarium in Louisiana?

Dr. VAN HOEK. Since 1921.

Mr. FLOOD. What is the current incidence of leprosy?

Dr. VAN HOEK. We estimate that in the continental United States there are approximately 2,000 individuals afflicted with leprosy.

Mr. FLOOD. What is leprosy?

Dr. VAN HOEK. It is an infectious disease caused by an organism called the Hansen's bacillus.

Mr. FLOOD. Hansen's disease?

Mr. VAN HOEK. Yes, the eponym is Hansen's disease.

The organism is structurally related and classified in the group of agents similar to the tuberculosis organism.

Mr. FLOOD. Do we know how to handle it?

Dr. VAN HOEK. We do not have a clear understanding of how the organism causes the infection.

Mr. FLOOD. Can the average local doctor identify it? What makes you think a guy has leprosy?

Dr. VAN HOEK. There are certain key signs which occur, such as loss of sensation, primarily in the extremities; highly localized areas of loss of sensation in the skin.

Mr. FLOOD. Is this a bacteria?

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. Where do you pick it up? It is contagious and infectious?

Dr. VAN HOEK. It is infectious, and it is also contagious.

Mr. FLOOD. How would that be? This would be unusual, would it not, for a thing like that?

Dr. VAN HOEK. No, sir. The nature of the infectious organism and the fact that it involves the skin indicates that it is contagious.

Mr. FLOOD. Where do you get it, just out of a clear blue sky?

Dr. VAN HOEK. We do not know the mode of transmission.

Mr. FLOOD. It has been around a long time, has it not?

Dr. VAN HOEK. Yes, sir. We think that transmission may occur by direct skin to skin contact. It occurs preponderantly in Asia, Africa, and areas of South America. There is a higher incidence among family members and close contacts.

Mr. FLOOD. Since the world is so small and shrinking, do we have a problem? Are you afraid of it?

Dr. VAN HOEK. We are on the lookout for it. We do not believe it is so contagious that it represents a major health problem in the United States.

For instance, experience with the military forces, individuals who have been overseas in endemic areas during World War II and the Korean and Vietnam wars, has resulted in very few cases of leprosy, and in those instances it has been found, or it is suspected that the individual may have had the disease prior to military service; many came from areas where leprosy is endemic.

Mr. FLOOD. What is this business about the toes falling off or losing a nose or something?

Dr. VAN HOEK. In leprosy there is progressive damage of the peripheral nerves and loss of sensation; the individual no longer has pain sensation or sensation of being burned, and the fingers and toes are subjected to chronic trauma.

Mr. FLOOD. Who is the priest who had hot water fall on his foot and found out he had leprosy?

Dr. VAN HOEK. Father Damian in Hawaii. The loss of sensation removes the individual's protective sensations and reflexes, therefore he has a tendency to damage his extremities. Improperly fitting shoes are a primary cause of tissue damage.

Mr. FLOOD. Do you order your people into the leprosarium to work there?

Dr. VAN HOEK. No, sir; assignments are discussed with our personnel, and no one is assigned unwillingly.

Mr. FLOOD. But you can work there for some time without of necessity acquiring the disease?

Dr. VAN HOEK. Yes, sir. None of the individuals who have worked at Carville have contracted leprosy.

Mr. FLOOD. I think of the biblical phrase, the classic leper sitting on the corner shouting "unclean, unclean" if anybody comes near him. Apparently this is not so then?

Dr. VAN HOEK. This is an outmoded approach to leprosy and is one of the major problems, the fact that an individual with leprosy has been stigmatized and essentially incarcerated in hospitals in the past. Our present approach is that with proper early detection and treatment with drugs, the patient can become noninfectious, and, with close surveilance and adequate drug therapy of the patient and his contacts, we can permit him to continue leading a normal life in the community.

Mr. FLOOD. Have you cured people, and discharged them?

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. Any recurrence?

Dr. VAN HOEK. This depends on the individual. It is similar to the treatment of tuberculosis. If the individual does not stay on drugs, the disease can become reactivated.

Mr. FLOOD. Is there a climate problem?

Dr. VAN HOEK. Leprosy occurs primarily in the Southern States, the warm, semitropical climate.

Mr. FLOOD. Why?

Dr. VAN HOEK. We do not know, sir. This is one of the problems relative to how the disease is transmitted. There are scientists who believe that transmission may occur by an insect vector and the climatic conditions may be a factor.

Mr. FLOOD. The mosquito?

Dr. VAN HOEK. We are supporting a study through the Public Law 480 program in India in which various household insects are being examined to determine whether they are infected with the Hansen's bacillus.

PER DIEM COSTS IN HOSPITALS

Mr. FLOOD. What is the average cost per patient day in your hospitals?

Dr. VAN HOEK. The leprosy hospital?

Mr. FLOOD. No, your general hospitals.

Dr. VAN HOEK. Our per diem cost for fiscal year 1970 is estimated to be $48.

Mr. FLOOD. Is that good or bad as of today?

Dr. VAN HOEK. We think, Mr. Chairman, it is pretty good.

Mr. FLOOD. So do I. I do not mean $48 a day is pretty good, but many hospitals are much higher. How does that compare with the cost in, first, VA hospitals, another Government shop, and then the average community hospital? How does that cost per patient per day compare? What do you include in the cost per patient day?

Dr. VAN HOEK. This is one of the problems of comparing cost statistics. Our per diem rate at $48 per inpatient day covers the total cost. It includes the physicians, dentists, pharmacists, all the professional services as well as just room and board.

The per diem rates reported by the voluntary nonprofit hospitals, in the latest statistics, were about $55 per day, but this does not include many of the professional costs such as physicians, dentists, pharmacists. It depends on the type of hospital.

NEED FOR PUBLIC HEALTH SERVICE HOSPITALS

Mr. FLOOD. I have been around here a long time. I thought by this time you would be out of business as far as hospitals are concerned. I have heard, year after year, especially after the war, that all of your hospitals were going to be closed or turned over to somebody else.

Is there any scuttlebutt going around, is there anybody in this new administration in the think tank talking about putting your hospitals out of business?

What do you hear, Dr. Fishburn?

Dr. FISHBURN. I have been hearing the same rumors for 35 years,

sir. They are still around. I do not believe there is any real emphasis on the program at the moment.

Mr. FLOOD. Nothing hot?

Dr. FISHBURN. Not that I am aware of. I am sure others around the table are more current than I am on this issue.

Mr. FLOOD. What do you think about it, Dr. van Hoek?

Dr. VAN HOEK. Close the hospitals?

Mr. FLOOD. Yes.

Dr. VAN HOEK. We are continuing to operate a hospital and clinic system and, as a matter of fact, we are right now in the planning stages for the modernization of three of our general hospitals.

Mr. FLOOD. What do you want with hospitals? Isn't the Public Health Service too busy to bother with hospitals?

Dr. VAN HOEK. No, sir. The operation of a hospital and clinic program within the Department is an extremely important function for the following reasons:

In addition to our legislative responsibility for providing care to certain Federal beneficiaries——

Mr. FLOOD. Why could they not be cared for if the VA absorbed you into their great hospital system?

Why in the world could they not just absorb you and all the merchant seamen and the other Federal beneficiaries? Veterans are really Federal beneficiaries in much the same sense, so what is so special about merchant seamen or anybody working for the Government as distinguished from a qualified veteran?

Dr. VAN HOEK. There is no question that there are alternatives to providing medical care for any group of Federal beneficiaries. But I think that——

Mr. FLOOD. I am not saying it should be done. I am the devil's advocate.

Dr. VAN HOEK. The point I want to make is that in terms of using this system as a base for achieving other purposes——

Mr. FLOOD. The reason I say this, I want you to be sure you know what you are talking about, and if you do not want to answer right now, put it in the record when you are ready, because when we get on the floor somebody is likely to ask me or Mr. Michel that question.

Dr. VAN HOEK. I can provide written documentation for the record, but I would like to respond now and say that the whole mission of the Health Services and Mental Health Administration is one of improving the delivery of health services and to develop new techniques and new methodoligies for improving the delivery of health services. In order to do this——

Mr. FLOOD. That is not a very good answer. That just begs the question. So what? Why could that not be done in the Veterans' Administration?

Dr. FISHBURN. There is one real important feature even if we grant every thing else, which I am not inclined to do, that the hospital and clinic program is the one resource we have to attract young doctors who eventually represent the career personnel of the Service. Every graduate from Medical School has in mind practicing medicine, doing research or teaching.

Mr. FLOOD. What is the difference between your medics and theirs. A and B graduate from University of Pennsylvania Medical School

in June, topflight kids, first third of the class. A goes to VA for reasons best known to himself and B goes to one of your outfits. What is the difference? They both want to do the same thing.

Dr. FISHBURN. The difference is the same as in the Army, Navy or Air Force, where each service has its hospitals. We all have different missions with different requirements and personnel needs.

Mr. FLOOD. That is a good question. I have been trying to figure that out for 25 years, too.

Dr. FISHBURN. It is hard to to explain, but it is a fact.

Dr. ENGLISH. Let me just say this, Mr. Chairman, because needless to say, this has been something I have been taking a look at.

Mr. FLOOD. I do not think I am giving birth to a new idea here. Far from it.

Dr. ENGLISH. I think it is an idea, as you say, that has been coming up from time to time and is currently under review as it has been over the past years. But one of the advantages that I see to the present Public Health Service hospital system, in addition to what Dr. Fishburn is saying, is that the Public Health Service has the total responsibility involving, as you know, sir, many different things.

If you bring a man into this system, the variety of experiences that you can offer him are very important in retaining him on a career basis. And because he can go to a Public Health Service hospital and not only take part in the clinical care program, but can take part in research, not just basic research but research in community health problems, a Public Health Service hospital is really quite an attraction.

The second thing we are beginning to realize, as we look at the problems of hospital costs we were talking about earlier, is that there is going to be a very close relationship developing between the National Center for Health Services Research and Development and the Public Health Service hospitals because they provide an excellent laboratory for trying out some of the things that might eventually be applicable in private and public hospitals. In that sense they are very helpful to us.

Mr. FLOOD. Prepare a good detailed answer to that question for the record.

Dr. VAN HOEK. I would be happy to do so.

(The information follows:)

THE ROLE OF THE HOSPITAL AND CLINIC PROGRAM
FEDERAL HEALTH PROGRAMS SERVICE

A PROGRAM REVIEW

Introduction

The Federal Health Programs Service hospital and clinic system operates 11 hospitals, 28 outpatient clinics, and a contract medical care program providing medical care to Federal beneficiaries as established by law. The hospitals have an average daily census of approximately 2,300 patients. The hospitals and clinics experience 1.8 million outpatient visits per year. Training and research are considered integral parts of this medical program. At the present time, some 600 Public Health Service personnel in various health professional categories are in full-time training. Another 700, from affiliated professional schools and other academic institutions, are receiving training in our facilities, and more than 1,500 individuals have been trained for health-related work through programs sponsored by the Department of Labor, Office of Economic Opportunity, and other Federal and community agencies. Research involves both clinical and health services research with the clinical program operating at a level of $4.2 million, of which $2.9 million is derived from the National Institutes of Health, National Aeronautics and Space Administration, and other Federal programs through grants and contracts. The Health Services Research program has been functioning for approximately three years at an annual level of $300,000.

The foregoing program description is characteristic of the image of this program in the Federal Government as well as the private sector, and is due to a lack of understanding of the true scope and responsibilities of the program, particularly with regard to its Federal medical activities. As a result, the Federal Health Programs Service medical program has been viewed as a limited operation responsible for the care of American seamen, Coast Guard and other uniformed services personnel and has been examined on numerous occasions with the objective of providing care to these beneficiary groups through other resources.

A major reorganization of the Public Health Service and Department and a change in administration have taken place during the past year. As a result, a more accurate and detailed description of the program is indicated, and the role of this hospital and clinic system in relation to the mission of the Health Services and Mental Health Administration is presented.

Health Care Activities

The direct health care responsibilities of the Health Services and Mental Health Administration (HSMHA) are not limited to the care of American Indians and Alaskan Eskimos by the Indian Health Service and American seamen, Coast Guard, and related beneficiaries by the Federal Health Programs Service (FHPS). Under the Public Health Service's enabling legislation, HSMHA is also responsible for the care of Leprosy patients; for the care and treatment of Federal prisoners; the examination and treatment of Federal employees; the examination of aliens; and the treatment and rehabilitation of narcotic addicts. Therefore, the health care activities encompass a wide range of responsibilities and cover beneficiaries of a number of other Federal agencies such as the Departments of Justice, Labor, Transportation, and Defense. Furthermore, with the exception of American Indians and Alaskan Eskimos, all these responsibilities have a relationship to and impact on the Public Health Service hospital and clinic system in terms of direct medical care, professional support, or consultation. The Federal Health Programs Service medical program also provides medical care to beneficiaries of other agencies when their resources are not available or accessible. These beneficiaries constitute some 23 percent of our hospital patient load and 41 percent of our ambulatory care program. The Director of FHPS also serves as Chief Medical Officer to the Maritime Administration and has been delegated authority by the Surgeon General for the Department's participation in the Department of Defense Dependents'

Medical Care Program. Administrative and professional support is also provided to the Cuban Refugee Program which is funded through the Social and Rehabilitation Service.

These responsibilities for health services provide the Federal Health Pograms Service and the Health Services and Mental Health Administration with many opportunities to evaluate, plan, organize and implement the delivery of health services. In addition, these responsibilities need not be limited to Federal beneficiaries or agencies. In recent years, FHPS hospitals and clinics have participated increasingly in community and regional health planning and programs. Initially, this consisted of affiliations with health professional schools, other academic institutions, hospitals, and health agencies in order to improve services to our beneficiaries, and to improve the training of Public Health Service personnel. This has expanded rapidly during the development of the modernization program for our hospital and clinic facilities so that, at present, each local Public Health Service program has an advisory committee composed of representatives from the community and these programs are being recognized as health resources which can meet a critical need for health services in the community. The Federal Health Programs Service has been approached for numerous services and in many areas. For example, physical examinations and follow-up care have been provided to individuals enrolled in various poverty programs, such as Headstart, Job Corps, and Manpower Development and Training Act programs. In two communities attempting to upgrade their emergency medical services and develop community regionalized emergency systems, our hospitals have been requested to serve as regional emergency facilities. In two other communities, representatives of citizen and medical groups have approached the Federal Health Programs Service with regard to utilizing its hospitals for the care of citizens due to an acute shortage of hospital beds or limited accessibility of the community facilities. In a number of instances, FHPS has been approached with regard to providing special medical services which are not available or accessible in the community, for example, renal dialysis, radiation therapy, cardiac catheterization, radioisotopic studies, acute medical care for patients in a nursing home, etc. In the District of Columbia, the Public Health Service Outpatient Clinic, in collaboration with the D.C. Department of Public Health, is operating a small neighborhood health center to serve a population in an out-reach area. When the Office of Economic Opportunity was establishing its first neighborhood health centers, the one at Columbia Point, Boston, Massachusetts, was staffed during its first two years by FHPS physicians detailed from the Boston Public Health Service Hospital. In times of medical emergency, our program has been called upon to provide additional medical support to both Federal and community agencies. FHPS teams have provided medical support during hurricane-induced floods in Louisiana and Texas in recent years. When the Vice President established a summer camp for disadvantaged children in the Los Angeles area two years ago, FHPS personnel provided the medical support for this activity. During the past two years, anti-war and civil rights demonstrations in the District of Columbia have required emergency medical support, and our program has provided the necessary backup to those agencies responsible for controlling the local health resources.

Federal Health Programs Service programs participate with community agencies and organizations involved in health planning, regional medical programs and model cities. In two communities there have been discussions with local health authorities and model city planning groups with regard to possible participation by FHPS medical facilities and staff in providing health services for the model city population. In another city, FHPS has been approached with regard to providing medical care to patients during the modernization of the city hospital. These are examples, which demonstrate that the Federal Health Programs Service medical program, while fulfilling its primary legislative mission of providing medical care to Federal beneficiaries, can also serve as a resource for meeting the health needs of the community; these needs identified by the community and not the Federal Government.

Training

The training programs in the Federal Health Programs Service hospitals and clinics have had limited direct support in the past and involved primarily the postgraduate training of physicians and other health professionals. This was justified on the basis that (1) in-Service training is essential for the recruitment and career development of Service personnel, and (2) training activities contribute to the quality and effectiveness of medical care programs. The productivity of these in-Service programs has been demonstrated by the retention of a significant number of those individuals trained and the fact that a significant number of the senior professionals in Public Health Service programs entered the Public Health Service through its medical care program and received at least a portion of their training in that program.

With this as a base, the medical care and training activities of FHPS also constitute a resource to the community and region for the training of all categories of health personnel, non-professional as well as professional. Training in collaboration with non-Federal institutions and community agencies could be expanded markedly and is limited only by our resources in terms of physical facilities and personnel. In addition, FHPS also conducts training of special types of health manpower, analogous to the physician assistant concept; for examples, the Staten Island Hospital is training purser-pharmacist mates to provide medical support on American merchant vessels; medical technical assistants of the Bureau of Prisons and medical corpsmen of the Coast Guard receive some of their training in FHPS facilities. The Federal Health Programs Service is also collaborating with other Federal programs in the development and conduct of health manpower studies.

Research

The Federal Health Programs Service conducts a modest, but productive, program in both clinical and health services research. The clinical research program, supported largely through grants and contracts, is a vital component of our program and makes a significant contribution to the research objectives of other Federal programs. Some of the studies are directed to medical problems directly affecting our beneficiary groups, such as Leprosy. Others have a broader relevance to national health problems, such as kidney disease, hypertension, and coronary artery disease. Our investigators are contributing significant information on the treatment of these diseases by conducting long-term, prospective investigations involving large numbers of patients on a multi-hospital basis. Four of our hospitals are participants in the national coronary artery disease study supported by the National Heart Institute. The Baltimore Hospital has a large scale collaborative program on cancer chemotherapy with the National Cancer Institute. A second cancer program has been approved for the Seattle Hospital as part of a University of Washington cancer research project. Other Federal agencies have supported research activities, not only because of the research interest and competence of the investigators, but because of the assurance that specific studies which are mission-oriented could be accomplished more effectively by our personnel and at less cost.

The Federal Health Programs Service has for a number of years been conducting individual studies which could be considered health services research in order to improve the organization and delivery of health services as part of its own mission. In recent years, these activities have been expanded and a formal health services research program was established with a multi-disciplinary staff in order to plan and direct a more definitive program. This approach is based on the concept that such a program can contribute not only to the improvement of the direct medical care activities of FHPS, but significant information may be obtained which will be applicable to the other health care systems in the community. Furthermore, it is our firm conviction that this program can contribute to the objectives of other HSMHA programs, such as the National Center for Health Services Research and Development, in the same way that our clinical research activities have contributed to the National Institutes of Health programs.

The Role of a Direct Medical Program

The past parochial concept of the mission of the Public Health Service hospital and clinic system is undergoing a change. There is an awareness of the extensive responsibilities which are implicit in the enabling legislation. Legislative authority places upon the Public Health Service responsibilities which have an impact on many other Federal agencies and for which there are no alternative resources. More important, however, this legislative authority provides the foundation for a health care delivery system which can contribute significantly to the mission of HSMHA.

The mission of the Health Services and Mental Health Administration is to improve the delivery of health services to the Nation and to develop health care systems which meet the total needs of all segments of the population. Within that mission, priorities have been established with respect to health care for the urban and rural poor. As part of HSMHA, the Federal Health Programs Service can plan, organize and operate its delivery system as part of a total community, region or national delivery system or systems.

The FHPS medical care program can assist HSMHA in achieving its objectives. Specific problems in the delivery of health services must be solved. First of all, techniques have to be developed for assessing the health status of the population or specific population groups. Secondly, the health needs of the population must be defined, and ways of satisfying those needs must be identified. The resultant information will make it possible to evaluate a particular delivery system from the standpoint of effectiveness and efficiency. This evaluation includes an assessment of all resources allocated to the system such as manpower, facilities, and funds.

The Federal Health Programs Service is a microcosm in this total effort. The direct medical care program has the same need for self-assessment. The health status of the beneficiary groups must be determined and their health needs and the areas in which those needs are not being met must be identified. The allocation of resources must be evaluated and appropriate adjustments made. Alternatives for providing medical care must be considered, and their relative effectiveness and efficiency assessed. For example, in an ambulatory care program, there may be a number of alternatives in a specific geographic location, **such as** the operation of a FHPS outpatient clinic; the contracting for medical care with a prepaid group practice, hospital based versus non-hospital based; and contract care through individual physicians. This would provide an opportunity to assess the relative costs of medical care, the quality of medical care, and the effectiveness of the program. Another example is the problem of manpower utilization. Direct Federal medical care programs face the same problems of shortages of manpower as the civilian sector of medicine. Studies have been proposed and can be conducted with regard to the training and evaluation of new categories of health personnel or the reallocation of professional responsibilities among the various categories of health personnel.

Finally, the Federal Health Programs Service can demonstrate the validity of the concept of community and regional health planning. A specific example is the present planning for a new PHS hospital facility which involves the development of a single Federal medical campus for two Federal agencies. This planning is consistent with the concept of community and regional planning whereby the needs of all Federal medical programs will be determined. In addition, non-Federal community resources will be evaluated in order to achieve maximum utilization of all health resources in the community and the region. In the future, all PHS hospitals, clinics, and other health activities will be evaluated in terms of total Federal and community health programs and resources.

Summary

This program review documents that the Public Health Service hospital and clinic system's role is not limited to providing comprehensive health services to Federal beneficiaries in the traditional sense. The system has unique responsibilities in supporting the health services of a number of other Federal programs such as the Coast Guard, Federal prison system, and Bureau of Employees' Compensation; and provides professional consultation to other agencies, such as the Maritime Administration and Office of Economic Opportunity.

This direct medical care program has been and continues to be the primary source of career professionals for these Federal agencies as well as other PHS programs such as the Indian Health Service, National Institute of Mental Health, and Federal Employee Health Program. Training opportunities in the health professions, provided in the PHS hospitals and clinics, have served as an entry for career personnel into other PHS programs and those Federal agency medical programs for which the Public Health Service has a responsibility. Without this resource, the Public Health Service would find it difficult, if not impossible, to meet its own professional manpower requirements and to fulfill its responsibilities for medical support to other Federal agencies.

As a health resource for the Federal Government in case of National, natural or civil emergencies, the hospitals and clinics are capable of providing emergency medical staff and equipment, as has happened in cases of hurricanes, tornados, floods, earthquakes and in civil and other disasters.

Finally, these hospitals and clinics constitute a health care delivery system which can contribute significantly to the mission of HSMHA in improving the organization and delivery of health services. As a direct medical program, it can demonstrate the application and effectiveness of community and regional health planning including the planning of health facilities. The development and evaluation of new or modified health manpower categories can be achieved in this setting. The latest applications of scientific technology to medical practice can be readily tested and evaluated. Through a combination of direct and contract medical care operations, new approaches and mechanisms for organizing and financing health care can be evaluated, including an assessment of validity of the incentive concept. Within each community, this hospital and clinic system constitutes a resource for providing health services, training, and employment for the poor.

Based on program responsibilities and opportunities which have been identified, the PHS hospital and clinic system is considered essential to the achievements of HSMHA's objectives and the health missions of the Public Health Service and other Federal agencies.

28-454 O - 69 - 57 (Part 3)

COSTS PER PATIENT-DAY

Mr. FLOOD. I want you to show me why you think your daily costs are good. I know they are, but I want you to show in the record why they are. What is the definition of "average daily costs"?

Dr. VAN HOEK. The average daily cost in the hospital setting is the cost per patient per day.

Mr. FLOOD. What does that mean?

Dr. VAN HOEK. Patients occupying beds in a hospital generate an average daily patient load—ADPL. If a 200-bed hospital averages 180 patients during the year, there is a 180 average daily patient load, and the total costs of operating that hospital divided by the ADPL, represents the cost per patient-day for that institution—excluding out-patient workload and costs.

Mr. FLOOD. Can you give me that for VA hospitals and the average community hospital?

(The information follows:)

VETERANS' ADMINISTRATION PER DIEM COST AND COMMUNITY HOSPITALS PER DIEM COST

For the Veterans' Administration, the most recent complete information is for fiscal year 1968, and the inpatient per diem rate in its general hospitals was $39.34. During that same period of time, the Public Health Service general hospitals were operating at the per diem rate of $40.86. In the community hospitals, the per diem rates were running at $54.55 for the 1-year period ending September 1967. However, this latter figure excludes many of the professional costs such as physicians, dentists, and pharmacists, and other special services. In the case of the VA and PHS hospitals, all such professional costs such as physicians, dentists, and pharmacists, and other special services. In the case of the VA and PHS hospitals, all such professional costs are included in the per diem costs.

DECLINE IN AVERAGE DAILY PATIENT LOAD

Mr. FLOOD. I notice your average daily patient load is declining, this baffles me, from 2,397 in 1960, to 2,355 in 1969, and 2,310 in 1970. What would account for that?

Dr. VAN HOEK. Our average daily patient load has been decreasing for two major reasons: One is that our length of stay has been decreasing.

Mr. FLOOD. That is good; is it not?

Dr. VAN HOEK. Yes, sir; it is evidence of increased efficiency of operation of our hospitals.

And secondly, our ambulatory care program, the outpatient clinic program, has expanded and we are providing care to a greater extent on an ambulatory care basis rather than hospitalizing patients, which is again a sign of progress; it improves the care of the patient, it means less sick days away from work and reduces the cost of the medical care program.

PATIENTS ELIGIBLE FOR ADMISSION TO PHS HOSPITALS

Mr. FLOOD. To what extent do families of Federal personnel have access to these facilities?

Here is a guy working for the Government and his wife does not feel well. What do you do, call Baltimore and take her over there, or what?

Dr. VAN HOEK. No, sir; the dependent has access to any uniformed services facility within the geographic area. So that the wife of a commissioned officer in Washington——

Mr. FLOOD. How about a commissioned officer? Does he go to Baltimore?

Dr. VAN HOEK. No, sir. If he is ill, he is treated in one of the clinics or the hospitals here in the Washington area, or he may go to our Public Health Service outpatient clinic in Washington, D.C., or he may go to Baltimore if he requires hospitalization.

Mr. FLOOD. This is no racket?

Dr. VAN HOEK. No, sir.

Mr. FLOOD. Will you place in the record at this point the conditions precedent for admission of patients to your hospitals.

(The information follows:)

Under the Public Health Service Act, the Federal Health Programs Service is authorized to provide medical care to its primary beneficiaries as follows:

Complete care

Seamen on American-flag vessels
Coast Guard personnel, active and retired
Environmental Science Services Administration (ESSA) personnel, active and retired
Public Health Service commissioned officers, active and retired

Care for specific illness

Patients with leprosy (complete care is provided upon admission to the Leprosarium)

Care for job-related compensable conditions

Federal civilian employees (injury cases reported to Bureau of Employees' Compensation)

Limited care

(Full outpatient care; inpatient care, if available)
Dependents of active and retired Coast Guard personnel
Dependents of active and retired ESSA personnel
Dependents of active and retired PHS commissioned officers

Under the Dependents' Medical Care Act, Public Law 569, and under the Economy Act, the Federal Health Programs Service treats beneficiaries of other Government agencies (Department of Defense uniformed services personnel and their dependents, Veterans', the Immigration and Naturalization Service, etc.), special study patients, foreign seamen, emergency cases, and others. The Public Health Service is reimbursed for the care of most of these patients, exceptions being special study cases not supported by grants and those emergency cases who are unable to pay for care.

For those primary beneficiaries entitled to complete care, the Federal Health Programs Service is responsible for care in other Federal facilities, in civilian hospitals where Federal facilities are unavailable, in cases of extreme emergency, or when such care is more feasible than in Federal facilities.

COOPERATION WITH OTHER MEDICAL SERVICES

Dr. ENGLISH. Mr. Chairman, I might mention, because it would be of some interest to you, particularly in areas where there are VA and Public Health Service hospitals together, there are some very fine examples now of joint planning and seeing this as a community facility.

Mr. FLOOD. It is about time.

Dr. ENGLISH. I think we are going to be able to give you some excellent examples of that very soon. Having been in the poverty

program, I might say the relationships we were able to develop with the Public Health Service hospitals for training of people that were needed in some of the poverty health programs, the way they cooperated there, I think evidenced to us the community resource that they were. I think the day may come, as some of these plans are worked out, that these hospitals may, in a very poor area where there is not a community hospital—that arrangements may be made whereby this facility can be the backup to a neighborhood health center which is starting in the area and may not have a hospital it can link to.

Mr. FLOOD. Do you have much experience in hospital administration?

Dr. ENGLISH. Not directly.

MEDICAL CARE OF SEAMEN

Mr. FLOOD. What proportion actually of your patient load are American seamen?

Dr. VAN HOEK. Approximately 50 percent.

Mr. FLOOD. Is it?

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. Any special conditions for their entrance?

I am a seaman, I am at LeHavre, I do not feel well, and the medico on board says I am not well. What happens to me?

Dr. VAN HOEK. Overseas, the responsibility of medical care for a merchant seaman is vested in the shipping company, and it arranges, through the master of the ship or the company, for medical care locally and pays for that medical care.

If it is not an acute emergency but requires medical care, the shipping company may transfer the individual back to the States and, upon return to the States, he can enter a Public Health Service hospital and clinic for medical treatment.

Mr. FLOOD. All right, I am in New York Harbor, I am on the *Constitution*, I am sick; what happens to me?

Dr. VAN HOEK. The individual can report directly to the outpatient clinic in New York City in downtown Manhattan, or can go directly to the hospital at Staten Island, N.Y., and be seen by a physician.

Mr. FLOOD. And surgery?

Dr. VAN HOEK. Yes, sir. If he is an active duty merchant seaman, and that means he has sailed within the past 60 days on an American-flag ship, he can receive comprehensive medical care for any illness.

Mr. FLOOD. It is cancer, a terminal case. What happens to me?

Dr. VAN HOEK. The patient is treated.

Mr. FLOOD. Terminal case, no date set but obviously a terminal case. What are you going to do with me?

Dr. VAN HOEK. If we have exhausted all available treatment and reached the point where the individual is chronically ill and only nursing home care is indicated, the individual is referred through our social service processes to a nursing home.

Mr. FLOOD. Do you know what a nursing home costs? What is he going to use for money, rubber bands or cigarette coupons?

Dr. VAN HOEK. Many of these individuals are eligible for various forms of assistance.

Mr. FLOOD. Union aid?

Dr. VAN HOEK. Possibly, and through State and local agencies. They may be veterans and entitled to domiciliary care.

Mr. FLOOD. You do not have nursing homes or halfway houses yourself, do you?

Dr. VAN HOEK. No, sir.

Dr. ENGLISH. This is a little known fact, but the Peace Corps volunteers all over the world were cared for in the Public Health Service hospitals when they got sick and had to be returned home. They received excellent care at considerable cost saving to the Government.

Mr. FLOOD. We ought to have the record show what Federal people are eligible and under what circumstances.

Dr. ENGLISH. Yes, sir.

(The information follows:)

FEDERAL PERSONNEL PROVIDED HEALTH SERVICES

UNIFORMED SERVICES PERSONNEL

Environmental Science Services Administration, commissioned officer, active.
Environmental Science Services Administration, commissioned officer, retired.
Environmental Science Services Administration, crew member,* active.
Environmental Science Services Administration, crew member,* retired.
U.S. Coast Guard officer, active.
U.S. Coast Guard enlisted, active.
U.S. Coast Guard officer, retired.
U.S. Coast Guard enlisted, retired.
U.S. Coast Guard applicant for enlistment.
U.S. Public Health Service officer, active.
U.S. Public Health Service officer, retired.
U.S. Public Health Service officer candidate (applicant for commission).
U.S. Army officer, active.
U.S. Army enlisted, active.
U.S. Army officer, retired.
U.S. Army enlisted, retired.
U.S. Air Force officer, active.
U.S. Air Force enlisted, active.
U.S. Air Force officer, retired.
U.S. Air Force enlisted, retired.
U.S. Marine Corps officer, active.
U.S. Marine Corps enlisted, active.
U.S. Marine Corps officer, retired.
U.S. Marine Corps enlisted, retired.
U.S. Navy officer, active.
U.S. Navy enlisted, active.
U.S. Navy officer, retired.
U.S. Navy enlisted, retired.
National Guard personnel.
Armed Forces applicants for enlistment.
Foreign NATO personnel attached to U.S. Army.
Foreign NATO personnel attached to U.S. Air Force.
Foreign NATO personnel attached to U.S. Navy.

FEDERAL CIVILIAN EMPLOYEES

Bureau of Employees' compensation beneficiaries (Federal employees injured or taken ill in line of duty).

Federal Employee Examinations—Pay (promotion examinations, annual physicals, and so forth).

Federal employee examinations—Nonpay (pre-employment, fitness for duty, disability retirement).

*Not uniformed.

Federal employee health.
Dependent of Foreign Service, Department of State personnel.
Foreign Service, Department of State personnel.
Job Corps.
Lighthouse Service, personnel of former, active.
Light House Service, personnel of former, retired.
Peace Corps.
Volunteers in Service to America (VISTA).

DISCONTINUED FEDERAL PROGRAMS

Civilian Conservation Corps (BEC).
War risk insurance (BEC).
National Youth Administration (BEC).
Puerto Rico Reconstruction Administration (BEC).
Works Progress Administration (BEC).

INCREASE IN CONTRACT MEDICAL CARE

Mr. FLOOD. You are asking for $247,000 for what you call "contract medical care price increases."

What percentage of increase is this? What do you mean "contract?" What do you contract?

Dr. VAN HOEK. In locations where we have beneficiaries—primarily American seamen and Coast Guard—and there are not a sufficient number of individuals to warrant establishing a Public Health Service clinic or hospital, we contract with local practicing physicians and hospitals. The contract physicians provide medical care for the beneficiaries and, if an acute emergency arises requiring hospitalization, they are hospitalized in the local hospital under contract.

Mr. FLOOD. In the merchant marine, do you take able-bodied seamen up to an admiral? Does a four-striper rate it as well as an AB?

Dr. VAN HOEK. Yes. Any member of the crew, seaman or officer, engaged in the preservation of navigation of the vessel, a U.S. registered vessel, is eligible for medical care.

REVENUE AND EXPENDITURE CONTROL ACT OF 1968

Mr. FLOOD. What about the Revenue and Expenditure Control Act? Have you been hurt by personnel restrictions? If so, how were you hurt?

Dr. VAN HOEK. The employment restrictions have had an effect on our program.

Mr. FLOOD. I am sure of that. To what extent and how?

Dr. VAN HOEK. Not being able to fill vacancies in the area of patient care for some time caused us to curtail some of our clinical programs and elective surgery.

Mr. FLOOD. Are you hurting very much?

Dr. VAN HOEK. It is not a severe problem now, due to partial relief from the Department in the direct patient care positions.

COAST GUARD ELIGIBILITY REQUIREMENTS

Mr. FLOOD. Dr. Fishburn, does a civilian employee of your outfit rate the same thing as the military personnel? Suppose I am working in the post office. I get transferred to the Coast Guard. I am still a mail clerk. Do I rate the same thing as one of your Coast Guard uniformed people just because I am a mail clerk in the Coast Guard?

Dr. FISHBURN. No, sir, you do not.

Mr. FLOOD. I am no special breed because I am working for the Coast Guard?

Dr. FISHBURN. No.

CONTRACT CARE COSTS

Mr. FLOOD. Now how does your estimated increase in 1969 over 1968 compare with the actual increase of 1968 over 1967 for contract care?

I still do not know what contract care is. You did not tell me that, or did I interrupt you?

Dr. VAN HOEK. In geographic areas where we do not have PHS clinics or hospitals, we have to provide care for American seamen and Coast Guard personnel. We enter into contracts with the physicians in the local communities to provide care.

Mr. FLOOD. We are worried about this contracting of Federal services. Again this arises from my long years of association with defense.

How does this compare, the estimated increase in 1969 over 1968 and the actual increase in 1968 over 1967? Your budget man can show this in the record.

(The information follows:)

Non-Federal contract hospitalization costs:	
Fiscal year 1967 (actual)	$1,213,000
Increase	257,000
Fiscal year 1968 (actual)	1,470,000
Increase	124,000
Fiscal year 1969 (estimate)	1,594,000

MULTIPHASIC SCREENING PROGRAM

Mr. FLOOD. Tell us a little about your multiphasic screening program at Staten Island.

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. Are you remodeling the whole place?

Dr. VAN HOEK. No, sir. The program at Staten Island has been changed.

Mr. FLOOD. Since when?

Dr. VAN HOEK. During the past year.

Our plans were changed in developing the proposed multiphasic screening program——

Mr. FLOOD. What is a multiphasic screening program. You never thought of that phrase. Some budget type thought of that.

Dr. VAN HOEK. A multiphasic screening program is a program in which a large number of medical tests are performed on an individual. These may involve tests such as parts of the physical examination, vision, hearing, as well as laboratory tests. The purpose of multiphasic screening is to conduct rapid, comprehensive screening for any indication of disease in an individual.

Mr. FLOOD. Your remodeling is not done. You have changed your plans in the middle of the ball game. Why?

Dr. VAN HOEK. Our change in plans was to transfer the program from the Staten Island Hospital to the Baltimore Hospital, and we are in the process now of remodeling the clinic in Baltimore.

Mr. FLOOD. Is all of your hardware in place?

Dr. VAN HOEK. Not yet.

Mr. FLOOD. What is the total cost going to be?

Dr. VAN HOEK. This year it is approximately $1.6 million.

Mr. FLOOD. This year?

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. What is the total cost going to be? You have remodeled and got your hardware and you are in Baltimore. You cannot give me an exact figure, but give me a ball park figure.

Dr. VAN HOEK. We anticipate operating at approximately $500,000 a year.

Mr. FLOOD. Is that good?

Dr. VAN HOEK. Yes, sir. Our estimate, when examining 20 patients a day, is approximately $100 per examination, but we anticipate increasing this by a factor of five without any significant increase in operating costs, so this will drop to about $20 per examination when in full operation.

Mr. FLOOD. You are not running country clubs now, you are running hospitals.

Dr. VAN HOEK. Yes, sir; this part of the hospital operation. Not only will it do health screening on an ambulatory basis, by which we hope to detect the disease early enough so that individuals can be treated without requiring hospitalization, but we also will use this for preadmission workups so it will shorten further the length of stay in the hospital.

OUTPATIENT CARE

Mr. FLOOD. Do you have outpatient care?

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. A small program?

Dr. VAN HOEK. No, sir, we have approximately 1.6 million outpatient visits a year in our clinics.

Mr. FLOOD. Good.

Dr. VAN HOEK. For the size of our beneficiary population I think it is excellent.

Mr. FLOOD. You ask for a very, very small increase of four in the personnel, Dr. Fishburn, for Coast Guard medical care. Do you have any statement to tell us a little bit about that part of the program. Why do you need four more people?

Dr. FISHBURN. I am sure you recognize that any program has to build up step by step, and we anticipate this program will be economically efficient.

Mr. FLOOD. Mr. Michel?

Mr. MICHEL. Are there 10 or 11 hospitals under your shop?

Dr. VAN HOEK. 10 general hospitals and one for leprosy.

PSYCHIATRIC TREATMENT

Mr. MICHEL. What activities do you carry on in mental health?

Dr. VAN HOEK. We provide psychiatric care to our beneficiaries in the general hospitals. This is a short term diagnostic and therapeutic care.

The long term cases are transferred either to community mental health facilities or to the psychiatric hospitals of the National Institute of Mental Health.

Mr. MICHEL. Do you have many from the Armed Forces?

Dr. VAN HOEK. I don't know the statistics from the Armed Forces.

Of the approximately 45,000 discharges in the last complete year we had approximately 2,559 discharges for psychiatric conditions.

Mr. MICHEL. When you say admitted to one of your general hospitals and discharged, that does not necessarily mean they went home well, does it?

Dr. VAN HOEK. No, sir.

Mr. MICHEL. In the mental health area they are simply out from under your responsibility and hopefully if they needed care and treatment they would go into a mental health facility somewhere else in the country?

Dr. VAN HOEK. They could either be under our care on an outpatient basis or could have been transferred to another mental health institution.

Dr. FISHBURN. They are treated in our hospital system and if they are discharged from the service they then become beneficiaries of the VA.

Mr. MICHEL. What happens to homosexual cases? I am thinking particularly in terms of the Navy and Coast Guard.

Dr. VAN HOEK. I don't know.

Mr. MICHEL. Would they get any kind of treatment at all or would they just be ridden out of the service, period. Do you know?

Dr. VAN HOEK. They are not ridden out. I don't know the details.

Dr. FISHBURN. It depends on the degree. The man who merely admits he is a homosexual and is not active will be provided treatment and possibly return to duty. If he is an active homosexual according to the rules of the military he is discharged, or more reasonably he is allowed to resign. That is usually the situation.

Mr. FLOOD. Do you handle them in the same way the Defense people do?

Dr. FISHBURN. Exactly.

Mr. FLOOD. You are still Treasury, are you not?

Dr. FISHBURN. Transportation.

Mr. FLOOD. Oh, yes, that new law. You are still not Defense unless there are hostilities.

Dr. FISHBURN. That is right, but Coast Guard rules are the same as those of the Navy.

Mr. MICHEL. Another question or two in this area and it is prompted by the fact that we Members of Congress get some of these ticklish cases brought to our attention by constituents or their families. I had one particular case which happened recently in the Navy.

You suggested there are degrees compatible with staying in the service.

Dr. FISHBURN. What I referred to, and I am sure you appreciate this, is that many youngsters get into the service, particularly if they are coming in to avoid the draft or because they are escaping from something. After a year, maybe even a few months, they find it is not a very desirable place for them. They will use all sorts of gimmicks which they think will get them out.

It is not uncommon at all to have an admission of homosexuality and it is very difficult to establish factually one way or the other.

Mr. FLOOD. You work the same way the Defense people do?

Dr. FISHBURN. Exactly the same, except that in psychiatric evaluation and treatment it is very apparent that some homosexuals have no actual desire to participate in homosexual acts but under certain circumstances they will.

It is compatible for some of them to stay in active duty.

Mr. FLOOD. It is difficult to tell a goldbrick.

Dr. FISHBURN. That is right.

Dr. ENGLISH. It is not an uncommon situation in the military or in the Peace Corps. I can give you an example of the kind of thing that has come up. It is not unusual to find a young boy, for example, who in early adolescence, say at 14 or 15 years of age, might have been approached by an active homosexual who would be older, and seduced into an incident which might come to the attention of the police, and there would be a notation in the public record of this.

That young student of 24 years of age is applying, let us say, for the Peace Corps. He has had no evidence of any kind of deviant behavior since, but in the review made of his record prior to his entry into governmental service this comes up and in a situation like that a good psychiatric examination would be made and a recommendation made to the agency as to whether this really is a condition which would require his being unable to come in the service.

That kind of thing occurs. That would be in striking contrast to the other kinds of situations which Dr. Fishburn spoke of.

Mr. FLOOD. I was not talking of that but some faker, like Dr. Fishburn was talking about. What about that? Is it hard to tell whether you have a faker or not?

Dr. ENGLISH. You do the best you can with the psychiatric examination.

Mr. FLOOD. I am asking you. You know and I don't.

Dr. ENGLISH. There are limitations to this. Psychiatry cannot give a definitive answer. It can give a recommendation.

Mr. FLOOD. Can you do pretty well?

Dr. ENGLISH. We do better these days, but it is very often a determination by nonmedical auspices on medical advice.

Mr. MICHEL. I don't know why I got started on the subject here this morning, but you keep reading more and more about this and you ask yourself what do we do to stem this growing problem.

Mr. CASEY. Is it a growing problem or has it just come to the surface more?

Mr. FLOOD. That is a good question.

Dr. ENGLISH. That is a good question. I would think it is more the latter. This was something that was very seldom talked about, very seldom brought even into the medical arena.

I think the experience in colleges is that students who have this kind of difficulty are much more willing now to go for help to a mental health service in the college, but I think in general the problem itself is getting much more attention in the theater, movies, and that would make it appear as if it is increasing. I don't think we have hard evidence that it is increasing.

Mr. CASEY. I don't think it was too many years ago when you would not have had them appear on a TV show and admit it, and, in fact, brag about it, as they do now.

Dr. FISHBURN. We have no evidence in the Coast Guard it is on the increase. Every body knows that where you find one case you will find a flock of them within that group.

NEIGHBORHOOD HEALTH CENTER IN THE DISTRICT OF COLUMBIA

Mr. MICHEL. Back to the more pertinent subject matter at hand here, you speak here in your testimony of these community programs—

The most exciting recent development has been our participation in a Neighborhood Health Center sponsored by the District of Columbia Health Department and the Redevelopment Land Agency.

What is exciting about that? What has happened?

Dr. VAN HOEK. What it demonstrates to us is something Dr. English was referring to earlier, and that is the opportunity that we have as a medical program heretofore largely associated with pure Federal activities. Where we have resources available we have been able to provide needed health services to the community.

In this renewal area in Washington, D.C. there is a small section bounded by Massachusetts Avenue, North Capitol Street, New Jersey Avenue, and New York Avenue Northwest which is surrounded by industry, Government buildings. In this area families live under very poor conditions in terms of the physical facilities and environment. They have no readily accessible health care.

For general medical problems they have had to go across town to District of Columbia General Hospital. It was a tremendous problem.

Even with the concept of neighborhood health clinics which the District of Columbia Health Department has established there was still a great problem in terms of transportation for these people, accessibility to health care, and so on.

In discussions with some of the staff members of the Redevelopment Land Agency and the District of Columbia Health Department it became clear that, for this small population group in need of medical care, we could utilize some of our resources.

Mr. MICHEL. How long has this been underway?

Dr. VAN HOEK. Since September 1968.

Mr. MICHEL. So you do not have a good experience table as to what you are really accomplishing?

Dr. VAN HOEK. That is right.

Mr. MICHEL. If I asked what the striking accomplishment of this center is, can you point to anything of real significance for even such a short time?

Dr. VAN HOEK. Not in terms of objectively saying we have improved the health status of those people, but in terms of demonstrating some of the approaches that must be taken in helping these target populations, in terms of their needs, and in their participation in the planning of the services. A community group has assisted us, the District of Columbia Health Department, and the Redevelopment Land Agency, in a four-way partnership to develop the services that the citizens should get, the hours of coverage, and other factors. This was a very important aspect in the acceptance of the clinic.

We are now seeing 90 to 100 individuals a week out of a total population of 2,000 people. We are finding significant health problems of which these people were not aware or for which they were not seeking medical care.

Mr. MICHEL. What are the most pronounced maladies that come to your attention?

Dr. VAN HOEK. Hypertension, obesity, problems of kidney disease, heart disease. We have had some cases of malnutrition.

Mr. MICHEL. When you speak of obesity, is that the opposite of malnutrition?

Dr. VAN HOEK. Not entirely. There are forms of obesity, by the nature of the diet, in which a person can be obese but still malnourished and have resultant metabolic abnormalities.

Mr. FLOOD. That can be organic as well?

Dr. VAN HOEK. Yes, sir.

FEDERAL EMPLOYEE HEALTH PROGRAM

Mr. MICHEL. You speak of this increase representing 70 positions and $600,000 in reimbursements to provide direct occupational health services, eliminating some of the backlog of requests for these services. A backlog of what?

Dr. SIEGEL. The Public Health Service operates employee health units when asked to provide services for other Federal agencies. Within the last few years the General Services Administration has been constructing new office buildings and other Federal installations. They have come to us after consulting with the agencies who will occupy this space, and asked us if we would operate a reimbursable health service or clinic.

There is now a large backlog, some 34 as of today, of outstanding requests to open such employee health clinics where none now exist.

Mr. MICHEL. Where?

Dr. SIEGEL. The current 34 backlogs are at Hartford, Conn.; Philadelphia, Pittsburgh, Harrisburg, in the Washington, D.C. area, including Rockville, Md., and Arlington, Va.; at Atlanta, Roanoke, Va.——

Mr. MICHEL. Put that list in the record.

Dr. SIEGEL. Yes, sir.

(Information requested follows:)

HEALTH UNIT BACKLOG

Hartford, Conn.
Philadelphia, Pa.
Pittsburgh, Pa.
Harrisburg, Pa.
Rockville, Md.
Washington, D.C. (3 units)
Arlington, Va.
Roanoke, Va.
Atlanta, Ga. (4 units)
Greensboro, N.C.
Memphis, Tenn.
Miami, Fla.
Chicago, Ill.
Detroit, Mich.
Milwaukee, Wis.
Toledo, Ohio
Rolla, Mo.
Des Moines, Iowa
Fort Snelling, Minn.
New Orleans, La. (4 units)
Salt Lake City, Utah
Phoenix, Ariz.
Sacramento, Calif.
Los Angeles, Calif.
Pasadena, Calif.
Long Beach, Calif.

Mr. MICHEL. Does that list include the agency name?

Dr. SIEGEL. This list is furnished by GSA. They will be the landlord for usually many Federal agencies. Many of these locations have Federal office buildings which may house from 10 to 50 different Federal agencies.

Mr. MICHEL. So that actually so far as the agency itself is concerned you get that directly from GSA?

Dr. SIEGEL. That is right.

Mr. MICHEL. You are not concerned with that. All you are interested in is the request that comes to you from GSA?

Dr. SIEGEL. Yes, sir; but we do contact the agencies occupying the space directly because they must pay for these services. For example, in a Federal office building with 30 different agencies, the agencies on a pro rata basis will actually pay for the services rendered.

Mr. MICHEL. Does this mean setting up an aid station in a Federal office building, for example?

Dr. SIEGEL. It is more than an aid station in that it is a modern health employee service just as found in modern businesses or industries providing services authorized under law to Federal employees, such as certain types of medical examinations. For example, a survey of employees whose jobs expose them to certain health hazards, such as in laser development laboratories where there has to be a periodic examination of the eyes.

Emergency first aid is provided for injuries and we see that Federal employees injured on the job are referred to prompt treatment under the Bureau of Employees Compensation System.

In addition, assistance and advice is given to Federal managers on health problems, problems of dealing with the troubled employee, the problem of alcoholism in the work force, the problem of employees who will be traveling overseas and require certain immunization and preventive services prior to their departure, and health counseling with the aim of keeping employees on the job and keeping them productive. Nonwork related illnesses or injuries are referred back to the private physician.

The employee health unit helps establish a contact with the private physician. Many Federal employees do not have private physicians and the clinics work with the local medical societies in seeing that these employees are put in touch with community medical resources.

Mr. FLOOD. Do you conduct clinics and seminars once a week or once a month for employees who may attend if they wish?

Dr. SIEGEL. No, sir; this is not a general program.

Mr. FLOOD. Should it be?

Dr. SIEGEL. I don't think so. The one thing we find, and we are serving over 700 different Federal agencies or subagencies, is that the needs of Federal agencies are infinitely varied.

An employee health program, basically designed to keep the employee productive, has to be varied. The nature of the work among various Federal agencies is so different it is hard to give a single answer to a question like that.

In some agencies such meetings might be desirable. In others there might be other high priority things.

Mr. MICHEL. Is this backlog bigger than it was 5 years ago?

Dr. SIEGEL. Yes, sir.

Mr. MICHEL. Is it higher now than it even has been?

Dr. SIEGEL. Yes, and I think the reason for this is as follows: The real interest in Federal employee health has developed over the last few years. This has been due to several things. The nature of Federal employment is becoming more complex. There are more hazards associated with the work than there used to be.

Federal managers now are graduating from the same schools as their counterparts who go into private industry. Employee health in private industry is an important factor in management, so Federal managers are interested in employee health. They are now requesting services and giving thought to services to which they were not 5, 10, or 15 years ago.

A very important third factor is that the Civil Service Commission, now as a matter of policy is urging and encouraging Federal managers to provide adequate employee health services where none previously existed.

All of this has stimulated a great demand for advice on employee health matters and setting up clinics where they did not exist before.

Mr. FLOOD. You are not creating a class of hypochondriacs, are you?

Dr. SIEGEL. I don't think so. On the other hand we are aiding the Federal employee who is legitimately concerned about his health and trying to do something constructive.

Mr. MICHEL. I think that is all, Mr. Chairman.

NEIGHBORHOOD HEALTH CENTER IN THE DISTRICT OF COLUMBIA

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. So, I can understand more about your responsibilities in connection with the neighborhood health center in the Northwest district, I think you said they are serving some 2,000 people.

Dr. VAN HOEK. Yes.

Mr. SHRIVER. Are they Federal employees?

Dr. VAN HOEK. No, sir; citizens of the District of Columbia.

Mr. SHRIVER. How do they come within the responsibility of your Department?

Dr. VAN HOEK. They are the responsibility of the District of Columbia Health Department. The majority of these individuals are welfare cases and are entitled to care under the medical assistance program of the District of Columbia Health Department.

Mr. SHRIVER. You take over the responsibility of the District of Columbia Health Department?

Dr. VAN HOEK. No, sir.

Mr. SHRIVER. I am trying to figure out where you get the statutory authority for what you are doing.

Mr. FLOOD. That is a good question.

Mr. SHRIVER. I am not objecting to it.

Dr. VAN HOEK. Under section 328 of the Public Health Service Act we are permitted to enter into agreements either on a reimbursable basis or a sharing basis to provide or to participate in providing services and training in the community in which our medical program operates.

We justify participation in this program from the standpoint of providing a training opportunity for our own Public Health Service

personnel. Operating in a Federal establishment and taking care of Federal beneficiaries it is difficult for our personnel, who in the future may go into the private sector of medicine or continue in Federal service, to work in the community and to understand the health problems of the urban poor and the problems of delivering health services.

Mr. FLOOD. How much have you been involved in the Office of Economic Opportunity program?

Dr. VAN HOEK. In several ways.

When the OEO was establishing the neighborhood health center program and the project in Boston, Mass., was being established, there was a shortage of physicians to staff that neighborhood health center.

Public Health Service physicians——

Mr. FLOOD. Did they pay you for it?

Dr. VAN HOEK. Yes, sir. We assigned physicians to the neighborhood health center from the Boston Public Health Service hospital.

Mr. FLOOD. You were reimbursed?

Dr. VAN HOEK. Yes, sir.

Mr. SHRIVER. Are you reimbursed in connection with this Northwest Center?

Dr. VAN HOEK. No, sir. We feel that our investment is so small in terms of personnel that the investment is repaid by the training experience for our people. It would be analogous to sending a person to a program in a community and having to pay his salary and tuition. This is the basis of the arrangement, equal sharing of services or other costs by both parties.

We have participated with the OEO and the Department of Labor in training and health services and we have been reimbursed.

Mr. FLOOD. Are you a commissioned officer?

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. How many stripes?

Dr. VAN HOEK. I am a rear admiral.

Mr. FLOOD. A flag officer?

Dr. VAN HOEK. Yes, sir.

ADJUSTMENTS IN CONNECTION WITH 1969 APPROPRIATION

Mr. SHRIVER. Can you explain the difference between the 1969 appropriation figure in the statement, $71,437,000, and that shown in the justifications which is $70,443,000? There is a difference of about $1 million.

Mr. CARDINAL. We will provide it for the record.

(Information requested follows:)

1969 appropriation	$70,443,000
Transfer to "Operating expenses, Public Buildings Service," General Services Administration	−53,000
Comparative transfers to:	
"Salaries and expenses, Food and Drug Administration"	−568,000
"Salaries and expenses, Office of the Administrator"	−70,000
"Emergency Health"	−561,000
Proposed transfer from other accounts for:	
Civilian pay increases	1,288,000
Military pay increases	958,000
1969 appropriation, adjusted	71,437,000

INCREASE IN COST OF OUTPATIENT CLINICS

Mr. SHRIVER. What are the reasons for the 20-percent increase in the per visit cost in the clinical outpatient program shown at page 84?

Dr. VAN HOEK. This is primarily to upgrade the services provided in those outpatient clinics. Historically, the support for the outpatient clinic program has been at a lower unit rate than that for the outpatient clinics of the hospitals. This was because the services provided in those outpatient clinics were not as comprehensive as they are now.

Mr. SHRIVER. This is a difference between 1969 and 1970. Why is this?

Dr. VAN HOEK. The first reason is that we feel the base from which we are working, the $1 base, is inadequate to begin with. It should have been comparable to the hospital outpatient clinic unit rate, if not more so. Second, because of the increase in costs of operating those clinics; the supply costs are rising by 15 to 20 percent a year.

Mr. SHRIVER. The beginning figure was too low, in other words?

Dr. VAN HOEK. Yes, sir.

FEDERAL EMPLOYEE HEALTH PROGRAM

Mr. SHRIVER. On page 88 of the justifications it is stated that the specified goal of the Federal employees medical care program is the provision of these services for all employees who work in groups of 300 or more. How was that goal of 300 determined?

Dr. SIEGEL. The Bureau of the Budget identified that goal in June of 1965. I don't know precisely how that figure was arrived at but I surmise that it was because the cost of providing health services for groups smaller than 300 became prohibitively expensive. It was an economically derived formula but it was derived by the Bureau of the Budget and issued by them in June of 1965.

Mr. SHRIVER. Where do you stand with regard to the attainment?

Dr. SIEGEL. The Civil Service Commission is charged with coordinating the Federal employee health program and reporting annually to the President. In the last report they reported that approximately 75 percent of the Federal employees working in groups of 300 or more had access to employee health services.

PAYMENT TO HAWAII FOR TREATMENT OF LEPROSY

Mr. SHRIVER. You mentioned the leprosy hospital in Hawaii to which we pay a certain amount. You said about $1 million.

Has it been the same figure each year?

Dr. VAN HOEK. It has been $1,200,000 since 1961.

Mr. SHRIVER. What was it before that date? Do you know? Has it been a constant figure even before 1961?

Dr. VAN HOEK. We assumed the partial funding of the Hawaii program in 1953 at $500,000. It was increased to $1 million in 1954 and to $1,200,000 in 1961.

Mr. SHRIVER. Have they had more leprosy out there?

Dr. VAN HOEK. No, sir. Their patient load has been decreasing gradually over the years. In 1953 the patient load was 331, and it is estimated that in 1969 it will be about 245.

Mr. SHRIVER. Is the State of Hawaii assuming any greater responsibility for this problem?

Dr. VAN HOEK. Yes, sir. They have increased their leprosy control program in Hawaii. This is probably one of the reasons the patient load is dropping. Also the total cost of the program has risen so proportionately the $1.2 million is becoming a smaller part of the funding.

Mr. SHRIVER. Will we be continuing this all along for that one State?

Dr. VAN HOEK. I don't know how to answer that question. Leprosy is a difficult public health problem, particularly so in Hawaii.

Mr. SHRIVER. But we started this program when Hawaii was a territory and not a State. Hawaii is loaded with Government programs of all kinds.

Mr. FLOOD. Is there a racial relationship with leprosy?

Dr. VAN HOEK. We believe there may be but we cannot document it.

Mr. SHRIVER. We have the one hospital we are funding completely in Louisiana taking care of cases for all of the States except Hawaii.

Dr. VAN HOEK. Yes, sir.

Mr. SHRIVER. And then there is one taking care of Hawaii which we are funding in part, and we are continuing to fund it at the same level, $1.2 million, and this will continue in the future?

Dr. VAN HOEK. Yes, sir.

Mr. FLOOD. If there is a connection it would perhaps be among the yellow and black people?

Dr. VAN HOEK. The difficulty is that the condition is so prevalent in the areas occupied by those races that we——

Mr. FLOOD. You don't know it as a fact?

Dr. VAN HOEK. That is right. We know individuals of other races contract leprosy but not with the same frequency.

Mr. SHRIVER. That is all.

Mr. FLOOD. Mrs. Reid?

Mrs. REID. Dr. van Hoek, most people in the public today tend to forget that there are many individuals afflicted with leprosy. How many Americans are under treatment for leprosy? Is it confined largely to Hawaii?

Dr. VAN HOEK. There are 2,144 known cases of leprosy within the continental United States. Of this number, 300 are under treatment by the Carville staff. Leprosy is not confined to Hawaii which has 553 reported cases. It is endemic in Texas, Louisiana, California, and Florida.

AID VIETNAM PROGRAM

Mrs. REID. On page 95 of your justifications, you have a figure of $270,000 for an AID Vietnam program. What does this consist of?

Dr. VAN HOEK. This service maintains two medical teams in civilian hospitals at Danang and Nha Trang, South Vietnam. These teams are detailed to the Agency for International Development Health Mission in Saigon and serve as an integral part of the civilian assistance program. Physicians, nurses, and technicians assigned to these teams assist the South Vietnamese hospital staff in providing medical and surgical care to the civilian population in these areas.

Mr. FLOOD. Thank you, gentlemen.

JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Patient Care and Special Health Services

Amounts Available for Obligation

	1969	1970
Appropriation	$70,443,000	$72,224,000
Transfer to "Operating expenses, Public Buildings Service," General Services Administration	-53,000	...
Comparative transfers to:		
"Salaries and expenses, Food and Drug Administration"	-568,000	...
"Salaries and expenses, Office of the Administrator"	-70,000	...
"Emergency Health"	-561,000	...
Receipts and reimbursements from:		
Federal funds	13,487,000	14,156,000
Non-Federal sources	355,000	322,000
Cutback required by P.L. 90-364	-91,000	...
Total currently authorized for obligation	82,942,000	86,702,000
Plus: Proposed release of reserves for increased pay costs	91,000	...
Proposed transfer from other accounts for:		
Civilian pay increases	1,288,000	...
Military pay increases	958,000	...
Total obligations	85,279,000	86,702,000

Disposition of cutback:

To be used for pay costs in this account	91,000

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
83	Operation of hospitals and clinics.....	5,945	$74,804,000	6,000	$75,428,000	+55	$ +624,000
	Medical care for special groups:						
87	(a) Coast Guard.....	148	2,515,000	152	2,655,000	+4	+140,000
88	(b) Federal employees..	190	3,077,000	262	3,707,000	+72	+630,000
	Special health services:						
93	(a) Rehabilitative services.....	7	168,000	7	168,000	...	...
94	(b) Payments to Hawaii.....	...	1,200,000	...	1,200,000	...	...
95	Personnel detailed to other agencies.	57	1,085,000	57	1,085,000	...	...
96	Program direction and management services.....	145	2,430,000	145	2,459,000	...	+29,000
	Total obligations	6,492	85,279,000	6,623	86,702,000	+131	+1,423,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions....	6,492	6,623	+131
Full-time equivalent of all other positions.....	177	140	-37
Average number of all employees.....	6,516	6,558	+42
Personnel compensation:			
Permanent positions.....	$51,431,000	$52,738,000	$+1,307,000
Positions other than permanent.....	1,001,000	801,000	-200,000
Other personnel compensation.....	1,952,000	1,938,000	-14,000
Total personnel compensation.....	54,384,000	55,477,000	+1,093,000
Personnel benefits.....	7,083,000	7,200,000	+117,000
Travel and transportation of persons..	1,040,000	1,043,000	+3,000
Transportation of things.....	702,000	704,000	+2,000
Rent, communications, and utilities...	1,532,000	1,518,000	-14,000
Printing and reproduction.....	209,000	214,000	+5,000
Other services.....	8,290,000	8,155,000	-135,000
Project contracts.....	7,000	7,000	...
Supplies and materials.....	7,825,000	8,520,000	+695,000
Equipment.....	3,282,000	2,939,000	-343,000
Grants, subsidies, and contributions..	1,285,000	1,285,000	...
Subtotal.....	85,639,000	87,062,000	+1,423,000
Deduct quarters and subsistence charges.....	-360,000	-360,000	...
Total obligations by object.....	85,279,000	86,702,000	+1,423,000

Summary of Changes

1969 estimated obligations	$85,279,000
1970 estimated obligations	86,702,000
Net change	+1,423,000

	Base		Changes from Base	
	Positions	Amount	Positions	Amount
Increases				
A. Built-in				
1. Net additional cost of within grades	...	...	...	$198,000
Operation of hospitals and clinics	...	...	...	(179,000)
Federal employees	...	...	...	(4,000)
Program direction and management services	...	...	...	(15,000)
2. Net additional cost of reclassifications	...	...	...	82,000
Operation of hospitals and clinics	...	...	...	(76,000)
Federal employees	...	...	...	(1,000)
Program direction and management services	...	...	...	(5,000)
3. Net additional cost of incentive pay and longevity increases	...	...	...	109,000
Operation of hospitals and clinics	...	...	...	(81,000)
Coast Guard	...	...	...	(20,000)
Federal employees	...	...	...	(2,000)
Program direction and management services	...	...	...	(6,000)
4. Social Security contributions	...	...	...	15,000
Operation of hospitals and clinics	...	...	...	(9,000)
Coast Guard	...	...	...	(5,000)
Program direction and management services	...	...	...	(1,000)

	Base		Changes from Base	
	Positions	Amount	Positions	Amount
5. Annualization of 1969 wageboard increases (Operation of hospitals and clinics).....	...	...	...	86,000
6. Annualization of nurse reclassifications (Operation of hospitals and clinics).....	...	...	...	90,000
7. Annualization of Phase II 1968 pay act increase.	...	...	...	17,000
Operation of hospitals and clinics.....	...	...	...	(14,000)
Federal employees Program direction and management services.....	...	...	...	(1,000)
8. Net additional cost of continuation pay (Coast Guard).....	...	...	...	(2,000)
9. Contract medical care price increases (Operation of hospitals and clinics)	...	...	...	15,000
Subtotal.....	...	...	...	247,000
				859,000
B. Program				
1. Operation of hospitals and clinics				
(a) Contract medical care.....	...	1,010,000	...	46,000
(b) Patient supplies...	...	4,288,000	...	445,000
(c) Maintenance and repairs.....	...	883,000	...	350,000
(d) Equipment (Additional)	...	750,000	...	40,000
(e) Additional positions: Conversion of part-time and temporary to permanent positions.....	...	200,000	55	(200,000)
Subtotal, operation of hospitals and clinics			55	881,000
2. Medical care for special groups				
(a) Coast Guard.....	148	2,515,000	4	100,000
(b) Federal employees...	190	3,077,000	72	622,000
Subtotal, program increases.....			131	1,603,000
Total increases..			131	2,462,000

	Base		Changes from Base	
	Positions	Amount	Positions	Amount
Decreases				
A. Non-recurring cost in multiphasic screening program.....	...	...	...	-1,039,000
Total decreases....			...	-1,039,000
Total net changes requested.....			+131	+1,423,000

Explanation of Changes

Operation of hospitals and clinics

Contract medical care -- The increase of $46,000 will provide funds for additional physician fees for treating our increasing office visit beneficiary workload, and a slight increase in non-Federal hospitalization.

Patient supplies -- Of the requested increase of $445,000 approximately 20% will be used to meet the added patient workloads in 1970. The remainder is to maintain quality patient care.

Maintenance and repairs -- Based on the University of Oklahoma-Veteran's Administration formula, $1,295,000 is required annually to provide for the maintenance and repairs in our hospitals and clinics. The increase of $350,000 will allow us to operate at 95% of the required annual level.

Equipment (additional) -- The requested increase of $40,000 is required to supplement current funds for the relocation of one of our larger outpatient clinics.

Additional positions -- No additional funds are being requested to support the added positions in fiscal year 1970. The increase in costs related to these positions will be offset by a corresponding decrease in the use of part-time and temporary manpower.

Non-recurring costs -- The above increases are reduced by $1,039,000 which represents non-recurring costs in the multiphasic screening program.

Reimbursements for care of non-primary beneficiaries are expected to increase by $36,000 in 1970, and will serve as a source of funding for the estimated obligations above the amount of new obligational authority.

Medical care for special groups

Coast Guard -- The increase of 4 positions and $100,000 will provide increased medical and dental support to present and proposed medical and dental facilities.

Federal employees -- An increase of 2 positions and $22,000 in appropriated funds will provide for augmentation of headquarters' staff to meet increasing requests from Federal agencies for consultation and technical assistance in dealing with employee health hazards and problems. A further increase of 70 positions and $600,000 in reimbursable funds will provide occupational health programs for a projected additional 25,000 Federal employees during fiscal year 1970.

Authorizing Legislation

Legislation	1970 Authorization
Public Health Service Act	
Section 301--Research and Investigation.....	Indefinite
Section 331--Lepers.....	Indefinite

PUBLIC HEALTH SERVICE ACT

Title III--General Powers and Duties of Public Health Service

Part A--Research and Investigation

Appropriation

Section 301. Legislative authority contained in section 301 of the Public Health Service Act provides for the award of grants for research.

Title III--General Powers and Duties of Public Health Service

Part D--Lepers

Appropriation

Section 331. "xxx When so provided in appropriations available for any fiscal year for the maintenance of hospitals of the Service, the Surgeon General is authorized and directed to make payments to the Board of Health of Hawaii for the care and treatment in its facilities of persons afflicted with leprosy at a per diem rate, determined from time to time by the Surgeon General, which shall, subject to the availability of appropriations, be approximately equal to the per diem operating cost per patient of such facilities, except that such per diem rate shall not be greater than the comparable per diem operating cost per patient at the National Leprosarium, Carville, Louisiana."

Explanation of Transfers

	1969 Estimate	Purpose
Proposed transfer from other accounts for:		
Civilian pay act increases	$1,288,000	To cover cost of Civilian pay increases and additional wage board costs.
Military pay act increases	958,000	To cover cost of Military pay increases.
Transfer to:		
"Operating expenses, Public Buildings Service," General Services Administration	53,000	Transfer of rental costs for San Diego outpatient clinic.
Comparative transfers to: a/		
"Salaries and expenses, Food and Drug Administration"	568,000	Transfer of responsibility for the operation of the Poison Control program to the Food and Drug Administration
"Salaries and expenses, Office of the Administrator"	70,000	Transfer of responsibility for the operation of the Occupational Hazards Control Program (Safety Function) to Office of the Administrator, HSMHA.
"Emergency Health".....	561,000	Transfer of responsibility for the operation of the Emergency Health Services program to the Emergency Health appropriation.

a/ In accordance with the Department's reorganization plan.

Patient Care and Special Health Services

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$51,689,500	$45,600,000	$49,722,500	$51,600,000
1961	52,434,000	56,023,000	56,023,000	56,023,000
1962	49,852,000	50,160,000	50,334,000	50,009,000
1963	51,514,000	51,477,000	48,820,000	48,820,000
1964	50,038,000	49,962,000	49,962,000	49,962,000
1965	54,436,000	54,436,000	55,064,000	55,064,000
1966	57,616,000	58,480,000	59,480,000	58,980,000
1967	64,121,000	64,121,000	64,121,000	64,121,000
1968	63,851,000	62,830,000	63,633,000	63,230,000
1969	71,193,000	70,443,000	70,443,000	70,443,000
1970	72,224,000			

Justification

Patient Care and Special Health Services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	6,492	$61,467,000	6,623	$62,677,000	+131	$+1,210,000
Other expenses.....	...	24,172,000	...	24,385,000	...	+213,000
Subtotal.....	6,492	85,639,000	6,623	87,062,000	+131	+1,423,000
Deduct quarters and subsistence charges..	...	-360,000	...	-360,000	...	...
Total.....	6,492	85,279,000	6,623	86,702,000	+131	+1,423,000
Reimbursable obligations.....		-13,842,000		-14,478,000		-636,000
Direct obligations...		71,437,000		72,224,000		+787,000

General Statement

A total of 11 hospitals and 167 outpatient facilities will be operated to furnish medical and dental care to the more than 400,000 legal beneficiaries of the Public Health Service. The major beneficiary groups are American seamen, Coastguardsmen and their dependents, Public Health Service Commissioned Officers and dependents, Bureau of Employees Compensation cases, and persons afflicted with leprosy. Among these, the largest single category is the American seamen who receive comprehensive medical care in service facilities. Medical care is also provided to foreign seamen and beneficiaries of other Federal agencies on a reimbursable basis.

1. Operation of hospitals and clinics. - Under this activity are operated 10 general hospitals, and the National Leprosarium at Carville, La. In addition, 28 outpatient clinics and 139 outpatient offices (private physicians rendering services under contractual arrangement) will operate to handle ambulatory patients at these facilities. Inpatient loads and outpatient visits as experienced during the past year and as expected during the next 2 years are as follows:

	1968 Actual	1969 Estimate	1970 Estimate
Average daily patient load			
Hospital patients, by type of hospital:			
General hospitals.....	2,124	2,085	2,040
Leprosarium.....	273	270	270
Total.....	2,397	2,355	2,310
Annual total outpatient visits			
Hospital outpatient visits...	812,861	843,000	864,200
Outpatient clinic visits.....	833,851	920,000	1,010,000
Outpatient office visits.....	69,900	72,000	74,000
Annual total outpatient visits	1,716,612	1,835,000	1,948,200

For 1970, the request provides for increased drug and supply needs to meet patient care requirements in PHS hospitals and clinics, increased funds to meet the maintenance and repair needs at these facilities, payment of contract medical care, and additional funds for equipment purchases.

2. Medical care for special groups:

   (a) Coast Guard. - Medical services are provided for Coast Guard personnel at shore stations and on vessels. The estimates provide for an increase in staffing and funds to meet the expanding medical and dental needs of the U. S. Coast Guard.

   (b) Federal employees. - The Public Health Service is responsible, under law, for providing all Federal agencies with recommendations and evaluations of proposed Federal employee health services. This activity also provides Federal employee health services to participating Federal agencies on a reimbursable basis. On July 1, 1968, this program operated 70 health units, providing health services for approximately 125,000 Federal employee participants.

3. Special health services:

   (a) Rehabilitative services. - This activity includes the Rehabilitation medicine program.

   (b) Payments to Hawaii. - Grants are made to Hawaii to defray the cost of care and treatment of persons afflicted with leprosy. Average daily patient load is expected to be 240 in 1970, compared with 249 in 1968 and 245 in 1969.

4. Personnel detailed to other agencies. - Medical, dental, and other professional personnel are detailed to other Federal agencies on a reimbursable basis.

5. Program direction and management services. - This activity provides program direction and management services to the activities contained within this appropriation. The activities directed and serviced by this headquarters' function consist of (1) the operation of hospitals and clinics; (2) medical care for special groups and (3) special health services.

1. Operation of hospitals and clinics

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	5,945	$54,623,000	6,000	$55,158,000	+55	$+535,000
Other expenses.....	...	20,541,000	...	20,630,000	...	+89,000
Subtotal	5,945	75,164,000	6,000	75,788,000	+55	+624,000
Deduct quarters and subsistence charges.....	...	-360,000	...	-360,000	...	...
Total.....	5,945	74,804,000	6,000	75,428,000	+55	+624,000
Reimbursable obligations		-9,807,000		-9,843,000		-36,000
Direct obligations.....		64,997,000		65,585,000		+588,000

Basic program

The primary missions of this program are (1) to provide comprehensive health services to its beneficiaries; (2) to train health personnel; (3) to conduct clinical and health services research, and; (4) to participate in community health programs.

Contract medical care

1969	1970	Change
$1,010,000	$1,056,000	$+46,000

An increase in patient visits to contract physicians in 1970 will necessitate increased funding. This increase is estimated at 2,000 patient visits and will require $20,000 in physician fees. The remainder of the requested increase, $26,000, will provide for the slight increase in non-Federal hospitalization (+1 average daily patient load) resulting from the higher outpatient clinic work load. The total increase is $46,000.

Patient supplies

1969	1970	Change
$4,288,000	$4,733,000	$+445,000

The request for an increase in patient supplies is based on two factors: (1) an increase in workload ($82,000), and (2) an increase in unit cost ($363,000).

The increase in unit cost contains two elements: (1) the need to bring supply funding for outpatient clinics to parity with that of hospital clinics. These independent medical facilities should be funded at the same unit rate or possibly a higher rate since they lack the support services of a hospital-based clinic; (2) a unit increase to meet the rising costs of supplies and increasing costs due to more complex diagnostic and therapeutic procedures.

Many desirable, but more expensive items are used routinely in modern medical practice, and we must keep pace with the rest of the medical community in providing medical care to our patients. The following are some limited examples relating to the rising cost of drug and supply needs of our patients:

(1) Patients in medical intensive care units generate drug costs approximating 5 times the average cost per inpatient day in our hospitals; patients in the recovery room require 3 times the average daily cost.

(2) New high speed x-ray film processors require the use of high speed film and special solutions. The film cost is 40% higher and the solution cost is increased by 10%.

(3) Radioisotope units require more funds in the area of supplies and radio-pharmaceuticals.

(4) Treatment of patients by renal dialysis requires large expenditures in drugs and supplies.

(5) Orthopedic and other rehabilitation appliances, cardiac catherization, and the use of cardiac pacemakers all contribute to the increasing cost of medical supplies.

The requested increase in funds will maintain the quality of care provided to Public Health Service beneficiaries. The following data demonstrates the changes in supply funding for 1970:

Facility	1969 Estimate	1970 Estimate	Change	Incr. Amt.
Hospital Inpatient (per patient day)	$2.57	$2.74	+17¢	$+85,000
Hospital Outpatient (per visit)	1.16	1.20	+4¢	+59,000
Clinic Outpatient (per visit)	1.00	1.20	+20¢	+292,000
Outpatient Office supplies	4.72	4.72	+2,000 visits	+9,000
Total	...	...	... ...	+445,000

Maintenance and repairs

1969	1970	Change
$883,000	$1,233,000	$+350,000

The hospitals and clinics annual maintenance and repair needs are $1,295,000, based on a current application of the University of Oklahoma-Veteran's Administration formula. This is a formula for computing a reasonable daily maintenance cost based on square foot area, type of construction, and percent of utilization in hospitals and clinics.

The requested funds will permit substantial improvement in the level of maintenance which has, in past years, been inadequate. The condition of our outmoded and crowded buildings clearly attests to the need for the requested level of routine maintenance and repairs support.

The increase of $350,000 in 1970 will meet about 95% of the routine maintenance needs of the facilities; it will not permit reduction in the backlog of repairs nor halt the present deterioration of our facilities.

Additional equipment

1969	1970	Change
$750,000	$790,000	$+40,000

Consistent with our program of relocating, modernizing, and expanding outpatient clinic facilities, wherever indicated, plans are being made to relocate one of our larger outpatient clinics during 1970. The requested funds will assist in equipping this new facility.

Additional positions

The additional 55 positions requested in 1970 are being financed by a decrease in the use of part-time and temporary employment.

Other changes

Mandatory increases in the amount of $782,000 are requested for statutory salary increases, reclassifications, increased social security contributions, annualization of wage board and pay act increases and contract medical care price increases.

Non-recurring costs

The above increases are reduced by $1,039,000 in non-recurring costs for the multiphasic screening program.

Reimbursements for care of non-primary beneficiaries are expected to increase by $36,000 in 1970 and will serve as a source of funding for the estimated obligations above the amount of new obligational authority.

Comparative Statement of Reimbursements

	1968 Actual			1969 Estimate			1970 Estimate		
	Avg. daily load	Rate per day	Amount	Avg. daily load	Rate per day	Amount	Avg. daily load	Rate per day	Amount
Operation of hospitals and clinics:									
Patient care:									
Special Study	43	$45.00	$ 709,020	43	$49.00	$ 769,100	43	$50.00	$ 784,800
Veterans	20	27.00	194,238	20	33.00	240,900	20	33.00	240,900
Foreign seamen	17	45.00	284,715	14	49.00	250,400	12	50.00	219,000
Immigration	..	27.00	3,861	..	33.00	4,700	..	33.00	4,700
Div. of Indian Health	13	27.00	129,627	12	33.00	144,500	11	33.00	132,500
Dept. of State - Dependents	..	46.00	4,002	..	49.00	4,300	..	50.00	4,300
Other (including emergency)	27	27.00	274,212	27	33.00	325,200	27	33.00	325,200
Dept. of Defense (Armed Forces)	122	27.00	1,208,115	123	33.00	1,481,500	124	33.00	1,493,600
Dept. of Defense (Dependents)	195	45.05	3,187,555	195	49.00a/	3,487,600	194	50.00a/	3,540,500
Coast Guard, U. S. Public Health Service and Environmental Science Services Administration Dependents	59	1.75	37,685	56	1.75	35,800	54	1.75	34,500
CG, USPHS, and ESSA Officers	..	1.00	13,100	..	1.00	14,000	..	1.00	14,000
Outpatient visits	..	...	110,000	..	...	110,000	..	...	110,000
Subtotal, patient care	496	...	6,156,130	490	...	6,868,000	485	...	6,904,000
Miscellaneous			1,830,050			2,939,000			2,939,000
Total, operation of hospitals and clinics			7,986,180			9,807,000			9,843,000
Special health services									
(a) Rehabilitative services - Health Referral			51,650			...			...
Program direction & management svs.			...			250,000			250,000
Federal employees			1,833,700			2,700,000			3,300,000
Personnel detailed to other agencies			898,470			1,085,000			1,085,000
Total reimbursements			10,770,000			13,842,00			14,478,000

a/ These are estimated to be weighted rates from the following individual rates: Obstetrical and maternity services: first five days of stay $65 in 1969 and $66 in 1970; sixth and subsequent days of stay: mother $49 in 1969 and $50 in 1970, infant $11 in 1969 and in 1970; other than obstetrical and maternity service $49 in 1969 and $50 in 1970.

2. Medical care for special groups:
(a) Coast Guard

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	148	$1,857,000	152	$1,947,000	+4	$ +90,000
Other expenses	...	658,000	...	708,000	...	+50,000
Total	148	2,515,000	152	2,655,000	+4	+140,000

The budget estimate provides for medical services to the Coast Guard aboard its vessels and at shore stations. Not included are costs funded by the Coast Guard such as space, utilities, medical and dental equipment, mobile dental units, furniture, office appliances, pay allowances and travel of Coast Guard personnel assigned to the program, etc.

Medical facilities at Coast Guard units are classified as infirmaries, dispensaries, or sick bays. The larger shore units have infirmaries staffed with medical and dental officers of the Public Health Service. Dispensaries are facilities at intermediate size shore units with medical and/or dental officers assigned to duty. Sick bays are facilities aboard vessels and at smaller shore units and usually are manned by hospital corpsmen.

Full-time medical, dental, and ancillary staff are assigned where there is a sufficient concentration of personnel to make the operation of a medical facility more economical to the Government. Small concentrations of personnel are provided medical and dental services by local contract physicians and dentists. Mobile dental units staffed by a Public Health Service dental officer are also used to provide dental services to Coast Guard personnel. The major medical problem for the Coast Guard is providing adequate medical and dental care to personnel widely dispersed in numerous small units, many isolated.

An increase of $100,000 will provide for four positions ($50,000) and other expenses. These positions will improve Coast Guard Medical and Dental activities by providing flight surgeons for the Coast Guard Stations at Traverse City, Michigan, San Francisco, California and Cape May, New Jersey, and a dental officer for the Recruit Training Center at Cape May. The $50,000 in other expenses is required to meet the increased rates for contract physicians and to meet additional medical and dental services required by the growth of the Coast Guard.

An increase of $40,000 is requested for mandatory items of incentive pay and longevity increases, continuation pay, and Social Security contributions.

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2. Medical care for special groups:
(b) Federal employees

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	190	$2,157,000	262	$2,713,000	+72	$+556,000
Other expenses		920,000		994,000		+74,000
Total	190	$3,077,000	262	$3,707,000	+72	$+630,000
Reimbursable obligations		-2,700,000		3,300,000		-600,000
Direct obligations		377,000		407,000		+30,000

Responsibility for Federal employee health is assigned to the Public Health Service under P.L. 658, August 8, 1946 (5-USC-7901), and the Bureau of the Budget Executive Circular No. A-72, June 18, 1965.

The services authorized include emergency diagnosis and treatment of injury or illness occurring during working hours; pre-employment examinations; in-service examinations determined necessary by the Department or agency head; administration of treatments and medications under certain circumstances; preventive services to appraise and report work environment health hazards, health education, and specific disease screening examinations and immunizations; and referral to private physicians, dentists, and other community health resources. The specified goal is the provision of these services for all Federal employees who work in groups of 300 or more.

The Division of Federal Employee Health has established the following objectives:

a. To provide consultation on the organization and establishment of employee health services to any Federal agency requesting advice; to provide standards and criteria for the furnishing of such employee health services; and, when requested, to assist agencies of the Government in the evaluation of such services.

b. To organize, administer, and operate Federal employee health services for participating Federal agencies on a reimbursable basis.

The requested increase of 2 positions and $22,000 in appropriated funds will provide for augmentation of the Division staff to meet its increasing responsibilities in guiding and advising Federal agencies on the improvement of employee health programs. With the nationwide development of interest in Federal employee health services, there has been a tripling of requests for consultation requiring extended field travel. Expansion from 60,000 to 125,000 employees directly served in our units in the past three years requires additional statistical and evaluation service to measure and report health improvement to participating agencies.

A further increase of 70 reimbursable positions and $600,000 in reimbursable funds will provide direct occupational health services to a projected additional 25,000 Federal employees during Fiscal Year 1970. For mandatory items of expense, an increase of $8,000 is requested.

HEALTH UNIT OPERATIONS AND PROGRAM ESTIMATES
FISCAL YEARS 1969 AND 1970

Health Unit	Location	FISCAL YEAR 1969				FISCAL YEAR 1970			
		No. Agcy. Served	No. Emp. Served	Cost of Unit in 000s	Man Years	No. Agcy. Served	No. Emp. Served	Cost of Unit in 000s	Man Years
Atomic Energy Comm.	Germantown, Md.	4	1,700	$ 68	5	4	1,700	$ 78	5
A.E.C., Phillips Bldg.	Bethesda, Md.	2	600	17	1	2	600	20	1
Brown Bldg.	Washington, D. C.	1	1,200	21	1	1	1,300	24	1
Bureau of Engr. & Printing	Washington, D. C.	1	3,400	113	9	1	3,400	130	9
Centennial Bldg.	Washington, D. C.	2	300	18	1	2	300	21	1
Coast Guard Bldg.	Washington, D. C.	4	1,100	20	1	4	1,200	23	1
Crystal Plaza Bldg.	Alexandria, Va.	3	1,200	22	1	3	1,200	25	1
E Street Bldg.	Washington, D. C.	2	600	18	1	2	600	21	1
Executive Office Bldg.	Washington, D. C.	10	1,500	21	1	10	1,500	24	1
Federal Office Bldg. #6	Washington, D. C.	3	1,500	35	2	3	1,500	40	2
Federal Office Bldg. #8	Washington, D. C.	2	1,200	21	2	2	1,200	24	2
General Accounting Off.	Washington, D. C.	8	5,500	92	8	8	5,500	106	8
General Serv. Adm. (Main)	Washington, D. C.	5	2,700	44	2	5	2,700	51	2
GSA (3 units):									
R.O.B. #3	Washington, D. C.	7	3,600	83	6	7	3,600	95	6
Wash. Nat'l. Recds. Ctr.	Suitland, Md.	1	200	a/	a/	1	200	a/	a/
Franconia Warehouse	Springfield, Va.	1	200	a/	a/	1	200	a/	a/
HEW, North & So. (2 units)	Washington, D. C.	12	5,000	107	8	12	5,000	123	8
H.U.D. Bldg.	Washington, D. C.	3	4,300	94	7	3	4,400	108	7
Imperial Bldg.	Washington, D. C.	1	1,000	22	1	1	1,000	25	1
I.R.S. Bldg.	Washington, D. C.	6	4,000	83	6	6	4,000	95	6
Labor Dept. Bldg.	Washington, D. C.	3	1,700	31	2	3	1,700	36	2
Lafayette Bldg.	Washington, D. C.	9	1,400	28	2	9	1,400	33	2
Logan Bldg.	Washington, D. C.	1	500	22	1	1	500	25	1
Madison Bldg.	Washington, D. C.	1	1,200	25	1	1	1,200	29	1
Maiatico Bldg.	Washington, D. C.	1	700	19	1	1	700	22	1
Matomic Bldg.	Washington, D. C.	7	2,100	23	1	7	2,100	27	1
National Archives Bldg.	Washington, D. C.	1	600	19	1	1	600	22	1

a/Included in data line supra.

HEALTH UNIT OPERATIONS AND PROGRAM ESTIMATES
FISCAL YEARS 1969 AND 1970

Health Unit	Location	FISCAL YEAR 1969				FISCAL YEAR 1970			
		No. Agcy. Served	No. Emp. Served	Cost of Unit in 000s	Man Years	No. Agcy. Served	No. Emp. Served	Cost of Unit in 000s	Man Years
NBS (2 units):	Gaithersburg, Md.	1	2,800	$ 82	6	1	2,800	$ 94	6
Sills Bldg.	Springfield, Va.	1	300	a/	a/	1	300	a/	a/
NLRB Bldg.	Washington, D. C.	5	1,000	24	1	5	1,000	28	1
Treasury (3 units):									
Main Treasury Bldg.	Washington, D. C.	9	2,100	65	4	9	2,100	75	4
Liberty Loan Bldg.	Washington, D. C.	5	600	a/	a/	5	600	a/	a/
Public Debt Bldg.	Washington, D. C.	3	700	a/	a/	3	700	a/	a/
Universal North Bldg.	Washington, D. C.	5	1,100	25	1	5	1,200	29	1
Walker Johnson Bldg.	Washington, D. C.	3	900	22	1	3	900	25	1
Webb & Tower Bldgs. (2 units)	Arlington, Va.	6	2,200	37	3	6	2,300	43	3
Willste Bldg.	Silver Spring, Md.	12	900	22	1	12	900	25	1
New Federal Bldg.	Los Angeles, Calif.	20	3,300	67	5	20	3,300	77	5
U. S. Courthouse	Los Angeles, Calif.	14	900	24	1	14	1,000	28	1
U.S. Courthouse & Fed. Bldg.	Sacramento, Calif.	20	1,200	24	1	20	1,200	28	1
New Fed. Bldg. (450 Golden Gate)	San Francisco, Calif.	31	3,500	90	6	31	3,600	104	6
Fed. Bldg. (49 4th St.)	San Francisco, Calif.	7	2,000	23	1	7	2,000	26	1
Fed. Bldg. (630 Sansome St.)	San Francisco, Calif.	15	1,400	22	1	15	1,400	25	1
Fed. Bldg. (50 Fulton St.)	San Francisco, Calif.	10	1,700	20	1	10	1,800	23	1
Fed. Ctr. (2 units)	Denver, Colo.	32	5,600	87	8	32	5,600	100	8
Fed. Bldg. & U.S. Courthouse	Denver, Colo.	51	1,900	43	2	51	1,900	49	2
U.S.Courthouse & F.O. Bldg.	Chicago, Ill.	39	4,200	87	6	39	4,300	100	6
I.R.S. Center	Covington, Ky.	2	2,600	40	2	2	2,700	46	2

a/ Included in data line supra.

HEALTH UNIT OPERATIONS AND PROGRAM ESTIMATES
FISCAL YEARS 1969 AND 1970

Health Unit	Location	FISCAL YEAR 1969				FISCAL YEAR 1970			
		No. Agcy. Served	No. Emp. Served	Cost of Unit in 000s	Man Years	No. Agcy. Served	No. Emp. Served	Cost of Unit in 000s	Man Years
Post Office & Courthouse	Boston, Mass.	9	900	$ 20	1	9	900	$ 23	1
J.F.K. Bldg.	Boston, Mass.	29	3,100	79	5	29	3,200	90	5
Federal Center	Waltham, Mass.	5	900	15	1	5	1,000	17	1
Fed. Ofc. Bldg. (Walnut St.)	Kansas City, Mo.	17	900	18	1	17	900	21	1
Fed.Bldg. (Bannister Rd.)	Kansas City, Mo.	5	1,200	19	1	5	1,300	22	1
Fed. Bldg.(601E. 12th St.)	Kansas City, Mo.	21	5,100	92	6	21	5,100	106	6
Federal Office Building	Omaha, Neb.	23	1,400	24	1	23	1,400	28	1
U.S.Courthouse & Fed. Bldg.	Reno, Nevada	15	400	18	1	15	400	21	1
Belle Mead Depot	Belle Mead, N. J.	2	400	13	1	2	400	15	1
Federal Office Bldg.	Newark, N. J.	17	1,800	24	1	17	1,900	28	1
Fed.Bldg.& U.S.Courthouse	Albuquerque, N. M.	30	2,300	38	2	30	2,300	44	2
Federal Bldg.	Brooklyn, N. Y.	12	1,800	35	2	12	1,800	40	2
U.S.Courthouse & Fed. Bldg.	New York, N. Y.	34	4,300	101	6	34	4,400	116	6
RATSE	Cincinnati, Ohio	3	500	18	1	3	500	21	1
Federal Office Bldg.	Cincinnati, Ohio	24	2,300	42	4	24	2,300	48	4
Santa Fe Bldg.	Dallas, Texas	24	2,000	32	2	24	2,000	37	2
New Fed.Bldg.(Taylor St.)	Ft. Worth, Texas	26	3,100	46	4	26	3,100	53	4
Fed.Center (Hemphill St.)	Ft. Worth, Texas	7	500	17	1	7	600	20	1
Federal Bldg.	Charlotesville, Va.	1	400	16	1	1	400	18	1
TOTAL HEALTH UNITS IN OPERATION = 70									
	Total-Existing Operations	696	123,200	2,537	165	696	124,800	2,920	165
	Total Reimbursement Est.	xx	xx	2,700	168	xx	xx	3,300	204
	Available for opening new units	xx	xx	163	3	xx	xx	380	39

3. Special health services:
(a) Rehabilitative services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	7	$ 70,000	7	$ 70,000	...	...
Other expenses	...	98,000	...	98,000	...	...
Total	7	168,000	7	168,000	...	...

This program is attempting to provide a focus for the Public Health Service and the nation through consultation, technical assistance, reference and resource information services. Its mission is to improve or initiate programs for the chronically ill in hospitals, clinics, nursing homes, extended care facilities, and the individuals' homes. No increase has been requested for 1970.

Formerly included in this activity were the Poison Control program which has been transferred to the Food and Drug Administration, and the Emergency Health Service program which has been transferred to the new Division of Emergency Health. The transfers of these programs are in accordance with the Department's reorganization plan.

3. Special health services:
(b) Payments to Hawaii

	1969 Estimate	1970 Estimate	Increase or Decrease
Other expenses, total	$1,200,000	$1,200,000	...

In accordance with 42 U.S.C. 255, funds under this activity are to be used for payments to the State of Hawaii for care and treatment of persons afflicted with leprosy. For the past several years, $1,200,000 has been appropriated each year to assist Hawaii in defraying the expenses relating to this care and treatment. We are requesting no change in the amount for fiscal year 1970.

It should be noted that reimbursement is based on actual expense so that the requested amount will not be paid unless it is actually needed. Any expenses above the $1,200,000 are borne by the State of Hawaii.

The table below shows the estimated average daily patient load, patient days, per diem cost, and appropriation requests for 1969 and 1970.

	1969	1970
Average daily patient load	245	240
Patient days	89,425	87,600
Per diem cost	$19.45	$20.78
Total rounded	$1,739,000	$1,821,000
Appropriation request	1,200,000	1,200,000

4. Personnel detailed to other agencies

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	57	$ 936,000	57	$ 936,000	...	...
Other expenses	...	149,000	...	149,000	...	...
Total	57	1,085,000	57	1,085,000	...	...
Reimbursable obligations		1,085,000		1,085,000		...
Direct obligations		...		...		...

This activity is completely reimbursable. Funds provide for Public Health Service personnel who are detailed to other Federal agencies. Other objects of expense are also provided on a reimbursable basis when authorized by law. No increase is requested for 1970.

The estimated number of personnel and net cost for all objects of expense by Agency for 1969 and 1970 are shown below:

	Pos.	Amount
Bureau of Employees' Compensation	12	$ 300,000
Maritime Administration	4	96,000
Environmental Science Services Administration	5	114,000
National Aeronautics and Space Administration	1	22,000
U. S. Coast Guard	4	58,000
Army Corps of Engineers	11	135,000
Office of Economic Opportunity	5	90,000
AID-Viet Nam Program	15	270,000
Total	57	1,085,000

5. Program direction and management services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	145	$1,824,000	145	$1,853,000	...	$+29,000
Other expenses	...	606,000	...	606,000	...	...
Total	145	2,430,000	145	2,459,000	...	+29,000
Reimbursable obligations		-250,000		-250,000		...
Direct obligations		2,180,000		2,209,000		+29,000

This activity provides program advice, guidance, and direction, along with management services to the operational programs.

For fiscal year 1970, no program increases for program direction and management services are requested. The small increase in funds for personal services is for mandatory pay items.

New Positions Requested
Fiscal Year 1970

Operation of hospitals and clinics			
(3)	Dental staff technician	GS-8	$ 23,097
(4)	Medical staff technician	GS-8	30,796
(8)	Nurses	GS-7	55,848
(6)	Clerical assistant	GS-3	27,600
(32)	Nursing assistant	GS-3	147,200
	Ungraded positions at hourly rates equivalent to less than $16,946		
(2)	Housekeeping assistant		12,606
		(55)	297,147
Medical care for special groups:			
(a)	Coast Guard		
	Grades established by Act of July 1, 1944 (42 U. S. C. 207)		
(4)	Senior assistant	(4)	38,808
(b)	Federal employees		
	Medical Officer	GS-15	21,098
	Medical Officer	GS-14	19,771
	Statistician	GS-11	10,203
	Administrative staff assistant	GS-9	8,462
(5)	Nurse	GS-9	46,540
(50)	Nurse	GS-7	407,300
	Property management assistant	GS-7	6,981
	Laboratory technician	GS-6	6,321
(4)	Clerical assistant	GS-5	22,928
	Clerical assistant	GS-4	5,145
	Custodial worker	GS-3	4,600
	Ungraded Positions:		
(2)	Housekeeping assistant		9,974
	Grades established by Act of July 1, 1944 (42 U. S. C. 207)		
	Director grade		14,051
	Senior grade		14,071
	Full grade		11,885
		(72)	609,330
	Total new positions, all activities	(131)	945,285

National Health Statistics

March 28, 1969.

WITNESSES

THEODORE D. WOOLSEY, DIRECTOR, NATIONAL CENTER FOR HEALTH STATISTICS
PHILIP S. LAWRENCE, ASSOCIATE DIRECTOR, NATIONAL CENTER FOR HEALTH STATISTICS
EDWARD E. MINTY, EXECUTIVE OFFICER, NATIONAL CENTER FOR HEALTH STATISTICS
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

NATIONAL HEALTH STATISTICS

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	3,443	3,927	4,240
Positions other than permanent	94	107	112
Other personnel compensation	78	87	92
Total personnel compensation	3,615	4,121	4,444
Personnel benefits: Civilian employees	327	350	378
Travel and transportation of persons	223	251	305
Transportation of things	22	21	25
Rent, communications, and utilities	429	303	476
Printing and reproduction	145	139	188
Other services	2,926	2,725	3,791
Supplies and materials	65	61	73
Equipment	119	57	93
Total obligations	7,871	8,028	9,773

PERSONNEL SUMMARY

Total number of permanent positions	462	460	488
Full-time equivalent of other positions	12	13	13
Average number of all employees	430	440	479
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Program by activities:			
1. National vital and health statistics	9,520	7,568	9,313
2. Program direction and management services	462	460	460
Total program costs, funded [1]	9,982	8,028	9,773
Change in selected resources [2]	−2,111		
Total obligations	7,871	8,028	9,773
Financing:			
Comparative transfers to other accounts	114	116	
Unobligated balance lapsing	332	81	
Budget authority	8,317	8,225	9,773
Budget authority:			
Appropriation	8,317	8,230	9,773
Transferred to other accounts		−5	
Appropriation (adjusted)	8,317	8,225	9,773
Relation of obligations to outlays:			
Obligations incurred, net	7,985	8,144	9,773
Obligated balance, start of year	3,168	1,468	1,475
Obligated balance, end of year	−1,468	−1,475	−1,796
Adjustments in expired accounts	−63		
Outlays	9,621	8,137	9,452

[1] Includes capital outlay as follows: $119,000; 1969, $57,000; 1970, $94,000.
[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $2,752,000 (1968 adjustments, −$63,000); 1968, $578,000; 1969, $578,000; 1970, $578,000.

Mr. FLOOD. Now we have the National Health Statistics budget. Mr. Theodore D. Woolsey, Director of the National Center for Health Statistics, will be the principal witness.

Mr. Woolsey, do you have any new people in your cast?

Mr. WOOLSEY. Mr. Edward Minty, my executive officer, has not appeared before this committee before.

Dr. Lawrence, our Associate Director, was with me last year when we appeared before this committee.

Mr. FLOOD. Where are you from, Mr. Minty?

Mr. MINTY. Montana originally. It has been a long time since I left there, however.

Mr. FLOOD. How did you get here? Are you a statistician?

Mr. MINTY. No, I am in administration. I came to the Government in the management intern program. I have been with the Government for some 20 years.

Mr. FLOOD. How many times have you appeared, Mr. Woolsey?

Mr. WOOLSEY. This is my second appearance, although prior to that I sat by the side of my former chief, Dr. Linder, now retired.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. FLOOD. We will place your biographical sketch in the record and then you may proceed with your statement, Mr. Woolsey.

BIOGRAPHICAL DATA

Name: Theodore D. Woolsey.
Position: Director, National Center for Health Statistics.
Birthplace and date: Paris, France; March 4, 1913.
Education: Yale University, B.A. (with honors in mathematics), 1936, Phi

Beta Kappa; graduate work, Johns Hopkins School of Hygiene and Public Health, 1940–42.

Military: Lieutenant, USNR, 1944–46.

Experience: Statistician in charge of current mortality sample, Division of Vital Statistics, Bureau of the Census, Department of Commerce, March 1942–January 1944; Chief, Special Surveys Section, National Office of Vital Statistics, OSG, PHS, FSA, 1946–47; Supervisory Statistician, Morbidity and Health Statistics Branch, Division of Public Health Methods, PHS, Department of Health, Education, and Welfare, 1947–56; Assistant Director, U.S. National Health Survey, Division of Public Health Methods, PHS, Department of Health, Education, and Welfare, 1956–60; Chief, National Health Survey Division, NCHS, PHS, Department of Health, Education, and Welfare, 1960–63; Deputy Director, NCHS, PHS, Department of Health, Education, and Welfare, 1963–67; Director, NCHS, HSMHA, PHS, Department of Health, Education, and Welfare, 1967 to present.

Major committee experience: Chairman, Committee on Sampling Techniques in Public Health Statistics, APHA, 1948–54; Task Force for Study of Data Reporting and Statistical Services, reported to Surgeon General, July 1950; Subcommittee on National Morbidity Survey, USNCVHS, 1951–54; Advisory Committee on Epidemiology and Biometry, National Institutes of Health, 1956–60; Surgeon General's Advisory Committee on the U.S. National Health Survey, 1957–65; Advisory Committee to the Community Action Studies Project, NCCHS, 1962–66; Federal Council on the 1970 Census, 1965; Chairman, Career Service Board for Mathematicians and Statisticians, Department of Health, Education, and Welfare, 1967; U.S. National Committee on Vital and Health Statistics, ex officio, 1967; WHO Expert Advisory Panel on Health Statistics, 1968.

Association memberships: Member, Washington Statistical Society; American Public Health Association (fellow); American Statistical Association (fellow); Population Association of America, and other professional societies.

Important recent publications:

With Lawrence, Philip S., Sc. D., "Moving Ahead in Health Statistics." Prepared for delivery at APHA annual meeting, November 1968. Not yet published

"Measuring the Nation's Health: Some Principles and Findings." Paper presented at First National Congress on the Socioeconomics of Health Care, sponsored by American Medical Association at Chicago, Ill., January 22, 1967.

"Morbidity in Relation to Smoking Habits—Some Preliminary Findings From the Health Interview Survey." American Journal of Public Health, vol. 56, No. 12, December 1966, pp. 9–16.

"Classification of Population in Terms of Disability." Contributed for United Nations World Population Conference, Belgrade, Yugoslavia, September 1965.

General Statement

Mr. Woolsey. Mr. Chairman and members of the committee, the Center was created within the Public Health Service in 1960 by combining the long-existing vital statistics programs and the then recently created National Health Survey. Later reorganizations added programs for health manpower and other resources statistics. Currently the Center operates a number of national statistical data collection systems; the national vital statistics of births, deaths, fetal deaths, marriages, and divorces; surveys based on samples of the birth and death records; a continuing health survey of households by means of interviews; a series of surveys based on actual physical examinations of samples of the population; a series of surveys of institutions and their patients or residents; a continuous national sampling of discharge records in short-stay hospitals; and surveys of various categories of health manpower based on license renewals or other sources.

The National Center for Health Statistics is recognized by the Bureau of the Budget as one of the five general-purpose statistical agencies of the Federal Government. Its overall mission is to develop and maintain systems capable of providing reliable current statistics to de-

scribe the health of the Nation and the health services being provided and to publish these statistics for the use of the health industry, both public and private.

CURRENT PROBLEMS

Now, let me give you some idea of our current problems and how we hope to solve them.

We are in a period when demands upon the Federal dollar are rapidly increasing. This dictates a sharper definition of health program priorities, and this, in turn, makes it the more urgent to have the hard statistical facts on which to base judgments. Half a dozen recent pieces of health legislation, particularly the partnership for health legislation, have added to the pressures for more statistical information. But, above all, there is a need to continuously modify the statistics we gather in order to make them responsive to current problems. Today these are, for the most part, the problems of the cities and the poor, the rapidly increasing costs of medical care, and the difficulties created by ever-increasing population. All of the efforts we are making and those that are reflected in this budget are devoted to helping to make a more effective attack on these problems.

STATISTICAL DATA FOR SMALL GEOGRAPHIC AREAS

Our requests are in four major areas. The first of these, for which we are requesting an increase of $587,000, is the provision of statistical data for relatively small geographic areas; that is, cities and parts of cities. We continually receive requests for such data from a variety of sources—one of the most current was a resolution passed at a recent meeting of the U.S. Conference of City Health Officers requesting * * * "that, in view of the national interest and value of such data, the U.S. Public Health Service be requested to augment its publications of health statistics for cities and metropolitan areas * * *."

Small area data would provide a sound statistical base for planning and evaluating programs related to the concept of Federal-State partnerships in health affairs—regional medical programs, partnership for health, model cities, neighborhood health centers, and other programs. Moving ahead on this project at this time is especially important because of the need to relate the health data to population statistics obtained from the 1970 census.

TECHNICAL ASSISTANCE AND SUPPORT TO STATES

The second major area requiring additional funding is technical assistance and support to States in order to enable individual States to develop their own competencies in establishing new or improved statistical systems. We are requesting an increase of $500,000 in this area.

One of the difficulties in trying to provide better and more comprehensive data on health problems in this country is that most States' statistical systems have not been developed to the extent required by modern health programs. We envision a Federal-State partnership in health data collection and dissemination in which each partner would do that part of the job he can do best, but right now the States are not prepared to meet the demands for statistics from their comprehensive

health planning agencies because the statistical offices are weak. They desperately need greater professional statistical competence.

One of the first steps in this effort is to train State and local health department personnel in specialized statistical activities. We have initiated on a small scale the Applied Statistics Training Institute at our facility in the Research Triangle in North Carolina. We need to build up a small faculty and make contracts for course development.

Another step in this effort will be the establishment of several demonstration State or regional centers for health statistics, as an integral part of our effort to increase State efficiency in this area we plan to expand our staff of technical consultants to provide more assistance to State programs.

DATA ON HEALTH RESOURCES

The third major area, for which we request additional funds in the amount of $516,000, is concerned with data on health resources and utilization of health services, including family planning services.

The National Center for Health Statistics has recently been asked by the Office of the Secretary to develop a system for national statistics on all federally supported family planning services. The major immediate objective of the Department of Health, Education, and Welfare family planning programs is to insure that family planning services are made available to all those desiring such services who would not otherwise have access to them. In order to plan programs to meet this objective, data on the numbers and effectiveness of family planning services and practices are needed. We are currently involved in the initial phase of an interim system for assessing progress in providing these services.

Also in the area of health resources, additional basic data on current patterns of hospital care are urgently needed for understanding the rapidly rising costs of medical care. This is, of course, one of today's highest priority problems in the health field.

HEALTH EXAMINATION SURVEY

Finally, we are attempting to redesign the fourth sampling in our health examination survey, during which we shall again be examining a national sample of the adult population. We want the fourth sampling to be more directly aimed at measuring unmet needs for health care which that survey alone is able to measure. For this redesign work we are asking an increase of $142,000 principally for research contracts. The third cycle comes to an end in late 1970.

The total estimate for the National Center for Health Statistics for 1970 is $9,773,000, an increase of $1,745,000 over the 1969 level.

I shall be glad to answer any questions the committee may have.

INTERVIEW COOPERATION

Mr. FLOOD. Do you get cooperation on interviews?

Mr. WOOLSEY. Excellent cooperation. As a matter of fact, refusal to be interviewed is about 1 percent of the total. People are interested in their health and they are glad to see the Government take an interest in their health.

USE OF STATISTICS

Mr. FLOOD. Who makes use of your statistics?

Mr. WOOLSEY. The entire health community actually. We have been making studies recently of the user population, as it were, and it is a very broad group ranging from all kinds of business interests to professionals in the health sciences and health administration. Principally it is within the Federal Government, and the greatest users of our statistics are the people in the Health Services and Mental Health Administration and the rest of the Public Health Service.

Mr. FLOOD. Then you don't just collect statistics and file them?

Mr. WOOLSEY. We feel we have the responsibility of getting data into the hands of people who can use them. Statistics are of no value whatsoever unless they are put to use. We make a considerable effort to bring our data into the hands of people who can use them.

Mr. FLOOD. That is what I had in mind.

RELIABILITY OF STATISTICS

How reliable do you think your statistics are?

Mr. WOOLSEY. There are different degrees of reliability. We feel we do a job of adequate reliability for the purposes at hand.

Of course, reliability is partly a function of costs. In other words, if you put more money in you can get more reliable statistics. This has to be a tradeoff.

Mr. FLOOD. If you left your job tomorrow and got a job with a drug company, would you buy this service?

Mr. WOOLSEY. Certainly, and many drug companies use our data.

DATA FOR SMALL AREAS

Mr. FLOOD. Tell us about the increase you are requesting to provide data on small geographic areas.

Mr. WOOLSEY. There are two programs devoted primarily to producing data for small areas. The first two are listed in the justification, sir, under the heading of vital statistics and the health interview statistics. Together they add to $587,000, the amount I mentioned in the opening statement.

Mr. FLOOD. On what page is that?

Mr. WOOLSEY. I happen to be looking at page 104. The first two of those are designed to produce data for small areas and——

Mr. FLOOD. How will you do that?

Mr. WOOLSEY. How will we provide the small areas statistics?

Mr. FLOOD. Yes.

Mr. WOOLSEY. In the case of the vital statistics the approach has to be different, depending upon the mechanism we are using. In vital statistics what we plan to do is to make contracts with the cities to take the street of residence, street address of residence, from the death certificates and birth certificates and to classify them according to the census tract in which the individuals live.

In the case——

Mr. FLOOD. Do you work with the Census people?

Mr. WOOLSEY. Very closely.

I brought along an illustration of the kinds of vital statistics data that one can produce from such data.

Mr. FLOOD. The witness shows the committee a single chart called "Health Indices for the District of Columbia, 1962–64," which contains an area map of the District, showing death rate, live birth rates, infants, illegitimate, fetal, neonatal, and other information.

Mr. WOOLSEY. In view of the stringent budget situation, rather than get a larger sample we attempted to find other means of providing these data. These are what is described in our program here of providing small area data in the health interview survey field.

Mr. FLOOD. You ask for an increase in your budget for the production of "artificial States estimates of disability and use of medical care."

What in the world is an artificial estimate and why don't we have a real estimate?

Mr. WOOLSEY. This is what I am explaining, sir.

Mr. FLOOD. What is wrong with a real estimate?

Mr. WOOLSEY. A real estimate would involve increasing the size of the sample of households very substantially. In view of the stringent budget situation, we decided we would have to do with a makeshift. This artificial estimate is a makeshift way but one we nevertheless feel can be useful to the community.

What it consists of is an estimate made——

Mr. FLOOD. What purpose will a makeshift serve?

Mr. WOOLSEY. It will give the people an order of magnitude figure.

Mr. FLOOD. What people?

Mr. WOOLSEY. Those in the cities dealing with the health problems; for example, a neighborhood health center or a model city demonstration area. We are talking about small areas within the city.

We will be able to provide them with an estimate from the health interview survey, for their own area.

Mr. FLOOD. Why do you have to have this increase now? Can't you wait a while?

Mr. WOOLSEY. Programs have been underway for some time and the demand already has been on us. The National Center for Health Statistics has been attempting to respond to this.

Mr. FLOOD. Can't you wait a while? We are in bad trouble here.

Mr. CARDWELL. There is a definite relationship here. As we get deeper into fiscal trouble the pressure to pinpoint our money gets firmer. They are trying to provide decisionmakers with information they don't have now.

Mr. FLOOD. To help us save money?

Mr. CARDWELL. In the end you will make the money go further.

Dr. ENGLISH. Medical societies are getting interested in problems like this.

Mr. FLOOD. Why now, is the question.

Dr. ENGLISH. Because they are ready to move and I think the need is great. I must have talked to 30 medical societies in different parts of the country in the last 2 years. What they say is that these national figures are very helpful but if they want to go to the doctors and try to get them in a part of town where there are no doctors, to see whether they can help in medical efforts, they want to know what the situation is locally. National figures mean nothing.

Mr. FLOOD. But the budget is likely to be cut. In the language of you people I must realine my priorities. Is this so prior?

Mr. WOOLSEY. Yes, sir. The reason we need to proceed on the vital statistics small area data now is that for the statistics we would like to produce for these cities we need a population denominator. That population denominator is going to be given to us by the 1970 census which is coming up a year from April.

Our program is planned for a 3-year period, 1969 through 1971, to average the deaths during those 3 years—tuberculosis deaths in the ghetto areas, accidental injury deaths, suicide deaths, something of this sort within ghetto areas of the city. We will use the population data from the 1970 census as a denominator.

If we miss this opportunity provided by the upcoming 1970 census, we will not have another opportunity to do it until the next census occurs.

That is one of the particular reasons we need to proceed with this now.

Mr. FLOOD. What is a package health survey? You want $175,000 for this.

Mr. WOOLSEY. This is another effort to respond to this need for small area data.

While we ourselves cannot pay for the survey to be done in a city or neighborhood health area, what we can do is to provide a completely described survey procedure which can be used in a uniform manner from one area to another. In other words, we prepare the questionnaire, give the instructions, write down the computer programs for getting information into the computer, and everything is prepared as a complete package. Then we offer it to a community for them to use.

The benefit of this is that then the community can do its own survey, and another community doing the same survey will have comparable data so that they can compare with one another. We call this a package survey in that it is a complete package of instructions.

HOSPITAL STATISTICS

Mr. FLOOD. You want an increase of $266,000 to double the size of your sample of hospitals collecting health resources statistics.

Keeping in mind what we are talking about, why is not the present sample large enough? Will the heavens fall if you do not double the sample?

Mr. WOOLSEY. One of the particular reasons for this is that we have been very strongly urged to begin to collect data on costs.

Mr. FLOOD. Urged by whom?

Mr. WOOLSEY. The Bureau of the Budget, Office of Statistical Standards. This Office has been urging us to some time to add to the information that we collect from hospitals, data on the charges to patients and sources of payment for their care.

Mr. FLOOD. What is the money for, to pay the hospitals to collect this?

Mr. WOOLSEY. We pay hospitals to abstract the information from their records and to provide it to us.

FAMILY PLANNING

Mr. FLOOD. You want an additional $250,000 to collect information on family planning. We have had five units here in 3 days that want more money for family planning activities.

What kind of information do you want to collect about family planning?

Mr. WOOLSEY. This came as a direct request from the Assistant Secretary's office to establish a program of comparable statistics on family planning services for all federally supported services throughout the country.

They felt the effort being put into family planning programs required some hard data on the volume of these services and their effectiveness. Since up to this point ——

Mr. FLOOD. For Federal agencies?

Mr. WOOLSEY. For federally supported programs such as those supported by the Children's Bureau and Office of Economic Opportunity.

TRAINING OF STATE AND LOCAL PERSONNEL

Mr. FLOOD. You want an increase of $500,000 for training State and local personnel. We were told, a couple days ago, that some States will not pay their employees travel expenses outside of the State. How do you get around that?

Mr. WOOLSEY. That is a difficult problem.

Mr. FLOOD. That is why I asked the question.

Mr. WOOLSEY. It is certainly hampering the development of this training. All of the States recognize the need for this training. In fact we have had expressions of interest in the use of this training program from all of the 50 States, but when a time comes to send a man to the source of the training then they get very tight about the funds to pay his travel.

Mr. FLOOD. Do you pay for the travel?

Mr. WOOLSEY. No, sir. All we do is pay for the development of courses and for the teaching.

Mr. FLOOD. None?

Mr. WOOLSEY. In the case of conferences in some cases we will pay for the travel of the chairmen of committees and things of this sort.

Mr. FLOOD. How much money did you use for this purpose last year? I refer to training State and local people.

Mr. WOOLSEY. We have not paid for the travel of these people for training with one exception. Where we felt we ourselves would benefit by the State's improved proficiency in classifying cause of death, we paid for the travel of one experienced coder from each State.

Mr. FLOOD. This is not a big deal, and you do not pay for travel of local people?

Mr. WOOLSEY. That is right.

Mr. FLOOD. How about the States?

Mr. WOOLSEY. We would like to set up regional courses of one kind or another. For the time being we have had to put that off. I think

what has to be done is to persuade the States they should be able to allow their people to go for training to a central location.

They have been able to do it by one means or another in the past. For example, epidemiologists have been trained at the Communicable Disease Center in Atlanta.

FAMILY PLANNING

Mrs. REID. I note on page 5 that you are developing a system for national statistics on all federally supported family planning services. Can you tell us how many such programs are operating today?

Mr. WOOLSEY. We don't have the exact number of programs and some of them are still in the process of approval, but we know that there are 160 supported by OEO and approximately 200 supported by the Children's Bureau. We also know that these differing programs have been developing reporting systems that do not provide comparable data from one to the other. The Office of the Assistant Secretary for Health and Scientific Affairs was concerned that it was impossible to put together any uniform data to show the total effort going into federally supported family planning services, and therefore they asked the National Center for Health Statistics to develop and operate a uniform system for all such services.

UPDATING STATISTICS

Mrs. REID. On page 114 of your justification you point out that the first cycle of your health examination statistics program was completed in 1962. This dealt with the adult population in the 18 to 79 age bracket. Since this cycle was completed 7 years ago, it would seem to me that there would be a constant need for updating these statistics if they are to be relevant to changing conditions and needs. Do you do this on a regular basis? Will this be included in your fourth sampling of which you speak on page 5?

Mr. WOOLSEY. There is indeed a constant need for obtaining these statistics and, in the fourth sampling for the health examination survey, we are planning to go back to the population in the 18 to 79 age bracket and will have some new figures on chronic disease for that group. Fortunately, the things we are attempting to measure in that survey change quite slowly so that new data a decade later would seem to give us information with reasonable frequency.

STATE AND LOCAL CONTRIBUTIONS

Mrs. REID. In compiling statistical data for relatively small geographic areas, that is, cities and parts of cities, do local communities or States make any contribution to the cost of these surveys? If not, should they contribute—or could they?

Mr. WOOLSEY. In the case of the vital statistics data we expect that for many cities the cost will be almost wholly borne by the city itself. We shall be trying to contract with those cities that are not yet producing such data in order to provide comprehensive birth and death information in geographic detail for all large cities. In the case of the disability and health care information which comes from sample surveys, our program calls only for the provision of what we call the

package survey—a complete set of procedures for carrying out the survey—and also for technical assistance to the cities. All the other expenses of carrying out a survey would have to be borne by the cities themselves, since our budget does not provide for it.

1970 CENSUS

Mrs. REID. We hear a great deal about questions to be asked on the forthcoming census. I realize that this is not your responsibility, but I assume that your agency utilizes census information to a degree. How many questions relating to health needs are included in the proposed census?

Mr. WOOLSEY. There is only one question that specifically relates to health that is to be included in the 1970 census. This was added at the urging of our Department because of the need for some measure of health, other than mortality, that would get down to small areas such as counties and parts of cities. This question deals with the disability of people in the labor force and how long disabled people have been afflicted. However, there are many other questions on the census which, though not directly related to health, are of vital concern to the whole process of health planning. For proper health planning we need to know a great deal about the numbers and characteristics of population, and about the quality of housing. Furthermore, we in the National Center for Health Statistics use a great deal of population data as denominators for our birth and death rates and rates of hospitalization, doctors per 1,000 population, and so forth. Therefore, our Department has attempted at every opportunity to strengthen the ability of the Bureau of the Census to collect this basic information.

Mrs. REID. That is all, Mr. Chairman.

Mr. FLOOD. Thank you, Mr. Woolsey.

JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

National Health Statistics

Amounts Available for Obligation

	1969	1970
Appropriation	$8,230,000	$ 9,773,000
Transfer to "Operating Expenses, Public Buildings Service" General Services Administration	-5,000	---
Comparative transfer to "Salaries and expenses Office of the Administrator"	-116,000	---
Cutback required by PL 90-364:		
Unobligated balance lapsing	-352,000	---
Total currently authorized for obligation	7,757,000	9,773,000
Plus: proposed release of reserves for increased pay costs	271,000	---
Total obligations	8,028,000	9,773,000
Disposition of cutback:		
To be used for pay costs in this account	271,000	
To be returned to the Treasury	81,000	
Total cutback	352,000	

Obligation by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
	National vital and health statistics						
112	Vital statistics.....	180	$2,232,000	183	$2,554,000	+3	+$322,000
113	Health interview statistics.....	66	2,023,000	69	2,288,000	+3	+265,000
114	Health examination statistics.....	63	1,155,000	64	1,297,000	+1	+142,000
115	Health resources statistics.....	72	1,535,000	85	2,051,000	+13	+516,000
116	Health statistics analysis.....	20	307,000	20	307,000	--	---
117	Professional and technical assistance	20	316,000	28	816,000	+8	+500,000
	Subtotal.....	421	7,568,000	449	9,313,000	+28	+1,745,000
118	Program direction and management services.	39	460,000	39	460,000	--	---
	Total obligations	460	8,028,000	488	9,773,000	+28	+1,745,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions..	460	488	+28
Full-time equivalent of all other positions.....	13	13	--
Average number of all employees.....	440	479	+39
Personnel compensation:			
Permanent positions.....	$3,927,000	$4,241,700	$314,700
Positions other than permanent	107,000	112,000	+5,000
Other personnel compensation..	87,000	90,000	+3,000
Total personnel compensation	4,121,000	4,443,700	+322,700
Personnel benefits.....	350,000	378,000	+28,000
Travel and transportation of persons.....	251,000	305,000	+54,000
Transportation of things.....	21,000	25,000	+4,000
Rent, communications and utilities	303,000	476,000	+173,000
Printing and reproduction.....	139,000	188,000	+49,000
Other Services.....	2,210,000	2,984,000	+774,000
Project contracts.....	515,000	807,000	+292,000
Supplies and materials.....	61,000	73,300	+12,300
Equipment.....	57,000	93,000	+36,000
Total obligations by object.	8,028,000	9,773,000	+1,745,000

Summary of Changes

1969 estimated obligations	$8,028,000
1970 estimated obligations	9,773,000
Net change	+1,745,000

	Base		Changes from Base	
	Positions	Amount	Positions	Amount
Increases				
Program				
1. Vital Statistics				
Code and process detailed addresses on vital records for approximately 25 large metropolitan areas	...	...	3	$322,000
2. Health Interview Statistics				
(a) Development, testing, and production of synthetic State estimates of disability and use of medical care	...	...	1	90,000
(b) Development of a package survey	...	...	2	175,000
Subtotal	...	...	3	265,000
3. Health Examination Statistics				
Develop and test plans for the Fourth Cycle of the Health Examination Survey	...	...	1	142,000

Summary of Changes (Continued)

	Base		Changes from Base	
	Positions	Amount	Positions	Amount
4. Health Resources Statistics				
(a) Statistical information on Family Planning Clinics and Services.....	...	...	10	250,000
(b) Provide a comprehensive program for collection and dissemination of data on Health Facilities and Health Manpower.....	18	1,100,000	3	266,000
Subtotal.....	...	...	13	516,000
5. Professional and Technical Assistance				
(a) Support to summer seminars.....	...	...	...	60,000
(b) Financial support to Biennial Conference on Records and Statistics....	...	...	...	20,000
(c) Technical assistance to State and local areas.....	13	300,000	8	420,000
Subtotal.....	...	...	8	500,000
Total Net Changes Requested.....	...	...	+28	+1,745,000

Explanation of Changes

Vital Statistics..... $322,000

The request will permit the National Center for Health Statistics to code and process detailed address information on vital records for approximately 25 of the large metropolitan areas. This would enable the Center to provide small geographic area information on births, deaths, infant mortality, maternal mortality, and related measures, during years adjacent to the 1970 Census.

Health Interview Statistics..... $265,000

The increase in funds for this program will allow the development, testing and production of artificial State estimates of disability and use of medical care by applying detailed specific rates for the Nation or region to the detailed population structure of the area in question. The production of health statistics data by this method is an economical method for obtaining gross, but useful, estimates of health characteristics. In addition, the increase will be used for development of a package health survey which can be used to carry out survey programs within any State, city or other geographic area.

Health Examination Statistics..... $142,000

This increase is to develop and test plans for the fourth cycle of the Health Examination Statistics program. The present cycle of examinations is due for completion in 1970,and it is very urgent that development and testing be completed by that time, to avoid a disruption of the field work and the loss of specially trained field staff.

Health Resources Statistics..... $516,000

Expansion of the present sample of 450 hospitals to approximately twice the size will enable this program to provide reliable data in the degree of detail required by current demands for information on utilization and types of services. In addition, the increased funding will be used to obtain information on the numbers, qualifications, and other data on health manpower employed in hospitals and other resident establishments which provide patient care.

A total of $250,000 of the increase is for the development of a statistical system for obtaining information on family planning clinics and services. The proposed funding will be used to establish an interim system for collecting and disseminating information in this area and to develop a fully operational national system to supplant data collection programs currently being utilized by multiple Federal organizations.

Explanation of Changes (Continued)

Professional and Technical Assistance..... $500,000

The National Center for Health Statistics has always been called upon by States and local areas for assistance on the design or conduct of health programs. These requests have multiplied since the advent of Comprehensive Health Planning because of the greater demands for health data and the acute shortage of trained statistical personnel in State and local offices.

The Center started an Applied Statistics Training Institute last year which offers several short courses to statisticians, program planners, and clerical staff from State and local health organizations. The proposed increase will allow the Center to expand both staff and facilities to provide a greater number of courses as well as increased student capacity.

Other programs of assistance to local areas included in the request are:

(1) Provision of financial support to summer seminars in biostatistics conducted cooperatively by schools of public health and the Federal government as a means of upgrading skills of Federal, State, and local health personnel.

(2) Provision of financial support to the Biennial Conference on Records and Statistics to be conducted in June 1970 for key State, local and Federal statisticians, health planners, and registrars.

Explanation of Transfers

	1969 Estimate	1970 Estimate	Purpose
Transfer to: "Operating expenses, Public Buildings Service," General Services Administration	$5,000	--	Increased electrical costs relating to 360-50 computer
Comparative transfer to: "Salaries and expenses, office of the administrator"	116,000	--	Transfer of Personnel and Financial Management functions as part of the Public Health Service reorganization.

NATIONAL HEALTH STATISTICS

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1962	$4,642,000	$4,642,000	$4,642,000	$4,642,000
1963	5,250,000	5,150,000	5,150,000	5,150,000
1964	5,949,000	5,949,000	5,949,000	5,949,000
1965	6,304,000	6,304,000	6,304,000	6,304,000
1966	7,310,000	7,230,000	7,230,000	7,230,000
1967	9,312,000	9,312,000	9,312,000	9,312,000
1968	9,767,000	8,317,000	8,317,000	8,317,000
1969	9,501,000	8,230,000	8,230,000	8,230,000
1970	9,773,000			

General Statement

The National Center for Health Statistics (NCHS) has responsibility at the Federal level for providing timely and accurate statistical information on the status of the Nation's health. The development of a coordinated public health program depends strongly upon the availability of objective statistical information.

Since its inception in August 1960, the Center has provided health and vital statistics data needed to provide a statistical base for programs of national importance. At the present time overall expenditures in the health field exceed 50 billion dollars each year in the United States. Yet various segments of the population receive less than adequate health care and show evidence of disease and mortality rates entirely out of proportion to their number.

The NCHS request for increased positions and funds in 1970 reflects recognition of the national problem and is geared to provide planners and program operators with a clear indication of the identity and geographic distribution of the Nation's health problems. This is an effort on the part of NCHS to react to increasing demand for statistics for cities and disadvantaged communities within the cities, and for technical help to the States in their health planning activities.

The Center's increased program efforts are in three major areas: (1) the provision of statistical data by relatively small geographic areas; i.e., cities and segments of cities; (2) providing technical assistance and support for States in developing new or improved statistical systems; (3) the provision of data on health resources and utilization of health services, including family planning services. The overall objective of the Center's increased program is to develop competencies at both the Federal and State level for establishing and maintaining statistical systems capable of meeting the needs of professional public health personnel at all levels.

The 1970 expansion of twenty-eight positions and $1,745,000 will provide additional basic data upon which the Nation's health programs of the 1970's can be logically based.

NATIONAL HEALTH STATISTICS

Justification

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation benefits:						
1. National and Vital Health Statistics						
Vital statistics.....	180	$1,602,100	183	$1,661,400	+3	+$59,300
Health interview statistics.....	66	668,000	69	712,200	+3	+44,200
Health examination statistics.....	63	647,200	64	670,700	+1	+23,500
Health resources statistics.....	72	648,000	85	776,200	+13	+128,200
Health statistics analysis.....	20	228,700	20	233,200	--	+4,500
Professional and technical assistance.....	20	236,000	28	327,000	+8	+91,000
Subtotal.....	421	4,030,000	449	4,380,700	+28	+350,700
2. Program Direction and Management Services...	39	441,000	39	441,000	--	---
Total personnel compensation and benefits.....	460	4,471,000	488	4,821,700	+28	+350,700
Other expenses.....		3,557,000		4,951,300		+1,394,300
Total.....	460	8,028,000	488	9,773,000	+28	+1,745,000

VITAL STATISTICS

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	180	$1,602,100	183	$1,661,400	+3	+$59,300
Other expenses.....		629,900		892,600		+262,700
Total.....	180	2,232,000	183	2,554,000	+3	+322,000

The United States vital registration system is a cooperative Federal-State program which provides annual statistical data on births, deaths, fetal deaths, marriages and divorces. The individual States have primary responsibility for maintaining adequate registration systems for vital events occurring in the various States. The National Center for Health Statistics serves as the focal point for the total national system and has responsibility for improving the general quality of the information produced and for promoting standardization of the vital registration system through cooperative efforts with the States.

Until recently the principal mission of the Center was to provide data for the Nation and for very broad geographic regions. During the past year unprecedented demands have been made upon the Center to provide health and vital statistics data for small geographic areas--States, cities, and areas within cities. The NCHS has answered requests for data within the design of existing statistical programs, but the ability to supply data in sufficient geographic detail has fallen far short of expressed needs.

The requested increase of $322,000 at this time would not only provide data in the required geographic detail but would also permit the collection of data both prior to and after calendar year 1970 when small area data on populations will be obtained by the Bureau of the Census. The value of health and vital statistics information is greatly reduced unless adequate data are made available about the populations of small areas and on the age, income, and racial structure of those populations.

The increase would also permit NCHS to code and process detailed address information on vital records for approximately 25 of the large metropolitan areas. This would enable the Center to provide for cities, or sections of cities, critically needed information on births, deaths, infant mortality, national mortality and related measures. The proposed program, though of great value, is perishable, since the data are of maximum utility and accuracy during the three years adjacent to the 1970 census when accurate population data used as denominators for rate calculations are available.

HEALTH INTERVIEW STATISTICS

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	66	$668,000	69	$712,200	+3	+$44,200
Other expenses		1,355,000		1,575,800		+220,800
Total	66	2,023,000	69	2,288,000	+3	+265,000

The Health Interview Statistics program serves as one of the most reliable and productive national programs for producing timely and accurate information on the health and demographic characteristics of the non-institutionalized population of the U.S. An enormous amount of information has been published by the Center and in public health and other professional journals. In addition, this program produces special tabulations in response to requests from hundreds of professional people covering a wide range of occupational specialties.

Statistical information has been published on such topics as health insurance coverage; patterns of hospital use by various segments of the population; personnel expenditures for health care; disability resulting from chronic disease; loss of time from work or school due to illness or injury; relation of smoking to health characteristics; prevalence of impairments, such as visual and hearing loss; the use of the services of physicians and dentists; injuries resulting from automobile accidents; and many other subjects.

Data are collected by means of a continuing national survey of approximately 43,000 households each year, enabling the production of both the type of information reported above and of trend data which identifies fluctuations or changes in the health status of the population.

Ninety thousand dollars of the requested increase will be used for the development, testing and production of estimates of disability and use of medical care within individual States and large cities.

Early experimentation has demonstrated the feasibility of producing gross estimates of health characteristics by State (or areas of similar size), by applying detailed specific rates for the nation or region to the detailed population structure of the area in question. The artificial estimate program could be expanded by additional refinements of the mathematical model utilized for this purpose and by the necessary purchase of detailed population data from the Bureau of the Census.

The balance, $175,000, will permit the development of a package health survey program which could be conducted within any State, city, or any other specific geographic area. Under this program the NCHS would develop the survey questionnaire, coding instruction, training manuals and computer programs and train interviewers for State or local governments which require local survey data

for planning or evaluation purposes. The funds requested would permit testing of this program in a single area. Future use of the package survey would be financed by the State or area involved with Center involvement being restricted to the provision of technical assistance.

HEALTH EXAMINATION STATISTICS

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	63	$647,200	64	$670,700	+1	+$23,500
Other expenses		507,800		626,300		+118,500
Total	63	1,155,000	64	1,297,000	+1	+142,000

The Health Examination Statistics program of the National Center for Health Statistics provides national statistics on the prevalence of specifically defined diseases and on the distribution of certain physical and physiological measurements. The program collects data by means of a nationwide survey of a sample of civilian, non-institutionalized population. The program is the only source of national morbidity data obtained through direct examination and clinical tests of respondents which includes undiagnosed and untreated diseases. Examinations are conducted in cycles that extend over several years, with each cycle concentrating on a particular age group and on certain aspects of health. Selected persons are examined by a team of doctors, dentists, nurses, and specially trained technicians at locations within home communities. Two examination cycles have been completed and the third will be completed in late 1970.

The first cycle, concerned with the adult population 18-79 was completed in 1962. A total of 6,672 persons were examined at 42 different locations. Reports from this series of examinations included such topics as coronary heart diseases, hypertension and hypertensive heart disease, hearing loss and many others.

The second cycle completed in December 1967 was concerned with children ages 6-11. During this cycle 7,129 children were examined at 40 different locations. The examination content differed somewhat from the previous examination cycle in order to obtain detailed information on child growth and development.

The present examination cycle (teen-age children 12-17 years of age) is the third successive cycle and will be completed late in 1970. In order to insure program continuity and to avoid the loss of specially trained field staff, the development and testing for the fourth cycle must be completed by that time. Loss of these staff members would necessitate an expensive and time-consuming period of training new personnel.

The requested increase of $142,000 would be for development and testing of the fourth cycle program. The funds requested would be used for sample design, alteration of the examination trailers, calibration and testing of laboratory equipment and standardization of examination procedures.

HEALTH RESOURCES STATISTICS

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	72	$648,000	85	$776,200	+13	+$128,200
Other expenses		887,000		1,274,800		+387,800
Total	72	1,535,000	85	2,051,000	+13	+516,000

The Health Resources Statistics program is a major national source of information on the location and characteristics of hospitals, extended care facilities, nursing homes and other resident and non-resident services. In addition, this program serves as the focal point for the collection and publication of health manpower data. Surveys covering the entire range of health and health-related occupations are underway or are scheduled for successive implementation through 1973.

A large part of the costs of health care are paid by users of hospitals and other resident institutions. In recent years these costs have been escalating to the point where it is a problem of major national concern. New patterns for the delivery of health care services are being sought, yet our knowledge of current patterns is limited and a firm statistical base on which to judge the merits of alternative methods is lacking. Particularly needed is factual information on the age, sex, income, race and health characteristics of persons who utilize medical services, and the extent of utilization in terms of rates, duration of stay and charges. At the present time the NCHS maintains a sample of about 450 hospitals to represent some 10,000 such institutions. In order to obtain reliable data in the degree of detail that is required by current demands for information on utilization and types of services, this sample should be expanded to approximately twice its current size.

In addition, information on outpatient care in clinics, group practice and private offices is vitally needed to develop a comprehensive program on health facilities and health facility utilization. Of particular importance is knowledge of diagnostic categories and of the numbers and location of personnel working in all categories of allied health manpower. Feasibility studies on a survey of physician practices and on techniques for obtaining data on allied health manpower are currently underway.

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An increase of $266,000 will be used to increase the number of hospitals in the sample to approximately 900 and for carrying out a comprehensive survey of physician practices and allied health manpower.

An additional increase of $250,000 is requested for the development of a statistical information system on family planning clinics and services. The proposed funding will be used to develop an interim system for collecting and disseminating information on a national basis and to develop a single, fully operational uniform system which will supplant existing data collection programs being utilized by multiple Federal and private organizations. Information in this area is of critical importance at this time in order to provide a mechanism for assessing the effect of present and future family planning programs on the rate of population change.

HEALTH STATISTICS ANALYSIS

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	20	$228,700	20	$233,200	--	+$4,500
Other expenses.....		78,300		73,800		-4,500
Total.....	20	307,000	20	307,000	--	---

The Health Statistics Analysis program carries out in-depth analysis of vital and health statistics obtained from a variety of sources. Of particular concern to this program is the identification and interpretation of mortality trends and the development of health indices.

Because of the increased interest in the problem of infant mortality in the United States, much of the work of this program has been concentrated in this area. The results of a study of infant deaths which occurred in the United States in 1960 will be published soon. The objective of the study is to relate infant mortality, by age at death and cause of death, to birth characteristics. The published report will focus on characteristics such as race, birth weight, birth order and age of mother.

Another important activity being carried out in this program is the development of an index suitable for measuring the status of the nation's health. A report on the conceptual basis for developing the indices has been published and developmental work on measures of health to be used in computing the index is continuing. Some preliminary estimates of the indices have been calculated and an automated computation procedure is being programmed for further studies of the measure.

During the past year work was completed on the modification of the Eighth Revision of the International Classification of Diseases to make it more useful for hospital indexing and for hospital morbidity and mortality purposes.

A further continuing activity of this program is the provision of secretariat services to the U.S. National Committee on Vital and Health Statistics. This committee is currently studying health resources and services, Indian health, migration and health statistics, and population dynamics.

No change in funding for this program is requested this year.

PROFESSIONAL AND TECHNICAL ASSISTANCE

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	20	$236,000	28	$327,000	+8	+$91,000
Other expenses		80,000		489,000		+409,000
Total	20	316,000	28	816,000	+8	+500,000

The National Center for Health Statistics Professional and Technical Assistance program comprises a variety of activities aimed at the improvement of the total vital and health statistics field.

During its existence, the Center has received many requests by the States and local areas for assistance on the design and conduct of health statistics programs. Moreover, since the advent of Comprehensive Health Planning, these requests have multiplied because of the greater requirements for small geographic area data and the acute shortage of trained statistical personnel in State and local offices.

In order to alleviate this situation, the Center has initiated an Applied Statistics Training Institute for statisticians, program planners, and key clerical staff from State and local areas. The training in applied statistics provided by the Center does not duplicate training in universities but provides training in registration methods, survey design, data processing and vital and health statistics collection and analysis.

The program is conducted on the East Coast, largely using NCHS personnel as instructors. States and communities which are distant, or which have limited resources, are poorly represented among the trainees. An increase of $420,000 would extend the training program to other areas of the country and expand both staff and facilities to provide a greater number of classes as well as increased student enrollment. In addition, the increased funding would permit the initiation of workshops to meet specific local or regional health statistical problems and the provision of direct assistance to States in planning their own training programs.

The increased funding would also provide for a new program of development of State or city centers for health statistics capable of collecting and analyzing data from surveys, vital registration and health program operations, and testing the operational feasibility of such statistical centers in two States.

An increase of $60,000 is requested for financial support to the summer seminar in biostatistics conducted cooperatively by the schools of public health and the Center. The summer seminars are an important training facility for Federal, State, and local health personnel.

A further increase requested is for $20,000 to provide financial support to the Biennial Conference on Records and Statistics to be conducted in June 1970 for State, local and Federal statisticians, health planners, and registrars. This conference allows the best professional health competence in the country to focus on major problems in the health and vital statistics field.

PROGRAM DIRECTION AND MANAGEMENT SERVICES

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	39	$441,000	39	$441,000	--	----
Other expenses.....		19,000		19,000	--	----
Total.....	39	460,000	39	460,000	--	----

The Program Direction and Management Services activity provides centralized administrative-management support for the National Center for Health Statistics. This includes all of the program activities of the Center. The Office of Program Planning and Evaluation under this activity reviews program plans and periodically evaluates the effectiveness of program activities. No new funds are requested for 1970.

New Positions Requested
Fiscal Year 1970

	Grade		Annual Salary
Vital Statistics			
Statistician	GS-13		$ 14,409
Statistician	GS-12		12,174
Secretary	GS-7		6,981
		(3)	33,564
Health Interview Statistics			
Statistician	GS-13		14,409
Statistician	GS-12		12,174
Clerk	GS-4		5,145
		(3)	31,728
Health Examination Statistics			
Statistician	GS-13		14,409
		(1)	14,409
Health Resources Statistics			
Branch Chief	GS-14		16,946
Section Chief	GS-13		14,409
Statistician	GS-12		12,174
Statistician	GS-11		10,203
Programmer	GS-11		10,203
Secretary	GS-6		6,321
(3) Clerks	GS-4		15,435
Clerk-Typist	GS-4		5,145
(3) Clerks	GS-3		13,800
		(13)	104,636
Professional and Technical Assistance			
Branch Chief	GS-14		16,946
Statistician	GS-13		14,409
(2) Statisticians	GS-12		24,348
Public Health Analyst	GS-12		12,174
Statistical Assistant	GS-9		8,462
Clerk-Typist	GS-5		5,732
Clerk-Typist	GS-4		5,145
		(8)	87,216
Total new positions, all activities		(18)	271,553

Retired Pay of Commissioned Officers

WITNESSES

DR. PAUL Q. PETERSON, ASSISTANT SURGEON GENERAL, ASSOCIATE ADMINISTRATOR FOR DIRECT HEALTH PROGRAMS
DR. ROBERT VAN HOEK, ASSISTANT SURGEON GENERAL, DIRECTOR, FEDERAL HEALTH PROGRAMS SERVICE
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

RETIRED PAY OF COMMISSIONED OFFICERS

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Benefits for former personnel	5,949	7,198	10,097
Other services	5,341	5,843	6,603
Total obligations	11,290	13,041	16,700

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

Program by activities:			
1. Retirement payments	5,849	7,086	9,967
2. Survivors' benefits	100	112	130
3. Dependents' medical care	5,341	5,843	6,603
Total obligations	11,290	13,041	16,700
Financing: Budget authority (appropriation) (indefinite)	11,290	13,041	16,700
Relation of obligations to outlays:			
Obligations incurred, net	11,290	13,041	16,700
Obligated balance, start of year	2,444	3,444	4,773
Obligated balance, end of year	−3,444	−4,773	−6,193
Outlays	10,290	11,712	15,280

Mr. Flood. We now have the request for retired pay of commissioned officers.

We have Dr. Paul Q. Peterson, Assistant Surgeon General, and Associate Administrator for Direct Health Programs. How long have you been on board?

Dr. Peterson. I was commissioned in the Public Health Service as a Reserve officer in 1942 and have been on active duty since 1951.

Mr. Flood. How do you wish to proceed, Doctor? I see you have a statement.

Dr. Peterson. I would suggest in order to conserve the time of the committee that the statement be entered into the record. As you are aware, this is a mandatory program.

Mr. Flood. Yes.

We will place both your biographical sketch and the statement in the record.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

BIOGRAPHICAL SKETCH

Name: Paul Q. Peterson, M.D.
Position: Assistant Surgeon General, Associate Administrator for Direct Health Programs.
Birthplace and date: Marissa, Ill., June 30, 1912.
Education:
B.S., 1935, University of Illinois.
M.D., 1938, University of Illinois.
M.P.H., 1946, University of Michigan.
Experience:
Associate Administrator for Direct Health Programs, Health Services and Mental Health Administration (Assistant Surgeon General), Public Health Service, D/HEW, Bethesda, Md., September 1, 1968– .
Deputy Director, Bureau of Health Services, PHS (Assistant Surgeon General) (Silver Spring, Md., January 1, 1967, to August 31, 1968.
Associate Chief, Bureau of State Services (CH), PHS (Assistant Surgeon General), Washington, D.C., January 1964 to December 1966.
Chief, Division of Community Health Services, Bureau of State Services, PHS, Washington, D.C., January 1963 to December 1963.
Chief, Division of Public Health Methods, Office of the Surgeon General, PHS, Washington, D.C., January 1962 to December 1962.
Deputy Chief, Division of Public Health Methods, Office of the Surgeon General, PHS, Washington, D.C., April 1961 to December 1961.
Assistant Director, National Institute of Allergy and Infectious Diseases. National Institutes of Health, PHS, Washington, D.C., July 1958 to April 1961.
Chief, chronic disease program, Bureau of State Services, PHS, Washington, D.C., April 1957 to July 1958.
Chief, program services, chronic disease program, Bureau of State Services, PHS, Washington, D.C., October 1955 to April 1957.
Chief, Health Services Branch, Division of International Health, PHS, Washington, D.C., April 1955 to October 1955.
Chief, Public Health Division, Mutual Security Mission, Saigon, Vietnam, 1954 to 1955.
Chief, Public Health Division, Mutual Security Mission, Taipei, Taiwan, Formosa, 1952 to 1954.
Ohio Department of Health, assistant director. Concurrently served as assistant professor of preventive medicine at Ohio State University School of Medicine, 1949 to 1952.
Kentucky State Health Department, regional consultant to local health departments, 1947 to 1949.
Engaged in public health work with local health departments in Kentucky, 1942 to 1945.
Commissioned in Reserve Corps of PHS in 1942.
Interned at Bethesda Hospital, Cincinnati, and was resident at Memorial Hospital, Lima, Ohio. Entered private practice in McLeansboro, Ill.

Memberships:
Diplomate—American Board of Preventive Medicine.
Fellow—American Public Health Association.
Member—American Medical Association; American Association for the Advancement of Science; Association of Military Surgeons.

GENERAL STATEMENT

STATEMENT BY ASSOCIATE ADMINISTRATOR FOR DIRECT HEALTH PROGRAMS ON RETIRED PAY OF COMMISSIONED OFFICERS

Mr. Chairman and members of the committee, this appropriation authorizes such amounts as may be necessary for certain mandatory payments under separate programs.

PAYMENTS TO RETIRED OFFICERS AND SURVIVORS

The first program covers payments to retired officers of the Public Health Service and to survivors of deceased retired officers. Benefits to retired officers are authorized by section 211 of the Public Health Service Act (and 10 U.S.C. 1201),

while those to survivors are authorized by the retired serviceman's family protection plan (10 U.S.C., ch. 73; 42 U.S.C. 213a). The amounts of these benefits are fixed by law and payments are not subject to administrative control. The estimated requirement of $10,097,000 for 1970 is based on a projection of beneficiaries now being paid with adjustments for anticipated additions and terminations. On June 30, 1968, 824 retired officers and 53 survivor annuitants were on the roll. It is estimated that the number of retired officers will reach 974 by June 30, 1969, and 1,125 by the end of fiscal year 1970. The projection contemplates that payments will be made to 62 survivor annuitants on June 30, 1969, and to 71 on June 30, 1970.

DEPENDENTS' MEDICAL CARE

As authorized by the Dependents' Medical Care Act (10 U.S.C., ch. 55), and the Military Medical Benefits Amendments of 1966 (Public Law 89-614), this program provides medical care to active duty and retired uniformed-service personnel, their dependents, and dependents of deceased servicemen of the Coast Guard, the Environmental Science Services Administration, and the Public Health Service. Expenses of the dependents' medical care program cover the cost of medical care provided under contractual arrangements either in non-Federal or Federal facilities. The coverage in these facilities is threefold: (1) in-patient care comparable to care authorized by the Federal Employees' Health Benefits Act, and the social security health program for the aged; (2) out-patient care; (3) rehabilitative care for the physically handicapped or mentally retarded dependents of active duty servicemen.

The increase of $760,000 for 1970 will provide for an additional $736,00 in the non-Federal sector to cover anticipated increased work loads and rates. The remaining increase of $24,000 is needed in the Federal sector to meet the increased rates for dependents.

The total estimate for 1970 is $16,700,000. This covers both the payments to retired officers and survivors, and the dependents' medical care programs.

I shall be glad to answer any questions you may have.

CHANGES IN ESTIMATES

Mr. FLOOD. As you say, this is mandatory. It is an indefinite appropriation over which we have no control.

Last year you estimated your 1968 costs at $13,800,000. Now it turns out to be $11,290,000 Then you estimated your 1969 costs to be $15,-090,000. Now you say they will be only $13,041,000.

I have been around here a long time but this overestimating on uncontrollable items is brand new. Usually it is the other direction and sometimes in a big way. How do you explain this?

Dr. PETERSON. I think this is mainly explained, Mr. Chairman, by the fact that the Federal agent in calculating the costs of the civilian health and medical program estimated experience and costs more generously than proved to be necessary.

The adjustment you see in this year's program has been downward with regard to the dependents' medical care program. I think this will put this into better reference in terms of costing. I think our experience is now more reliable than it has been in the past.

Mr. FLOOD. Is there any chance that the 1970 estimate might be a little high?

Dr. PETERSON. If there had not been the adjustment downward in terms of the medical care costs I would agree that the anticipated costs might be more generous than are actually necessary. However, in estimating this year our dependents' medical care program at only an approximately $750,000 increase rather than the larger increases which have been projected in the past we are in a much better and more reliable situation than previously.

Mr. FLOOD. Thank you very much.

JUSTIFICATION MATERIAL

PUBLIC HEALTH SERVICE

Retired Pay of Commissioned Officers

Amounts Available for Obligation

	1969	1970
Appropriation (Indefinite).....	$13,041,000	$16,700,000

Obligations by Activity

Page ref.		1969 Estimate	1970 Estimate	Increase or Decrease
126	Retirement payments...	7,086,000	9,967,000	+$2,881,000
128	Survivors' benefits...	112,000	130,000	+ 18,000
129	Dependents' medical care.....	5,843,000	6,603,000	+ 760,000
	Total obligations.	13,041,000	16,700,000	+ 3,659,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Benefits for former personnel.....	$7,198,000	$10,097,000	+$2,899,000
Other services.....	5,843,000	6,603,000	+760,000
Total obligations by object.....	13,041,000	16,700,000	+3,659,000

Summary of Changes

1969 estimated obligations	$13,041,000
1970 estimated obligations (Indefinite)	16,700,000
Net change	+3,659,000

Increases

A. Built-in:	
1. Estimated costs for protection of retirements during 1969 to full year and for estimated additional retirements during 1970	2,881,000
2. Estimated increase in survivors' benefits	18,000
3. Estimated costs for increased patient load and increased rates for non-Federal hospitalization of retirees and dependents	653,000
4. Estimated costs for increased services (drugs, handicapped care, etc.) required by an expanding beneficiary population	107,000
Total built-in items	3,659,000
Total change requested	3,659,000

Explanation of Changes

A. Built-in:

1. An estimated increase of $2,881,000 will provide for the full year of 1970 for payments to officers placed on the retired roll during 1969 and for the net increase of 151 officers estimated to be added to the retired list during 1970.

2. An increase of $18,000 to provide for an estimated increase in the number of survivors receiving benefits.

3. An increase of $653,000 to provide for an expected 5% increase in average daily patient load and a 12% increase in rates for contract hospitalization of retirees and dependents.

4. An increase of $107,000 to provide for increased costs for care of handicapped dependents of active duty beneficiaries, drug usage related to an increased outpatient load, contractor fees, and increases in other services required by an expanding beneficiary population.

Retired Pay of Commissioned Officers

	Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$1,753,000	$1,753,000	$1,753,000	$1,681,892
1961	1,860,000	1,860,000	1,860,000	1,926,837
1962	2,180,000	2,180,000	2,180,000	2,360,118
1963	2,671,000	2,671,000	5,328,000	5,525,698
1964	6,436,000	6,436,000	6,436,000	6,487,293
1965	7,272,000	7,272,000	7,272,000	7,066,099
1966	7,850,000	7,850,000	7,850,000	7,833,800
1967	8,977,000	8,977,000	8,977,000	10,837,719
1968	13,391,000	13,391,000	13,391,000	11,290,000
1969	15,090,000	15,090,000	15,090,000	13,041,000 (est.)
1970	16,700,000			

Retirement payments

1969 Estimate	1970 Estimate	Increase or Decrease
$7,086,000	$9,967,000	+$2,881,000

This estimate provides for mandatory payments to officers who have been retired for age, disability, or specified period of service in accordance with provisions of law. Thirty officers will be eligible for age retirement during 1970, and provision is made for the retirement of 12 officers for disability and 118 officers for years of service.

On June 30, 1968, there were 824 officers on the retired list. During fiscal year 1969, through January 1, 1969, 74 officers have been retired for service, disability, or age. It is estimated that a total of 159 officers will be retired during the fiscal year and that 9 will be dropped from the roll, resulting in an estimated 824 officers on the retired list as of June 30, 1969.

It is estimated that 118 officers will be retired for service and 12 for disability during 1970. Since thirty officers will reach the mandatory retirement age of 64 years, provisions has been made for the retirement of a total of 160 officers during 1970. It is estimated that 9 officers will be dropped from the roll during the year, resulting in an estimated total of 1,125 officers on the retired list as of June 30, 1970.

Table of Increases and Decreases of Retirements

	Fiscal Year 1964	Fiscal Year 1965	Fiscal Year 1966	Fiscal Year 1967	Fiscal Year 1968	Estimate Fiscal Year 1969	Estimate Fiscal Year 1970
Retired for:							
Disability....	12	10	10	10	11	11	12
Age.....	12	12	19	16	22	30	30
Years of service.....	47	54	66	71	96	118	118
Total retirement	71	76	95	97	129	159	160
Dropped:							
Death.....	12	15	12	9	10	9	9
Other.....	0	0	1	1	0	0	0
Total dropped.	12	15	13	10	10	9	9
Net increase or decrease in officers on retired roll, end of fiscal year.....	59	61	82	87	119	150	151
Officers on retired roll, end of fiscal year.....	475	536	618	705	824	974	1,125

Survivors' benefits

1969 Estimate	1970 Estimate	Increase or Decrease
$112,000	$130,000	+$18,000

This estimate provides for the payment of annuities to the survivors of deceased retired officers who elected to receive reduced retirement payments under the Retired Serviceman's Family Protection Plan.

The estimate is based on payments to the survivors of the following numbers of officers:

June 30, 1968.....	53
June 30, 1969 (est.).....	62
June 30, 1970 (est.).....	71

Dependents' medical care

1969 Estimate	1970 Estimate	Increase or Decrease
$5,843,000	$6,603,000	$+760,000

The Dependents' Medical Care Act (10 U.S.C., Ch. 55), as amended by PL 89-614, provides for an expanded and uniform program of medical care for active duty and retired members of the uniformed services, and dependents of active duty, retired, and deceased members. This activity covers the cost of inpatient and outpatient care, including care of the handicapped, outside the Public Health Service, both non-Federal and uniformed service facilities, to dependents of eligible personnel of the Coast Guard, the Environmental Science Services Administration, and the Public Health Service; and to retired personnel of these services.

A comparison of the estimated costs is shown in the following table:

	1969 Estimate	1970 Estimate
I. Non-Federal Care		
A. Inpatient care		
Average daily patient load	126	132
Total annual patient days	45,990	48,180
Average cost per day	$81.90	$91.74
Total cost inpatient care	$3,767,000	$4,420,000
B. Outpatient care		
Total outpatient claims	4,205	4,369
Average cost per claim	$88.87	$97.82
Total cost outpatient care	$374,000	$428,000
C. Drugs		
Total cost of drugs	$23,000	$24,000
D. Program for handicapped		
Total cost	$74,000	$77,000
E. Other costs		
Total other costs	$184,000	$209,000
Total cost of non-Federal care certified by the Executive Agent		
Cost rounded	$4,422,000	$5,158,000

	1969 Estimate	1970 Estimate
II. Federal care		
A. Inpatient care		
1. Dependents (other than handicapped)		
Average daily patient load.....	65	65
Total annual patient days.....	23,725	23,725
Average cost per day..	$49.25	$50.25
Total cost of dependents.....	$1,168,000	$1,192,000
2. Retired		
Average daily patient loads.....	21	21
Total annual patient days.....	7,665	7,665
Average cost per day	$33.00	$33.00
Total cost of retired personnel.....	$ 253,000	$ 253,000
Total Federal hospitalization.....	$1,421,000	$1,445,000
III. Total cost of dependents and retired medical care	$5,843,000	$6,603,000

The expenses incurred for this activity are mandatory obligations of the Public Health Service. They arise because a dependent or a retired person utilizes an approved hospital facility. The amount of expense incurred varies, depending upon the hospital system which the Public Health Service beneficiary enters: (1) if care is rendered by a Public Health Service facility there is no charge under the Dependents' Medical Care Act (these costs are chargeable to "Patient Care and Special Health Services"); (2) if care is received from a facility of another uniformed service, the Public Health Service is billed directly by that organization; and (3) if medical care is given by a private facility, a contractor such as Blue Cross pays the hospital and bills the executive agent in the Department of Defense, who in turn bills the Public Health Service for the services rendered. Since unit costs are variable to an extensive degree and the workload is not created through program operations of the Public Health Service, the costs of the Dependents' Medical Care program are neither precisely predictable nor subject to administrative controls.

P.L. 89-614, approved September 30, 1966, liberalized the medical provisions of the Dependents' Medical Care Act to provide benefits to retired personnel and dependents that are more in line with those provided under the Federal Employee Health Benefits Act and the new Social Security health program for the aged. The major new benefits provide outpatient care and improved inpatient care to dependents. They provide a program of care in civilian hospitals for retired personnel and their dependents. They provide aid to military parents who have physically or mentally handicapped children who need special care. The provisions of this law became effective January 1, 1967, except for those provisions related to patient care for active duty dependents. This part of the amendment became effective October 1, 1966.

An increase of $760,000 is requested for 1970. Of this sum $736,000 is needed in the non-Federal sector to cover the anticipated increased rates and loads and to provide proportional increases in drugs, handicapped care, and contractor services - other costs required by our expanding beneficiary population. The balance, $24,000, is needed in the Federal sector to meet the increased rate for dependents.

WEDNESDAY, MARCH 25, 1969.

BUILDINGS AND FACILITIES

WITNESSES

IAN K. BURGESS, DIRECTOR, OFFICE OF BUILDINGS AND FACILITIES
DR. ROBERT VAN HOEK, DIRECTOR, FEDERAL HEALTH PROGRAMS SERVICE
DR. SHERMAN N. KIEFFER, ASSOCIATE DIRECTOR FOR PATIENT CARE, NATIONAL INSTITUTE OF MENTAL HEALTH
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
JOHN H. KELSO, ASSISTANT ADMINISTRATOR FOR MANAGEMENT
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

HSMHA, BUILDINGS AND FACILITIES

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 Actual	1969 estimated	1970 estimated
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION			
Travel and transportation of persons		2	3
Printing and reproduction		5	5
Other services	1,664	2,126	1,956
Supplies and materials	112	108	107
Equipment	165	182	200
Lands and structures	38	472	1,792
Total obligations, Health Services and Mental Health Administration	1,979	2,895	4,063
ALLOCATION TO GENERAL SERVICES ADMINISTRATION			
Travel and transportation of persons	1	4	3
Printing and reproduction	11	13	6
Other services	154	3,904	771
Supplies and materials		3	
Lands and structures	459	3,507	3,085
Total obligations, General Services Administration	625	7,431	3,865
Total obligations	2,604	10,326	7,928

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

	Costs to this appropriation					Analysis of 1970 financing			
	Total estimate	To June 30, 1967	1968 actual	1969 estimate	1970 estimate	Deduct selected resources and unobligated balance, start of year	Add selected resources and unobligated balance, end of year	Appropriation required, 1970	Appropriation required to complete
Program by activities:									
1. General program:									
(a) Repairs and improvements	7,876	884	950	2,207	2,863	1,735	972	2,100	
(b) Modernization of Public Health Service hospitals	96,715	18	80	1,164	400	2,451	2,051		93,002
(c) Communicable disease facility, San Juan, P.R.	1,867	54	28						1,785
(d) Facilities planning	125				125	125			
(e) National Communicable Disease Center	15,581	14,307	378	475	70	421	351		
(f) Research facilities, Lexington, Ky	400	398				3	3		
Subtotal, general program costs, funded	122,564	15,661	1,436	3,846	3,458	4,735	3,377	2,100	94,787
2. St. Elizabeths Hospital:									
(a) Construction and equipment, continued treatment building (rehabilitation center)	1,971	414				5,414	1,566		
(b) Miscellaneous improvements of existing facilities:									
Air conditioning, Dix Building	2,185			119	1,139	371	927		
Air conditioning, Nichols Building	1,335	7	55	140	539	390	593		
Air conditioning, Geriartrics Building	1,243	56	10	773	360	405	45		
Other	13,895	7,139	649	2,477	3,596	2,210	34		
(c) Construction and equipment, security facility	475	25				450	450		

(d) Construction and equipment, residential treatment center, adolescents and children	160					160	160		
Subtotal, St. Elizabeths Hospital, program costs, funded	21,264	7,641	714	3,509	5,634	9,400	3,765		
Total program costs, funded	143,828	23,302	2,150	7,355	9,092	14,135	7,142	2,100	94,787
Change in selected resources [1]			454	2,971	−1,164				
Total obligations			2,604	10,326	7,928				
Financing:									
Comparative transfers from other accounts			−2,055	−4,680					
Unobligated balance available, start of year			−11,808	−12,496	−6,850				
Unobligated balance transferred from other accounts					−2,953				
Unobligated balance available, end of year			12,496	6,850	3,975				
Budget authority			1,237		2,100				
Relation of obligations to outlays:									
Obligations incurred, net			549	5,646	7,928				
Obligated balance, start of year			687	489	2,617				
Obligated balance transferred					1,782				
Obligated balance, end of year			−489	−2,617	−3,227				
Outlays			747	3,518	9,100				

[1] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $905,000; 1968, $1,361,000; 1969, $4,332,000; 1970, $3,168,000.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

BIOGRAPHICAL SKETCH

Name: Ian K. Burgess.
Position: Director, Office of Buildings and Facilities.
Birthplace and date: Norfolk, Va., December 7, 1929.
Education: B.S., 1950 and M.S., 1953, Virginia Polytechnic Institute.
Experience:

October 1966 to present, Director, Office of Buildings and Facilities, Washington.
1963–66, Chief, Construction Coordination Section, Division of Administrative Services, PHS, Washington.
1962–63, engineer placement officer, Office of Personnel, PHS, Washington.
1960–62, assistant program officer, Division of Water Supply and Pollution Control, Washington.
1959–60, sanitary engineer, Prince George's County Health Department, Cheverly, Md.
1957–59, engineer, Division of Water Supply and Pollution Control, PHS, Chicago, Ill.
1956–57, engineer, Division of Water Supply and Pollution Control, Washington.
1953–56, sanitary engineer, water treatment and supply, Washington Suburban Sanitary Commission, Hyattsville, Md.
1952–53, teaching assistant, Virginia Polytechnic Institute, Blacksburg, Va.
1950–52, engineer platoon leader and company commander, U.S. Army, Fort Leonard Wood, Mo., and 25th Division, Korea.

Associate memberships: American Society of Civil Engineers.

Mr. FLOOD. We now have before us the budget request for "Buildings and facilities, Health Services and Mental Health Administration." Please proceed, Mr. Burgess.

GENERAL STATEMENT

Mr. BURGESS. Mr. Chairman and members of the committee, the estimate for the appropriation "Buildings and facilities," combined funds for design and construction projects recommended for St. Elizabeths Hospital with those of the general program recommended for the Health Services and Mental Health Administration, excluding the Indian health program which is considered by the Interior Subcommittee.

SAINT ELIZABETHS HOSPITAL

Our 1970 request provides for reprograming unobligated funds for six improvement projects at St. Elizabeths Hospital. The total cost of these miscellaneous improvements to existing facilities will be $4,513,000 of which $3,858,000 will be reprogramed from the funds appropriated for "Construction and equipment, continued treatment building."

GENERAL

The request provides for $2,100,000 in new obligational authority to support a number of repair and improvement projects at field facilities of the National Communicable Disease Center, Public Health Service Hospitals, and Lexington Clinical Research Center of the National Institute of Mental Health.

SUMMARY

The request for $2,100,000 in new authority plus the proposed reprograming of unobligated balances brought forward from prior years will provide a total obligational authority in the amount of $7,928,000. The distribution of this amount by program activity and project is identified in the budget justification material furnished you.

Mr. Chairman, I shall be pleased to answer any questions that you or the members of the committee may have.

UNOBLIGATED BALANCES

Mr. FLOOD. Your budget shows an estimated unobligated balance to be brought forward from 1969 of $6,850,000.

Mr. BURGESS. Yes, sir.

Mr. FLOOD. Is it still a good estimate?

Mr. BURGESS. Yes, sir; I believe it is. A large portion includes unobligated balances brought forward from the St. Elizabeths Hospital building including substantial amounts for the continued treatment building construction.

Mr. FLOOD. But you will be back again, you know.

Mr. BURGESS. At a later date; yes, sir. Perhaps not for the continued treatment building, but for new facilities for St. Elizabeths Hospital.

Mr. FLOOD. You show $3,975,000 unobligated balance at the end of 1970.

Mr. BURGESS. Yes, sir.

Mr. FLOOD. What in the world do you want more money in 1970 for then?

Mr. BURGESS. We will need reprogramed money for design contracts for St. Elizabeth's facilities in late 1970 or in early 1971 before the 1971 money would be available to us.

FACILITIES AT ST. ELIZABETHS HOSPITAL

Mr. FLOOD. We have been told—Dr. Yolles told us—about the preparation of plans and specifications for two new multipurpose treatment buildings and a new medical and surgical building. He went to some length. What is the status of these projects? I don't see them in the justifications.

Mr. BURGESS. The NIMH has under consideration the development of the program, that is what is to be carried out in these multipurpose buildings, and specifically what types of functions will be carried on in the general medical and surgical building.

Mr. FLOOD. We are concerned about this thing.

Mr. BURGESS. When the program decisions are made, we as engineers and architects take the program requirements and translate them into facility requirements in terms an architect-engineer can understand when he starts on the design.

Mr. FLOOD. Were you told we sort of hammered Yolles on this St. Elizabeths problem? We were not against him, we were for him.

Dr. Yolles on page 6 of his original statement says:

"In view of the urgency of the problem, the hospital hopes to move ahead in 1970."

Mr. BURGESS. With the planning of these facilities?

Mr. FLOOD. "Using reprogramed 1969 funds, with plans and specifications for two new multipurpose patient treatment buildings."

Mr. BURGESS. Yes, sir. There are unobligated balances carried forward that can be used to fund the planning costs.

If I may, in the St. Elizabeths account there was at the——

Mr. FLOOD. You and Yolles talk to each other, do you not?

Mr. BURGESS. Yes, sir; but I talk to Dr. Kieffer more often. He is Dr. Yolles' representative here today.

If I may explain, there was $7,326,000 available at the beginning of the 1969 in unobligated balances for St. Elizabeths. We had $1,302,000 approved for reprograming in 1969 and we are asking that $3,854,000 be reprogramed in 1970 as part of this request. That will leave us a balance of $2,166,000 in the St. Elizabeths program for the three buildings.

This is the point referred to by Dr. Yolles when he hoped to get the planning going for the two multipurpose structures and GMS building. They would be funded, as I understand, through the reprograming of the $2,166,000 available.

Mr. FLOOD. Why are they not in your budget?

Mr. BURGESS. They are. The unobligated balance of $3.9 million includes $2,166,000 for the multipurpose and GMS buildings.

Mr. FLOOD. You have submitted your justifications. We have gone through them most carefully and there is not a sign of these in any of these justifications.

Mr. BURGESS. For the multipurpose facility and GMS?

Mr. FLOOD. Yes.

Mr. BURGESS. The final programing and the program of requirements which translates program needs into facility needs is not prepared yet. When it is prepared, we will come forward and ask the committees for permission to reprogram part of this unobligated balance to fund those three proposed facilities.

Mr. FLOOD. Is Dr. Yolles dreaming?

Mr. CARDWELL. No, sir.

Mr. FLOOD. Is it just a gleam in his eye?

Mr. CARDWELL. It could perhaps be characterized as a gleam in his eye. He brought into the discussion the other day construction proposals that he would initiate this year through reprograming of funds that are incorporated this year, but such reprograming has not been put before the Congress. So it has not yet been formally called to your attention and is not reflected in this budget. That is the problem.

Mr. FLOOD. You were here, Dr. Kieffer. Dr. Yolles sat here and put it very flatly before this committee, without any question.

DISCUSSIONS WITH THE DISTRICT OF COLUMBIA

Mr. CARDWELL. As I recall, he indicated that the plan, including the proposal to put before the Congress a reprograming request, had been presented to the District of Columbia and had not yet been resolved satisfactorily as far as the District was concerned.

I think Mr. Lewis indicated at that time, that they would make another try at negotiations with the District of Columbia fairly soon.

Mr. LEWIS. We have not got together again with Mr. Fletcher to discuss the point previously mentioned, that is our proposal for two mul-

tipurpose buildings and general medical building, the planning for which would be financed out of reprograming of available funds. We will get together with the District and then, through the Department, request the approval of the committee.

Mr. FLOOD. Has the mayor been out to this place lately?

Mr. LEWIS. No, unless he has gone on his own.

Dr. KIEFFER. I can assure you he has not. Since we were here last time we have not come closer together than the day we were here.

Mr. FLOOD. You have seen these recent newspaper articles, putting the finger on you people, in the last few days.

Are you doing a Pontius Pilate on us or what?

Dr. KIEFFER. Not really.

Mr. FLOOD. Do you plan to get the mayor out there?

Dr. KIEFFER. Mr. Fletcher, the deputy mayor, is going to be in touch with Mr. Lewis sometime this week, and negotiations, I assume, will proceed from there. We must get this resolved.

Mr. LEWIS. It is not a lack of willingness.

Mr. FLOOD. Not a lack of willingness on whose part?

Mr. LEWIS. Our part.

Mr. FLOOD. I believe that.

Mr. LEWIS. Or on the District.

Mr. FLOOD. The finger is on you because of the shift in responsibility to the Institute?

Mr. LEWIS. Yes.

We would hope we can convince Mr. Fletcher our proposals are right.

Mr. FLOOD. With the realinement, everybody thinks it is now a fait accompli. It is not at all. You cannot get it off the ground by yourselfs; can you?

Dr. KIEFFER. Not without the cooperation of the District.

Mr. FLOOD. I still do not understand it; do you, Mr. Shriver or Mrs. Reid?

Where is the responsibility? What is the problem here? What has to be done?

Mr. LEWIS. St. Elizabeths is the responsibility of the Department of Health, Education, and Welfare, of the National Institute of Mental Health. There is, however, clearly a financial burden the District has to assume as a result of any capital construction in the operation of the hospital.

I think in quintessential form that is the heart of the problem. They have to bear 80 to 85 percent of the capital costs. I can understand Mr. Fletcher. He would like to feel that the plan we come up with is the best plan and the right thing in the light of all of the other commitments which the District has to make.

Mr. FLOOD. This reminds me of an old saying in show business. If you miss a cue, you go out and come in and knock on the door and say, now I come in again. You walk in the second time.

You were here a few days ago and I still do not understand why you and the Mayor and the Deputy Mayor can't get this St. Elizabeths problem settled. Do they want to use the money someplace else?

Dr. KIEFFER. According to the 1955 law, they are responsible for 85.1 percent of all construction.

Mr. FLOOD. That is a pretty good chunk.

Dr. KIEFFER. And their statement, made by the District Director of the Department of Public Health, has to do with their views on their "responsibility" in regard to the operation of this hospital.

Mr. FLOOD. What are they going to use for money?

Mr. LEWIS. I think there are differences in view as to how the hospital ought to be improved. I think this is an inevitable jurisdictional or professional disagreement. The District Department of Public Health does not necessarily have the same view the Director of NIMH has as to what to do with the hospital.

Mr. FLOOD. Well, where are we?

Mr. LEWIS. We are going to do everything we can to try to resolve this as fast as possible.

Dr. ENGLISH. Mr. Chairman, the moment it is possible for——

Mr. FLOOD. We are going to press this and you are under the gun. It is not your fault, but you are.

Dr. ENGLISH. The moment it is convenient for the deputy mayor to sit down again with us, we are ready to do that to see if we can get this reconciled.

Mr. FLOOD. Do you go to the deputy mayor with your hat in your hand?

Dr. ENGLISH. No, sir, he has been very cooperative in getting together with us. As Mr. Lewis indicated, there are some differences of opinion, but we share with you the sense of urgency.

Mr. FLOOD. Well, we will follow up on that later.

UNOBLIGATED BALANCE

You show $3,975,000 unobligated balance at the end of 1970 and you want more money for 1970. The same reason?

Mr. BURGESS. Of that balance, the $2.166 million is temporarily held in abeyance, assuming we can resolve the multipurpose and GMS buildings construction problem.

If that problem were resolved and we moved into design quickly, the obligational level would go up by the $2.166 million renovation before 1970 is over.

DEVELOPMENT OF DEMONSTRATION-QUALITY TREATMENT CONCEPTS

Mr. FLOOD. Suppose you tell us a little more about what you plan to do in connection with the $500,000 requested to undertake a complete and comprehensive renovation, modernization, and refurbishing of selected areas in order to develop a demonstration-quality treatment concept.

When did you see that first, when somebody handed it to you?

Mr. BURGESS. I cannot claim authorship. This was written by the hospital staff.

Mr. FLOOD. In order to develop demonstration-quality treatment concepts. That was written by professionals for professionals.

Dr. KIEFFER. May I reply to that?

Mr. FLOOD. Certainly. We would like to know what that means.

Dr. KIEFFER. In the theory of developing therapeutic treatment atmosphere, there is a relationship between the architectural characteristics of patient areas and the impact on different diseases in this category. This is an attempt to try to take some of the worst areas

and remodel them with different approaches for different divisions, disease entities, for example, for drug addiction in one area, the alcoholics, and others. There are different architectural concepts.

Mr. FLOOD. Is this a one-shot project or do you plan to be back next year and the year after that and the year after that?

Mr. BURGESS. On this particular item?

Mr. FLOOD. Yes.

Mr. BURGESS. I would think there would have to be a period of evaluation since this falls in the area of how well you can use architecture to assist the patient. You would have to have a period of evaluation on this concept before you utilize it further.

Mr. FLOOD. They tell me the architecture is beautiful but some of it will not stand up much longer.

Mr. BURGESS. The outside of the buildings are fine looking, brick, with Spanish tile roofs. It is inside the buildings where the problems begin.

The grounds are well kept. The casual observer riding through gets a good impression of St. Elizabeths.

FACILITIES AT CHAMBLEE, GA.

Mr. FLOOD. You are asking $25,100 for facilities at Chamblee. You have been planning on vacating those facilities as being unsuitable certainly for 10 years.

Mr. BURGESS. At least 10 years; yes, sir.

Mr. FLOOD. Why should we put money into a place like that?

Mr. BURGESS. The first phase of the Communicable Disease Center was built in 1960, but when it was occupied they still had to maintain the Chamblee operation, which is an old Army hospital, because the first increment of the CDC headquarters——

Mr. FLOOD. How long have you been sitting in that chair?

Mr. BURGESS. This will be my third year, but I am aware of the facilities operation at CDC.

Mr. FLOOD. We have heard this story for 10 years.

Mr. BURGESS. That is true, but we have asked on several occasions for an addition to CDC, a second addition, and the request was marked up, or out if you will, in the budget process, so we still continue the Chamblee operation. It is not as large as it was. A large majority has been turned over to DeKalb County for an airport operation. We have a relatively small operation compared to what it was before.

Mr. FLOOD. Mr. Michel?

Mr. MICHEL. I do not think I have any questions, Mr. Chirman.

FACILITIES AT ST. ELIZABETHS HOSPITAL

Mr. FLOOD. Mr. Shriver?

Mr. SHRIVER. You talk a good bit about St. Elizabeths.

Mr. Burgess, I want to understand a little bit more. You are proposing a program level for a hospital of $4,513,000, of which $3,858,000 would be financed from reprogramed prior year unobligated balances that are available.

Mr. BURGESS. Yes, sir.

Mr. SHRIVER. Where is the remainder coming from?

Mr. BURGESS. For the air conditioning of the Nichols Building there was an initial appropriation of $675,000, and the funds are insufficient now. In one othr area there was $490,000 appropriated for air conditioning the Dix pavilion and it also is insufficient now.

We are asking for 4 new projects plus making up the deficits in the two air-conditioning projects.

Mr. SHRIVER. I see.

Are some of the buildings air conditioned now?

Mr. BURGESS. Some are, but the majority of them are not. This is a phasing process. We are trying to do work in increments to generally upgrade the buildings in terms of electric capacity and air conditioning.

Mr. SHRIVER. One has to do with plastering?

Mr. BURGESS. Right, sir.

Mr. SHRIVER. $6,000 of reprogramed funds for third increment, as you call it, for replacement of old and unsatisfactory plaster?

Mr. BURGESS. Right, sir.

Mr. SHRIVER. I would think if it is a health hazard——

Mr. BURGESS. Yes, sir; it also is literally a safety hazard in that it may come down at any time.

Mr. SHRIVER. You use so much of your funds each year?

Mr. BURGESS. They are trying to do it in increments, yes, sir.

Mr. SHRIVER. On page 141 of the justifications, you are requesting $323,000 in new appropriations for the Savannah Laboratory?

Mr. BURGESS. Yes, sir.

Mr. SHRIVER. Part of this money is to be spent for a centrally located plant, housing the electrical services and the emergency power supply, I believe.

Mr. BURGESS. Right.

Mr. SHRIVER. Is that customary to have that kind of service all in the same building, the regular power supply and emergency power supply?

Mr. BURGESS. The regular power and the heating plants; yes, sir. We try to group our utilities into a single central operation. It is more efficient and cuts down on personnel requirements rather than have the utility support scattered throughout the facilities.

Mr. SHRIVER. Maybe Mr. Cardwell could answer this question.

I note in the statement that Indian health program is excluded. Do you have any idea of how many health programs are elsewhere than in the Department of Health, Education, and Welfare?

Mr. CARDWELL. There are three HEW programs that are significant that are heard by other committees. One, the Indian health program, is heard by the Subcommittee on Interior. The title IV civil rights education program operated by the Office of Education is heard by State, Justice, and the Judiciary. The emergency health program of the Public Health Service is heard by the Independent Offices Subcommittee.

Mr. SHRIVER. What programs are not before this committee in connection with funding for health and education?

Mr. LEWIS. The two programs that are part of this administration would be about $125 million.

Mr. CARDWELL. The requested appropriation in 1970 for all three programs heard before other committees is $141,059,000.

Mr. SHRIVER. Thank you.

PAINTING NEEDS AT CARVILLE HOSPITAL

Mr. MICHEL. Is there any money in here to paint the building at the Carville hospital?

Mr. BURGESS. No, sir.

Mr. MICHEL. I was not down there personally, but my distinguished predecessor, Mr. Laird, was there and I think he made some comment about how shabby it looked, and it ought to have a coat of paint.

As I recall, it costs about $25,000 to paint the White House every year.

Mr. BURGESS. We had $150,000 programed for painting, but we had an emergency electrical situation at Staten Island. We came to the committee and asked for permission to reprogram that amount to Staten Island for the electrical emergency. Painting and repairing roads takes a low priority when it comes to an emergency situation.

Mr. MICHEL. I see for the entire year you got $447,000 for painting costs. Is that right?

Mr. BURGESS. Quite frankly, we have not figured out the summary costs for painting. You mean painting budget out of the total R. & I. budget this year?

Mr. MICHEL. It gets to be a pretty sizable item here. It gets up to nearly a half-million dollars for painting. I do not know if that was the one that needed priority or not.

Mr. BURGESS. A half-million dollars for painting?

Mr. MICHEL. $447,000. Does that jibe with your figures?

Mr. BURGESS. I do not have it broken out. I am surprised it adds up to that amount. I do not have the information available, frankly.

This work would be included as part of the modernization at Carville.

Mr. FLOOD. Mrs. Reid?

Mrs. REID. I have no questions, Mr. Chairman.

But I certainly agree with your remarks concerning St. Elizabeths. I hope you people can get together with the District.

Mr. FLOOD. Have you ever been out there?

Mrs. REID. No, I have not, but I mentioned the other day I would like to go out.

Dr. ENGLISH. We will arrange it.

TRANSFER OF ST. ELIZABETHS TO DISTRICT OF COLUMBIA

Mr. FLOOD. With regard to St. Elizabeths there is one important point that has not been brought up in this discussion. Let me read to you from last year's report.

"May 22, 1967, Mr. Flood from the Committee on Appropriations, submits the following report." Then, on page 40:

"When Secretary Gardner was before the committee using charts to explain the organization, and reorganization"—that is an old chestnut here—"of various parts of the Department he said 'St. Elizabeths Hospital is an anomaly on the chart' "—I could not improve on that myself—"I have been trying ever since I got here to get it off the chart and it is no easy task, let me tell you. The committee certainly agrees that it is an anomaly. Approximately 80 percent of the patients are from the District of Columbia. If the hospital did not exist and it were established today, there is no doubt it would be established as a District

institution. Why it should continue as a federal institution just because it was so established over 100 years ago is difficult to understand."—I wrote this with my own hands—"The committee urges the Secretary and others involved to increase their efforts to work out a program to transfer the institution to the District of Columbia." That is the end of the quotation from the report.

I am sure you do not want to comment on that. That would be gilding the lily.

Mr. Casey?

Mr. CASEY. Do you handle the rental of the facilities?

Mr. BURGESS. We process requests for rentals, yes, sir.

Mr. CASEY. Did you process that one that they use on Westbard?

Mr. BURGESS. No, sir; the Westwood Building belongs to the National Institutes of Health.

Mr. CASEY. You do not have anything to do with that?

Mr. BURGESS. No, sir; just the Health Services and Mental Health Administration components in the area.

Mr. CASEY. I will save my questions for later.

Mr. FLOOD. Thank you, Mr. Burgess. You get your wound stripes at the door.

TUESDAY, MARCH 25, 1969.

SALARIES AND EXPENSES, OFFICE OF THE ADMINISTRATOR

WITNESSES

JOHN H. KELSO, ASSISTANT ADMINISTRATOR FOR MANAGEMENT
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

Health Services and Mental Health Administration

Buildings and Facilities

Amounts Available for Obligation

	1969	1970
Appropriation	---	$2,100,000
Unobligated Balance Brought Forward	$12,496,000	6,850,000
Unobligated Balance Transferred from "Buildings and Facilities," Public Health Service	---	2,953,000
Comparative Transfer from "Buildings and Facilities," Public Health Service	4,680,000	---
Unobligated Balance Carried Forward	-6,850,000	-3,975,000
Total Obligations	10,326,000	7,928,000

Obligations by Activity

Page Ref.	Description	1969 Estimate	1970 Estimate	Increase or Decrease
141	General Program:			
	Repairs and Improvements.....	$2,962,000	$2,241,000	$-721,000
	Modernization of Public Health Service Hospitals.....	1,296,000	700,000	-596,000
	Facilities Planning.....	72,000	53,000	-19,000
	National Communicable Disease Center.....	350,000	421,000	+71,000
143	Saint Elizabeths Hospital:			
	Miscellaneous Improvement of Existing Facilities.....	5,646,000	4,513,000	-1,133,000
	Total Obligations.....	10,326,000	7,928,000	-2,398,000

Budget Authority by Activity

	General Program:			
	Repairs and Improvements.....	---	2,100,000	+2,100,000
	Total, New Obligational Authority..	---	2,100,000	+2,100,000

Obligations by Object

Description	1969 Estimate	1970 Estimate	Increase or Decrease
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION			
Travel and Transportation of Persons ..	$2,000	$3,000	+$1,000
Printing and Reproduction	5,000	5,000	---
Other Services	2,126,000	1,956,000	-170,000
Supplies and Materials	108,000	107,000	-1,000
Equipment	182,000	200,000	+18,000
Lands and Structures	472,000	1,792,000	+1,320,000
Total, Health Services and Mental Health Administration	2,895,000	4,063,000	+1,168,000
ALLOCATION TO GENERAL SERVICES ADMINISTRATION			
Travel and Transportation of Persons ..	4,000	3,000	-1,000
Printing and Reproduction	13,000	6,000	-7,000
Other Services	3,904,000	771,000	-3,133,000
Supplies and Materials	3,000	---	-3,000
Lands and Structures	3,507,000	3,085,000	-422,000
Total, General Services Administration	7,431,000	3,865,000	-3,566,000
Total, Obligations by Object	10,326,000	7,928,000	-2,398,000

Summary of Changes

1969 Appropriation.....	---
1970 Appropriation Request.....	$2,100,000
Total Change.....	+2,100,000

Increases

General Program:

Repairs and Improvements (Change Requested).....	+2,100,000

Year	Budget estimate to Congress	House allowance	Senate allowance	Appropriation
1960	$330,000	$330,000	$330,000	$330,000
1961	5,445,000	5,445,000	5,445,000	5,445,000
1962	645,209	645,209	645,209	645,209
1963	8,095,000	8,095,000	8,095,000	8,095,000
1964	627,000	627,000	627,000	627,000
1965	2,032,000	2,032,000	2,032,000	2,032,000
1966	1,977,000	1,977,000	1,977,000	1,977,000
1967	2,138,000	2,138,000	2,298,000	2,298,000
1968	1,237,000	1,237,000	1,237,000	1,237,000
1969	1,302,000	---	---	---
1970	2,100,000			

JUSTIFICATION

Introduction

This appropriation includes all proposed direct construction items of the Health Services and Mental Health Administration except construction of Indian health facilities.

The justifications that follow include Repairs and Improvements projects for programs within Health Services and Mental Health Administration.

GENERAL PROGRAM

Repairs and Improvements

1970 appropriation estimate.....$2,100,000

The sum of $2,100,000 is requested for specific repair and improvement projects to be accomplished in 1970. These projects are necessary to prevent deterioration of building exteriors, to replace worn components within the structures, to correct existing fire hazards, to provide additional temporary space for program operations, and to improve existing substandard building features. None of these projects will conflict with presently authorized modernization planning of the facilities. A descriptive listing of the projects, by program and location follows:

National Communicable Disease Center..... $ 725,000

1. Clifton Road Facility - $186,500

Replace vinyl wall covering of elevator lobbies; renovation of basement, Building D, to provide laboratory space; interior painting; and relamping.

2. Chamblee Facilities - $25,100

Erect portable steel building for storage space and erect bridge at main entrance for use by NCDC employees.

3. Lawrenceville Facilities - $151,600

Conversion of certain animal rooms to SPF production; conversion of space to germ-free animal production; cage washing and cleaning facility for Building B; painting, surface coating, and caulking; extension of screw conveyors and provide outside dual hoppers for waste Building A; replace interior coating of water tower.

4. Savannah Laboratories - $323,000

Provide a centrally located plant housing the necessary electrical and heating services and emergency power supply for research activities and fire fighting system; prefabricated portable steel building to replace buildings 13, 14, and 15 used to mix, formulate, and store insecticides. Replacement of parts of Biology Laboratory (Bldgs. 10 and 11) with a larger prefabricated portable steel building; provide proper sewerage treatment facilities; and replace elevator in main building.

5. Other locations (New Orleans, Kansas City, Ft. Collins, etc.) - $38,800

Furnace repairs; roof repairs; fencing and watering devices; interior and exterior painting and plumbing repairs.

Federal Health Programs Service.....$1,260,000

1. Baltimore - $265,000

Replacement of existing boilers and incinerator to comply with E.O. 11282 for air pollution control. Correct electrical service deficiencies; repair, caulk, and paint exterior woodwork and metal; tuckpoint and waterproof brickwork with silicones; install security fence; install water softener to alleviate scale formation in piping; install sanitary ceiling in kitchen, and replace defective safety anchors for window washers.

2. Boston - $80,000

Repair, caulk, and paint exterior woodwork and metal; tuckpoint and waterproof brickwork with silicones, and replace hazardous walkways.

3. Detroit - $137,000

Repair roof and gutter on main building; replace deteriorated water main; replace deteriorated underground steam and condensate lines; correct electrical service deficiencies; replace existing boilers and incinerator to comply with E.O. 11282 for air pollution control.

4. New Orleans - $80,000

Repair termite damage; replace No. 1 elevator; replace shutters in laundry building with windows; replace unsanitary food storage lockers.

5. Norfolk - $352,000

Replace two 250 HP boilers and incinerator to comply with E.O. 11282 for air pollution control; extend seawall to halt erosion; renovate electrical system; repair roofs of laundry, garage, and powerhouse, and provide safety anchors for window washers.

6. San Francisco - $273,000

Provide 8" water main for fire protection; repair, caulk, and paint exterior woodwork and metal; repair masonry walls.

7. Staten Island - $57,000

Replace deteriorated hot water generators in Building No. 1; replace air conditioning unit in Building No. 7; replace deficient walk-in freezer storage units. Connect Building 7 to New York sewer system in accordance with E.O. 11288.

8. San Juan, Puerto Rico - $16,000

Abandon septic tank; connect to Sewage Authority's system to comply with E.O. 11288 for water pollution control.

National Institute of Mental Health.....$115,000

The sum of $115,000 is requested to eliminate fire, health, and safety hazards at the Lexington Clinical Research Center. Typical projects include replacement of low pressure steam lines and replacement of combustible acoustical tile with non-combustible tile in the patient areas. These projects can be incorporated into any long-range program for the modernization of the Research Center and hospital.

SAINT ELIZABETHS HOSPITAL

The 1970 program level amounts to $4,513,000, of which $3,858,000 would be financed from reprogrammed prior year unobligated balances available under the activity "Construction and Equipment, Continued Treatment Building." The reprogramming will fund the following items, all of which come under the Hospital's continuing program of miscellaneous improvements of existing facilities:

1.	Rewiring and extension of electrical facilities	$ 821,000
2.	Screening in patient buildings	50,000
3.	Replastering of Hospital buildings	50,000
4.	Air-conditioning Nichols Building	742,000
5.	Air-conditioning Dix Pavilion	1,695,000
6.	Renovation of selected areas	500,000
	Subtotal, miscellaneous improvements	3,858,000
	Less prior year funds	-3,858,000
	Appropriation required	---

Rewiring and extension of electrical facilities.....$821,000

An amount of $821,000 is required in 1970 for the Hospital's continuing program of replacement, extension and modernization of basic electrical facilities. Reprogrammed funds to undertake the sixth increment of this program will provide for badly needed rewiring and relighting in several of the Hospital's service buildings and will make possible the necessary extension to the existing 13.2 kilovolt cable system.

Screening in patient buildings.....$ 50,000

The removal of wooden-frame, household-type screening in patient buildings and the installation of heavy duty, all metal screens is a continuing operation. An amount of $50,000 is required in 1970 for the seventh increment of this multi-year program. The new screening reduces maintenance costs, provides greater security, resists patient abuse, and offers more adequate insect protection.

Replastering of Hospital buildings.....$ 50,000

The 1970 budget includes a reprogramming request for $50,000 to finance the third increment in a continuing program of replacement of old and unsafe plaster in several buildings. In recent years incidents involving falling plaster have caused serious concern for the safety of patients. The cause of these incidents has been a combination of deterioration due to aging, temperature and humidity changes, and chemical decomposition of the plaster itself - a characteristic of early plaster mixing techniques. The element of danger inherent in occurrences of this nature makes it obvious that spot repairs of areas already damaged do not constitute a satisfactory solution of the problem. The work is being accomplished on a building-by-building basis and consists of removal of the old ceiling plaster along with its wood lath base, and application of a light, durable, gypsum-base plaster to a metal mesh base.

Air-conditioning of Nichols Building.....$742,000

An initial appropriation of $675,000 was made in 1966 to fund the air conditioning of this facility. Since that time, Public Buildings Service has raised its estimate, due principally to a reevaluation of the extent to which the existing heating system could be utilized by the new installation. Nichols Building is structurally sound, with a remaining useful life at least equal to that of the proposed air-conditioning. The structure houses approximately 290 aged and infirm patients who, for the most part, are confined to bed or wheel

chairs. Heat exhaustion is a very serious problem with the elderly who are more susceptible to dehydration than younger patients. Diseases of the heart and respiratory system, a prevalent condition of the aged, are seriously complicated by excessive heat and humidity. Design work is nearing completion and the Hospital will be in a position to award a construction contract in 1970.

Air-conditioning of Dix Pavilion.....$1,695,000

In 1968 an initial appropriation of $490,000 was made for this project. Public Buildings Service recently revised its original estimate following an examination of the extent to which the existing heating and air handling systems could be utilized in the proposed air-conditioning system. Dix Pavilion currently houses some 300 patients, a greater portion of whom must necessarily spend most of their time indoors. Their amenability to treatment, as well as their comfort, depend in large measure upon controlled temperature and humidity. Many of the patients also have serious physical disabilities in addition to their psychiatric problems. The Public Buildings Service has advised that it is ready to move ahead with design work for this project so that a contract may be awarded in 1970.

Renovation of selected areas.....$ 500,000

The Hospital plans to undertake a complete and comprehensive renovation, modernization, and refurbishment of selected areas in order to develop demonstration - quality treatment concepts at the Hospital. Portable equipment for this project will be funded from the "Salaries and expenses" appropriation. Funds requested for reprogramming under this appropriation represent the estimated cost of building alterations and fixed equipment.

TUESDAY, MARCH 25, 1969.

SALARIES AND EXPENSES, OFFICE OF THE ADMINISTRATOR

WITNESSES

JOHN H. KELSO, ASSISTANT ADMINISTRATOR FOR MANAGEMENT
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

Object Classification (in thousands of dollars)

Identification code 09-20-0367-0-1-651		1968 actual	1969 est.	1970 est.
	Personnel compensation:			
11.1	Permanent positions	5,771	6,712	6,880
11.3	Positions other than permanent	78	12	12
	Total personnel compensation	5,849	6,724	6,892
12.1	Personnel benefits: Civilian employees	493	480	489
21.0	Travel and transportation of persons	188	191	191
22.0	Transportation of things	21	10	10
23.0	Rent, communications, and utilities	262	383	1,583
24.0	Printing and reproduction	137	222	222
25.0	Other services	503	472	472
26.0	Supplies and materials	104	70	70
31.0	Equipment	27	49	49
99.0	Total obligations	7,584	8,601	9,978

Personnel Summary

Total number of permanent positions	625	587	596
Full-time equivalent of other positions	7	2	2
Average number of all employees	544	567	578
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794

Program and Financing (in thousands of dollars)

Identification code 09-20-0367-0-1-651	1968 actual	1969 est.	1970 est.
Program by activities:			
Management and central services	6,706	8,601	9,978
Total program costs, funded [1]	6,706	8,601	9,978
Change in selected resources [2]	878		
10 Total obligations	7,584	8,601	9,978
Financing:			
16 Comparative transfers to other accounts	936	779	
25 Unobligated balance lapsing	31		
Budget authority	8,551	9,380	9,978
Budget authority:			
40 Appropriation	8,358	9,073	9,978
41 Transferred to other accounts	−108		
42 Transferred from other accounts	301		
43 **Appropriation (adjusted)**	8,551	9,073	9,978
46 **Proposed transfer from other accounts for pay increases**		307	
Relation of obligations to outlays:			
71 Obligations incurred, net	8,520	9,380	9,978
72 Receivables in excess of obligations, start of year	−299	−1,264	−546
74 Obligated balance, end of year			−593
Receivables in excess of obligations, end of year	1,264	546	
77 Adjustments in expired accounts	−759		
90 Outlays	8,725	8,662	8,839

[1] Includes capital outlays as follows: 1968, $30 thousand; 1969, $49 thousand; 1970, $52 thousand.

[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders, 1967, $467 thousand (1968 adjustments, −$759 thousand); 1968, $585 thousand; 1969, $585 thousand; 1970, $585 thousand.

Mr. FLOOD. Now we have "Salaries and expenses, Office of the Administrator." Mr. John H. Kelso, the Assistant Administrator for Management will be the witness.

You have a statement on salaries and expenses. What do you wish to do?

Mr. KELSO. I would like to read it if I might.

Mr. FLOOD. Very well.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

We have your biography which will be placed in the record and then you may proceed.

(Biographical sketch follows:)

BIOGRAPHICAL SKETCH

Name: John H. Kelso.

Position: Assistant Administrator for Management, Health Services and Mental Health Administration.

Birthplace and date: Iowa City, Iowa, June 16, 1925.

Education: B.A., 1949 and M.A., 1950, State University of Iowa.

Experience: April 1968 to present: Assistant Administrator for Management, Health Services and Mental Health Administration, PHS, Washington. 1966–68: Executive officer, Public Health Service, Washington. 1962–66: Assistant executive officer, BSS/Environmental Health, PHS, Washington. 1957–60: Management analyst, PHS, Washington. 1955–57: Management analyst, Department of Agriculture, Washington. 1951–55: Occupational research analyst, Department of the Navy, Washington.

Association memberships: American Society for Public Administration, Society for Advancement of Management, Association of Management in Public Health.

GENERAL STATEMENT

Mr. KELSO. Mr. Chairman and members of the committee: I am pleased to appear before you today to discuss the 1970 budget request for the salaries and expenses appropriation for the Office of the Administrator, Health Services and Mental Health Administration (HSMHA). This apropriation finances those offices which serve the Administrator, HSMHA, in the task of providing program direction to the administration and also finances its central staff services. The funds and positions which will make up this appropriation in 1970 have been drawn in the main from the current appropriation, "Salaries and expenses, Office of the Surgeon General." In addition, this appropriation contains resources from the former PHS management fund which supported the Bureaus of Health Services and Disease Prevention and Environmental Control. Both of these organizations were abolished early in fiscal year 1969.

It should be noted that a proportionate share of the funds and positions previously associated with "Salaries and expenses, Office of the Surgeon General" and the Public Health Service management funds have been transferred to the Office of the Secretary, the National Institutes of Health and the Consumer Protection and Environmental Health Service to support staff and functions now located in those organizations.

The resources contained in this appropriation are required to provide management support for the Health Services and Mental Health Administration. It is a new administration which seeks to develop a cohesive and integrated approach to the organization and delivery of

the Nation's health services. This integration can only come from well-coordinated program and management direction emerging from the Administrator's own office. The budget proposal before you contains requested increases in only three priority areas where, in fact, the need has been evident for some period of time.

Prior to the reorganization of the Public Health Service, we had been planning to locate most of its components in leased space in the Parklawn Building in Rockville, Md. It is now planned to locate the Health Services and Mental Health Administration and the Consumer Protection and Environmental Health Service in the Parklawn Building on or before January 1, 1970. The General Services Administration does not assume the rental for that space until after the first full fiscal year of occupancy. Accordingly, we are budgeting in this appropriation $1.2 million for 6 months' rental and other expenses related to the Parklawn Building.

This appropriation request also contains moderate increases for the program planning and financial activities of the Office of the Administrator. The need in both of these areas has been manifest for a long period of time. The increase of five positions and $64,000 for the Office of Program Planning and Evaluation gives recognition to the mounting need at all levels of Government to plan our efforts more effectively and to evaluate the progress of our programs and the degree to which they are meeting the needs described by the President, the Secretary, and the Congress. We are also requesting an additional four positions and $43,000 for the Office of Financial Management. The increased effort here is also tied closely to the need for planning and evaluation of program and financial progress and to the requirements of converting to an accrual accounting system in the 31 accounting offices of the Health Services and Mental Health Administration.

And, finally, we are requesting an additional $60,000 to provide full-year cost of our computer rental allowed in 1969 in the Office of Systems Management.

In summary, Mr. Chairman, we feel that the request before you is for activities basic to the managerial tasks which confront this administration. The request for 1970 is $9,978,000, an increase of $1,377,000 over the comparable level for 1969, including $1,200,000 for rental and related expenses of the Parklawn Building, $60,000 for computer costs and nine positions, and $117,000 for program increases in the Office of Program Planning and Evaluation and Financial Management.

I shall be pleased to answer any questions the committee may have.

PROPOSED LANGUAGE PROVISION FOR RENTAL OF HEADQUARTERS BUILDING

Mr. Flood. You are proposing a special provision in your appropriation language to read "not to exceed $1.2 million—shall be available for rental and related expenses incidental to occupancy of a headquarters building."

Why do you need that language?

Mr. Kelso. This language is proposed in order to make a clear-cut delineation between the regular operating expenses of HSMHA and the expenses of occupying the new building which will accommodate

personnel both of HSMHA and the Consumer Protection and Environmental Health Service.

Mr. FLOOD. Where is this new building and when do you expect to take over?

Mr. KELSO. It is located off of Rockville Pike. It is about 3 or 4 miles north of NIH at Fisher Lane and Twin Brook Parkway. Anticipated occupancy is between October and the 1st of January.

Mr. FLOOD. Are you going to get all of your people in it or only part of them?

Mr. KELSO. We will have all of our people in with the exception of the National Institute of Mental Health. They are scheduled to move in about a year and a half from the 1st of January 1970.

INCREASED POSITIONS REQUESTED

Mr. FLOOD. Here is your Office of Program Planning and Evaluation. You want five more people. What is the matter with 41, the current number?

Is there a vacant room someplace?

Mr. KELSO. No, sir. Within a rather stringent budget, the Administrator has placed high priority on the evaluation of programs. We feel that the five people requested are more than going to make up what their salaries are in terms of evaluating programs that can be done better, particularly with limited resources.

Mr. FLOOD. Can they do it?

Mr. KELSO. Yes, sir; we believe they can.

Mr. FLOOD. You have 115 people in Financial Management. Now you want four more.

Mr. KELSO. We believe we need two in the budget area to provide a better reporting system to the Administrator on what is happening to his financial resources. In the accounting area we have to begin operating an accrual accounting system on July 1, 1969.

Mr. MILLER. At the present time we are working considerable overtime.

Mr. FLOOD. Do they get paid overtime?

Mr. MILLER. Either compensatory or overtime; yes.

Mr. FLOOD. I do not think you are kidding me, but there are an awful lot of people on the floor of the House that don't like increases in personnel.

Mr. KELSO. Within a tight budget, we wanted to distribute the resources where we felt they would be most effective and we believe that five in "Program planning and evaluation" and four in "Financial management" are appropriate.

Mr. FLOOD. Did you ever think how many hours of overtime you work without getting paid?

Mr. KELSO. Yes, sir; but some of these people, particularly in the accounting area, do not draw the salary I do.

Mr. FLOOD. That is not the point. You don't have to be there, either.

Mr. KELSO. We have a very, very difficult accounting problem in the Administration.

RENTAL OF COMPUTERS

Mr. FLOOD. Now about hardware, computers, and this confuses us more and more day after day. I was present the first time the Govern-

ment ever showed hardware for the Department of Defense. A very, very hush-hush thing. It was a Rube Goldberg affair, about the size of that wall.

How much do you have budgeted for computer rental in this appropriation?

Mr. KELSO. In 1969 in the Office of the Surgeon General appropriation we asked for $100,000.

Mr. FLOOD. What do you use the computer for?

Mr. KELSO. In 1969 we asked for $100,000 to rent computer time to automate data on grants and contracts and also some of our committee management activity. What we have in the 1970 budget in this appropriation is $60,000 to annualize the amount we got in 1969.

Mr. FLOOD. Did you ever take a computer course?

Mr. KELSO. Yes; I think you could characterize it as a computer course.

Mr. FLOOD. Who buys your hardware—GSA or you?

Mr. KELSO. We buy it, but the money we're requesting in this appropriation is not for hardware. It is for rental of computer time. We would not be buying a computer with this money. We would just be using it for rental time.

Mr. FLOOD. Who has the title?

Mr. KELSO. We would use an NIH computer which they lease.

Mr. FLOOD. You do not buy outright?

Mr. KELSO. Some parts of the Administration do; yes, sir.

Mr. FLOOD. You are not getting stuck with a lot of second hand obsolete stuff with a new machine coming out on October 1, are you?

Mr. KELSO. No, sir; we do not think so.

Mr. FLOOD. You know the problem.

Mr. KELSO. Yes, indeed.

Mr. FLOOD. Mr. Michel?

Mr. MICHEL. This item on page 149 of the justifications of $1,200,000, in the Office of Assistant Administrator for Management, obviously has to be that 6-month rental.

Mr. KELSO. Yes, sir; that is the rental.

ADDITIONAL POSITIONS

Mr. MICHEL. The $47,000 increase in financial management has to do with these four additional positions.

Mr. KELSO. Two budget and two accounting positions.

Mr. MICHEL. What did we say these five additional positions up here in "Program planning and evaluation" will be doing?

Mr. KELSO. They are in the Office of Program Planning and Evaluation and will be carrying out program planning activities and evaluating programs on behalf of the Administrator.

Mr. MICHEL. There are currently 46 people in that business.

Mr. KELSO. Forty-one, sir.

Mr. MICHEL. I see, excuse me. How many additional programs over last year would they have to evaluate?

Mr. KELSO. Because of the reorganization it is a little difficult to answer. This office was put together from resources from the former Office of the Surgeon General and some of the other Bureaus. One of the reasons we have asked for program planning and evaluation in-

creases is because we are a new organization and we feel we ought to evaluate the programs from the beginning.

Dr. ENGLISH. And possibly integrate.

A part of the increment in program planning and evaluation is not only for the evaluation of programs that are ongoing, but also to study something that is of primary interest, which is the way these programs are working, particularly to avoid overlapping and duplication of Federal resources at the local level.

Mr. FLOOD. You talk very well.

Dr. ENGLISH. Thank you, sir.

Mr. MICHEL. That is all, Mr. Chairman.

Mr. FLOOD. Mr. Casey.

Mr. CASEY. I have no questions, Mr. Chairman.

Mr. FLOOD. Mr. Shriver.

Mr. SHRIVER. Thank you, Mr. Chairman.

How much of the 1970 request is for the Office of Legislation?

Mr. KELSO. There is no increase for the Office of Legislation.

Mr. SHRIVER. How much is in there for it?

I did not say increase.

Mr. KELSO. $198,000.

RENTAL OF NEW BUILDING

Mr. SHRIVER. I notice that quite a bit of the increase for fiscal 1970 is for rent for the new building you occupy. On page 157 you show that this ran a million dollars for the next 6 months. How much did that building cost to build?

Mr. KELSO. That is a private building.

Mr. SHRIVER. I know. It seems like an awful lot of rent.

Mr. KELSO. It is $4.23 per square foot. That is what the Government is paying.

Mr. BURGESS. The lessors have not divulged the specific cost, but we understand it cost about $21 to $23 million to construct.

Mr. KELSO. As I indicated, the cost to the Government is $4.23 a square foot.

Mr. MICHEL. Is that comparable for the area here?

Mr. KELSO. Yes, it is. It would be higher if it were downtown.

Mr. MICHEL. I mean comparable to that area.

Mr. KELSO. Yes, sir; for office space.

Mr. SHRIVER. Will it be necessary to appropriate for rent for another year?

Mr. KELSO. Yes, sir. We will be back in 1971 for rental because GSA will not pick it up until we have paid for a full fiscal year. In 1972, it will be in the GSA budget.

Mr. SHRIVER. This is all; thank you.

Mr. FLOOD. Mrs. Reid?

Mrs. REID. I have no questions.

Mr. FLOOD. Thank you very much.

JUSTIFICATION MATERIAL

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Salaries and expenses, Office of the Administrator

Amounts Available for Obligation

	1969	1970
Appropriation	$9,073,000	$9,978,000
Comparative transfers to:		
"Salaries and expenses, Office of the Secretary"	-980,000	---
"Salaries and expenses, Office of the Comptroller"	-426,000	---
"Salaries and expenses, Office of Administration"	-2,028,000	---
"Office of the Director, National Institutes of Health"	-51,000	---
"Health Services Research and Development"	-92,000	---
"Salaries and expenses, Office of the Administrator", Consumer Protection and Environmental Health Services	-242,000	---
Comparative transfers from:		
"Chronic diseases"	554,000	---
"Comprehensive health planning and services"	102,000	---
"Community health services"	1,638,000	---
"Communicable diseases"	15,000	---
"Patient care and special health services"	70,000	---
"Hospital construction activities"	79,000	---
"Regional Medical Programs"	75,000	---
"Saint Elizabeths Hospital, salaries and expenses"	15,000	---
"National health statistics"	116,000	---
"Salaries and expenses, Office of the Administrator", Consumer Protection and Environmental Health Services	376,000	---
Cutback required by P.L. 90-364	-80,000	
Total currently authorized for obligation	8,214,000	---
Plus: proposed release of reserves for increased pay costs	80,000	---
Proposed transfer of reserves created by P.L. 90-364 from "Community Mental Health resource support"	307,000	---
Total obligations	8,601,000	9,978,000
Disposition of cutback:		
To be used for pay costs in this account	80,000	
Total cutback	80,000	

Obligations by Activity

Page Ref.		1969 Estimate Pos.	1969 Estimate Amount	1970 Estimate Pos.	1970 Estimate Amount	Increase or Decrease Pos.	Increase or Decrease Amount
156	Immediate Office of the Administrator	41	$685,000	41	$685,000	---	---
156	Office of Program Planning and Evaluation.....	41	548,000	46	618,000	+5	+$70,000
156	Office of Information.....	62	911,000	62	911,000	---	---
156	Office of Legislation.....	13	198,000	13	198,000	---	---
156	Office of Administrative Management:						
156	Office of Assistant Administrator for Management.....	33	568,000	33	1,768,000	---	+1,200,000
156	Office of Buildings and Facilities.....	43	614,000	43	614,000	---	---
156	Office of Financial Management.....	115	1,565,000	119	1,612,000	+4	+47,000
157	Office of Grants Management.....	27	387,000	27	387,000	---	---
157	Office of Management Policy.....	22	353,000	22	353,000	---	---
157	Office of Personnel	104	1,371,000	104	1,371,000	---	---
157	Office of Procurement and Materiel Management.....	64	912,000	64	912,000	---	---
157	Office of Systems Management.....	22	489,000	22	549,000	---	+60,000
	Total obligations	587	8,601,000	596	9,978,000	+9	+1,377,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions	587	596	+9
Full-time equivalent of all other positions	2	2	
Average number of all employees	567	578	+11
Personnel compensation:			
Permanent positions	$6,712,000	$6,813,000	+$101,000
Positions other than permanent	12,000	12,000	---
Total personnel compensation	6,724,000	6,825,000	+101,000
Personnel benefits	480,000	486,000	+6,000
Travel and Transportation of persons	191,000	193,000	+2,000
Transportation of things	10,000	10,000	---
Rent, communications, and utilities	383,000	1,648,000	+1,265,000
Printing and reproduction	222,000	222,000	---
Other services	472,000	472,000	---
Supplies and materials	70,000	70,000	---
Equipment	49,000	52,000	+3,000
Total obligations by object	8,601,000	9,978,000	+1,377,000

SUMMARY OF CHANGES

1969 estimated obligations	$8,601,000
1970 estimated obligations	9,978,000
Net change	+1,377,000

Increases	Base Positions	Base Amount	Change from Base Positions	Change from Base Amount
A. Built-in				
1. Rent and other expenses related to Parklawn Building	---	---	---	$1,200,000
B. Program				
1. Office of Financial Management	115	$1,489,000	4	47,000
2. Office of Program Planning and Evaluation	41	523,000	5	70,000
3. Office of Systems Management	22	475,000	---	60,000
Total program increases	---	---	9	177,000
Total changes requested	---	---	+9	+1,377,000

EXPLANATION OF CHANGES

Office of Program Planning and Evaluation -- 5 positions and $70,000. Three positions will be to evaluate new programs and two for the overall planning systems staff.

Office of the Assistant Administrator for Management -- A mandatory increase of $1,200,000 for rental and related expenses incidental to occupancy of new headquarters building.

Office of Financial Management -- An increase of 4 positions and $47,000 to strengthen the budget reports section and the accounting function.

Office of Systems Management -- $60,000 for computer rental to cover full year costs of increases allowed in 1969.

Explanation of Transfers

	1969 Estimate	Purpose
Comparative transfers to:		
"Salaries and expenses, Office of the Secretary".....	$980,000	Transfer of Office of Surgeon General activities as part of the reorganization of the Department of Health, Education, and Welfare
"Salaries and expenses, Office of the Comptroller".....	426,000	Transfer of Office of Surgeon General activities as part of the reorganization of the Department of Health, Education, and Welfare
"Salaries and expenses, Office of Administration".....	2,028,000	Transfer of Office of Surgeon General activities as part of the reorganization of the Department of Health, Education, and Welfare
"Office of the Director, National Institutes of Health".....	51,000	Transfer of Office of Surgeon General activities as part of the reorganization of the Department of Health, Education, and Welfare
"Health Services Research and Development"	92,000	Transfer of Office of Surgeon General activities as part of the reorganization of the Department of Health, Education, and Welfare
"Salaries and expenses, Office of the Administrator" Consumer Protection and Environmental Health Services.....	242,000	Transfer of Office of Surgeon General activities as part of the reorganization of the Department of Health, Education, and Welfare

Comparative transfers from:		
"Chronic diseases"	554,000	Transfer of financial operations, personnel operations, information and grants functions as part of the formation of Health Services and Mental Health Administration
"Comprehensive health planning and services".....	102,000	For support of field liaison staff and financial operations transferred to the Office of the Administrator, Health Services and Mental Health Administration
"Community health services".....	1,638,000	Transfer of management fund activities and financial operations as part of the reorganization of the Department of Health, Education, and Welfare
"Communicable diseases".....	15,000	Transfer of financial operations
"Patient care and special health services".....	70,000	Transfer of financial operations
"Hospital construction activities".....	79,000	Transfer of financial operations
"Regional medical programs"...	75,000	Transfer of financial operations
"Saint Elizabeths hospital, salaries and expenses".....	15,000	Transfer of financial operations
"National health statistics".....	116,000	Transfer of financial operations and personnel function
"Salaries and expenses, Office of the Administrator", Consumer Protection and Environmental Health Services.....	376,000	Transfer of activities as part of reorganization of the Department of Health, Education, and Welfare
Proposed transfer from:		
Reserve balances of other accounts	307,000	To cover increased pay costs for Executive Order No. 11413 not covered by reserves set aside under P.L. 90-364 in this account

Salaries and expenses, Office of the Administrator

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$5,816,000	$5,816,000	$5,816,000	$5,816,000
1961	7,180,000	7,126,000	7,226,000	7,226,000
1962	5,275,000	5,275,000	5,375,000	5,375,000
1963	5,850,000	5,850,000	5,850,000	5,850,000
1964	6,140,000	6,111,000	6,111,000	6,111,000
1965	6,214,000	6,214,000	6,214,000	6,214,000
1966	6,648,000	6,648,000	6,648,000	6,648,000
1967	8,207,000	8,069,000	7,648,000	7,858,000
1968	9,087,000	8,358,000	8,358,000	8,358,000
1969	9,073,000	9,073,000	9,073,000	9,073,000
1970	9,978,000			

JUSTIFICATION
MANAGEMENT AND CENTRAL SERVICES

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel Compensation and Benefits						
Immediate Office of the Administrator....	41	$628,000	41	$628,000	---	---
Office of the Assistant Administrator for Management.....	33	344,000	33	344,000	---	---
Office of Buildings and Facilities.....	43	552,000	43	552,000	---	---
Office of Financial Management.....	115	1,418,000	119	1,461,000	+4	+$43,000
Office of Grants Management.....	27	350,000	27	350,000	---	---
Office of Information..	62	717,000	62	717,000	---	---
Office of Legislation..	13	182,000	13	182,000	---	---
Office of Management Policy.....	22	325,000	22	325,000	---	---
Office of Personnel....	104	1,225,000	104	1,225,000	---	---
Office of Procurement and Materiel Management.....	64	731,000	64	731,000	---	---
Office of Program Planning and Evaluation.....	41	474,000	46	538,000	+5	+64,000
Office of Systems Management.....	22	258,000	22	258,000	---	---
Sub-total.....	587	7,204,000	596	7,311,000	+9	+107,000
Other expenses.....		1,397,000		2,667,000		+1,270,000
Total.....	587	8,601,000	596	9,978,000	+9	+1,377,000

General Statement

This appropriation provides funds to support the Office of the Administrator, Health Services and Mental Health Administration, which was established by the reorganization of the health activities within the Department of Health, Education, and Welfare.

This organization is the policy, planning and support staff for the Administrator and includes the following organizational components:

Immediate Office of the Administrator
Office of Program Planning and Evaluation
Office of Information
Office of Legislation
Office of Administrative Management

The functions of each of these areas are shown below.

The Immediate Office of the Administrator provides direction and leadership for the execution of Federal responsibilities related to the conduct and improvement of physical and mental health services for the people of the United States; manages and directs the activities of the Administration; and advises on physical and mental health services for the U.S. Government both at home and abroad.

The Office of Program Planning and Evaluation is the Administrator's principal staff arm for program planning, coordination, and evaluation. This includes the development of program alternatives and policy positions.

The Office of Information plans, directs, and coordinates the information programs and health education activities of the Health Services and Mental Health Administration.

The Office of Legislation assists in the development of administration objectives, policies and programs, with particular reference to their relationship to statutory authorities and to congressional trends, attitudes and policies. It provides for legislative analysis and development through reports on pending bills, development of legislative program, and technical assistance to Committee staffs and members of Congress.

The Office of Assistant Administrator for Management formulates executive policy, advises on management implications of Administration plans and programs, provides Administration-wide leadership in all phases of management, and directs the administrative management components in the Office of the Administrator. It also brings together the following HSMHA-wide management support groups: Assistant Administrator for Management, Office of Buildings and Facilities, Office of Financial Management, Office of Grants Management, Office of Procurement and Materiel Management, Office of Personnel, Office of Management Policy, and the Office of Systems Management.

The Office of Buildings and Facilities provides leadership for improvement of and plans, directs, and coordinates facilities planning and construction programs. Provides guidance and technical assistance in design, construction, renovation, repair and related real estate activities for all HSMHA components.

The Office of Financial Management provides leadership and serves as the focal point for improvement and operation of the Administration's financial management activities. This includes budget, accounting and financial advice on grants and contracts.

The Office of Grants Management coordinates policy and procedure for the Administration's grant programs and evaluates grant management operations throughout HSMHA.

The Office of Management Policy provides staff services in management policy development and review, and provides leadership for and conducts management planning and appraisal programs.

The Office of Personnel provides leadership for improvement of, conceives and conducts or coordinates, Administration personnel management programs. It develops policies, procedures and standards for personnel programs and operations; advises the Administrator, the Assistant Administrator for Management and other Administration officials on personnel management; and maintains liaison with the Office of the Secretary, the Civil Service Commission, and other agencies concerned with personnel management.

The Office of Procurement and Materiel Management provides leadership for improvement of, and conducts or coordinates, Administration procurement and materiel management programs. It also interprets regulatory issuances and provides guidance and technical assistance in these areas, and maintains liaison with the Office of the Secretary, the General Services Administration, and other agencies concerned with procurement and materiel management activities.

The Office of Systems Management provides leadership and advice in developing systems specifications and develops and coordinates Administration-wide programs for determining requirements for utilization of data systems.

We are requesting a total increase of $1,377,000. An increase of $1,200,000 is for rent and related expenses incidental to occupancy of the new Parklawn Building. This building is being constructed for the Federal Government and will bring together HSMHA activities which are presently scattered throughout the Washington metropolitan area. The expense breakdown follows:

Rent for 6 months	$1,000,000
Other expenses related to the building	200,000
Total	$1,200,000

The remaining $177,000 is for the following program increases:

1. Five positions and $70,000 in the Office of Program Planning and Evaluation

2. Four positions and $47,000 in the Office of Financial Management

3. Computer rental of $60,000 in the Office of Systems Management to cover full year costs of increases allowed in 1969.

Five of the additional nine positions are requested for the Office of Program Planning and Evaluation. This office is the key organizational component in the Office of the Administrator to which he will turn for the planning, development and evaluation of the Administration's mission and program. This aspect of the Administrator's task has his highest priority.

A corollary opportunity is created by the Congressional authorization to devote one percent of the grant funds for several of the key programs of HSMHA to the analyses of those programs in which this authority resides. This effort will be coordinated on the Administrator's behalf by the Office of Program Planning and Evaluation. This coordination will include mapping the general strategy for these evaluations, assessing the implications of each of the separate program evaluations, and extrapolating the results for purposes of evaluating HSMHA-wide progress and determining further areas to be studied.

In distributing the five positions requested, one will be concerned with evaluations pertaining to Disease Control and Statistics; one with Mental Health and Direct Services; one with Organization and Delivery of Health Services; and two would be assigned to the over-all planning systems staff for analyzing and interpreting program data.

The increase of four positions requested for the Office of Financial Management includes two positions for budget and two for accounting. Extensive budget intelligence is of vital importance to the Office of the Administrator. Information is needed to assess the budgetary implications of current operating decisions and their effect on long-range plans. More detailed and informative analyses are needed to determine that funds are spent as intended by the Congress and in accordance with priorities set by the Administrator. The fiscal program data must be correlated and shaped into comprehensive reports to stress program relationships and trends rather than isolated facts. The two requested budget positions will provide an increased capability directed toward this analysis and interpretation of financial data.

The accounting workload has increased significantly in recent years. There are an increasing number of accounting reports required both Government and Department wide. This additional workload, plus the even more significant one of converting the HSMHA accounting structure to an accrual accounting system and installing it in 31 accounting points throughout the country, requires increased staff capability in the accounting area. The two additional accounting positions requested will be directed toward this enhanced reporting and conversion effort.

New Positions Requested
Fiscal Year 1970

	Grade		Annual Salary
Office of Financial Management			
Financial Analyst	GS-13		$14,409
Budget Analyst	GS-12		12,174
Accountant	GS-11		10,203
Financial Analyst	GS-9		8,462
		(4)	45,248
Office of Program Planning and Evaluation			
Planning Officer	GS-14		16,946
(3) Program Analyst	GS-13		43,227
Secretary	GS-6		6,321
		(5)	66,494
Total new positions, all activities		(9)	111,742

TUESDAY, MARCH 25, 1969.

HOSPITAL CONSTRUCTION

WITNESSES

DR. HARALD M. GRANING, DIRECTOR, HEALTH FACILITIES PLANNING AND CONSTRUCTION SERVICE
JOHN J. MOSCATO, SPECIAL ASSISTANT, HEALTH FACILITIES PLANNING AND CONTRUCTION SERVICE
DR. JOSEPH T. ENGLISH, ADMINISTRATOR
IRVING J. LEWIS, DEPUTY ADMINISTRATOR
CHARLES MILLER, DIRECTOR, OFFICE OF FINANCIAL MANAGEMENT
JAMES B. CARDWELL, DEPUTY ASSISTANT SECRETARY, BUDGET

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

	1968 actual	1969 estimate	1970 estimate
Personnel compensation:			
Permanent positions	2,831	2,926	3,126
Positions other than permanent	55	50	40
Total personnel compensation	2,886	2,976	3,166
Personnel benefits: Civilian employees	256	290	306
Travel and transportation of persons	200	230	228
Transportation of things	5	5	5
Rent, communications, and utilities	99	90	80
Printing and reproduction	69	70	60
Other services	174	175	125
Supplies and materials	35	35	35
Equipment	10	10	10
Grants, subsidies, and contributions	274,750	267,665	264,660
Total obligations	278,483	271,546	268,675

PERSONNEL SUMMARY

Total number of permanent positions	275	248	258
Full-time equivalent of other positions	5	4	3
Average number of all employees	257	241	251
Average GS grade	6.8	6.9	7.0
Average GS salary	$8,044	$8,700	$8,794

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

Program by activities:			
1. Construction:			
(a) Hospitals and public health centers	95,041	109,220	107,316
(b) Long-term care facilities	61,053	55,816	54,836
(c) Diagnostic or treatment centers	15,111	16,856	15,884
(d) Rehabilitation facilities	10,767	9,653	10,504
(e) Modernization	51,054	76,120	76,120
2. Operations and technical services	3,762	3,881	4,015
Total program costs, funded [1]	236,788	271,546	268,675
Change in selected resources [2]	41,695		
Total obligations	278,483	271,546	268,675
Financing:			
Comparative transfers to other accounts	24,937	1,548	
Unobligated balance available, start of year	−260,427	−228,494	−213,760
Unobligated balance transferred from other accounts	−3,371		
Unobligated balance transferred to other accounts	23,381		
Unobligated balance available, end of year	228,494	213,760	203,500
Unobligated balance lapsing	1,990	8	
Budget authority	293,487	258,368	258,415

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)—Continued

	1968 actual	1969 estimate	1970 estimate
Budget authority:			
Appropriation	293,357	258,368	258,415
Transferred from other accounts	130		
Appropriation (adjusted)	293,487	258,368	258,415
Relation of obligations to outlays:			
Obligations incurred, net	303,419	273,094	268,675
Obligated balance, start of year	496,498	540,739	581,704
Obligated balance, end of year	−540,739	−581,704	−569,917
Adjustments in expired accounts	−658		
Outlays	258,520	232,129	280,462

[1] Includes capital outlay as follows: 1968, $10,000; 1969, $10,000; 1970, $10,000.
[2] Selected resources as of June 30 are as follows: Unpaid undelivered orders. 1967, $1,226,000 (1968 adjustments −$635,000); 1968, $41,179,000; 1969, $41,179,000; 1970, $41,179,000.

Mr. FLOOD. Now we will have the hospital construction program, and Dr. Harald M. Graning as the principal witness.

Dr. Graning is listed as the Director of the Health Facilities Planning and Construction Service.

You are an Assistant Surgeon General, I see. You are not an engineer, of course.

Dr. GRANING. No, sir.

Mr. FLOOD. You are a doctor of what?

Dr. GRANING. Medicine.

BIOGRAPHICAL SKETCH OF PRINCIPAL WITNESS

Mr. FLOOD. We will place your biographical sketch in the record. (The biographical sketch follows:)

Name: Harald M. Graning, M.D.

Position: Assistant Surgeon General; Director, Health Facilities Planning and Construction Service.

Birthplace and date: Minneapolis, Minn., February 14, 1912.

Education: B.S. University of Minnesota; B.M.-M.D. University of Minnesota; M.P.H. Johns Hopkins School of Hygiene and Public Health.

Experience: Director, Health Facilities Planning and Construction Service, Washington, D.C., October 1963 to present; regional health director for the New York region, 1958–63; regional medical director, USPHS, Chicago, 1951–58; Chief, State and Local Health Services, USPHS, Washington, D.C., 1948–50; Cancer control consultant, USPHS, New Orleans, La., 1947–48; Director, Division Local Health Services, Georgia Department of Public Health, Atlanta, Ga., 1945–47; civil affairs (military government) Princeton University, 1944–45; USPHS Plague Laboratory, San Francisco, Calif., 1942–43; director, Kitsap County Health Department, Bremerton, Wash., 1941; Hospital Service and Quarantine, San Pedro, Calif., 1938–40.

Association memberships: American Medical Association, American Hospital Association, the American Association of Military Surgeons, the American College of Preventive Medicine, and a member of the governing council of the American Public Health Association.

Special awards, citations, or publications: In November 1963, was awarded the Meritorious Service Medal of the Public Health Service Commissioned Corps.

Mr. FLOOD. I see you have a statement, Doctor. How do you wish to proceed?

Dr. GRANING. With your permission, sir, I would like to read it.

Mr. FLOOD. As usual, we will do what you want to do. You may proceed, Doctor.

General Statement

Dr. Graning. Mr. Chairman and members of the committee, I am privileged to appear before you to discuss the continuing need for assistance from the Federal Government in building a limited number of additional beds and in combating the functional and structural obsolescence of our Nation's hospitals—thus improving their health care capabilities.

Although technological advances have made health care of outstanding quality a possibility, such care is most certainly not as yet available to large segments of our population. It is encouraging that the highest quality health care is available to some members of all socioeconomic income groups, but we fall far short both in terms of availability and quality in many sections of the United States.

As many Members of the Congress are well aware the Hill-Burton program during its initial years did much to improve the distribution of medical care by participating in the erection of hospitals in rural sections that were completely without health care facilities. During recent years technological advances have increased the lifesaving potential of properly trained manpower when functioning in appropriately equipped facilities. Fortunately concurrent advances in transportation and communication—via highways and electronic devices—have permitted the concentration of health care personnel in relation to effectiveness. This concentration of health care personnel is highly desirable because of the greater effectiveness with which health care services can be delivered.

State Hill-Burton agencies have been having increasing success in encouraging the construction of hospitals that are designed to achieve high quality care with increasing functional efficiency.

There has been extensive discussion of the capitalization needs of health care institutions. Although the national need of $10 billion may appear to be staggering, it should be emphasized that funds spent for modernization have the potential of reducing the length of hospital stay by eliminating delays attributable to inadequate laboratory, X-ray, or surgical facilities.

Much has been accomplished during the past two decades of Federal, State and community planning efforts toward achieving a better balance of health facilities However, some communities have adequate acute care facilities but are in need of long-term care facilities. Other communities have sufficient acute and long-term care services, yet have insufficient ambulatory care or home care services. Greater efforts on the part of the Federal-State community partnership are being made to achieve a balanced health facility system, integrated in a functional sense, and capable of delivering health care in a mutually complementary manner.

HILL-BURTON CONSTRUCTION ACTIVITIES

The funds requested would provide $109,000,000 for hospitals and public health centers, $63,600,000 for long-term care facilities, $18,200,000 for diagnostic or treatment centers, $9,100,000 for rehabilitation centers and $54,500,000 for modernization of hospitals and other health facilities. The latter amount will be directed to functionally and structurally obsolete health facilities, especially to the modernization

and replacement of hospitals in urban areas. The problem of modernization becomes more critical when one considers that these urban areas are also the centers of many of the Nation's health teaching and health research facilities. In part, the need for modernization can be traced to the fact that many of the Nation's hospitals were built during the 1920's. On the other hand, portions of hospitals built as recently as 20 years ago are now functionally obsolete in part because of the rapid advances made in medical care and the demands these advances have made for new equipment and more efficient physical plants.

The amount requested for the construction and expansion of hospitals and public health centers will be primarily directed to two areas of need: communities experiencing population growth, and to areas with stable populations where the existing need has not been met. Secondly, the construction and expansion of public health centers will aid in increasing the average community's ability to practice an important element of health care—prevention. While much has already been accomplished in these areas, it is necessary that we continue to upgrade the health services presently available by providing or expanding facilities from which acute and preventive health care can be effectively and economically delivered.

The continued pressures upon general hospital bed usage and the concurrent rise in per diem hospital costs necessitates renewed efforts to encourage those types of health facilities that permit the delivery of health care outside of the general hospital bed. The amounts requested for diagnostic and treatment facilities, long-term care facilities, and rehabilitation facilities will aid in mitigating these pressures by encouraging the direction of more health care to outpatient, long-term care and rehabilitation. Equally important, assistance directed to these facilities along the hospitals and public health centers will assist in providing a comprehensive range of full spectrum of health services.

OPERATIONS AND TECHNICAL SERVICES

The $4,015,000 requested for operation and technical services is essential to the continuation of the Federal Government's leadership in the planning, designing and construction of health facilities. The professional and technical staff to be supported by this request would be engaged in the review and approval of documents required by legislation, such as the State plans, project applications, and architectural drawings and specifications. In addition, this staff develops guide material relating to the planning, construction and operation of health facilities, and equally important, the staff provides technical assistance and consultation to State agencies, project sponsors and other members of the health community regarding all aspects of program administration. The amount requested under this activity represents an increase of $134,000 and 10 positions. The increase in personnel is a reflection of the need to continue and improve the activities mentioned earlier, especially predesign conferences on more efficient health care, and to provide the necessary assistance in the administration of several recently enacted health facility construction programs.

The total request for activities in this budget of $258,415,000 includes $254,400,000 for Hill-Burton construction and $4,015,000 for operations and technical services.

Gentlemen, I thank you. I would be pleased to answer any questions concerning the Hill-Burton program and this budget request, or to provide the answers for the record.

ANNOUNCEMENT OF GRANT AWARDS

Mr. FLOOD. I have a question which probably does not deal with your presentation, but I just came from a luncheon given by the beloved and distinguished gentleman from South Carolina, Mr. Rivers, chairman of the Armed Services Committee, in honor of the Speaker. I walked in there a bit late because of our hearings, and I was jumped by two senior and distinguished Members of this House, one a Republican and one a Democrat.

From what I gather there was announced in a local paper in this State that somebody in the State capital—and they had newspaper pictures and clippings—announced that Hill-Burton funds had been allocated, or awarded, to this facility. Apparently the area it serves overlaps the districts of these two Members of the House.

The responsible local officials and the responsible State officials went on to praise the local administrator, the local chamber of commerce, a local State senator, and so forth, but never mentioned these Members of Congress. This is a sore point with them. In this case, however, they did not mention the Members of the other body, which is a rarity. The White House was not involved in this, they tell me. In what way could you win Brownie points, and you need them, with Members of the House in making sure that at someplace, sometime, somewhere, I could assure these Members that they might be mentioned as Members of Congress identified with appropriating funds for such a facility. Could you do that? This is not the first time I heard about this.

Dr. GRANING. Mr. Chairman, it may be of interest to you——

Mr. FLOOD. Apparently this is more of a problem in the Northwest and West than anyplace else. I do not know why. I never had the problem myself.

Dr. GRANING. It may be of interest to you and members of the committee to know that as a matter of routine operating practice the Congressional Liaison Office of the Department is advised——

Mr. FLOOD. What Department?

Dr. GRANING. HEW is advised by our Office, and the Congressman in whose district a grant is going to be approved is advised.

Mr. FLOOD. By the State?

Dr. GRANING. By the Congressional Liaison Office prior to notification of the State agency.

Mr. FLOOD. But I repeat to you for the purpose of emphasis that I saw a newspaper story with pictures an hour and a half or 2 hours ago where this was not done.

Dr. GRANING. This was a presentation at a dedication or cornerstone laying?

Mr. FLOOD. No; announcement by some State official that the funds were going to be allocated. Federal funds, I forget the amount, were going to be allocated to this institution. In this paper—it was a weekly paper, by the way, which makes it worse—they went on at some length to heap praise on everybody including the local constable, except these two well-known Members who are both involved with this hospital. What can you do about that, or is that somebody else's job?

Dr. GRANING. If you feel that you could let us have the details——

Mr. FLOOD. Certainly not.

Dr. GRANING (continuing). Of the area involved.

Mr. FLOOD. Of course not.

Dr. GRANING. We would deal with the State agency in terms of preventing a recurrence.

Mr. FLOOD. Certainly not. You know better than that. I just point out to you that there is something wrong with your communications. This story very flatly, with a big headline, carried the statement that the State was awarding Federal funds, X dollars, to this hospital. Do you have to approve that allocation? The question asked me was. Must you act on it, or is it final now without any imprimatur from you? They want to know this. If I call you or have the staff call you, is there any way that you finally approve whatever these State people did so that they can say they were advised by you, or somebody here, that this had been done?

Dr. GRANING. Sir, may I say again that the Congressmen are notified before the State agency.

Mr. FLOOD. This is not true, they are not, period.

Dr. GRANING. As I understand the chairman's statement, the publicity did not make reference to the Congressmen.

Mr. FLOOD. That is correct.

Dr. GRANING. But the Congressmen should have been notified, I should say. The machinery that is established for notification of Congressmen should have taken care of the notification prior to the notification of the State agency.

If this did not occur, I am sorry but the standard operating procedures is that the Congressman is notified before the State agency.

Mr. FLOOD. Both of these fellows are not boys, or they would not have been at that luncheon, if you follow me.

Dr. GRANING. Yes, sir.

Mr. FLOOD. Have one of your people check on this kind of thing. There is something wrong someplace.

Dr. GRANING. Thank you, sir.

Mr. FLOOD. I am sure if it happened once, it must happen again. I personally have never had that experience.

ADDITIONAL POSITIONS REQUESTED

What do you want with 10 additional jobs when your program is going down?

Dr. GRANING. The program is getting better all the time, sir. It is getting better because of the active involvement and the complexities that we are bumping into now in terms of modernization needs, and the accomplishments that we are striving for in terms of encouraging sharing between health care facilities. This represents the first request for additional personnel that we have made in 4 years. The 10 positions are related to our responsibilities.

Mr. FLOOD. I wondered about that, too.

Dr. GRANING. This relates to our responsibilities in connection with the Allied Health Professions Act, the Appalachian Development Act, and the services that we are going to be performing for the Vocational Rehabilitation Administration in terms of the administration of some construction projects.

PAYMENTS FOR DEPRECIATION UNDER MEDICARE

Mr. FLOOD. Let us take a look at the medicare program. Do you have any figures to show how much money Uncle Sam is putting into hospital and nursing home construction and modernization through medicare payments?

Dr. GRANING. In 1968 the figure was about $285 million.

Mr. MICHEL. For what?

Dr. GRANING. For payments made for depreciation.

Mr. FLOOD. And amortization?

Dr. GRANING. Yes, sir; $285 million.

Mr. FLOOD. Is that bad or good; $285 million for that purpose is not a black mark; is it?

Dr. GRANING. This is the extent to which the program paid for depreciation costs.

Mr. FLOOD. Then you think it is, or are you merely reporting the facts?

Dr. GRANING. I was reporting the fact, sir.

FUNDS FOR MODERNIZATION

Mr. FLOOD. That is a good thing to do.

On page 45 you say: "The largest single need in terms of cost is to modernize the Nation's health facilities." You certainly won't get in wrong by making that statement. The only trouble with it is that right above it you show you are asking for $109 million for new construction, and $54,500,000 for modernization.

Dr. GRANING. Yes, sir.

Mr. FLOOD. Is this your fault? Are you being inconsistent, or are you handcuffed by law?

Dr. GRANING. This represents the maximum amount that could be asked for under a request of this budget.

Mr. FLOOD. Are you stuck by the law?

Dr. GRANING. We are, sir. The distribution between new construction and modernization means that the modernization amount for this year may not exceed one-third.

PROPOSED CHANGES IN HILL-BURTON LEGISLATION

Mr. FLOOD. You are running out of time on Hill-Burton. The present authorizing legislation expires at the end of fiscal year 1970. Do you expect to propose—or have you proposed—any major changes in it, and what sort of changes? You and I know the hearings are going on right now on this. What do you have to say about it?

Of course, we know it will be renewed. This is an extraordinary program. Even its fondest parents had no idea it would go as far as it has.

Have you proposed any changes?

Dr. GRANING. As the chairman has indicated, this is the first day of some hearings which we anticipate will extend for some time.

Mr. FLOOD. Yes, they shall.

Dr. GRANING. We have reason to believe that there is extensive concern about the best approaches to the capital financing needs of our Nation.

Mr. FLOOD. That is true. What about you?

Dr. GRANING. Many proposals have been developed.

Mr. FLOOD. What do you propose?

Dr. GRANING. The administration proposal——

Mr. FLOOD. I am talking about you. The administration leaves me cold. I have been through administrations like Tennyson's Brook. I think this is my sixth or seventh. I am talking about what do you think?

Dr. GRANING. It is my conviction that any approach to capitalization needs at the present point in time must take appropriate cognizance of the opportunities and the limitations that are available in terms of reimbursement financing for medicare and medicaid. It should also take into consideration the variation that prevails between the ability of some sections of the United States, particularly depressed areas, to fund or meet capitalization needs. There has been a serious deficiency in the existing Hill-Burton program, one that I strove valiantly to try to correct in 1964. This has been——

Mr. FLOOD. You strove valiantly?

Dr. GRANING. I thought I did.

There has been a recognition for some time that in allocating money to States on the basis of the per capita income of the State, a State as a whole might be relatively wealthy, but there are depressed areas within the State. Thus although the Federal participation percentage has ranged from one-third to two-thirds depending upon the wealth of the State, it has been difficult for some depressed areas.

Mr. FLOOD. That sounds like New York or Pennsylvania.

Dr. GRANING. Yes, sir. I served as regional medical director in the New York region so I am familiar with some of the problems of Pennsylvania.

Mr. FLOOD. Yes, I know that.

As of now New York and Pennsylvania are getting the short end of things.

Dr. GRANING. The point I am making is that there are depressed areas in Pennsylvania in which people would have to raise two-thirds of the money through their own resources to get a federal share.

Mr. FLOOD. Of course, you know that I am from one.

Dr. GRANING. In like manner States like Alabama.

Mr. FLOOD. Did you say you knew?

Dr. GRANING. That you are from Wilkes-Barre?

Mr. FLOOD. Yes.

Dr. GRANING. Yes, I know this very well. In contrast with the situation in Pennsylvania there are States like Alabama in which there are wealthy communities in a State that is relatively poor. Thus people living in such communities have a Federal participation percentage of 66⅔ percent. We would hope that in new legislation it would be possible to make provisions so that communities could get needed capital financing through a grant and loan approach for the health care facilities that they need. Appropriate cognizance should be taken of the need and the problems involved in raising the local share.

IMPROVING HOSPITAL DESIGN

Mr. FLOOD. It is interesting that the great State of New York and the great Commonwealth of Pennsylvania, and so on, would be having

difficulties. We, and a few like us, have been taking care of these other States for a long, long time in this specific area for the reasons you have just stated very well. Let me ask you this: What about hospital construction plans, designs, the modern concept, the new thinking ahead? Are you going to permit these local moth-eaten amateurs to continue to construct these medieval buildings that are obsolete when they are built, just because they have been building them that way from their grandfather's time?

Dr. GRANING. To be sure, sir, there are still some hospitals being designed and built in some sections of the United States that have not taken advantage of all of the technical information available, but it is nonetheless gratifying to know that there are some places in the United States where they are building some excellent health care facilities.

Mr. FLOOD. I am amazed.

Dr. GRANING. I had an opportunity relatively recently to visit in Holland, Mich., a place that was called the McPherson Health Center. It was not called a hospital but a health center. It represented the collective contributions of all the people in the county who had set up a board to appraise what they had and then ultimately what they wanted.

Mr. FLOOD. I agree this is an example of what should be done. What about the mossbacks and the stuffed shirts who won't and don't in most of the country, and insist upon annexing wings to clearly obsolete buildings, with nurses needing roller skates—going half a mile to bring somebody a bedpan. Can you do anything about that?

PROPOSED AMENDMENTS TO HILL-BURTON ACT

Dr. GRANING. We do not participate in the modernization of any health care facility unless we have appraised the relative cost of abandoning it and building a completely new one, or renovating the facility that is there. If the facility is structurally sound, represents a substantial investment, and the additional health care facility need is relatively small, as when a small addition is needed, then the people of the community are not willing to abandon their facility, no matter how differently they would have built it had they been starting from scratch.

Mr. CARDWELL. Mr. Chairman, may I interrupt?

On the question of the successor legislation to the current Hill-Burton——

Mr. FLOOD. I am speaking about the medieval fortresses that are built under this program.

Mr. CARDWELL. Yes, sir.

Mr. FLOOD. Don't you remember those things?

Mr. CARDWELL. Yes, sir.

Mr. FLOOD. In the Defense Department we have eliminated all these things. We do not build National Guard armories with great turrets that are utilized largely for charity balls and such unmilitary activities. I do not know whether you can do anything about these hospitals.

I would like to hear you.

Mr. CARDWELL. I want to make mention of the fact that the administration has taken a position on successor legislation to the current Hill-Burton legislation, and they made their recommendations known to the Congress this morning in a presentation before Congressman

Rogers' committee. We would be glad to furnish members of this committee with the under Secretary's statement, if you would like.

Mr. FLOOD. I think what you should do is this: Suppose that you insert at this point in the record, following this line of examination, in view of the fact that the hearings by coincidence are now going on at this very minute, a summary of some sort of that position.

Mr. CARDWELL. Yes, sir.

(The information follows:)

SUMMARY OF MEDICAL FACILITIES CONSTRUCTION AND MODERNIZATION AMENDMENTS OF 1969 (HEW DRAFT BILL)

LOAN GUARANTEE FOR MODERNIZATION AND CONSTRUCTION

Provides for guarantee of loans to nonprofit private agencies for modernization or construction of hospitals, facilities for long-term care, rehabilitation facilities, and diagnostic, or treatment centers.

(*a*) Amount guaranteed, when added to any grant or loan under the program, may not exceed 90 percent of the cost of the project; guarantee may not apply to over 90 percent of loss of principal and interest.

(*b*) The maximum on the principal of loans with respect to which guarantees may be issued could not exceed amount specified in appropriation acts and in no event could it exceed $500 million for fiscal year 1970 (increased by $500 million in each of the next 2 years); total available for any year allocated among States on basis of population, financial need, need for modernization of facilities, and need for construction of facilities.

(*c*) Fund established to make the payments called for under the program; includes borrowing authority.

(*d*) Applications for loan guarantees must be approved as in the case of applications for grants under existing program, but with the requirements modified as indicated below.

(*e*) Up to one-half percent of unpaid principal of loan imposed as premium for guarantee.

(*f*) HUD hospital mortgage insurance program terminated.

GRANTS FOR CONSTRUCTION OR MODERNIZATION OF FACILITIES

Authorizes appropriations of $150 million for fiscal year 1970 and such sums as necessary for next 2 years, for grants for construction or modernization of medical facilities (including diagnostic or treatment centers).

(*a*) Appropriations divided into 2 parts.

(1) Eighty percent of appropriation allotted among States for grants for projects for modernization or construction of public health centers and public or nonprofit private long-term care facilities, rehabilitation facilities, and diagnostic or treatment centers; allotment to be made on basis of relative population, financial need, need for modernization of above facilities, and need for construction thereof; also provides for reallotment of portions remaining unobligated after specified period.

(2) Provides Federal share determined by State with a maximum of 66⅔ percent or State's allotment percentage (based on relative State per capita income), if lower, except that if the allotment percentage is less than 50 percent (it could be as low as 33⅓ percent), it is presumed to be 50 percent; also in cases of rural or urban poverty areas or other specially justified cases the maximum is 90 percent.

(3) Applications for grants must be approved as in the case of applications for grants under existing program, but with the requirements modified as indicated below.

(*b*) Twenty percent of appropriation available for direct grants by Secretary for up to 90 percent of cost of modernization or construction of public health centers and public or other nonprofit long-term care facilities, rehabilitation facilities, and diagnostic or treatment centers which are of special national significance because they meet needs of disadvantaged or demonstrate new or particularly effective or efficient methods of delivery of health care.

(1) State Hill-Burton agency has 30 days to disapprove project in its State.

(c) Existing Hill-Burton program of separate allotments to States for five different categories of public or nonprofit private facilities—four are for construction of (*i*) hospitals and public health centers, (*ii*) facilities for long-term care, (*iii*) rehabilitation facilities, and (*iv*) diagnostic or treatment centers, and the fifth is for modernization of the aforementioned facilities—ended with close of fiscal year 1969 instead of, as now in the law, the close of fiscal year 1970.

MODIFICATIONS IN REQUIREMENTS OF EXISTING LAW

(*a*) State plan must be approved by the comprehensive health planning agency of the State (designated under the partnership for health program, sec. 314(a) of the Public Health Service Act).

(*b*) Instead of requirement that State plan provisions on determination of need and priority of projects be subject to criteria set forth in regulations of Secretary, including special priority consideration for rural area hospitals, State plan must merely show methods of determining need and priority which provide reasonable assurance of approval of projects in order of relative need and in furtherance of purposes of the new legislation.

(*c*) State agency must consider recommendations of areawide planning agency before approving project.

OTHER MODIFICATIONS OF EXISTING LAW

(*a*) Extends program to Trust Territory of the Pacific Islands.

(*b*) Makes authority to waive Federal right of recovery in case a project ceases to be a public health center or a public or other nonprofit hospital, diagnostic or treatment center, facility for long-term care, or rehabilitation facility—which waiver authority may be exercised if there is good cause for so doing—applicable to cases which arose before the 1964 amendments, which first authorized this waiver.

(*c*) Amends definition to make it clear that diagnostic or treatment centers (including community health centers) may be for ambulatory patients whether they are inpatients or outpatients. Also broadens this category to include nonprofit private center serving poverty area, as well as center which is run by a hospital or is publicly operated.

(*d*) Provides that maximum on the portion of any allotment for grants which may be used for paying up to one-half the cost of State plan administration shall be the lesser of 4 percent or $100,000 (present maximum is 2 percent or $50,000).

(*e*) Non-Federal share of cost of project under loan guarantee program, special need cases under the program of State allotments from which grants for projects are made, and under the direct Federal grants program can be met by contributions of materials, facilities, equipment, and services.

CIRCULAR HOSPITAL AT ROCHESTER, MINN.

Mr. MICHEL. Following up very closely on the last point you were making, Mr. Chairman, our good right hand here, Mr. Moyer, has reminded me of the communication from the Rochester Methodist Hospital way back in 1961 when your distinguished predecessor and Chairman of the committee, Mr. Fogarty, had such an interest in this whole business of moving to more modern facilities.

Mr. FLOOD. I remember that.

Mr. MICHEL. That is nearly 9 years ago. I remember some of the specifics that they were talking about then. Because of this cylindrical type hospital they had in mind up there at Rochester, there were supposed to be some surprising and astounding savings realized. As I recall the information we received, a patient requiring three special duty nurses around the clock paid $54, at that time, a day, plus a room charge of an average of $20 or a total of $74.

In a circular unit equal or superior care could be given for a total of $36 per day, a savings of $38 a day. Question No. 1, did we ever get

that circular hospital built? Didn't we have some Hill-Burton money in that?

Dr. GRANING. Yes, this hospital was built and opened in September 1966.

As has been indicated, the group at Rochester was very interested in the circular design and study has since been made in terms of operating costs of a circular design. Although the study favored the circular unit, it is questionable whether the advantages cited by the study will outweigh the many advantages of the well-designed double corridor arrangements. The double corrider, while requiring more corridor area, provides for space for treatment area, which is not normally found within the perimeter of the circular nursing unit. It reduces the nurse travel distance. And is considered by many to be more efficient.

At the present time the double-corridor design is most often selected for new hospitals. In short, sir, the circular design has not worked out nearly as well as the proponents had thought it would. However, since we mentioned Rochester, Minn., we are very pleased to be able to report that at about the same time we initiated a study with the Mayo Foundation group which has now been completed. For many years it has been customary to permit only the use of outside air in operating rooms. Fresh air had to be taken in from the outside. No recirculated air could be used. Our architectural and engineering people working with the group at the Mayo Foundation have completed a study on the use of recirculated air. They took the neurosurgical unit of the Mayo Clinic as the test area and have found to our great delight that it is possible to recirculate air using filters, and achieve better air than outside air. This has substantial economic impact or import, rather, for those sections of the United States in which it is necessary to heat the air in the winter time or cool it in the summer.

Mr. MICHEL. You mentioned this new double-corridor concept. Are there any other striking differences or improvements in design that we can mention?

Dr. GRANING. Not as far as the nursing unit itself is concerned, sir.

ALLIED AGENCIES CENTER AT PEORIA

Mr. MICHEL. Incidentally, while on the subject of new construction and new design, you are familiar, are you not, Dr. Graning, with the allied agencies project out in my home district? You folks provided a million and a half dollars and we locally have raised one-third of the money, plus some more now, finally finishing that wonderful facility. Have there been any other inquiries from around the country on pursuing this approach?

Dr. GRANING. There have not as yet but we would anticipate that there might very well be. The facility, as you know, was completed on November 15, 1968, and it now has a daily caseload of about 500 persons. It uses a staff of 90. There are these nine agencies, private and public organizations that are housed there. It has certainly enhanced their ability to work with one another.

Mr. MICHEL. This is the first time, is it not, that we have been able to bring together under one roof the Cystic Fibrosis Research Foundation, the Cerebral Palsy people, the Crippled Children's Center, the Association for Retarded Children, the Mental Health Clinic, the

Arthritis Foundation, the Council on Alcoholism, and the Community Workshop & Training Center. When the final inspection from your shop was taking place as I went around during the course of that inspection to take a good firsthand look at this facility myself, I realized when you are bringing all these groups together that would like to keep their self-identification, it tends to be kind of a rambling place, each with their little niche. My wife, who does considerable volunteer work, argues that this is inefficient. How do you find your way around? If we could have gotten them to melt everything together, and none of them wanted to be a self-entity to themselves, maybe by design the building could have been one of more vertical nature rather than horizontal and maybe some costs could have been cut. You were obviously satisfied with the design of it when it was presented Dr. Graning. Have you any comments for the future, critical or otherwise? Should there be some improvements in design? Have you had enough opportunity to get a real read-out on it?

Dr. GRANING. The facility would not have been possible in the first place had those who were responsible for developing it not been sensitive to the strong preferences that some of the groups had for the kind of facility that could best meet their needs. To be sure in terms of taking a look at the entire facility, it does look a little complicated, but as far as the people who use it are concerned, it should be remembered that no one person who comes to this facility is going to have a need for going to all nine agencies. There will be some people who will have to be seen or can be seen very conveniently by two different agencies that are now housed together, whereas heretofore they were scattered in different parts of your community, as you well know. So from the standpoint of the agencies themselves it has enhanced their ability to work together and to share information about the problems they are working with.

Mr. MICHEL. Just further for the record, we do have an appreciable cutting of costs here.

For example, a shared switchboard is in effect, and one agency might be short of a wheelchair and it is right there and the other group can borrow it. Most of the furniture and equipment inside is of an adjustable, portable nature.

Personally, I am sold on it and am looking forward to a formal dedication sometime soon, and hope to get our chairman to come see firsthand what that facility is like. After we get some more landscaping done we hope to have that dedication around May or so. I want the other committee members to know about it at that time because it is considered to be a very fine project for the rest of the country.

HILL-BURTON MATCHING FORMULA

Doctor, you mentioned this variance in the formula from a third to two-thirds; what is the factor that determines whether or not a given State is going to get a third contribution or two-thirds?

Dr. GRANING. The per capita income of the State.

Mr. MICHEL. You developed here with the chairman that is not altogether a fair proposition within given States when there is such a wide disparity of that per capita income in various sections of the State.

Dr. GRANING. Yes, sir.

Mr. MICHEL. Are they addressing themselves to this? Do you know currently in the hearings whether they are addressing themselves to this particular problem?

Dr. GRANING. There is an effort being made to increase the Federal participation percentage; yes, sir.

Mr. MICHEL. And variable within a State.

Dr. GRANING. It has always been true in the Hill-Burton program that the States have had the option of having a variable percentage. We have encouraged them to do this. States have been reluctant to do it. There has been only one State, I think, that does at the present time, and that is the State of Michigan.

Mr. MICHEL. How much of a variable does the State have now?

Dr. GRANING. The States have had the option of developing a sliding scale, and we would have approved this had they submitted it.

In a State whose per capita income figure would give it a one-third allotment, the State could give up to two-thirds of the project if it wanted to do so. The problem has been, as far as the States are concerned, that they have felt that there has not been a good equitable barometer of financial need that could be applied to a particular area. Attempts have been made at using such things as sales units, the evaluation of property, and the per capita income. All such factors are of interest when you are talking about a service area, but since service areas are sometimes not contiguous with the political boundaries of counties it is very difficult to obtain meaningful data.

ALLOCATION OF FUNDS AMONG PROGRAMS

Mr. MICHEL. In the breakdown of these figures you mentioned in your testimony $109 million for hospital and public health centers, $63.6 million for long-term care facilities, $18.2 million for diagnostic and treatment centers, and so forth.

Who makes the determination as to how this whole package is going to be broken down into those increments? How do you arrive at those figures?

Dr. GRANING. The maximum authorization under the existing legislation for long-term care facilities, for instance, is $70 million. The maximum authorization for diagnostic and treatment centers is $20 million. The maximum authorization for rehabilitation facilities is $10 million. We could have requested 70, 20, and 10, which would make $100 million, but this would have meant having only $150 million to allocate for the hospitals, public health centers, and modernization. And we have said in our testimony that the big need is for modernization.

Mr. MICHEL. Incidentially, on the formula is there any difference between construction and modernization?

Dr. GRANING. In terms of distribution of funds?

Mr. MICHEL. Yes.

Dr. GRANING. Yes. In both new construction and modernization population per capita income is a factor, but in the distribution of the modernization money the actual need for modernization is a part of the formula.

All of the States have reported for every existing health care facility

within their State, what the modernization need is. When we talk about what the need for modernization is, the $10 billion, this is a figure we can back up State by State, and it represents the actual appraisal by State agencies of the need for modernization.

Given a budgetary ceiling of $254,400,000 to be made available for construction of health care facilities, this represented our best judgment in terms of how it could most equitably be decided.

In the testimony you will recall I stressed the need for achieving a better balance of health care facilities. This is why we did not want to cut back on long-term care facilities, or diagnostic and treatment, or rehabilitation any more than we did. Yet we felt in terms of the marked reduction compared with last year's figures it would have been too big a cut to reduce had we gone 70, 20 and 10 for long-term care D. & T. and rehabilitation. The remaining sum for hospitals, public health centers and modernization would have been just too small.

IMPROVING DESIGN OF MEDICAL FACILITIES

Mr. MICHEL. One final question on these additional positions again. You say here they are needed especially "to predesign conferences on more efficient health care."

Are you looking for some competent, engineers or research people or what, to advise?

Are you saying for all practical purposes you do not have efficient or competent enough people now to give advice to the applicants?

Dr. GRANING. No. What I am trying to say is that we have learned that the best way, the very best way to achieve improvements in health care facility design is to have conversations with people in the very earliest stages. By a predesign conference we mean have people that can sit down with a State agency and with a sponsor before they have got their working drawings done, where we can really talk through with them functional planning of the facility. "What is it you are trying to do in this facility?"

And then bring to bear our know-how in terms of the different options that would be available to them, thus introducing in many instances for the first time to their thinking some approaches they had not thought about before.

Whereas, when they have gone to the trouble of making elaborate designs and send the plans in and have specifications written, it is very difficult to make changes.

Mr. FLOOD. Do you not find there exists a certain new breed of architect engineers that we have given birth to since the Hill-Burton Act first became law, just as we have in the urban redevelopment area? There has been born of recent years a new profession, planners, city planners.

The universities and colleges have helped and there are degrees in city planning, and urban redevelopment. Did we not create a certain limited narrow breed of architect-engineer-specialists in designing and building hospitals who simply move into a community and superimpose upon the natives their concept of what should be done?

Dr. GRANING. The chairman and the members of the committee may be interested in knowing that we have in the last 3 years encouraged our staff and regional offices to visit health care facilities that have been built within the last 3 to 5 years and to identify both

the success and any problems that may have arisen in terms of living in the facility.

As all of us know that even in spite of the best of intentions as to how we would like to build a home it does not necessarily work out as planned when living with it. It is encouraging that to an ever-increasing degree there is much more involvement now than there used to be in terms of different people that have an input in terms of what they would like to have in the hospital.

But many times in the conversations between heads of departments, the hospital administrators, the board, and the architect, some people have things they want to try to achieve, but unless there is someone there to help them achieve it, they feel frustrated about it.

We have learned that predesign conferences have often been able to help people achieve what they want at no additional cost, with functional improvement of the hospital, and we are prepared to say in an unqualified manner that it represents a very excellent investment.

We are prepared to move ahead in terms of doing more predesign conferences if we can have some additional positions, but it does take time. People have to go out and work on this technical facility with the sponsor and the State agency.

Mr. MICHEL. I gather from what you say that many hospital boards, communities, or whoever is putting together a new hospital, pretty much just dig into it on their own. I cannot really conceive, however, that they would not have their eyes and ears open enough to keep up with the times in constructing the most modern facility. Do they really know that your shop is equipped or available to give them this kind of precounseling?

My own personal feeling would be, on the strength of what you have said, if I know of any new hospital construction being contemplated in my district I would tell them before they get too far along to check with the people who are supposed to know and find out the best way to proceed.

Dr. GRANING. It is just a few months ago we received a request to send a pharmacist who is on our staff, who is conversant with various methods of drug distribution—the State of Oregon was asking for him to come. Before we pay anyone's travel all the way out to Oregon, we want to be sure this is going to be worth while. So we contacted the State agency to be sure that they would keep him busy in terms of going to the State of Oregon.

We were delighted to find when he returned that they had pulled together 20 hospitals who were thinking in the foreseeable future about making some changes in drug distribution within their hospitals. The State Hill-Burton agency had arranged to have representives of the hospital association and the State pharmaceutical association there. The man himself discussed all kinds of approaches to this and was giving consultation to them on the functional design of drug distribution systems.

Some of these projects are going to go ahead without any kind of Hill-Burton assistance, people are going to be building them on their own, but it does represent a very important contribution to a new way of distributing drugs in which there is less medication error on the part of the hospital.

Mr. MICHEL. I am glad to hear we are making progress.

That is all, Mr. Chairman.

Mr. FLOOD. Mr. Casey?

Mr. CASEY. Doctor, the long-term-care facilities that come under this act and under these appropriations, are they for nursing homes?

Dr. GRANING. It includes nursing homes and extended-care facilities. The category of long-term-care facilities may be used by State facitities for building nursing or extended-care facilities. Structurally they are essentially the same requirement. Extended-care facility came into being with the enactment of the Social Security Act.

Mr. CASEY. I keep hearing that there is a great shortage of this type of facility, there is a need for more nursing homes, and more extended-care homes where hospitalization is not really the thing that is needed, but custodial care, if you want to call it that, where they can get treatment with someone to care for them, giving them the attention they need. Usually they need nursing, primarily.

Do you have a lot of applicants for this type of assistance?

Dr. GRANING. Yes, we do. We estimate that for the country as a whole there is a need for additional 164,000 beds and for the modernization of 214,000 of the existing nursing home beds.

Mr. CASEY. How come you cut your request in that category?

Dr. GRANING. As I indicated earlier, the authorization is $70 million. It should be said that the States under the provisions of the Hill-Burton Act do have authority to transfer money between categories. Thus, in my State, if their allotment for a particular category, long-term care for instance, if it is not adequate, they can transfer money from another category into it.

Mr. CASEY. Could they transfer it from construction of new hospital facilities?

Dr. GRANING. They can; yes, sir.

Mr. CASEY. Or modernization?

Dr. GRANING. Yes, sir; if they indicate that they have a greater need for long-term care facilities and for modernization, they could transfer money into it.

Mr. CASEY. Is this allocation of the long-term-care facilities funds on a formula basis also?

Dr. GRANING. Yes, sir; it is on population weighted by per capita income.

Mr. CASEY. All of these funds under this are treated in that manner?

Dr. GRANING. They are; yes, sir.

Mr. CASEY. You have a reduction then of $12 million here. Is there that much less demand for these moneys?

Dr. GRANING. No, sir; but this represents our best approach to dividing the amount of money that was made available.

Mr. CASEY. This figure was not your idea; I presume it was the Bureau of the Budget's?

Dr. GRANING. Yes, sir.

Mr. CASEY. If you made it, it might look different than this; is that correct?

Dr. GRANING. Yes.

Mr. CASEY. Due to the applications you have and the times, you have to say no.

On this long term care facilities, those are made, as I understand it, by the States, the individual grants.

Dr. GRANING. Yes, sir.

Mr. CASEY. Do you have to approve them.

Dr. GRANING. The program operates through the nine HEW regional offices. The State's plan document has to be approved by the Public Health Service, and then the law says if an application comes in and is in accordance with the State plan, the Surgeon General shall approve it.

There is no option in terms of a project request that comes in if it is in accordance with the State plan. The project must of course meet certain agreed-upon structural requirements. These agreed-upon requirements have been worked out with the State agencies and relate essentially to such things as the building code and other requirements which would assure the safety of the people in the hospital.

And the regional office staff, as I have indicated, plans to offer consultation on the design.

Mr. CASEY. I think you have made that pretty clear, your supervision and assistance on design of construction. It does not have to be a State agency or a city agency, I understand it can be a nonprofit agency that could be the recipient.

Dr. GRANING. Yes, sir.

Mr. CASEY. Is there any history of failures of some of these nonprofit institutions after they get the grants to be able to operate the institution?

Dr. GRANING. No, sir. The ability of these facilities to generate necessary revenue to meet their obligations has been outstanding through the years. In some instances a community may have completely outgrown a facility and want to build another one in which case, if it is converted to anything other than health use, the Federal Government has the right to recover its share within 20 years of the time of construction.

Mr. CASEY. In other words, you have not had the experience they have had in HUD with some of the homes for elderly.

Dr. GRANING. We have not.

Mr. CASEY. You are fortunate. It speaks well for whoever started this because I have known of two or three so-called homes for the elderly, and the only ones that got anything out of that was the real estate developer and the contractor who built it. I believe that is all, Mr. Chairman.

INCREASING COST OF CONSTRUCTION

Mr. FLOOD. Mrs. Reid.

Mrs. REID. Thank you, Mr. Chairman.

Doctor, you say that the capitalization needs of health care institutions across the Nation total about $10 billion which I agree is a staggering sum. Has this total shown any signs of leveling off over the past several years, or is it likely to be constantly escalating?

Dr. GRANING. The cost of construction is increasing between 6 and 7 percent per year. This together with the population increase and the modernization obsolescence, the number of hospital beds that are judged to become functionally obsolete each year means it is not leveling off. It is consistently greater.

Mrs. REID. Is it possible to tell actually how much is due to construction costs, increasing construction costs, and inflation.

Will you supply that for the record?

Dr. GRANING. Thank you.

(The information follows:)

The annual increment attributable to increased construction costs is $600 million.

Mrs. REID. I think that is all, Mr. Chairman.

Mr. FLOOD. Thank you very much.

This concludes our hearings with the officials of the Health Services and Mental Health Administration of which Dr. English, you are the Administrator. I have talked to the members of the subcommittee about you, and I seldom do this kind of thing, but it is the consensus here that we have been very much, and very favorably, impressed by you. You are a bit glib, but you do it well, and I think that the record should show that this subcommittee is convinced you are sincere and know what you are talking about. This is not true of all of your bureau chiefs. For a new man under the guns, you have done very well.

Do you want to say something more? I hope you would.

Dr. ENGLISH. Just to thank you very much and to express our appreciation for the attention of the committee.

Mr. FLOOD. That is all?

Dr. ENGLISH. Yes.

Mr. FLOOD. That is disappointing. We enjoy listening to you.

JUSTIFICATION MATERIAL

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Hospital Construction

Amounts Available for Obligation 1/

	1969	1970
Appropriation	$258,368,000	$258,415,000
Comparative transfers to:		
"Salaries and expenses, Office of the Administrator"	-79,000	....
"Mental Retardation, Social and Rehabilitation Services"	-1,469,045	....
Cutback required by Public Law 90-364	-183,000	....
Unobligated balance brought forward for Mental Retardation grants	1,469,045	....
Unused 1968 allotment available in 1969	12,800,000	....
Total currently authorized	270,906,000	258,415,000
Plus: proposed release of reserves for increased pay costs	175,000	....
Total obligations	271,081,000	258,415,000

Disposition of cutback:

To be used for increased pay costs in this account	175,000
To be returned to Treasury	8,000
Total cutback	183,000

1/ Hospital construction grants are on an allocation basis.

Obligations by Activity

Page Ref.		1969 Estimate Pos	1969 Estimate Amount	1970 Estimate Pos	1970 Estimate Amount	Increase or Decrease Pos	Increase or Decrease Amount
44	1. Construction:						
45	(a) Hospitals and public health centers		$119,285,000		$109,000,000		-$10,285,000
45	(b) Long-term care facilities		66,800,000		63,600,000		-3,200,000
45	(c) Diagnostic or treatment centers		19,085,000		18,200,000		-885,000
45	(d) Rehabilitation facilities		9,545,000		9,100,000		-445,000
45	(e) Modernization		52,485,000		54,500,000		+2,015,000
47	2. Operations and technical services	248	3,881,000	258	4,015,000	+10	+134,000
	Total obligations	248	271,081,000	258	258,415,000	+10	-12,666,000

Obligations by Object

	1969 Estimate	1970 Estimate	Increase or Decrease
Total number of permanent positions	248	258	+10
Full-time equivalent of all other positions	4	3	-1
Average number of all employees	241	251	+10
Personnel compensation:			
Permanent positions	$2,926,000	$3,126,000	+$200,000
Positions other than permanent	50,000	40,000	-10,000
Total personnel compensation	2,976,000	3,166,000	+190,000
Personnel benefits	290,000	306,000	+16,000
Travel and transportation of persons	230,000	228,000	-2,000
Transportation of things	5,000	5,000	....
Rent, communications, and utilities	90,000	80,000	-10,000
Printing and reproduction	70,000	60,000	-10,000
Other services	175,000	125,000	-50,000
Supplies and materials	35,000	35,000	....
Equipment	10,000	10,000	....
Grants, subsidies, and contributions	267,200,000	254,400,000	-12,800,000
Total obligations by object	271,081,000	258,415,000	-12,666,000

Summary of Changes

1969 estimated obligations	$271,081,000
1970 estimated obligations	258,415,000
Net change	-12,666,000

Increases

	Base Pos	Base Amount	Changes from Base Pos	Changes from Base Amount
A. Built-in				
Additional cost of within grades and reclassifications	...	....	...	+$100,000
B. Program				
Net increase for operations and technical services	248	$3,881,000	+10	+34,000
Total increases	...	....	+10	+134,000

Decreases

A. Program				
Decrease in grants for hospital construction program	...	267,200,000	...	-12,800,000
Total net changes requested	...	....	+10	-12,666,000

Explanation of Changes

Operations and technical services

A net increase of 10 positions and $134,000 is requested for 1970. Of this amount $100,000 is for mandatory items and $106,000 for program increases in personnel compensation and benefits offset by a decrease of $72,000 in other objects of expenses. This increase will provide for the additional staff needed to cope with the increased workloads generated by the new construction programs initiated in recent years; to administer the District of Columbia Medical Facilities Construction Act of 1968; and, to provide greater assistance to State agencies as a means of improving plans for more efficient, effective and economical delivery of health care.

Construction

A reserve of $12,800,000 was established in 1968 and released in 1969. No similiar amount appears for 1970, thus, there appears a decrease of that amount in 1970.

Authorizing Legislation

Legislation	1970 Authorization
Public Health Service Act.	
Section 601--Authorization of Appropriations for Construction Grants	$295,000,000

PUBLIC HEALTH SERVICE ACT

Title VI--Assistance for Construction and Modernization of Hospitals and Other Medical Facilities

Part A--Grants and Loans for Construction and Modernization of Hospitals and Other Medical Facilities

Appropriation

"Sec. 601, In order to assist the States in carrying out the purpose of section 600, there are authorized to be appropriated--

"(a) for the fiscal year ending June 30, 1965, and each of the next five fiscal years--

"(1) $70,000,000 for grants for the construction of public or other nonprofit facilities for long-term care;

"(2) $20,000,000 for grants for the construction of public or other nonprofit diagnostic or treatment centers;

"(3) $10,000,000 for grants for the construction of public or other nonprofit rehabilitation facilities;

"(b) for grants for the construction of public or other nonprofit hospitals and public health centers and for grants for modernization of such facilities and the facilities referred to in paragraph (a), $150,000,000 for the fiscal year ending June 30, 1965, $160,000,000 for the fiscal year ending June 30, 1966, $170,000,000 for the fiscal year ending June 30, 1967, $180,000,000 each for the next two fiscal years, and $195,000,000 for the fiscal year ending June 30, 1970.

"Sec 602. (a)(1)***As used in this paragraph, the new hospital portion of sums appropriated pursuant to section 601 (b) (which portion shall be available for grants for the construction of public or other nonprofit hospitals and public health centers) is 100 per centum of such sums in the case of the fiscal year ending June 30, 1965, seven-eights thereof in the case of the first fiscal year thereafter, twenty-seven thirty-fourths thereof in the case of the second fiscal year thereafter, thirteen-eighteenths thereof in the case of the third fiscal year thereafter, twenty-five thirty-sixths thereof in the case of the fourth fiscal year thereafter, and two thirds thereof in the case of the fifth fiscal year thereafter.

Explanation of Transfers

	1969 Estimate	1970 Estimate	Purpose
Comparative transfer to:			
Salaries and expenses, office of the Administrator"	$79,000	....	Centralization of financial management activities as part of health reorganization.

Hospital Construction

Year	Budget Estimate To Congress	House Allowance	Senate Allowance	Appropriation
1960	$101,200,000	$143,700,000	$211,200,000	$186,200,000
1961	126,200,000	150,000,000	211,200,000	186,200,000
1962	196,972,000	187,972,000	221,972,000	211,500,000
1963	176,220,000	188,672,000	226,220,000	226,220,000
1964	184,589,000	182,981,000	233,281,000	231,287,000
1965	247,057,000	44,407,000	267,057,000	266,907,000
1966	303,304,000	259,089,000	303,304,000	303,304,000
1967	313,544,000	313,525,000	313,525,000	313,525,000
1968	308,357,000	293,357,000	293,357,000	293,357,000
1969	258,368,000	258,368,000	258,368,000	258,368,000
1970	258,415,000			

Justification

Hospital Construction

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos	Amount	Pos	Amount	Pos	Amount
Personnel compensation and benefits	248	$3,266,000	258	$3,472,000	+10	+$206,000
Other expenses	...	267,815,000	...	254,943,000	...	-12,872,000
Total	248	271,081,000	258	258,415,000	+10	-12,666,000

A request for $258,415,000 is submitted for 1970. This amount provides $254,400,000 for the Hill-Burton construction program, and $4,015,000 for operations and technical services.

Construction under Title VI, the Public Health Service Act (Hill-Burton).

	1968 Estimate	1969 Estimate	1970 Estimate	Change (+) or (-)
Grants, subsidies, and contributions	$267,200,000	$267,200,000	$254,400,000	-$12,800,000

The $254,400,000 requested for 1970 for construction under Title VI of the Public Health Service Act will provide $163,500,000 for grants or loans to assist in (a) the construction of hospitals, public health centers, and related facilities, and (b) the modernization of hospitals and other health facilities; $63,600,000 for long-term care facilities; $18,200,000 for diagnostic or treatment centers, and $9,100,000 for rehabilitation facilities.

Considerable progress has been made in providing additional general hospital beds and facilities. However, the need and demand for construction of these types of facilities continue at a high level. The need for long-term care and ambulatory facilities is also acute. Increase in our aging population and the enactment of Medicare which partially removes the financial barriers to care in nursing homes and hospitals further contribute to the need for additional beds and facilities.

The rate at which existing facilities are becoming structurally and functionally obsolete and require replacement or modernization is the most serious problem in the health facilities field today. State agencies have now identified the modernization needs, and many cities and communities are seeking assistance under this program to modernize or replace these obsolete facilities. The cost of modernizing the Nation's health facilities is presently estimated at $10,000,000,000.

State agencies reported in January 1968 that if unlimited Federal funds were available 889 projects costing a total of $2,056,439,000 and utilizing Federal funds in the amount of $854,265,000 could be approved in 1970. Many of the 1,992 projects which States reported could be approved in 1969 will not be constructed because of limited funds and will further add to this total.

1. Hospitals and public health centers--The amount of $109,000,000 is requested for the construction of new and expanded hospitals and public health centers out of the $163,500,000 requested pursuant to Section 601 (b). This represents a decrease of $10,285,000 under the amount available in 1969. That portion of the $109,000,000 that will be utilized for hospital construction will produce an estimated 9,695 beds and construction taking place outside the program will produce an additional 12,000 beds for a total of 21,695 beds.

2. Modernization--An amount of $54,500,000 is requested for the modernization of hospitals and other health facilities out of the $163,500,000 requested pursuant to the provisions of Section 601(b). This is an increase of $2,015,000 over the amount available for 1969.

   While the Hill-Burton program has achieved notable results in bringing health facilities to many areas, an additional serious and growing problem has emerged. The largest single need in terms of cost is the need to modernize the Nation's health facilities. Accordingly, increased emphasis must be placed on modernizing or replacing those hospitals located in our densely populated areas which provide specialized services of all kinds, including the training of personnel. Community funds are not readily available for this type of construction for two reasons: First, the replacement or remodeling of a facility does not command the same enthusiasm as in the case of new construction or expansion. Secondly, large quality-care hospitals are usually located in urban areas which are not readily associated with the surrounding community population. This modernization problem is one of the more urgent needs in the hospital field today. The latest Hill-Burton State plans show 263,000 general hospital beds currently needing modernization. The $54,500,000 requested for modernization will produce an estimated 101 projects providing 6,575 modernized beds.

3. Long-term care facilities--Construction of long-term care facilities should be accelerated in order to provide beds to meet the needs of an increasing number of older citizens. Also, the increased coverage of long-term care provided by various third party payment programs will unquestionably increase demand beyond current figures now reflected in State Plans. Further, increased Federal support of long-term care facilities in required since it is difficult to engender in the general public and working population a feeling of financial responsibility for the construction of nursing homes in which the bulk of patient load is

aged persons. Moreover, industry, which is a large contributor to the construction facilities, often does not have the same interest in long-term care facilities as in the case of general hospitals since its employees are of working age and generally do not use such facilities.

According to Hill-Burton State plans 375,000 long-term care beds currently need to be added or modernized. The $63,600,000 requested for 1970 will produce an estimated 158 nursing home and chronic disease projects providing 8,920 beds.

4. Diagnostic or treatment centers and rehabilitation facilities--The construction of these outpatient facilities will provide a means of lessening the pressure for construction of additional expensive bedcare installations, and reducing the cost of health care to patients whose needs may be met through facilities providing outpatient care. The National Advisory Commission on Health Manpower concluded that a tremendous savings in hospital cost could be achieved by reducing acute inpatient usage through increased ambulatory care. According to Hill-Burton State plans 2,300 diagnostic or treatment centers need to be newly built or modernized. The $18,200,000 requested for these centers will produce an estimated 63 projects. The State plans also show that 542 rehabilitation facilities need to be newly built or modernized. The $9,100,000 for this purpose will provide an estimated 26 projects.

Projects and Beds Produced by Funds Requested--Assuming that State agencies program projects along the same lines as occurred in 1966 and 1967, the funds requested above will produce the following projects and beds for 1970.

Type of Project	Number of Projects			Beds Provided		
	1968	1969	1970	1968	1969	1970
Hospitals, public health centers, and clinics:						
Hospitals	195	172	137	13,275	11,545	9,695
Public health centers and laboratories	42	42	30	0	0	0
Subtotal	237	214	167	13,275	11,545	9,695
Long-term care facilities	191	184	158	11,245	10,880	8,920
Diagnostic or treatment centers	80	75	63	0	0	0
Rehabilitation facilities	34	32	26	0	0	0
Subtotal	305	291	247	11,245	10,880	8,920
Modernization	77	118	101	5,325	8,455	6,575
Grand total	619	623	515	29,845	30,880	25,190

Operations and Technical Services

	1969 Estimate		1970 Estimate		Increase or Decrease	
	Pos	Amount	Pos	Amount	Pos	Amount
Personnel compensation and benefits	248	$3,266,000	258	$3,472,000	+10	+$206,000
Other expenses	...	615,000	...	543,000	...	-72,000
Total	248	3,881,000	258	4,015,000	+10	+134,000

The estimate of $4,015,000 and 258 positions requested for 1970 are necessary to continue the Federal Government's role of providing national leadership in the planning, design, and construction of all types of facilities essential to the care and treatment of the sick and disabled.

This represents an increase of 10 positions and $134,000 over the amount available in 1969. Of this amount $100,000 is for mandatory within grade increases. Ten positions and $106,000 is being requested for program increases in personnel compensation and benefits. This program increase is partially offset by a decrease of $72,000 in other objects.

The funds requested will support the staff necessary to provide technical assistance and consultation to project sponsors and State agencies regarding all aspects of program administration; develop and revise minimum standards of design, construction, and equipment; review and approve basic documents, such as State plans, applications, and architectural drawings and specifications; compile, and analyze data relating to problems in hospital and medical facility planning for the purpose of reflecting health facility needs and developing or projecting a base for a balanced program approach; maintain surveillance over bid awards and the construction of facilities; and develop regulations, procedures, and policies for operation of the program.

The operation of this program requires a large variety of specialized and highly technical skills relating to the planning, design, and construction of all types of hospital and medical facilities. For the most part these employees are in the professional or technical field of medicine, nursing, hospital administration, architecture, engineering, and equipment consultation. Employees in each of these professional categories are minimal in number, have been recruited gradually over a long period of years, have become highly skilled in their respective specialties, and represent the nucleus of the basic staff believed essential to administration of the program.

In addition to the operations described above additional personnel are needed for the following:

1. Administration of the District of Columbia Medical Facilities Construction Act. These employees will be used to review applications for grants or loans, issue commitments, and participate in settlements at the completion of construction. The personnel will also provide technical assistance and consultation to the State agency and sponsors regarding modernization projects, including the development of plans and specifications, maintain surveillance over the payment of prevailing wage rates, equal employment opportunity requirements, bid procedures and awards, construction, and the payment of Federal funds.

2. The demand for more effective health care facilities has become a matter of national concern. It is apparent that more definitive planning based upon community need has to come about through relationships with State agencies. Our regional staffs must be expanded to provide intensive technical assistance to state agency personnel and to those who are concerned with health care facility planning on a community basis. The advantages to be accrued through shared services and the need for delineation of services consonant with effective manpower utilization are among our program goals.

ALLOCATIONS TO STATES EXHIBIT I

For Construction and Modernization of Hospitals
and Related Health Facilities

	Fiscal Year		
	1968	1969	1970
Totals	$267,200,000	$267,200,000	$254,400,000
Alabama	7,063,184	7,005,701	6,426,933
Alaska	750,000	750,000	750,000
Arizona	2,476,266	2,467,602	2,378,115
Arkansas	3,936,590	3,891,932	3,679,007
California	14,809,164	14,779,536	15,359,956
Colorado	2,664,467	2,682,931	2,631,441
Connecticut	2,555,933	2,610,629	2,563,669
Delaware	750,000	750,000	750,000
District of Columbia	761,430	753,261	750,000
Florida	8,989,589	8,946,150	8,427,807
Georgia	7,758,539	7,685,927	7,026,358
Hawaii	933,070	918,430	923,231
Idaho	1,193,352	1,176,508	1,146,533
Illinois	9,562,343	9,624,188	9,441,163
Indiana	6,310,955	6,339,872	6,143,474
Iowa	4,109,909	4,141,118	3,528,917
Kansas	3,192,644	3,208,948	3,168,620
Kentucky	5,853,033	5,803,489	5,370,069
Louisiana	6,477,947	6,408,161	6,213,090
Maine	1,718,937	1,720,767	1,569,543
Maryland	3,807,032	3,808,534	3,498,679
Massachusetts	6,308,575	6,418,828	6,233,578
Michigan	9,718,647	9,776,282	8,999,688
Minnesota	4,953,541	4,965,955	4,666,479
Mississippi	5,282,484	5,215,299	4,755,672
Missouri	6,493,701	6,522,793	6,236,918
Montana	1,198,513	1,207,709	1,165,902
Nebraska	2,120,204	2,129,987	1,822,610
Nevada	750,000	750,000	750,000
New Hampshire	1,044,212	1,026,781	989,489
New Jersey	6,679,711	6,780,060	6,859,908
New Mexico	1,659,927	1,627,754	1,582,441
New York	16,095,997	16,269,443	16,077,840
North Carolina	9,627,630	9,590,783	8,800,736
North Dakota	1,173,213	1,162,397	1,073,304
Ohio	12,477,364	12,482,715	11,567,377
Oklahoma	4,096,174	4,070,651	3,759,889
Oregon	2,438,661	2,435,829	2,441,921
Pennsylvania	15,857,418	15,993,888	15,138,450
Rhode Island	1,122,678	1,106,654	1,037,329
South Carolina	5,434,661	5,389,551	4,957,456
South Dakota	1,293,844	1,294,255	1,156,063
Tennessee	7,784,138	7,775,041	7,130,596
Texas	17,117,926	17,041,903	16,104,371
Utah	1,533,010	1,525,267	1,531,905
Vermont	885,785	872,692	820,501
Virginia	7,092,049	7,077,729	6,635,516
Washington	3,549,805	3,563,420	3,438,496
West Virginia	3,637,577	3,640,110	3,441,992
Wisconsin	5,361,806	5,353,621	5,003,579
Wyoming	753,874	750,000	750,000
American Samoa	66,031	69,233	375,000
Guam	380,034	394,908	383,614
Puerto Rico	7,161,426	7,069,778	6,589,775
Virgin Islands	375,000	375,000	375,000

ALLOCATIONS TO STATES
FOR CONSTRUCTION AND MODERNIZATION OF HOSPITALS AND RELATED HEALTH FACILITIES
For Fiscal Year 1968
as of July 1, 1967

EXHIBIT II

State	Total	Modernization	Hospitals and Public Health Centers	Long-Term Care Facilities	Diagnostic or Treatment Centers	Rehabilitation Facilities
Total	$267,200,000	$47,715,000	$124,055,000	$66,800,000	$19,085,000	$9,545,000
Alabama	7,063,184	766,714	3,583,895	1,913,379	532,747	266,449
Alaska	750,000	200,000	200,000	200,000	100,000	50,000
Arizona	2,476,266	359,381	1,204,912	643,281	179,111	89,581
Arkansas	3,936,590	327,788	2,054,098	1,096,647	305,343	152,714
California	14,809,164	2,320,674	7,108,338	3,795,017	1,056,657	528,478
Colorado	2,664,467	604,813	1,172,337	625,890	174,269	87,158
Connecticut	2,555,933	869,040	960,164	512,615	142,729	71,385
Delaware	750,000	200,000	200,000	200,000	100,000	50,000
District of Columbia	761,430	200,000	211,430	200,000	100,000	50,000
Florida	8,989,589	1,209,906	4,428,127	2,364,099	658,243	329,214
Georgia	7,758,539	767,465	3,979,258	2,124,456	591,518	295,842
Hawaii	933,070	200,000	380,127	202,943	100,000	50,000
Idaho	1,193,352	200,000	549,815	293,537	100,000	50,000
Illinois	9,562,343	2,133,226	4,228,588	2,257,569	628,581	314,379
Indiana	6,310,955	1,315,559	2,843,336	1,518,007	422,662	211,391
Iowa	4,109,909	951,772	1,797,583	959,698	267,212	133,644
Kansas	3,192,644	679,060	1,430,709	763,831	212,676	106,368
Kentucky	5,853,033	618,922	2,979,210	1,590,548	442,860	221,493
Louisiana	6,477,947	569,470	3,363,053	1,795,475	499,919	250,030
Maine	1,718,937	309,930	801,995	428,171	119,216	59,625
Maryland	3,807,032	668,045	1,786,683	953,879	265,591	132,834
Massachusetts	6,308,575	1,952,293	2,479,558	1,323,792	368,587	184,345
Michigan	9,718,647	2,127,413	4,320,864	2,306,833	642,298	321,239
Minnesota	4,953,541	951,303	2,278,038	1,216,205	338,631	169,364
Mississippi	5,282,484	395,022	2,781,900	1,485,208	413,530	206,824

Missouri	6,493,701	1,348,372	2,928,676	1,563,568	435,349	217,736
Montana	1,198,513	273,556	505,226	269,731	100,000	50,000
Nebraska	2,120,204	441,363	955,581	510,168	142,048	71,044
Nevada	750,000	200,000	200,000	200,000	100,000	50,000
New Hampshire	1,044,212	200,000	452,585	241,627	100,000	50,000
New Jersey	6,679,711	1,938,699	2,698,542	1,440,705	401,139	200,626
New Mexico	1,659,927	200,000	830,978	443,644	123,525	61,780
New York	16,095,997	4,135,205	6,807,977	3,634,660	1,012,008	506,147
North Carolina	9,627,630	1,371,386	4,699,381	2,508,917	698,565	349,381
North Dakota	1,173,213	200,000	536,686	286,527	100,000	50,000
Ohio	12,477,364	2,192,802	5,853,882	3,125,285	870,181	435,214
Oklahoma	4,096,174	507,174	2,042,827	1,090,629	303,667	151,877
Oregon	2,438,661	397,068	1,162,057	620,402	172,740	86,394
Pennsylvania	15,857,418	3,805,448	6,859,875	3,662,367	1,019,723	510,005
Rhode Island	1,122,678	200,000	503,740	268,938	100,000	50,000
South Carolina	5,434,661	581,798	2,762,207	1,474,694	410,603	205,359
South Dakota	1,293,844	223,166	600,227	320,451	100,000	50,000
Tennessee	7,784,138	1,270,279	3,707,632	1,979,439	551,140	275,648
Texas	17,117,926	2,352,829	8,404,164	4,486,835	1,249,281	624,817
Utah	1,533,010	202,776	757,157	404,233	112,552	56,292
Vermont	885,785	200,000	335,785	200,000	100,000	50,000
Virginia	7,092,049	1,110,674	3,404,546	1,817,628	506,086	253,115
Washington	3,549,805	718,950	1,611,298	860,243	239,520	119,794
West Virginia	3,637,577	646,999	1,702,211	908,780	253,034	126,553
Wisconsin	5,361,806	859,290	2,562,792	1,368,230	380,960	190,534
Wyoming	753,874	200,000	203,874	200,000	100,000	50,000
American Samoa	66,031	3,141	35,796	19,111	5,321	2,662
Guam	380,034	100,000	105,034	100,000	50,000	25,000
Puerto Rico	7,161,426	836,229	3,600,246	1,922,108	535,178	267,665
Virgin Islands	375,000	100,000	100,000	100,000	50,000	25,000

Basis of Allocations, per Statutory Formula: a. Total population, as estimated by the Bureau of the Census: (1) Provisional Estimates of the United States, and Puerto Rico, July 1, 1967 (Series P-25, No. 373, September 6, 1967); American Samoa, Guam, and Virgin Islands, Provisional Estimates as of July 1, 1966, (Series P-25, No. 358, January 18, 1967).

b. Allotment percentages for fiscal years 1968 and 1969, as determined by the Surgeon General, September 30, 1966.

ADJUSTED ALLOCATIONS TO STATES
FOR CONSTRUCTION AND MODERNIZATION OF HOSPITALS AND RELATED HEALTH FACILITIES
Fiscal Year 1968
as of June 30, 1968

EXHIBIT III

State	Total	Moderni-zation	Hospitals and Public Health Centers	Long-Term Care Facilities	Diagnostic or Treatment Centers	Rehabili-tation Facilities	Adminis-tration Funds
Total	$267,200,000	$70,509,236	$114,431,453	$55,175,269	$15,501,573	$10,037,815	$1,544,654
Alabama	7,063,184	3,122,840	3,583,895	40,000	-	266,449	50,000
Alaska	750,000	500,000	-	200,000	-	35,500	14,500
Arizona	2,476,266	1,001,447	1,204,912	-	180,326	51,412	38,169
Arkansas	3,936,590	822,719	2,054,098	842,558	64,501	121,104	31,610
California	14,809,164	9,034,373	1,435,470	1,059,579	1,953,358	1,326,384	-
Colorado	2,664,467	1,800,325	-	552,715	174,269	87,158	50,000
Connecticut	2,555,933	856,799	946,704	505,425	140,722	70,387	35,896
Delaware	750,000	200,000	200,000	200,000	100,000	50,000	-
Dist. of Col.	761,430	200,000	211,430	200,000	100,000	50,000	-
Florida	8,989,589	1,209,906	4,428,127	2,364,099	658,243	279,214	50,000
Georgia	7,758,539	767,465	3,979,258	2,074,456	591,518	295,842	50,000
Hawaii	933,070	580,127	-	202,943	100,000	33,262	16,738
Idaho	1,193,352	1,008,202	-	135,150	-	33,831	16,169
Illinois	9,562,343	2,133,226	4,228,588	2,257,569	628,581	264,379	50,000
Indiana	6,310,955	1,604,016	2,843,336	1,247,333	404,879	161,391	50,000
Iowa	4,109,909	951,772	1,069,728	1,767,064	-	294,915	26,430
Kansas	3,192,644	875,736	1,430,709	763,831	-	106,368	16,000
Kentucky	5,853,033	618,922	2,979,210	1,590,548	442,860	171,493	50,000
Louisiana	6,477,947	2,058,001	3,517,646	543,140	9,130	325,030	25,000
Maine	1,718,937	309,930	786,211	428,171	135,000	59,625	-
Maryland	3,807,032	658,137	1,786,683	953,879	265,591	132,834	9,908
Massachusetts	6,308,575	1,952,293	2,445,058	1,314,792	364,087	182,345	50,000
Michigan	9,718,647	2,127,413	4,270,864	2,306,833	642,298	321,239	50,000
Minnesota	4,953,541	951,303	2,278,038	1,402,844	101,992	169,364	50,000
Mississippi	5,282,484	395,022	2,781,900	1,709,865	188,873	206,824	-

Missouri	6,493,701	1,348,372	2,928,676	1,513,568	435,349	217,736	50,000
Montana	1,198,513	273,556	505,226	269,731	100,000	26,100	23,900
Nebraska	2,120,204	441,363	955,581	505,298	113,934	71,044	32,984
Nevada	750,000	288,383	400,000	11,617	-	41,982	8,018
New Hampshire	1,044,212	287,177	452,585	253,450	1,000	28,400	21,600
New Jersey	6,679,711	1,927,609	2,676,047	1,429,140	397,904	199,011	50,000
New Mexico	1,659,927	821,870	281,458	365,152	123,525	44,961	22,961
New York	16,095,997	4,135,205	6,807,977	3,634,660	1,012,008	506,147	-
North Carolina	9,627,630	4,556,868	4,675,381	-	-	345,381	50,000
North Dakota	1,173,213	200,000	536,686	386,527	-	39,500	10,500
Ohio	12,477,364	2,192,802	5,803,882	3,125,285	870,181	435,214	50,000
Oklahoma	4,096,174	980,507	2,042,827	881,903	-	151,877	39,060
Oregon	2,438,661	1,713,494	40,000	550,000	-	86,394	48,773
Pennsylvania	15,857,418	3,805,448	6,859,875	3,662,367	969,723	510,005	50,000
Rhode Island	1,122,678	200,000	503,740	268,938	100,000	46,500	3,500
South Carolina	5,434,661	631,798	2,712,207	1,462,196	373,101	205,359	50,000
South Dakota	1,293,844	323,166	600,227	293,739	-	50,000	26,712
Tennessee	7,784,138	1,270,279	3,707,632	1,979,439	551,140	255,648	20,000
Texas	17,117,926	4,250,375	9,229,342	1,807,692	1,155,700	624,817	50,000
Utah	1,533,010	202,776	757,157	404,233	112,552	29,611	26,681
Vermont	885,785	200,000	335,785	200,000	100,000	47,350	2,650
Virginia	7,092,049	1,110,674	3,404,546	1,767,628	506,086	253,115	50,000
Washington	3,549,805	718,950	1,611,298	860,243	239,520	119,794	-
West Virginia	3,637,577	789,930	1,702,211	1,001,720	17,163	88,626	37,927
Wisconsin	5,361,806	859,290	2,562,792	1,368,230	335,960	190,534	45,000
Wyoming	753,874	200,000	35,374	368,500	100,000	34,920	15,080
American Samoa	66,031	3,141	35,796	19,111	5,321	2,662	-
Guam	380,034	100,000	105,034	100,000	50,000	25,000	-
Puerto Rico	7,161,426	836,229	3,600,246	1,922,108	535,178	238,777	28,888
Virgin Islands	375,000	100,000	100,000	100,000	50,000	25,000	-

NOTE: This exhibit is prepared especially to show the adjusted amount of construction money remaining in the various categories and the amount used for State administration purposes.

ALLOCATIONS TO STATES
FOR CONSTRUCTION AND MODERNIZATION OF HOSPITALS AND RELATED HEALTH FACILITIES
for Fiscal Year 1969

EXHIBIT IV

State	Total	Moderni-zation	Hospitals and Public Health Centers	Long-Term Care Facilities	Diagnostic or Treatment Centers	Rehabili-tation Facilities
Total	$267,200,000	$52,485,000	$119,285,000	$66,800,000	$19,085,000	$9,545,000
Alabama	7,005,701	847,499	3,445,191	1,913,684	532,834	266,493
Alaska	750,000	200,000	200,000	200,000	100,000	50,000
Arizona	2,467,602	397,272	1,158,241	643,363	179,134	89,592
Arkansas	3,891,932	362,348	1,974,617	1,096,831	305,395	152,741
California	14,779,536	2,565,295	6,833,227	3,795,620	1,056,830	528,564
Colorado	2,682,931	668,580	1,126,924	625,967	174,290	87,170
Connecticut	2,610,629	960,665	923,068	512,733	142,762	71,401
Delaware	750,000	200,000	200,000	200,000	100,000	50,000
Dist. of Col.	753,261	200,000	203,261	200,000	100,000	50,000
Florida	8,946,150	1,337,417	4,256,686	2,364,442	658,341	329,264
Georgia	7,685,927	848,328	3,825,278	2,124,809	591,619	295,893
Hawaii	918,430	200,000	365,441	202,989	100,000	50,000
Idaho	1,176,508	204,517	528,454	293,537	100,000	50,000
Illinois	9,624,188	2,358,136	4,064,975	2,257,952	628,691	314,434
Indiana	6,339,872	1,454,262	2,733,243	1,518,221	422,724	211,422
Iowa	4,141,118	1,052,120	1,728,132	959,917	267,274	133,675
Kansas	3,208,948	750,604	1,375,314	763,939	212,707	106,384
Kentucky	5,803,489	684,176	2,863,987	1,590,846	442,945	221,535
Louisiana	6,408,161	629,458	3,232,881	1,795,753	499,999	250,070
Maine	1,720,767	342,606	771,009	428,269	119,244	59,639
Maryland	3,808,534	738,478	1,717,535	954,031	265,635	132,855
Massachusetts	6,418,828	2,158,127	2,383,639	1,324,028	368,654	184,380
Michigan	9,776,282	2,351,660	4,153,687	2,307,228	642,411	321,296
Minnesota	4,965,955	1,051,550	2,189,904	1,216,416	338,691	169,394
Mississippi	5,215,299	435,045	2,674,301	1,485,481	413,609	206,863

Missouri	6,522,793	1,490,53?	2,815,285	1,563,793	435,414	217,768
Montana	1,207,709	302,396	485,587	269,726	100,000	50,000
Nebraska	2,129,987	487,898	918,662	510,285	142,081	71,061
Nevada	750,000	200,000	200,000	200,000	100,000	50,000
New Hampshire	1,026,781	200,000	435,099	241,682	100,000	50,000
New Jersey	6,780,060	2,143,049	2,594,164	1,440,968	401,215	200,664
New Mexico	1,627,754	200,000	798,754	443,680	123,535	61,785
New York	16,269,443	4,571,136	6,544,589	3,635,292	1,012,189	506,237
North Carolina	9,590,783	1,515,922	4,517,460	2,509,293	698,673	349,435
North Dakota	1,162,397	209,854	515,951	286,592	100,000	50,000
Ohio	12,482,715	2,423,942	5,627,356	3,125,801	870,329	435,287
Oklahoma	4,070,651	560,647	1,963,663	1,090,746	303,701	151,894
Oregon	2,435,829	438,931	1,117,160	620,544	172,780	86,414
Pennsylvania	15,993,888	4,206,612	6,594,362	3,662,939	1,019,887	510,088
Rhode Island	1,106,654	203,377	484,277	269,000	100,000	50,000
South Carolina	5,389,551	643,138	2,655,369	1,474,965	410,680	205,399
South Dakota	1,294,255	246,695	577,036	320,524	100,000	50,000
Tennessee	7,775,041	1,404,208	3,564,147	1,979,760	551,232	275,694
Texas	17,041,903	2,600,894	8,078,987	4,487,597	1,249,499	624,926
Utah	1,525,267	224,155	727,904	404,325	112,578	56,305
Vermont	872,692	200,000	322,692	200,000	100,000	50,000
Virginia	7,077,729	1,227,724	3,272,771	1,817,911	506,168	253,155
Washington	3,563,420	794,751	1,548,925	860,374	239,558	119,812
West Virginia	3,640,110	715,213	1,636,326	908,923	253,075	126,573
Wisconsin	5353,621	949,887	2,463,658	1,368,476	381,031	190,569
Wyoming	750,000	200,000	200,000	200,000	100,000	50,000
American Samoa	69,233	3,678	36,675	20,371	5,672	2,837
Guam	394,908	100,000	119,908	100,000	50,000	25,000
Puerto Rico	7,069,778	922,217	3,439,238	1,910,377	531,914	266,032
Virgin Islands	375,000	100,000	100,000	100,000	50,000	25,000

Basis of Allocations, per Statutory Formula:

a. Total population, as estimated by the Bureau of the Census: (1) Provisional Estimates of the United States, July 1, 1967 (Series P-25, No. 373, September 6, 1967); American Samoa, Guam, Puerto Rico, and Virgin Islands, Provisional Estimates as of July 1, 1967, (Series P-25, No. 392, May 2, 1968).

b. Allotment percentages for fiscal years 1968 and 1969, as determined by the Surgeon General, September 30, 1966.

TENTATIVE ALLOCATIONS TO STATES
FOR CONSTRUCTION AND MODERNIZATION OF HOSPITALS AND RELATED HEALTH FACILITIES
for Fiscal Year 1970

EXHIBIT V

State	Total	Modernization	Hospitals and Public Health Centers	Long-term Care Facilities	Diagnostic or Treatment Centers	Rehabilitation Facilities
Total	$254,400,000	$54,500,000	$109,000,000	$63,600,000	$18,200,000	$9,100,000
Alabama	6,426,933	719,117	3,138,160	1,814,170	503,658	251,828
Alaska	750,000	200,000	200,000	200,000	100,000	50,000
Arizona	2,378,115	365,429	1,106,575	639,711	177,600	88,800
Arkansas	3,679,007	360,389	1,824,577	1,054,788	292,835	146,418
California	15,359,956	2,974,364	6,809,603	3,936,631	1,092,906	546,452
Colorado	2,631,441	666,414	1,080,373	624,563	173,394	86,697
Connecticut	2,563,669	1,023,801	846,620	489,431	135,878	67,939
Delaware	750,000	200,000	200,000	200,000	100,000	50,000
Dist. of Col.	750,000	200,000	200,000	200,000	100,000	50,000
Florida	8,427,807	1,383,011	3,873,232	2,239,115	621,633	310,816
Georgia	7,026,358	817,444	3,413,663	1,973,438	547,875	273,938
Hawaii	923,231	200,000	363,241	209,990	100,000	50,000
Idaho	1,146,533	216,384	494,360	285,789	100,000	50,000
Illinois	9,441,163	2,749,349	3,679,162	2,126,923	590,486	295,243
Indiana	6,143,474	1,633,815	2,479,412	1,433,348	397,933	198,966
Iowa	3,528,917	948,099	1,418,935	820,286	227,731	113,866
Kansas	3,168,620	881,458	1,257,482	726,951	201,819	100,910
Kentucky	5,370,069	702,014	2,566,498	1,483,693	411,909	205,955
Louisiana	6,213,090	911,053	2,915,062	1,685,197	467,852	233,926
Maine	1,569,543	337,174	677,557	391,696	108,744	54,372
Maryland	3,498,679	581,491	1,603,871	927,198	257,413	128,706
Massachusetts	6,233,578	2,236,483	2,197,604	1,270,435	352,704	176,352
Michigan	8,999,688	2,287,309	3,690,469	2,133,459	592,301	296,150
Minnesota	4,666,479	1,111,353	1,954,609	1,129,960	313,705	156,852
Mississippi	4,755,672	424,779	2,381,127	1,376,529	382,158	191,079

Missouri	6,236,918	1,485,413	2,612,379	1,510,216	419,273	209,637
Montana	1,165,902	318,624	441,847	255,431	100,000	50,000
Nebraska	1,822,610	412,662	775,190	448,137	124,414	62,207
Nevada	750,000	200,000	200,000	200,000	100,000	50,000
New Hampshire	989,489	215,472	395,423	228,594	100,000	50,000
New Jersey	6,859,908	2,283,609	2,516,051	1,454,529	403,813	201,906
New Mexico	1,582,441	208,878	755,185	436,573	121,203	60,602
New York	16,077,840	4,928,572	6,129,872	3,543,678	983,812	491,906
North Carolina	8,800,736	1,439,145	4,047,405	2,339,804	649,588	324,794
North Dakota	1,073,304	206,465	454,242	262,597	100,000	50,000
Ohio	11,567,377	2,233,641	5,131,692	2,966,630	823,609	411,805
Oklahoma	3,759,889	553,988	1,762,606	1,018,962	282,889	141,444
Oregon	2,441,921	509,917	1,062,217	614,067	170,480	85,240
Pennsylvania	15,138,450	4,300,438	5,958,743	3,444,748	956,347	478,174
Rhode Island	1,037,329	200,000	435,542	251,787	100,000	50,000
South Carolina	4,957,456	632,692	2,377,757	1,374,581	381,617	190,809
South Dakota	1,156,063	262,115	471,420	272,528	100,000	50,000
Tennessee	7,130,596	1,340,120	3,183,606	1,840,442	510,952	255,476
Texas	16,104,371	2,811,112	7,308,639	4,225,123	1,172,998	586,499
Utah	1,531,905	233,486	713,871	412,689	114,572	57,287
Vermont	820,501	200,000	270,501	200,000	100,000	50,000
Virginia	6,635,516	1,265,652	2,952,354	1,706,755	473,837	236,918
Washington	3,438,496	908,104	1,391,210	804,259	223,282	111,641
West Virginia	3,441,992	742,921	1,483,951	857,871	238,166	119,083
Wisconsin	5,003,579	1,051,573	2,172,815	1,256,104	348,725	174,362
Wyoming	750,000	200,000	200,000	200,000	100,000	50,000
American Samoa	375,000	100,000	100,000	100,000	50,000	25,000
Guam	383,614	100,000	108,614	100,000	50,000	25,000
Puerto Rico	6,589,775	924,671	3,114,676	1,800,594	499,889	249,945
Virgin Islands	375,000	100,000	100,000	100,000	50,000	25,000

Basis of Allocations, per Statutory Formula:

a. Total population, as estimated by the Bureau of the Census: (1)Provisional Estimates of the United States, July 1,1968 (Series P-25, No. 403, September 19, 1968); American Samoa, Guam, Puerto Rico, and Virgin Islands, Provisional Estimates as of July 1, 1967, (Series P-25, No. 392, May 2, 1968).

b. Allotment percentages for fiscal year 1970, as determined by the Surgeon General, September 30, 1968.

AMENDMENTS TO THE FISCAL YEAR 1970 BUDGET

On May 5, 1969 the President submitted amendments to the budget which affected several of the appropriations on which hearings contained in this volume had already been held. These revisions are contained in H. Doc. No. 91–113. In addition, the Department made internal adjustments within some appropriation items without changing the total amount requested. Following is a listing of those items covered in the volume which were changed and those which were not:

CHANGED

Food and drug control (p. 1043)
Air pollution control (p. 1051)
Environmental control (p. 1060)
Buildings and facilities (Consumer Protection and Environmental Health Services) (p. 1070)
Salaries and expenses, Office of the Administrator (Consumer Protection and Environmental Health Services) (p. 1072)
Mental health (p. 1077)
Health services research and development (p. 1085)
Comprehensive health planning and services (p. 1089)
Regional medical programs (p. 1098)
Communicable diseases (p. 1107)
Hospital construction (p. 1111)
Patient care and special health services (p. 1123)
National health statistics (p. 1133)
Salaries and expenses, office of the Administrator (Health Services and Mental Health Administration) (p. 1141)

NOT CHANGED

Saint Elizabeth's Hospital,
District of Columbia medical facilities.
Retired pay of commissioned officers.
Buildings and facilities (Health Services and Mental Health Administration)

Following is the Department's explanation of each of the changes in the budget beginning, for each, on the page indicated in parentheses in the above listing.

Appropriation Estimate

FOOD AND DRUG CONTROL

For necessary expenses, not otherwise provided for, of the Food and Drug Administration in carrying out the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301, et seq.), the Federal Hazardous Substances Act (15 U.S.C. 1261, et seq.), the Fair Packaging and Labeling Act (15 U.S.C. 1451, et seq.), the Import Milk Act (21 U.S.C. 141, et seq.), the Filled Milk Act (21 U.S.C. 61, et seq.), the Import Tea Act (21 U.S.C. 41, et seq.), the Federal Caustic Poison Act (44 Stat. 1406, et seq.), and the Flammable Fabrics Act (15 U.S.C. 1191, et seq.), and sections 301 and 311 of the Public Health Service Act (42 U.S.C. 241, 243) with respect to pesticide control, poison control, shellfish sanitation, and food and drug activities, including payment in advance for special tests and analyses and adverse reaction reporting by contract; studies of new developments pertinent to food and drug enforcement operations: payment for publication of technical and informational materials in professional and trade journals; and rental of special purpose space in the District of Columbia or elsewhere; [$72,698,000] *$72,007,000.*

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Food and Drug Control

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$72,698,000	-$691,000	$72,007,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
1. Medical evaluation:						
a. Research grants		$821,000		---		$821,000
b. Direct operations	780	18,853,000	-8	---	772	18,853,000
Subtotal	780	19,674,000	-8	---	772	19,674,000
2. Scientific research and evaluation:						
a. Research grants		870,000		---		870,000
b. Direct operations	936	15,969,000	-19	-256,000	917	15,713,000
Subtotal	936	16,839,000	-19	-256,000	917	16,583,000
3. Education and voluntary compliance	72	1,296,000	--	---	72	1,296,000
4. Regulatory compliance:						
a. Research grants		690,000		---		690,000
b. Direct operations	2,229	29,338,000	-87	-381,000	2,142	28,957,000
Subtotal	2,229	30,028,000	-87	-381,000	2,142	29,647,000
5. Program direction and management services	353	4,861,000	-4	-54,000	349	4,807,000
Total obligations	4,370	72,698,000	-118	-691,000	4,252	72,007,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions ..	4,370	-118	4,252
Full-time equivalent of all other positions	75	---	75
Average number of all employees	4,280	-55	4,225
Personnel compensation:			
Permanent positions	$45,648,000	-520,000	45,128,000
Positions other than permanent	128,000	---	128,000
Other personnel compensation	400,000	---	400,000
Total personnel compensation	46,176,000	-520,000	45,656,000
Personnel benefits	4,457,000	-48,000	4,409,000
Travel and transportation of persons .	1,937,000	-7,000	1,930,000
Payment to interagency motor pools .	466,000	---	466,000
Transportation of things	455,000	-18,000	437,000
Rent, communications, and utilities ..	1,724,000	-24,000	1,700,000
Printing and reproduction	486,000	---	486,000
Other services	9,600,000	---	9,600,000
Supplies and materials	2,466,000	-37,000	2,429,000
Samples	403,000	---	403,000
Equipment	2,137,000	-37,000	2,100,000
Lands and structures	6,000	---	6,000
Grants, subsidies, and contributions .	2,381,000	---	2,381,000
Insurance claims and indemnities	4,000	---	4,000
Total obligations by object	72,698,000	-691,000	72,007,000

Summary of Changes

1970 Obligations:

Original estimate	$72,698,000
Revised estimate	72,007,000
Net change	-691,000

	Original estimate Pos.	Original estimate Amount	Amendment Pos.	Amendment Amount
A. Decreases:				
1. Medical evaluation Direct operations	780	$18,670,000	-8	---
2. Scientific research and evaluation Direct operations	936	15,696,000	-19	-$256,000
3. Regulatory compliance Direct operations	2,229	28,736,000	-87	-381,000
4. Program direction and management services	--	---	-4	-54,000
Total decreases	xxx	xxx	-118	-691,000
Net change	xxx	xxx	-118	-691,000

EXPLANATION OF CHANGES

Medical Evaluation

Direct operations

A decrease of eight positions is proposed for this activity, with no decrease in funds. Currently authorized positions will be redirected to the medical program early in the fiscal year. This reduction permits an increase over 1969 of 18 positions and $900,000, of which five positions and $435,000 are program increases, $183,000 is a mandatory increase, and 13 positions and $282,000 are reprogrammed from other activities. As a result, FDA will fulfill the program objectives in the original 1970 budget request.

Scientific Research and Evaluation

Direct operations

A decrease of 19 positions and $256,000 is proposed for this activity. Compared with the 1969 base, there is a net decrease of 12 positions and a net increase of $205,000, consisting of $273,000 in mandatories and five additional positions and $188,000 for new programs, offset by a 17-position and $256,000 reduction in food and cosmetic programs. As a result, FDA will augment its efforts at the National Center for Drug Analysis to evaluate 18,000 samples in 1970; however, reductions will have to be made in the areas of food-additive and color-additive petition review, food standards, nutrition, and analysis of vitamin and food samples. Twelve positions and $68,000 will be reprogrammed to the Medical Evaluation budget activity to support drug review and drug equivalency studies.

Regulatory Compliance

Direct operations

A decrease of 87 positions and $381,000 is proposed for this activity. Compared with the 1969 base, there is a net increase of eight positions and $442,000, consisting of 39 more positions and $221,000 for the intensified drug inspection program and $602,000 for mandatory increases, offset by a reduction of 36 positions and $381,000 in food and devices programs. As a result of these changes, FDA will conduct the intensified drug inspections in 340 drug firms in 1970 but will reduce its surveillance efforts in the areas of economic and sanitation problems associated with foods, pesticide and drug residues in foods, food additives, foreign objects in foods, advisory opinions for the food industry, and regulatory planning.

Program Direction and Management Services

Direct operations

A decease of four positions and $54,000 is proposed for this activity. Three positions will be reprogrammed to the Regulatory Compliance activity for the intensified drug inspection program, and one position and all of the funds will go to the Medical Evaluation activity to support drug-equivalency studies. FDA anticipates that it will be able to improve management procedures and streamline administrative-support functions enough to absorb this reduction.

Food and Drug Control

	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$12,132,000	$13,800,000	$13,800,000	$13,800,000
1961	19,176,000	18,648,000	19,176,000	18,848,000
1962	23,580,000	23,580,000	22,000,000	23,000,000
1963	31,826,000	29,064,700	30,564,700	29,064,700
1964	35,805,000	35,805,000	35,805,000	35,805,000
1965	40,370,000	40,370,000	40,370,000	40,370,000
1966	53,079,000	53,079,000	53,079,000	53,079,000
1967	65,139,000	65,139,000	61,685,000	61,685,000
1968	66,749,000	66,225,000	66,000,000	66,000,000
1969	69,801,000	67,296,000	67,296,000	67,296,000
1970	72,007,000			

1. Medical evaluation

Direct operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	780	$10,642,000	-8	---	772	$10,642,000
Other expenses ...	---	8,211,000	---	---	---	8,211,000
Total	780	18,853,000	-8	---	772	18,853,000

FDA's original 1970 request identified 26 new positions and $442,000 for the review of new-drug submissions and for expanded research into the clinical equivalency of drugs that are chemically identical. Under this amendment, the same level of effort will be applied to accomplish program objectives through the addition of five new positions and $60,000, combined with the reprogramming of 12 positions from food programs in the Scientific Research and Evaluation budget activity and one from the Program Direction and Management Services activity.

2. Scientific research and evaluation

Direct operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	936	$11,050,000	-19	-$193,000	917	$10,857,000
Other expenses ...	---	4,919,000	---	-63,000	---	4,856,000
Total	936	15,969,000	-19	-256,000	917	15,713,000

FDA originally requested seven new positions and $188,000 in 1970 to increase output at the National Center for Drug Analysis. The same level of effort can be maintained by shifting four currently authorized positions from food standards activities and one from the cosmetics area within this budget activity. Twelve more positions will be reprogrammed from this activity to Medical Evaluation for drug review and for drug equivalency studies. These positions were involved in evaluating food-additive petitions, establishing food standards, and analyzing food samples in connection with FDA's surveillance and compliance programs.

3. Regulatory compliance

Direct operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	2,229	$24,176,000	-87	-$325,000	2,142	$23,851,000
Other expenses	---	5,162,000	---	-56,000	---	5,106,000
Total	2,229	29,338,000	-87	-381,000	2,142	28,957,000

FDA originally requested 90 new positions and $221,000 for the intensified drug inspection program. The same level of effort can be maintained in 1970 through the use of 39 currently authorized positions, 36 of which will be transferred from food programs within this budget activity and three of which will come from the Program Direction and Management Services activity. The 36 positions were involved in surveillance activities aimed at food sanitation problems, economic cheats, pesticide and drug residues in foods, food additives, and foreign objects in foods. This reduction in effort will lead to a cutback of about 2,300 in the total number of food samples collected and analyzed.

4. Program direction and management services

Direct operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	353	$3,893,000	-4	-$50,000	349	$3,843,000
Other expenses	---	968,000	---	-4,000	---	964,000
Total	353	4,861,000	-4	-54,000	349	4,807,000

Three of these four positions will be reprogrammed into the Regulatory Compliance activity to support the intensified drug inspection program in 1970, and one will go to Medical Evaluation for drug equivalency studies. This reduction reflects the administration's goal to improve management procedures and streamline as much as possible the administrative support functions in FDA. By merging certain of these functions and by increasing efficiency in others, FDA anticipates that it will be able to reduce its administrative support staff in 1970.

New Positions Requested
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Salary	No.	Grade	Salary
Medical Evaluation						
Medical officer	5	GS-15	$105,490	---	---	---
Medical officer	21	GS-14	415,191	5	---	$98,855
	26		520,681	5		98,855
Scientific Research and Evaluation						
Chemist	1	GS-12	12,174	---	---	---
Chemist	3	GS-11	34,689	---	---	---
Chemist	3	GS-9	30,462	---	---	---
	7		77,325	---		---
Regulatory Compliance						
Supervisory inspectors	5	GS-12	60,870	---	---	---
Inspectors	5	GS-7	34,905	---	---	---
Inspectors	44	GS-5	252,208	---	---	---
Inspector technicians	15	GS-4	77,175	---	---	---
Inspector technicians	10	GS-3	46,000	---	---	---
Clerk dictating machine transcriber	11	GS-3	50,600	---	---	---
	90		521,758	---		---
Total new positions, all activities	123		$1,119,764	5		$98,855

Appropriation Estimate

Air Pollution Control

To carry out the Clean Air Act, as amended, and the functions of the Secretary of Health, Education, and Welfare under the provisions of section 48 (h) (12) (C) (ii) of the Internal Revenue Code of 1954 (80 Stat. 1508, 1512), including hire, maintenance, and operation of aircraft, $95,800,000, [, of which $21,900,000 shall remain available until expended to carry out section 104 of the Clean Air Act.]

Appropriation Language Change

The change in language deletes all references to Section 104 of the Clean Air Act, since the authorization for Section 104 expires on June 30, 1969. Research and development activities concerning the control of air pollution from fuel combustion will be carried out in 1970 under the authority of other provisions of the Air Quality Act of 1967.

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Air Pollution Control

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$95,800,000	---	$95,800,000
Unobligated balance brought forward	1,000,000	---	1,000,000
Total obligations	96,800,000	---	96,800,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
1. Abatement and control:						
a. Grants	---	$25,300,000	---	+$575,000	---	$25,875,000
b. Direct operations	400	10,077,000	-56	-421,000	344	9,656,000
Subtotal	400	35,377,000	-56	+154,000	344	35,531,000
2. Research, development, and demonstration:						
a. Grants and contracts	---	31,300,000	---	+300,000	---	31,600,000
b. Direct operations	585	22,033,000	-25	-305,000	560	21,728,000
Subtotal	585	53,333,000	-25	-5,000	560	53,328,000
3. Manpower training:						
a. Grants	---	3,500,000	---	---	---	3,500,000
b. Direct operations	90	1,990,000	-12	-85,000	78	1,905,000
Subtotal	90	5,490,000	-12	-85,000	78	5,405,000
4. Program direction and management services	128	2,600,000	-8	-64,000	120	2,536,000
Total obligations	1,203	96,800,000	-101	---	1,102	96,800,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions..	1,203	-101	1,102
Full-time equivalent of all other positions.....	78	---	78
Average number of all employees.....	1,205	-68	1,137
Personnel compensation:			
Permanent positions.....	$10,800,000	-$657,000	$10,143,000
Positions other than permanent.....	400,000	---	400,000
Other personnel compensation.....	200,000	---	200,000
Total personnel compensation.....	11,400,000	-657,000	10,743,000
Personnel benefits.....	1,583,000	-31,000	1,552,000
Travel and transportation of persons.....	1,900,000	-42,000	1,858,000
Transportation of things.....	1,000,000	-11,000	989,000
Rent, communications, and utilities.....	2,300,000	-30,000	2,270,000
Printing and reproduction.....	620,000	-15,000	605,000
Other services:			
Project contracts.....	31,997,000	+300,000	32,297,000
Other.....	2,900,000	-35,000	2,865,000
Supplies and materials.....	1,900,000	-7,000	1,893,000
Equipment.....	2,000,000	-47,000	1,953,000
Lands and structures.....	400,000	---	400,000
Grants, subsidies, and contributions.....	38,800,000	+575,000	39,375,000
Total obligations by object.....	96,800,000	---	96,800,000

Summary of Changes

1970 obligations:

Original estimate	$96,800,000
Revised estimate	96,800,000
Net change	---

	Original estimate		Amendment	
	Pos.	Amount	Pos.	Amount
A. Increases:				
1. Abatement and control Grants	---	$25,300,000	---	+$575,000
2. Research, development, and demonstration Grants and contracts	---	31,300,000	---	+300,000
Subtotal, increases	xxx	xxx	---	+875,000
B. Decreases:				
1. Abatement and control Direct operations	400	9,958,000	-56	-421,000
2. Research, development, and demonstration Direct operations	585	21,886,000	-25	-305,000
3. Manpower training Direct operations	90	1,968,000	-12	-85,000
4. Program direction and management services	128	2,575,000	-8	-64,000
Subtotal, decreases	xxx	xxx	-101	-875,000
Net change	xxx	xxx	-101	---

EXPLANATION OF CHANGES

Abatement and control

Grants

A reprogramming of $575,000 is requested to provide an increased level of support to the State and local air pollution control agencies located in the approximately 50 Air Quality Control Regions that will be designated by the end of 1970.

Research, development, and demonstration

Grants and contracts

This amendment requests a reprogramming of $300,000 for contracts to support limited studies to develop unconventional power sources for low pollution type vehicles.

Abatement and control

Direct operations

The reprogrammed reduction of 56 positions will provide an additional $421,000 for control program grants. The 56 positions and the related $421,000 were to provide direct support to the establishment of air pollution control programs directed at continuing improvement in local control measures.

Research, development, and demonstration

Direct operations

The reduction of 25 positions and the related $305,000 will provide additional funds for grants and contracts. These positions and amounts were to increase the number of pollutants being monitored and would have enabled the gathering of additional emission source data.

Manpower training

Direct operations

The amendment reduction of 12 positions and $85,000 will provide additional funds for grants to State and local control agencies. The 12 positions and related costs would have provided training for additional personnel to meet State, local, and regional program needs.

Program direction and management services

The amendment reduction of 8 positions and $64,000 will provide additional funds for reprogramming into control program grants. The 8 positions and related costs would have provided direction for the determination of the boundaries of Air Quality Control Regions and the coordination of the National Air Pollution Control Administration's activities within these regions.

Air Pollution Control

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1962	$8,100,000	$8,600,000	$8,900,000	$8,800,000
1963	10,069,000	11,069,000	11,069,000	11,069,000
1964	15,247,000	12,999,000	12,999,000	12,999,000
1965	23,030,000	20,995,000	20,995,000	20,995,000
1966	25,028,000	26,662,000	26,662,000	26,662,000
1967	39,481,000	39,225,000	46,000,000	40,061,000
1968	70,271,000	64,185,000	64,185,000	64,185,000
1969	106,733,000	86,733,000	94,033,000	88,733,000
1970	95,800,000			

General statement

The proposed amendment of the 1970 budget requests a reprogramming of $875,000 into grants and contracts, and deletion of all references to Section 104 of the Air Quality Act of 1967, since authorization for Section 104 expires on June 30, 1969.

A reduction of 101 positions in direct operations will provide $875,000 for reprogramming; $575,000 into control program grants, and $300,000 into contracts for support of limited studies to develop unconventional power sources for low pollution type vehicles. Research and development activities concerning the control of air pollution from fuel combustion, originally proposed to be carried out under Section 104, will be carried out under the authority of other provisions of the Air Quality Act of 1967.

1. Abatement and control

	1970 Original Estimate	Amendment	1970 Revised Estimate
a. Grants	$25,300,000	+$575,000	$25,875,000

Control program grants

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	No.	Amount	No.	Amount	No.	Amount
(1) Continuations	195	$21,000,000	---	+$475,000	195	$21,475,000
(2) New grants	30	4,300,000	---	+100,000	30	4,400,000
Total	225	25,300,000	---	+575,000	225	25,875,000

The amendment requests a reprogramming of $575,000 into control program grants to provide an increased level of support to the State, local, and regional air pollution control agencies located in the 50 Air Quality Control Regions that will be designated by the end of 1970. Of the $575,000 requested to be reprogrammed, $475,000 will provide additional continued support to agencies within the 20 Air Quality Control Regions designated as of the end of 1969 and $100,000 will provide additional initial support for programs in approximately 30 additional Regions to be designated by the end of 1970.

b. Direct operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	400	$4,318,000	-56	-$332,000	344	$3,986,000
Other expenses	---	5,759,000	---	-89,000	---	5,670,000
Total	400	10,077,000	-56	-421,000	344	9,656,000

The reduction of 56 positions will provide $421,000 for reprogramming into control program grants. The reduced 56 positions and the related costs of $421,000 were to provide direct support to State, local, and regional air pollution control agencies. These agencies will be faced with the responsibility for standard setting and enforcement of these standards for the designated Air Quality Control Regions.

2. Research, development, and demonstration

	1970 Original Estimate	Amendment	1970 Revised Estimate
a. Grants and contracts	$31,300,000	+$300,000	$31,600,000

Contracts

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	No.	Amount	No.	Amount	No.	Amount
Total	108	$21,300,000	+3	+$300,000	111	$21,600,000

The amendment requests a reprogramming of $300,000 into contracts for additional support of limited studies, initiated in 1969, on external combustion burners, Rankine engine design, evaluation of new power sources for buses, and the development of other unconventional power sources for low pollution type vehicles.

b. Direct operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	585	$6,585,000	-25	-$231,000	560	$6,354,000
Other expenses	---	15,448,000	---	-74,000	---	15,374,000
Total	585	22,033,000	-25	-305,000	560	21,728,000

The amendment requests a reduction of 25 positions and a reprogramming of $305,000 in related costs. The $305,000 will provide additional funds for grants and contracts. The reduced positions and amounts were to increase the number of pollutants being monitored and would have enabled the gathering of additional emission source data.

3. Manpower training

b. Direct operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	90	$920,000	-12	-$70,000	78	$850,000
Other expenses	---	1,070,000	---	-15,000	---	1,055,000
Total	90	1,990,000	-12	-85,000	78	1,905,000

The amendment reduction of 12 positions and $85,000 will provide additional funds for grants to State and local control agencies. The 12 positions and related costs would have provided training for additional personnel and the expansion of field activities to meet State, local, and regional program needs.

4. Program direction and management services

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	128	$1,160,000	-8	-$55,000	120	$1,105,000
Other expenses	---	1,440,000	---	-9,000	---	1,431,000
Total	128	2,600,000	-8	-64,000	120	2,536,000

The amendment reduction of 8 positions and $64,000 will provide additional funds for reprogramming into control program grants. The 8 positions and related costs would have provided direction for the determination of the boundaries of Air Quality Control Regions and the coordination of the National Air Pollution Control Administration's activities within these regions.

New Positions Requested
Fiscal Year 1970

Abatement and control	1970 Original Estimate No.	Grade	Salary	1970 Revised Estimate No.	Grade	Salary
Engineer	1	GS-17	$26,264	---	---	---
Engineer	2	GS-16	45,670	1	GS-16	$22,835
Engineer	4	GS-15	79,120	2	GS-15	39,560
Administrative staff assistant	1	GS-14	16,946	---	---	---
Engineer	4	GS-14	67,784	2	GS-14	33,892
Scientist	6	GS-14	101,676	1	GS-14	16,946
Physical science administrator	2	GS-14	33,892	---	---	---
Engineer	5	GS-13	72,045	1	GS-13	14,409
Scientist	4	GS-13	57,636	1	GS-13	14,409
Scientist	2	GS-12	25,160	1	GS-12	12,580
Engineer	1	GS-12	12,580	1	GS-12	12,580
Staff assistant	2	GS-12	24,348	---	---	---
Scientist	3	GS-11	34,689	1	GS-11	11,563
Engineer	2	GS-11	23,126	1	GS-11	11,563
Economist	1	GS-11	10,203	---	---	---
Scientist	3	GS- 9	30,462	1	GS- 9	10,154
Engineer	3	GS- 9	30,462	---	---	---
Administrative assistant	4	GS- 9	33,848	---	---	---
Scientist	4	GS- 7	36,312	1	GS- 7	9,078
Engineer	4	GS- 7	36,312	1	GS- 7	9,078
Secretary	1	GS- 7	6,981	1	GS- 7	6,981
Secretary	2	GS- 6	12,642	1	GS- 6	6,321
Scientist	2	GS- 5	14,912	1	GS- 5	7,456
Secretary	3	GS- 5	17,196	1	GS- 5	5,732
Clerk-typist	4	GS- 4	20,580	---	---	---
Clerk-typist	2	GS- 3	9,200	---	---	---
Commissioned Officers:						
Director grade	1	---	13,367	1	---	13,367
Senior grade	1	---	10,367	1	---	10,367
Full grade	1	---	8,503	1	---	8,503
Senior assistant	3	---	17,940	2	---	11,960
Wage Board:						
Machinist	1	WB-11	9,028	1	WB-11	9,028
Machinist helper	1	WB- 4	5,345	---	---	---
Laborer	1	WB- 1	4,326	---	---	---
	81	---	948,922	25	---	298,362
Research, development and demonstration						
Scientist	3	GS-17	78,792	---	---	---
Scientist	3	GS-16	68,505	1	GS-16	22,835
Statistician	1	GS-15	19,780	---	---	---
Engineer	1	GS-15	19,780	1	GS-15	19,780
Scientist	3	GS-15	59,340	1	GS-15	19,780
Engineer	2	GS-14	33,892	---	---	---
Scientist	4	GS-14	67,784	2	GS-14	33,892
Physical science administrator	1	GS-14	16,946	---	---	---
Economist	1	GS-13	14,409	1	GS-13	14,409
Statistician	1	GS-13	14,409	---	---	---
Physical science administrator	1	GS-13	14,409	---	---	---
Scientist	1	GS-12	12,580	1	GS-12	12,580
Engineer	1	GS-12	12,580	---	---	---
Scientist	1	GS-11	11,563	1	GS-11	11,563
Economist	1	GS-11	10,203	---	---	---

New Positions Requested - continued

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Salary	No.	Grade	Salary
Research technician	2	GS- 9	$16,924	---	---	---
Administrative assistant	1	GS- 9	8,462	---	---	---
Laboratory technician	2	GS- 7	13,962	1	GS- 7	$6,981
Secretary	2	GS- 7	13,962	1	GS- 7	6,981
Scientist	2	GS- 5	14,912	---	---	---
Commissioned Officers:						
Director grade	1	---	13,367	1	---	13,367
Senior grade	1	---	10,367	1	---	10,367
Full grade	1	---	8,503	---	---	---
	37	---	555,431	12	---	172,535
Manpower training						
Chief, Office of Manpower Development	1	GS-15	19,780	---	---	---
Administrative staff assistant	1	GS-14	16,946	---	---	---
Scientist	1	GS-13	14,409	---	---	---
Scientist	1	GS-12	12,580	---	---	---
Engineer	1	GS-12	12,580	---	---	---
Scientist	1	GS-11	11,563	---	---	---
Engineer	1	GS-11	11,563	---	---	---
Scientist	1	GS- 9	10,154	---	---	---
Engineer	1	GS- 9	10,154	---	---	---
Secretary	1	GS- 6	6,321	---	---	---
Clerical assistant	1	GS- 3	4,600	---	---	---
Commissioned Officer:						
Full grade	1	---	8,503	---	---	---
	12	---	139,153	---	---	---
Program direction and management services						
Coordinator, Air Quality Regions	1	GS-17	26,264	---	---	---
Special assistant for inter-State abatement activities	1	GS-17	26,264	---	---	---
Intergovernmental relations specialist	1	GS-17	26,264	---	---	---
Assistant coordinator, Air Quality Regions	1	GS-16	22,835	---	---	---
Associate commissioner	1	GS-16	22,835	---	---	---
Secretary	2	GS- 7	13,962	---	---	---
Commissioned Officer:						
Senior grade	1	---	10,367	---	---	---
	8	---	148,791	---	---	---
Total new positions, all activities	138	---	1,792,297	37	---	470,897

Appropriation Estimate

Environmental Control

To carry out sections 301, 311, 328, and 354-361 of the Public Health Service Act (42 U.S.C. 241, 243, and 264; Public Law 90-602) with respect to occupational safety and health, milk, food, and community environmental sanitation, water quality control, interstate quarantine activities, and control of radiation hazards to health; section 2 (k) of the Water Quality Act of 1965 (79 Stat. 903. 905); and the functions of the Secretary of Health, Education, and Welfare under the Solid Waste Disposal Act of 1965 (42 U.S.C. 3251, et seq.), including hire, maintenance, and operation of aircraft; [$57,698,000] *$55,208,000.*

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Environmental Control

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation.....	$57,698,000	-$2,490,000	$55,208,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
1. Solid wastes:						
a. Research grants..		$2,444,000		-$300,000		$2,144,000
b. Training grants..		490,000		---		490,000
c. Demonstration grants..		5,150,000		---		5,150,000
d. Planning grants..		1,500,000		---		1,500,000
e. Direct operations..	216	5,588,000	---	---	216	5,588,000
Subtotal..	216	15,172,000	---	-300,000	216	14,872,000
2. Occupational safety and health:						
a. Research grants..		2,966,000		-259,000		2,707,000
b. Training grants..		477,000		---		477,000
c. Direct operations..	284	4,590,000	---	---	284	4,590,000
Subtotal..	284	8,033,000	---	-259,000	284	7,774,000

Obligations by Activity--continued

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
3. Radiological health:						
a. Research grants..		$ 2,296,000		-$430,000		$ 1,866,000
b. Training grants..		2,000,000		---		2,000,000
Direct operations..	752	13,057,000	+8	-396,000	760	12,661,000
Subtotal..	752	17,353,000	+8	-826,000	760	16,527,000
4. Community environmental management:						
a. Research grants..		3,127,000		---		3,127,000
b. Training grants..		1,192,000		---		1,192,000
c. Fellowships..		50,000		---		50,000
d. Direct operations..	446	6,848,000	-99	-905,000	347	5,943,000
Subtotal..	446	11,217,000	-99	-905,000	347	10,312,000
5. Water Hygiene:						
a. Research grants..		158,000		---		158,000
b. Training grants..		200,000		---		200,000
c. Direct operations..	180	2,435,000	-13	-200,000	167	2,235,000
Subtotal..	180	2,793,000	-13	-200,000	167	2,593,000
6. Program direction and management services.....	220	3,130,000	---	---	220	3,130,000
Total obligations..	2,098	57,698,000	-104	-2,490,000	1,994	55,208,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions.	2,098	-104	1,994
Full-time equivalent of all other positions.....	102	-7	95
Average number of all employees.....	2,135	-95	2,040
Personnel compensation:			
Permanent positions.....	$19,600,000	-608,000	18,992,000
Positions other than permanent....	960,000	-52,000	908,000
Other personnel compensation.....	197,000	-5,000	192,000
Total personnel compensation....	20,757,000	-665,000	20,092,000
Personnel benefits.....	2,867,000	-118,000	2,749,000
Travel and transportation of persons	1,561,000	+18,000	1,579,000
Transportation of things.....	715,000	-24,000	691,000
Rent, communications, and utilities.	1,705,000	-12,000	1,693,000
Printing and reproduction.....	210,000	-5,000	205,000
Other services:			
Project contracts.....	3,836,000	-552,000	3,284,000
Other.....	1,424,000	-255,000	1,169,000
Supplies and materials.....	1,268,000	-8,000	1,260,000
Equipment.....	1,161,000	+120,000	1,281,000
Land and structures.....	140,000	---	140,000
Grants, subsidies, and contributions	22,050,000	-989,000	21,061,000
Insurance claims and indemnities....	4,000	---	4,000
Total obligations by object.....	57,698,000	-2,490,000	55,208,000

Summary of Changes

1970 obligations:

Original estimate	$57,698,000
Revised estimate	55,208,000
Net change	-2,490,000

	Original estimate Pos.	Original estimate Amount	Amendment Pos.	Amendment Amount
A. Increases:				
1. Radiological health Direct operations..	752	$12,911,000	+8	+$144,000
2. Community environmental management Direct operations..	446	6,750,000	+6	+440,000
Subtotal, increases..	xxx	xxx	+14	+584,000
B. Decreases:				
1. Solid wastes Grants.....	---	9,584,000	---	-300,000
2. Occupational safety and health Grants.....	---	3,443,000	---	-259,000
3. Radiological health Grants.....	---	4,296,000	---	-430,000
Direct operations.	752	12,911,000	---	-540,000
Subtotal, Radiological health.....	752	17,207,000	---	-970,000
4. Community environmental management Direct operations.	446	6,750,000	-105	-1,345,000
5. Water hygiene Direct operations.	180	2,401,000	-13	-200,000
Subtotal, decreases.	xxx	xxx	-118	-3,074,000
Net change.....	xxx	xxx	-104	-2,490,000

EXPLANATION OF CHANGES

Radiological health

Direct operations

The increase of $144,000 will permit acceleration of instrumentation and standards development in relation to the "Radiation Control for Health and Safety Act of 1968."

Community environmental management

Direct operations

An increase of $90,000 will be used to expand rodent control efforts.

The increase of $350,000 will be used to fund severance pay requirements resulting from the elimination of the Aedes aegypti program.

Solid wastes

Grants

The reduction of $300,000 in research grants will reduce the number of new grants from 20 to approximately 14 grants.

Occupational safety and health

Grants

The reduction of $259,000 in research grants will reduce the number of new grants from 16 to approximately 11 grants.

Radiological health

Grants

The reduction of $430,000 in research grants will reduce the number of new grants from 19 to 4 and eliminate all research grant supplementals.

Direct operations

The reduction of $540,000 will require the elimination of the 1970 X-Ray population study and some reduction in on-going contractual studies.

Community environmental management

Direct operations

The reduction of 105 positions and $1,345,000 will terminate the Aedes aegypti program at the end of Fiscal Year 1969. Aedes aegypti is the vector of yellow fever which has not been reported in the United States for over four decades. This program had been undertaken because of the danger of the mosquito migrations from this country to Latin America, where outbreaks of yellow fever are a potential threat. Using the existing eradication method, continuation of the program would have required hundreds of millions of dollars in future U.S. expenditures without any real assurance of success.

Water hygiene

Direct operations

The reduction of 13 positions and $200,000 will reduce the planned expansion of DHEW participation in Water Resources Council activities.

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1962	$ 5,604,000	$ 7,424,000	$ 7,424,000	$ 7,424,000
1963	7,502,000	7,502,000	8,536,000	8,536,000
1964	9,153,000	9,073,000	9,073,000	9,073,000
1965	9,240,000	9,170,000	9,170,000	9,170,000
1966	15,818,000	9,842,000	13,842,000	13,842,000
1967	21,971,000	21,963,000	21,963,000	21,963,000
1968	42,594,000	41,594,000	42,194,000	41,750,000
1969	45,611,000	42,875,000	43,375,000	42,995,000
1970	55,208,000			

1. Solid Wastes

	1970 Original Estimate	Amendment	1970 Revised Estimate
a. Grants.....	$9,584,000	-$300,000	$9,284,000

(1) Research Grants

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.	39	$1,374,000	---	---	39	$1,374,000
(b) New grants.....	20	970,000	-6	-$300,000	14	670,000
(c) Supplementals..	(3)	100,000	---	---	(3)	100,000
Total.....	59	2,444,000	-6	-300,000	53	2,144,000

The reduction of approximately 6 new grants and $300,000 will result in curtailing the research efforts in the field of management practices.

2. Occupational Safety and Health

	1970 Original Estimate	Amendment	1970 Revised Estimate
a. Grants.....	$3,443,000	-$259,000	$3,184,000

(1) Research Grants

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.	52	$2,231,000	---	---	52	$2,231,000
(b) New grants.....	16	635,000	-5	-$259,000	11	376,000
(c) Supplementals..	(4)	100,000	---	---	(4)	100,000
Total.....	68	2,966,000	-5	-259,000	63	2,707,000

The reduction of approximately 5 new grants and $259,000 will reduce the research effort in the areas of toxicology, pathology, physiology, noise and employee health services.

3. Radiological Health

	1970 Original Estimate	Amendment	1970 Revised Estimate
a. Grants.....	$4,296,000	-$430,000	$3,866,000

(1) Research Grants

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	No.	Amount	No.	Amount	No.	Amount
(a) Non-competing continuations.	58	$1,710,000	---	---	58	$1,710,000
(b) New grants.....	19	556,000	-15	-$400,000	4	156,000
(c) Supplementals..	(5)	30,000	(-5)	-30,000	---	---
Total.....	77	2,296,000	-15	-430,000	62	1,866,000

The reduction of $430,000 will reduce the number of new grants from 19 to 4, and will limit initiation of new projects in the non-ionizing radiation area.

b. Direct Operations

	1970 Original Estimate		Amendment		1970 Revised Estimated	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	752	$8,286,000	+8	+$120,000	760	$8,406,000
Other expenses.....	---	4,771,000	---	-516,000	---	4,255,000
Total.....	752	13,057,000	+8	-396,000	760	12,661,000

The net decrease of $396,000 is the result of an increase of $144,000 to augment implementation of new legislation, offset by a decrease of $540,000 in other radiological health areas. The increase will permit acceleration of instrumentation and standards development in relation to the "Radiation Control for Health and Safety Act of 1968." It will provide additional engineering and laboratory support necessary for establishment of technical reference standards for microwave, laser and ultrasonic radiations. The reduction of $540,000 will result in the elimination of the 1970 X-Ray population study and a reduction in some on-going contractural studies not related to the implementation of the new legislation pertaining to electronic product radiation control.

4. Community Environmental Management

a. Direct Operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	446	$5,943,000	-99	-$678,000	347	$5,265,000
Other expenses	---	905,000	---	-227,000	---	678,000
Total	446	6,848,000	-99	-905,000	347	5,943,000

The decrease of 99 positions and $905,000 is the net result of an increase of $90,000 related to expansion of rodent control efforts, and an increase of $350,000 to fund 1970 severance pay requirements resulting from the elimination of the Aedes aegypti program. This program will be terminated at the end of Fiscal Year 1969. Aedes aegypti is the vector of yellow fever which has not been reported in the United States for over four decades. This program had been undertaken because of the danger of the mosquito migration from this country to Latin America, where outbreaks of yellow fever are a potential threat. Using the existing eradication method, continuation of the program would have required hundreds of millions of dollars in future U.S. expenditures without any real assurance of success.

5. Water Hygiene

a. Direct Operations

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	180	$1,792,000	-13	-$225,000	167	$1,567,000
Other expenses	---	643,000	---	+25,000	---	668,000
Total	180	2,435,000	-13	-200,000	167	2,235,000

The reduction of $200,000 and 13 positions will reduce the planned expansion of DHEW participation in Water Resources Council activities. The effort in 1970 will be somewhat above the current level which may result in delays or omissions of health effects input on a number of long range studies that the council is proposing.

New Positions Requested
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Amount	No.	Grade	Amount
Solid Waste Management						
Epidemiologist	1	GS-15	$ 19,780	1	GS-15	$ 19,780
Ecologist	1	GS-14	16,946	1	GS-14	16,946
Information specialist	1	GS-12	12,174	1	GS-12	12,174
Biologist	1	GS-12	12,174	1	GS-12	12,174
Engineering technician	1	GS-7	6,981	1	GS-7	6,981
Technician	1	GS-7	6,981	1	GS-7	6,981
Secretary	1	GS-5	5,732	1	GS-5	5,732
Commissioned officers:						
Senior grade	2	---	22,184	2	---	22,184
Senior assistant grade	1	---	8,276	1	---	8,276
	10	---	111,228	10	---	111,228
Occupational Safety and Health						
Medical officer	1	GS-15	19,780	1	GS-15	19,780
Epidemiologist	1	GS-14	16,946	1	GS-14	16,946
Bioengineer	1	GS-13	14,409	1	GS-13	14,409
System engineer	1	GS-13	14,409	1	GS-13	14,409
Statistician	1	GS-7	6,981	1	GS-7	6,981
Administrative assistant	1	GS-7	6,981	1	GS-7	6,981
Secretary	1	GS-5	5,732	1	GS-5	5,732
Physical science aide	1	GS-5	5,732	1	GS-5	5,732
Commissioned officers:						
Senior grade	1	---	11,092	1	---	11,092
Full grade	1	---	9,490	1	---	9,490
	10	---	111,552	10	---	111,552
Radiological Health						
Opthalmologist	1	GS-16	22,835	1	GS-16	22,835
Research physicist	1	GS-15	19,780	1	GS-15	19,780
Biomedical engineer	1	GS-15	19,780	1	GS-15	19,780
Research engineer	2	GS-14	33,892	2	GS-14	33,892
Electrical engineer	1	GS-14	16,946	3	GS-14	50,838
Research physicist	--	---	---	2	GS-14	33,892
Electrical engineer	4	GS-13	57,636	6	GS-13	86,454
Electrical supervisor	3	GS-12	36,522	3	GS-12	36,522
Engineering technician	2	GS-11	20,406	2	GS-11	20,406
Electronic technician	2	GS-9	16,924	2	GS-9	16,924
Electronic technician	3	GS-7	20,943	3	GS-7	20,943
Secretary	3	GS-5	17,196	5	GS-5	28,660
Commissioned officers:						
Director grade	3	---	43,071	3	---	43,071
Senior grade	6	---	66,552	6	---	66,552
Full grade	6	---	56,940	6	---	56,940
Senior assistant grade	3	---	24,828	3	---	24,828
	41	---	474,251	49	---	582,317

New Positions Requested -- continued
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Amount	No.	Grade	Amount
Water Hygiene						
Physiologist	1	GS-14	16,946	---	---	---
Economist	1	GS-14	16,946	1	GS-14	16,946
Epidemiologist	1	GS-13	14,409	---	---	---
Engineer	1	GS-13	14,409	---	---	---
Engineer	1	GS-12	12,174	---	---	---
Statistician	1	GS-12	12,174	---	---	---
Engineer	1	GS-11	10,203	---	---	---
Biological laboratory technician	2	GS-9	16,924	---	---	---
Chemist	1	GS-9	8,462	---	---	---
Engineer	1	GS-9	8,462	1	GS-9	8,462
Microbiologist	1	GS-9	8,462	---	---	---
Physical science technician	1	GS-5	5,732	---	---	---
Secretary	1	GS-5	5,732	2	GS-5	11,464
Statistician	1	GS-5	5,732	---	---	---
Commissioned officers:						
Director grade	2	---	28,714	---	---	---
Senior grade	1	---	11,092	1	---	11,092
Full grade	1	---	9,490	1	---	9,490
Senior assistant grade	1	---	8,276	1	---	8,276
	20	---	214,339	7	---	65,730
Community Environmental Management						
Secretary	---	---	---	1	GS-5	5,732
Commissioned officers:						
Director grade	---	---	---	5	---	82,235
Subtotal	---	---	---	6	---	87,967
Aedes aegypti	-68	---	-604,804	-173	---	-1,509,967
	-68	---	-604,804	-167	---	-1,422,000
Total new positions 11 activities	+13	---	+306,566	-91	---	-551,173

Appropriation Estimate

BUILDINGS AND FACILITIES

For construction, extension, major repairs, improvements, alterations, and equipment, including acquisition of sites, of facilities of or used by the Consumer Protection and Environmental Health Service where not otherwise provided, [$400,000] *$300-000*, to remain available until expended: Provided, That such unexpended balances as the Secretary of Health, Education, and Welfare may determine to be available as of June 30, 1969, in the appropriation for "Buildings and facilities", Public Health Service, for Consumer Protection and Environmental Health Service activities shall be merged with this appropriation.

CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE

Buildings and Facilities

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$ 400,000	-$100,000	$ 300,000
Unobligated balance brought forward	8,571,000	---	8,571,000
Unobligated balance transferred from: "Buildings and Facilities," National Institutes of Health	3,777,000	---	3,777,000
Unobligated balance carried forward	-2,439,000	---	-2,439,000
Total obligations	10,309,000	-100,000	10,209,000

Obligations by Activity

Description	1970 Original Estimate	Amendment	1970 Original Estimate
1. Appalachian health field station	$ 862,000	$ ---	$ 862,000
2. Air pollution research facility	1,615,000	---	1,615,000
3. Laboratory facility, Cincinnati, Ohio	1,000,000	---	1,000,000
4. National center for drug analysis	3,541,000	---	3,541,000
5. FDA research laboratory #2	250,000	---	250,000
6. FDA district offices	2,341,000	---	2,341,000
7. Repairs and Improvements	700,000	-100,000	600,000
Total obligations	10,309,000	-100,000	10,209,000

Obligations by Object

Description	1970 Original Estimate	Amendment	1970 Revised Estimate
CONSUMER PROTECTION AND ENVIRONMENTAL HEALTH SERVICE			
Transportation of things	$5,000	---	$5,000
Other services	1,756,000	-100,000	1,656,000
Supplies and materials	582,000	---	582,000
Equipment	200,000	---	200,000
Lands and structures	575,000	---	575,000
Total, Consumer Protection and Environmental Health Service	3,118,000	-100,000	3,018,000
ALLOCATION TO GENERAL SERVICES ADMINISTRATION			
Other services	61,000	---	61,000
Lands and structures	7,130,000	---	7,130,000
Total, General Services Administration	7,191,000	---	7,191,000
Total obligations by object	10,309,000	-100,000	10,209,000

Summary of Changes

1970 appropriation:

Original estimate	$400,000
Revised estimate	300,000
Net change	-100,000

	Original estimate Amount	Amendment Amount
Increases		
1. Repairs and improvements:		
(a) Food and drug control	$100,000	-40,000
(b) Environmental control	300,000	-60,000
Net change	xxx	-100,000

EXPLANATION OF CHANGES

Repairs and improvements

The decrease of $100,000 in the budget amendment eliminates scheduled repairs and improvements at the following facilities: $21,000, Pesticides Research Laboratory, Perrine, Florida; $2,000, Pesticides Research Laboratory, Wenatchee, Washington; $50,000, Gulfcoast Marine Health Sciences Laboratory, Dauphin Island, Alabama; $10,000, Northwest Marine Health Sciences Laboratory, Manchester, Washington. Repairs at Food and Drug district offices will be reduced by $17,000.

Buildings and Facilities

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1970	$300,000			

Repairs and Improvements

The budget amendment reduction of $100,000 will be applied as listed below.

	1970 Original Estimate	Amendment	1970 Revised Estimate
Food and Drug Administration.....	$100,000	$ -40,000	$ 60,000
Environmental Control Administration..	300,000	-60,000	240,000
Totals	400,000	-100,000	300,000

Food and Drug Administration..... $ 60,000

FDA eliminated repairs and modifications in the Pesticides Research Laboratories at Perrine, Florida, $21,000, and at Wenatchee, Washington, $2,000. Other Food and Drug facilities were reduced by $17,000 from $77,000 to the $60,000 requested in this amendment.

Environmental Control Administration..... $240,000

ECA eliminated improvements in the Gulfcoast Marine Health Sciences Laboratory at Dauphin Island, Alabama, $50,000, and in the Northwest Marine Health Sciences Laboratory at Manchester, Washington, $10,000. The amendment request now includes: Arctic Health Research Laboratory--$115,000; Northeast Marine Health Sciences Laboratory--$70,000; Northeastern Radiological Health Laboratory--$30,000; and the Southeastern Radiological Health Laboratory--$25,000.

Appropriation Estimate

SALARIES AND EXPENSES, OFFICE OF THE ADMINISTRATOR

For expenses necessary for the Office of the Administrator,

[$6,203,000] *$6,162,000.*

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation.....	$6,203,000	-$41,000	$6,162,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
1. Management and central services:						
a. Program direction.....	145	$2,090,000	---	---	145	$2,090,000
b. Administrative management....	242	4,113,000	-6	-$41,000	236	4,072,000
Total obligations	387	6,203,000	-6	-41,000	381	6,162,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions.....	387	-6	381
Full-time equivalent of all other positions.....	10	---	10
Average number of all employees.....	384	+27	379
Personnel compensation:			
Permanent positions.....	$4,118,000	-$144,000	$3,974,000
Positions other than permanent.....	70,000	---	70,000
Other personal compensation.....	25,000	---	25,000
Total personnel compensation.....	4,213,000	-144,000	4,069,000
Personnel benefits.....	393,000	-15,000	378,000
Travel and transportation of person.....	162,000	-3,000	159,000
Transportation of things.....	34,000	---	34,000
Rent, communications, and utilities.....	805,000	---	805,000
Printing and reproduction.....	65,000	-3,000	62,000
Other services:			
Project contracts.....	---	+85,000	85,000
Other.....	241,000	+55,000	296,000
Supplies and materials.....	200,000	-8,000	192,000
Equipment.....	90,000	-8,000	82,000
Total obligations by object.....	6,203,000	-41,000	6,162,000

Summary of Changes

1970 obligations:

Original estimate	$6,203,000
Revised estimate	6,162,000
Net change	-41,000

	Original estimate		Amendment	
	Pos.	Amount	Pos.	Amount
A. Decreases:				
1. Management and central services	387	$6,134,000	-6	-$41,000
Net change	xxx	xxx	-6	-41,000

EXPLANATION OF CHANGES

Management and central services

The amendment eliminated six new positions and related costs of $41,000.

These additional positions had been requested for expanded workloads in accounting and data processing.

Salaries and Expenses, Office of the Administrator

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1970	$6,162,000			

1. Management and central services:

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
a. Administrative management.....	242	$4,113,000	-6	-$41,000	236	$4,072,000

The amendment eliminated six new positions and related costs of $41,000 that had been requested for expansion in the accounting and data processing areas.

New Positions Requested Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Salary	No.	Grade	Salary
Administrative management						
Systems analyst.....	1	GS-13	$14,409	---	---	---
Cost accountant.....	1	GS-12	12,174	---	---	---
Computer programmer.....	1	GS-11	10,203	---	---	---
Accounting technician...	1	GS- 9	8,462	---	---	---
Voucher examiner.....	1	GS- 6	6,321	---	---	---
Computer operator.....	1	GS- 5	5,732	---	---	---
Total new positions.....	6	----	57,301	---	---	---

Appropriation Estimate

Mental Health

For expenses necessary for carrying out the Public Health Service Act with respect to mental health, the Community Mental Health Centers Act (42 U.S.C. 2681. et seq.), the Narcotic Addict Rehabilitation Act of 1966 (Public Law 89-793), section 810 of the Act of July 1, 1944, as amended (33 U.S.C. 763), the Act of July 19, 1963 (Public Law 88-71) with respect to mental diseases, and Executive Order 9079 of February 26, 1942 [, including purchase of firearms and ammunition]; [$367,129,000] *$357,904,000*, of which [$42,500,000] *$37,200,000* shall remain available until June 30, 1971 for grants pursuant to parts A, C, and D of the Community Mental Health Centers Act: Provided, That there may be transferred to this appropriation from the appropriation for "Mental Retardation" an amount not to exceed the sum of the allotment adjustments made by the Secretary pursuant to section 132 (c) of the Mental Retardation Facilities Construction Act.

Appropriation Language Change

The language which provided for purchase of firearms and ammunition was deleted since armed guards are no longer required at the Fort Worth and Lexington Clinical Research Centers.

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Mental Health

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$367,129,000	-$9,225,000	$357,904,000
Advances and reimbursements from:			
Other accounts	162,000	---	162,000
Non-Federal sources	8,000	---	8,000
Unobligated balance brought forward	10,000,000	---	10,000,000
Total, obligations	377,299,000	-9,225,000	368,074,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Support and conduct of research:						
Grants:						
Research	...	$82,273,000	...	...	...	$82,273,000
Hospital improvement	...	8,000,000	...	...	...	8,000,000
Early child care demonstration	...	1,000,000	...	...	...	1,000,000
Direct operations:						
Intramural research	545	18,259,000	-12	-$134,000	533	18,125,000
Planning, development, and administration	195	5,775,000	-7	+1,231,000	188	7,006,000
Manpower development:						
Grants:						
Training	...	112,500,000	...	-5,000,000	...	107,500,000
Fellowships	...	10,866,000	...	...	...	10,866,000
Direct operations	211	4,583,000	...	...	211	4,583,000
Support of State and community programs:						
Grants:						
Construction of community mental health centers	...	40,500,000	...	-1,300,000	...	39,200,000
Staffing of community mental health centers	...	51,300,000	...	...	...	51,300,000
Narcotic addiction and alcoholism community assistance	...	12,000,000	...	-4,000,000	...	8,000,000
Direct operations	115	2,379,000	...	...	115	2,379,000
Service activities:						
Narcotic addict treatment program	1,002	17,526,000	...	...	1,002	17,526,000
Regional and field activities	122	2,346,000	...	...	122	2,346,000
Scientific communication and public education	87	2,771,000	-7	-22,000	80	2,749,000
Program direction and management services	314	5,221,000	...	...	314	5,221,000
Total obligations	2,591	377,299,000	-26	-9,225,000	2,565	368,074,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions.....	2,591	-26	2,565
Full-time equivalent of other positions.	432	---	432
Average number of all employees.....	2,937	-16	2,921
Personnel compensation:			
Permanent positions.....	$24,743,000	+$203,000	$24,946,000
Positions other than permanent.....	2,647,000	---	2,647,000
Other personnel compensation.....	463,000	---	463,000
Total, personnel compensation.....	27,853,000	+203,000	28,056,000
Personnel benefits.....	2,764,000	+16,000	2,780,000
Travel and transportation of persons....	1,305,000	+48,000	1,353,000
Transportation of things.....	196,000	+2,000	198,000
Rent, communication and utilities.....	1,033,000	-10,000	1,023,000
Printing.....	424,000	+15,000	439,000
Other services.....	4,781,000	+785,000	5,566,000
Project contracts.....	9,372,000	---	9,372,000
Payment to "National Institutes of Health Management Fund".....	6,584,000	---	6,584,000
Supplies and materials.....	2,413,000	---	2,413,000
Equipment.....	2,149,000	+16,000	2,165,000
Grants, subsidies and contributions.....	318,451,000	-10,300,000	308,151,000
Subtotal.....	377,325,000	-9,225,000	368,100,000
Quarters and subsistence charges.....	-26,000	---	-26,000
Total obligations by object.....	377,299,000	-9,225,000	368,074,000

Summary of Changes

1970 obligations:

Original estimate	$377,299,000
Revised estimate	368,074,000
Net change	-9,225,000

	Original estimate		Amendment	
	Pos.	Amount	Pos.	Amount
A. Increases:				
1. Support and conduct of Research:				
(a) Planning, development and administration...	195	$5,775,000	---	+$1,300,000
Subtotal, increase.....	xxx	xxx	---	+1,300,000
B. Decreases:				
1. Support and conduct of Research:				
(a) Intramural research.....	545	18,259,000	-12	-134,000
(b) Planning, development and administration...	195	5,775,000	-7	-69,000
2. Manpower development:				
(a) Training grants...	---	112,500,000	---	-5,000,000
3. Support of state and community programs:				
(a) Construction of CMHC's.....	---	40,500,000	---	-1,300,000
(b) Narcotic addiction and alcoholism community assistance.....	---	12,000,000	---	-4,000,000
4. Service activities:				
(a) Scientific communication and public education	10	2,771,000	-7	-22,000
Subtotal, decreases....	xxx	xxx	-26	-10,525,000
Net change.....	xxx	xxx	-26	-9,225,000

Explanation of Changes

A. Increases

1. Support and conduct of research - Included in this amendment is an increase of $1,300,000 to fund the Surgeon General's Scientific Advisory Committee on Television and Social Behavior. This latter increase of $1,300,000 is derived from funds originally requested in the 1970 budget for the construction of community mental health centers.

B. Decreases

1. Support and conduct of research:

(a) Intramural research - The decrease of 12 positions and $134,000 in this activity deletes funds proposed for an expansion of research in several areas, including the relationship of sleep to psychiatric and psychological disorders; studies on the neurochemical factors in mental illness; and investigations of the biological basis for learning and memory.

(b) Planning, development and administration - The decrease deletes seven positions and $69,000 requested to administer a grant program for construction, operation, and staffing of community facilities for the prevention, treatment and rehabilitation of alcoholics.

2. Manpower development:

(a) Training grants - Funds requested for the 1970 revised estimate will support 1,938 awards compared to 2,024 in the 1970 original estimate, a decrease of 86. The reduction will curtail the training effort in some established programs, particularly those which are directed toward increasing the manpower available for research and those which provide for specialized mental health training in schools of public health.

3. Support of state and community programs:

(a) Construction of community mental health centers - The decrease in this activity will be used to provide funds to support the Surgeon General's Scientific Advisory Committee on Television and Social Behavior. These funds would have provided construction awards for approximately 3 new centers.

(b) Narcotic addiction and alcoholism community assistance - The decrease of $4,000,000 in this activity eliminates the funds that were proposed to initiate a new program of grants for the construction and staffing of community facilities for the prevention and treatment of alcoholism. However, States will be encouraged to devote additional block grant funds, made available through a proposed budgetary revision in the 314(d) portion of the Partnership for Health program, to support community-based efforts to combat alcoholism.

4. Service activities:

(a) Scientific communication and public education - The decrease of 7 positions and $22,000 in this activity deletes a portion of the positions and funds requested to expand services provided by the National Clearinghouse for Mental Health Information.

Mental Health

(Consolidated Mental Health Research and Services and Community Mental Health Resource Support)

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$52,384,000	$60,409,000	$79,986,000	$68,090,000
1961	67,563,000	79,863,000	110,800,000	100,900,000
1962	88,324,000	92,182,000	125,570,000	108,876,000
1963	126,899,000	133,599,000	148,599,000	143,599,000
1964	190,096,000	177,288,000	190,096,000	183,288,000
1965	224,085,000	223,273,000	223,273,000	223,273,000
1966	278,669,000	278,669,000	286,169,000	283,169,000
1967	305,115,000	310,119,000	315,619,000	315,619,000
1968	346,909,000	296,909,000	346,909,000	346,909,000
1969	364,939,000	342,439,000	364,939,000	350,439,000
1970	357,904,000			

Narrative Justification

I. Support and Conduct of Research

A. Intramural Research

This subactivity is amended by eliminating 12 positions and $134,000 to carry out: (1) studies of sleep in relation to psychiatric, psychological and somatic disorders; (2) new investigations into the neurochemistry of mental illness; and (3) additional research in multiple drug reaction in neuropsychiatric disorders.

B. Planning, Development and Administration

There are two items of change in this subactivity:

1. A reduction of seven positions and $69,000 originally budgeted as an increase to provide the staff necessary to initiate a new grant program for providing assistance to communities for the construction, operation and staffing of facilities for the prevention and treatment of alcoholism. The grant funds originally budgeted for this purpose have also been deleted in these amendments.

2. An increase of $1,300,000 is requested to fund the Surgeon General's Scientific Advisory Committee on Television and Social Behavior. In response to considerable concern expressed by the Congress, the National Institute of Mental Health has been assigned responsibility to organize and carry out a study on the effects of televised violence on the behavior of children. To carry out this study, a group of approximately fifteen distinguished scientists including psychiatrists, psychologists, sociologists and experts in related fields will be established as an advisory committee to the Surgeon General. The Committee will also include appropriate representatives from the television and broadcasting industry.

The National Institute of Mental Health will serve as the Secretariat for the Committee and will be responsible for the staff support of its work. During the first few months of the study the Committee will systematically review relevant literature and current studies on this subject; they will then design and initiate research projects which focus on specific areas of concern. This initial effort is critical to the success of the entire project. The recruitment of qualified staff will begin in 1969 and will be supported by reprogramming of a limited amount of funds from other activities. Of the $1,300,000 budgeted to support this work in 1970, approximately $425,000 will be used to provide the administrative costs of the Committee and the staff. No new positions are being requested for this purpose.

The second phase of the study will be devoted to the execution of research projects. A variety of studies will be initiated, including experimental and laboratory investigations, clinical research, attitude surveys and field studies. Longitudinal, epidemiological research and other studies with special populations will also be conducted. At the close of this period, although some of the research will undoubtedly continue, the Committee should be in a position to present its findings. An interim report will be provided at the end of the first year. Approximately $875,000 will be required for these research projects which will be supported by grants or contracts.

II. Manpower Development

A. Training Grants

Funds for training grants are reduced by $5,000,000. This reduction will eliminate funds to initiate new training grant programs and supplemental awards to existing programs. Some established programs will be reduced in size, particularly those directed toward increasing the manpower available for research and those which provide for specialized mental health training in schools of public health.

Training Grants

	1970 Original Estimate		Amendments		1970 Revised Estimate	
	No.	Amount	No.	Amount	No.	Amount
Noncompeting Continuations	1,557	$88,847,000	-9	-$1,908,000	1,548	$86,939,000
Competing renewals	385	20,577,000	-3	-352,000	382	20,225,000
Supplementals	(99)	440,000	(-99)	-440,000	...	...
New	74	2,300,000	-74	-2,300,000	...	...
Scientific Evaluation	8	336,000	...	...	8	336,000
Total	2,024	112,500,000	-86	-5,000,000	1,938	107,500,000

III. Support of State and Community Programs

A. Grants

1. Construction of Community Mental Health Centers

The original request of $30.5 million (in new obligational authority) has been reduced by $1.3 million in order to provide funds to support the cost of conducting the study of **television and social behavior described earlier in these amendments. These funds would have provided construction awards for approximately 3 new community health centers.**

2. Narcotic Addiction and Alcoholism Community Assistance

This amendment deletes $4,000,000 in grant funds originally budgeted to initiate a new program of assistance for community alcoholism programs. In 1968, the Community Mental Health Centers Act was amended to authorize the award of grants for staffing and constructing specialized community alcoholism facilities in which to carry out programs of prevention, treatment, and rehabilitation. Implementation of this new authorization will now be deferred for at least one year, however, States will be encouraged to devote additional block grant funds, made available through a proposed budgetary revision in the 314(d) portion of the Partnership for Health program, to support community-based efforts to combat alcoholism.

IV. Service Activities

A. Scientific Communication and Public Education

A decrease of 7 positions and $22,000 results from deletion of a portion of the increase requested to expand the services provided by the National Clearinghouse for Mental Health Information.

Allocations of grant-in-aid funds for construction of community mental health centers

State or Territory	1970 Original Estimate	Amendment	1970 Revised Estimate
Alabama	$671,336	-$29,189	$642,147
Alaska	100,000	0	100,000
Arizona	268,069	-11,656	256,413
Arkansas	387,128	-16,831	370,297
California	2,529,221	-109,966	2,419,255
Colorado	300,589	-13,070	287,519
Connecticut	373,109	-16,222	356,887
Delaware	100,000	0	100,000
District of Columbia	100,000	0	100,000
Florida	966,323	-42,013	924,310
Georgia	779,677	-33,898	745,779
Hawaii	109,856	-4,777	105,079
Idaho	116,214	-5,052	111,162
Illinois	1,427,032	-62,044	1,364,988
Indiana	725,658	-31,550	694,108
Iowa	400,452	-17,411	383,041
Kansas	342,042	-14,872	327,170
Kentucky	569,384	-24,756	544,628
Louisiana	651,593	-28,329	623,264
Maine	160,363	-6,973	153,390
Maryland	517,332	-22,492	494,840
Massachusetts	738,043	-32,089	705,954
Michigan	1,199,963	-52,172	1,147,791
Minnesota	537,983	-23,391	514,592
Mississippi	494,653	-21,507	473,146
Missouri	695,620	-30,243	665,377
Montana	109,340	-4,753	104,587
Nebraska	212,565	-9,242	203,323
Nevada	100,000	0	100,000
New Hampshire	105,435	-4,585	100,850
New Jersey	932,107	-40,527	891,580
New Mexico	172,444	-7,497	164,947
New York	2,360,048	-102,611	2,257,437
North Carolina	901,252	-39,185	862,067
North Dakota	104,919	-4,561	100,358
Ohio	1,512,331	-65,754	1,446,577
Oklahoma	414,714	-18,031	396,683
Oregon	294,956	-12,824	282,132
Pennsylvania	1,698,311	-73,841	1,624,470
Rhode Island	129,749	-5,641	124,108
South Carolina	508,188	-22,095	486,093
South Dakota	109,553	-4,763	104,790
Tennessee	704,432	-30,627	673,805
Texas	1,765,198	-76,748	1,688,450
Utah	169,204	-7,356	161,848
Vermont	100,000	0	100,000
Virginia	727,718	-31,640	696,078
Washington	450,505	-19,587	430,918
West Virginia	324,934	-14,128	310,806
Wisconsin	613,623	-26,680	586,943
Wyoming	100,000	0	100,000
Guam	20,803	-905	19,898
Puerto Rico	576,379	-25,061	551,318
Virgin Islands	13,172	-573	12,599
American Samoa	6,480	-282	6,198
Total	30,500,000	-1,300,000	29,200,000

New Positions Requested
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Annual Salary	No.	Grade	Annual Salary
Support and conduct of research						
Intramural research						
Pharmacologist	1	GS-13	$14,409	...	...	...
Research Psychologist	1	GS-13	14,409	...	...	...
Medical Officer	1	GS-12	15,828	...	...	...
Biologist	1	GS-12	12,174	...	...	...
Psychologist	1	GS-12	12,174	...	...	...
Pharmacologist	1	GS-9	9,026	...	...	...
Biologist	1	GS-7	6,981	...	...	...
Psychologist Technician	1	GS-7	6,981	...	...	...
Secretary	1	GS-5	5,732	...	...	...
Clerk Typist	2	GS-4	10,290	...	...	...
Animal Caretaker	1	GS-3	4,600	...	...	...
Total	12	...	112,604	...	...	...
Planning, development and administration						
Chief of Section	1	GS-15	19,780	1	GS-15	$19,780
Psychiatrist	1	GS-14	16,946	1	GS-14	16,946
Psychologist	1	GS-13	14,409	1	GS-13	14,409
Statistician	1	GS-13	14,409	1	GS-13	14,409
Sociologist	1	GS-13	14,409	1	GS-13	14,409
Research Assistant	1	GS-11	10,203	1	GS-11	10,203
Sociologist	1	GS-9	9,297	1	GS-9	9,297
Secretary	1	GS-6	6,321	1	GS-6	6,321
Clerk Typist	2	GS-5	11,464	2	GS-5	11,464
Early Child Care - Total	10	...	117,238	10	...	117,238
Chief of Section	1	GS-15	19,780	...	...	...
Psychiatrist	1	GS-14	16,946	...	...	...
Psychologist	1	GS-13	14,409	...	...	...
Biochemist	1	GS-11	10,203	...	...	...
Research Assistant	1	GS-9	8,462	...	...	...
Secretary	1	GS-6	6,321	...	...	...
Clerk Typist	1	GS-4	5,145	...	...	...
Alcoholism - Total	7	...	81,266	...	...	...
Scientific communication and public education						
Visual Information Specialist	1	GS-13	14,409	1	GS-13	14,409
Technical Information Spec	1	GS-12	12,174	...	...	...
Writer-Editor	1	GS-12	12,174	1	GS-12	12,174
Public Information Specialist	1	GS-11	10,203	1	GS-11	10,203
Audio Visual Production Spec	1	GS-11	10,203	...	...	...
Technical Information Spec	1	GS-11	10,203	...	...	...
Public Information Specialist	1	GS-9	8,462	...	...	...
Editorial Assistant	1	GS-7	6,981	...	...	...
Clerical Assistant	1	GS-5	5,732	...	...	...
Clerical Assistant	1	GS-3	4,600	...	...	...
Total	10	...	95,141	3	...	36,786
Total new pos., all activities	39	...	406,249	13	...	154,024

Appropriation Estimate

HEALTH SERVICES RESEARCH AND DEVELOPMENT

To carry out, to the extent not otherwise provided, sections 301 and 304 of the Public Health Service Act, with respect to health services research and development, $44,975,000.

DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Health Services Research and Development

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$44,975,000	---	$44,975,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Studies, training and systems development:						
Grants and contracts	--	$40,672,000	--	+$60,000	--	$40,732,000
Direct operations	168	3,312,000	-5	-41,000	163	3,271,000
Program direction and management services	70	991,000	-3	-19,000	67	972,000
Total obligations	238	44,975,000	-8	---	230	44,975,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions	238	-8	230
Full-time equivalent of all other positions	23	---	23
Average number of all employees	250	-5	245

Personnel compensation:			
Permanent positions	$2,819,000	-$55,000	$2,764,000
Positions other than permanent	225,000	---	225,000
Other personnel compensation	20,000	---	20,000
Total personnel compensation	3,064,000	-55,000	3,009,000
Personnel benefits	256,000	-5,000	251,000
Travel and transportation of persons	250,000	---	250,000
Transportation of things	38,000	---	38,000
Rent, communications and utilities	109,000	---	109,000
Printing and reproduction	60,000	---	60,000
Other services	388,000	---	388,000
Project contracts	10,717,000	---	10,717,000
Supplies and materials	50,000	---	50,000
Equipment	88,000	---	88,000
Grants, subsidies, and contributions	29,955,000	+60,000	30,015,000
Total obligations by object	44,975,000	---	44,975,000

Summary of Changes

1970 obligations:	
Original estimate	$44,975,000
Revised estimate	44,975,000
Net change	---

	Original estimate		Amendment	
	Pos.	Amount	Pos.	Amount
A. Increases:				
1. Grants and contracts	---	$40,672,000	---	+$60,000
B. Decreases:				
1. Direct operations	168	3,312,000	-5	-41,000
2. Program direction and management services	70	991,000	-3	-19,000
Subtotal, decreases	---	---	-8	-60,000
Net change	---	---	-8	---

Explanation of Changes

Grants and Contracts

The additional increase of $60,000 will be used for grants for research to increase our understanding of the underlying factors and conditions affecting the organization, delivery and financing of health services.

Direct Operations

The reduction of five positions and $41,000 is in accordance with Administration policy to restrict Federal employment. These funds will be used for grants and contracts.

Program Direction and Management Services

The reduction of three positions and $19,000 is in accordance with Administration policy to restrict Federal employment. These funds will be used for grants and contracts.

Health Services Research and Development

	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	24,523,000	22,497,000	24,523,000	24,497,000
1961	27,847,000	22,777,000	27,847,000	27,277,000
1962	25,181,000	23,961,000	24,361,000	24,336,000
1963	28,533,000	26,276,000	26,776,000	26,526,000
1964	31,715,000	28,644,000	30,644,000	29,644,000
1965	32,777,000	25,630,000	33,339,000	33,230,000
1966	98,428,000	75,182,000	82,182,000	82,182,000
Trust fund transfers	2,100,000	2,100,000	2,100,000	2,100,000
1967	125,385,000	134,575,000	140,665,000	138,665,000
Trust fund transfers	3,512,000	3,512,000	3,512,000	3,512,000
1968	64,448,000	51,234,000	61,234,000	54,234,000
Trust fund transfers	4,075,000	4,075,000	4,075,000	4,075,000
1969	59,500,000	42,731,000	42,731,000	49,931,000
Trust fund transfers	4,320,000	4,320,000	4,320,000	4,320,000
1970	44,975,000			

Narrative Justification

Health Services Research and Development

The National Center for Health Services Research and Development originally requested 16 new positions in 1970. This request has been reduced by 8 positions and $60,000 in accordance with Administration policy to restrict Federal employment. Of the 8 positions, 5 would have provided additional support for activities related to the inhouse extramural operations of the Center, and 3 for program direction and management services. The $60,000 will be programmed under the activity "Grants and Contracts" and will be used for additional support of grants for research to increase our understanding of the underlying factors and conditions affecting the organization, delivery and financing of health services in this country.

New Positions Requested
Fiscal Year 1970

	Original Estimate			Revised Estimate		
	Number	Grade	Annual Salary	Number	Grade	Annual Salary
Direct Operations						
Economist	(1)	GS-15	$19,780	(1)	GS-15	$19,780
Public Health Program Specialist	(1)	GS-15	19,780	--	-----	-----
Public Health Program Specialist	(1)	GS-13	14,409	(1)	GS-13	14,409
Sociologist	(1)	GS-13	14,409	--	-----	-----
Public Health Program Specialist	(1)	GS-12	12,174	(1)	GS-12	12,174
Statistician	(1)	GS-11	10,203	(1)	GS-11	10,203
Research Psychologist	(1)	GS-9	8,462	--	-----	-----
Public Health Program Specialist	(1)	GS-9	8,462	(1)	GS-9	8,462
Grants Assistant	(1)	GS-7	6,981	--	-----	-----
Clerical Assistant	(2)	GS-6	12,642	(1)	GS-6	6,321
Clerical Assistant	(2)	GS-5	11,464	(2)	GS-5	11,464
Subtotal	(13)	-----	138,766	(8)	-----	82,813
Program Direction and Management Services						
Public Health Program Specialist	(1)	GS-12	12,174	--	-----	-----
Clerical Assistant	(1)	GS-6	6,321	--	-----	-----
Clerical Assistant	(1)	GS-5	5,732	--	-----	-----
Subtotal	(3)	-----	24,227	--	-----	-----
Total new positions, all activities	(16)	-----	162,993	(8)	-----	82,813

Appropriation Estimate

COMPREHENSIVE HEALTH PLANNING AND SERVICES

To carry out sections 310, 314(a) through 314(e) of the Public Health Service Act, and to the extent not otherwise provided, sections 301 and 311 of the Act, [$212,030,000] *$214,033,000: Provided,* That $4,320,000 may be transferred to this appropriation, as authorized by section 201(g)(1) of the Social Security Act, as amended, from any one or all of the trust funds referred to therein and may be expended for functions delegated to the Administrator of the Health Services and Mental Health Administration under title XVIII of the Social Security Act.

Comprehensive Health Planning and Services

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation.....	$212,030,000	+$2,003,000	$214,033,000
Trust fund transfer.....	4,320,000	---	4,320,000
Total obligations.....	$216,350,000	+$2,003,000	$218,353,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Partnership for health grants:						
(a) Planning.....	---	$20,000,000	---	---	---	$20,000,000
(b) Formula.....	---	72,000,000	---	+$18,000,000	---	90,000,000
(c) Project.....	---	98,000,000	---	-18,000,000	---	80,000,000
Migrant health program:						
(a) Grants.....	---	12,000,000	---	+2,000,000	---	14,000,000
(b) Direct operations..	50	910,000	---	+90,000	50	1,000,000
Standard-setting and resources development.	476	11,256,000	-12	-87,000	464	11,169,000
Program direction and management services...	132	2,184,000	---	---	132	2,184,000
Total obligations.....	658	216,350,000	-12	+2,003,000	646	218,353,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions	658	-12	646
Full-time equivalent of all other positions	884	---	884
Average number of all employees	1,517	-6	1,511
Personnel compensation:			
Permanent positions	$7,292,000	-$83,000	$7,209,000
Positions other than permanent	7,156,000	---	7,156,000
Other personnel compensation	54,000	---	54,000
Subtotal, personnel compensation	14,502,000	-83,000	14,419,000
Personnel benefits	1,548,000	-4,000	1,544,000
Travel and transportation of persons	1,078,000	---	1,078,000
Transportation of things	200,000	---	200,000
Rent, communications and utilities	330,000	---	330,000
Printing and reproduction	172,000	---	172,000
Other services	916,000	---	916,000
Project contracts	3,073,000	+90,000	3,163,000
Supplies and materials	10,117,000	---	10,117,000
Equipment	95,000	---	95,000
Grants, subsidies and contributions	184,319,000	+2,000,000	186,319,000
Total obligations by object	216,350,000	+2,003,000	218,353,000

Summary of Changes

1970 obligations:

Original estimate	$216,350,000
Revised estimate	218,353,000
Net change	+2,003,000

	Original estimate Pos.	Original estimate Amount	Amendment Pos.	Amendment Amount
A. Increases:				
1. Partnership for health formula grants	---	$72,000,000	---	+$18,000,000
2. Migrant health:				
(a) Grants	---	12,000,000	---	+2,000,000
(b) Direct operations	50	910,000	---	+90,000
Subtotal, migrant health	50	12,910,000	---	+2,090,000
Subtotal, increase	xxx	xxx	---	+20,090,000
B. Decreases:				
1. Partnership for health project grants	---	98,000,000	---	-18,000,000
2. Standard-setting and resources development	476	11,256,000	-12	-87,000
Subtotal, decreases	xxx	xxx	-12	-18,087,000
Net change	xxx	xxx	-12	+2,003,000

Explanation of Changes

Formula grants

The increase reflects a proposed transfer of $18,000,000 from project grants in order to give greater flexibility to States to determine health priorities under the "bloc" grant concept. States will be encouraged to use these funds to continue needed tuberculosis control programs previously supported by project grants.

Project grants

The decrease reflects a proposed transfer to formula grants of $18,000,000 currently supporting tuberculosis activities. The long-standing project support for these programs will be phased out. This will, for the first time, implement the concept of "spinning-off" special programs from the project to the "block" grant as they mature and become accepted in medical practice.

Migrant health services

An increase of $2,090,000 is requested to permit the establishment of approximately 10 new migrant health projects and the expansion of the projects now in operation. The increase will provide ready access to personal health care for approximately 45,000 more migrants.

Standard-setting and resources development

The decrease of 12 positions and $87,000 reflects the policy of the Administration to restrict Federal employment.

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1967	$ 4,500,000	$ 4,250,000	$ 4,250,000	$ 4,250,000
1968	168,628,000	140,676,000	140,676,000	140,676,000
1969	195,383,000	165,604,000	168,604,000	167,104,000
1969 proposed supplemental	9,600,000 1/			
1970	218,353,000 2/			

1/ The 1969 supplemental includes a proposal that $414,000 be released from reserves in this appropriation.

2/ Includes $4,320,000 transfer from Social Security trust funds.

Formula Grants to States for Health Services

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Formula grants.....	---	$72,000,000	---	+$18,000,000	---	$90,000,000

The 1970 request of $90,000,000 for formula grants constitutes an increase of $18,000,000 over the original estimate. This $18,000,000 was previously requested for 1970 under Section 314(e).

This reallocation of funds implements the Partnership for Health philosophy of "spinning off" health services programs which have developed and become an accepted part of medical practice. The proposed transfer of $18 million from Section 314(e) to Section 314(d) leaves to the States the decision to continue existing TB projects. Over the past several years the projects supported under 314(e) grants have been demonstrated to be effective methods for controlling TB. These activities should therefore be transferred to a basic continuing support mechanism. Section 314(d) is the vehicle which many States use for supporting on-going health programs. The proposed transfer of $18 million to 314(d) to be allocated among the States by formula rather than on a project basis, does not distribute funds among the States in the same amounts now being spent for TB control in each State. The opportunity to provide States with the flexibility to determine the amount of funds to be spent for TB versus other state health priorities and to allow a greater use of 314(e) funds to focus support on new programs of health services is basic to the long-range goals of the Partnership for Health program. At the same time this transfer does not exclude application for support of TB activities under Section 314(e).

There will, of course, be a transition period of support for current projects and TB services may still be incorporated in projects funded under Section 314(e).

Comprehensive Health Planning and Services

Allocations of Grants for Comprehensive Public Health Services

	1970 Original Estimate	Amendment	1970 Revised Estimate
Alabama	$1,469,800	+$380,200	$1,850,000
Alaska	371,800	21,000	392,800
Arizona	781,600	158,700	940,300
Arkansas	971,300	219,700	1,191,000
California	5,099,100	1,548,600	6,647,700
Colorado	849,500	180,600	1,030,100
Connecticut	1,012,200	232,900	1,245,100
Delaware	432,600	46,400	479,000
District of Columbia	490,700	65,100	555,800
Florida	2,035,800	562,400	2,598,200
Georgia	1,674,400	446,100	2,120,500
Hawaii	502,000	68,700	570,700
Idaho	508,700	70,900	579,600
Illinois	3,011,400	876,500	3,887,900
Indiana	1,648,500	437,700	2,086,200
Iowa	1,040,800	242,100	1,282,900
Kansas	925,600	205,000	1,130,600
Kentucky	1,292,000	323,000	1,6h5,000
Louisiana	1,438,900	370,200	1,809,100
Maine	585,400	95,500	680,900
Maryland	1,267,500	315,000	1,582,500
Massachusetts	1,678,300	447,300	2,125,600
Michigan	2,560,000	731,100	3,291,100
Minnesota	1,282,200	319,700	1,601,900
Mississippi	1,131,200	271,100	1,402,300
Missouri	1,572,000	413,200	1,985,200
Montana	497,500	67,100	564,600
Nebraska	688,600	128,800	817,400
Nevada	413,200	40,000	453,200
New Hampshire	490,100	64,800	554,900
New Jersey	2,065,900	572,100	2,638,000
New Mexico	607,500	102,600	710,100
New York	4,771,200	1,442,800	6,214,000
North Carolina	1,873,500	510,100	2,383,600
North Dakota	488,500	64,300	552,800
Ohio	3,112,500	909,000	4,021,500
Oklahoma	1,037,900	241,200	1,279,100
Oregon	845,000	179,100	1,024,100
Pennsylvania	3,422,700	1,008,900	4,431,600
Rhode Island	537,400	80,000	617,400

Allocations of Grants for Comprehensive Public Health Services (cont.)

	1970 Original Estimate	Amendment	1970 Revised Estimate
South Carolina	1,171,100	284,100	1,455,200
South Dakota	493,800	66,100	559,900
Tennessee	1,530,800	399,900	1,930,700
Texas	3,455,900	1,019,600	4,475,500
Utah	604,800	101,800	706,600
Vermont	418,500	41,700	460,200
Virginia	1,606,700	424,300	2,031,000
Washington	1,132,200	271,500	1,403,700
West Virginia	866,200	185,900	1,052,100
Wisconsin	1,427,900	366,700	1,794,600
Wyoming	385,400	31,200	416,600
Guam	314,300	13,900	328,200
Puerto Rico	1,266,500	314,800	1,581,300
Virgin Islands	265,700	2,700	268,400
American Samoa	265,700	2,700	268,400
Trust Territory of the Pacific Islands	309,700	13,600	323,300
TOTAL	72,000,000	18,000,000	90,000,000

Project Grants to States for Health Services

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Project grants	---	$98,000,000	---	-$18,000,000	---	80,000,000

The decrease in project grants reflects a proposed transfer to formula grants of $18,000,000 currently supporting tuberculosis activities. The long-standing project support for these programs will be phased out. This will, for the first time, implement the concept of "spinning-off" special programs from the project to the "block" grant as they mature and become accepted in medical practice.

Within the $80,000,000 remaining in 314(e), project grants, there are sufficient funds to support high priority programs such as rat control, rubella vaccination and model cities.

Migrant health program

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Grants.....	—	$12,000,000	—	+2,000,000	—	$14,000,000
Direct operations:						
Personnel compensation and benefits.....	50	612,000	—	—	50	612,000
Other expenses...	—	298,000	—	+90,000	—	388,000
Total.....	50	12,910,000	—	+2,090,000	50	15,000,000

The increase of $2,090,000 provides for expansion of the Migrant Health program to full authorization.

Grants

The increase of $2 million will permit further expansion and improvement of existing projects and the addition of 10 new projects in serving approximately 45,000 additional migrants. The additional services which will result from this increase are: 45,000 patient visits for medical care, 6,000 dental visits, 35,000 nursing visits, 10,000 days of in-hospital care.

At present the scope of services of projects in many local communities is severely limited by the lack of funds. Dental services are not provided at all by more than half of the projects and are provided to only a limited extent by the remainder. Nutrition services are limited or non-existent in most projects although many of their reports provide evidence of nutritional problems such as iron deficiency anemias and obesity. Medical services are the basic component of service for most existing migrant health projects. The fact that this service is greatly in need of being strengthened is demonstrated by the statistic that migrants now use medical services at about one-fifth the rate for the general population. The overloading of many family health service clinics limits not only the quantity but also the quality of services that can be rendered. With additional funds it would be possible to support more adequate clinic staff, better laboratory support, and more frequent clinic sessions. Family health service clinics need to be established at additional locations in or near large migrant labor communities in some project areas. They also need to be opened earlier and operated later in the season than is possible with existing funds.

Direct Operations

The $90,000 increase in direct operations would be used to fund contracts for an evaluation of current inter-area referral procedures between migrant health projects with a view to increasing the effectiveness of the current system or to make changes in the referral system as considered appropriate.

Standard-setting and resources development

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	476	$6,166,100	-12	-$87,000	464	$6,079,100
Other expenses..	—	5,089,900	—	—	—	5,089,900
Total.....	476	11,256,000	-12	- 87,000	464	11,169,000

The decrease of 12 positions and $87,000 is due to the Administration's policy to restrict employment in 1970.

New Positions Requested
Fiscal Year 1970

	Original Estimate			Revised Estimate		
	No.	Grade	Annual Salary	No.	Grade	Annual Salary
Health care services						
Public Health Program Specialist...	4	GS-13	$57,636	.....		
Public Health Program Specialist...	2	GS-12	24,348	.....		
Clerical Assistant.....	2	GS-4	10,290	.....		
	8		92,274	.....		
Health planning						
Public Health Program Specialist...	1	GS-13	14,409	1	GS-13	14,409
Public Health Program Specialist...	1	GS-12	12,174	1	GS-12	12,174
Public Health Program Specialist...	1	GS-11	10,203	1	GS-11	10,203
Public Health Program Specialist...	1	GS-9	8,462	.....		
Clerical Assistant.....	2	GS-5	11,464	1	GS-5	5,732
	6		56,712	4		42,518
Review and approval						
Public Health Program Specialist...	5	GS-9	42,310	3	GS-9	25,386
Total new positions, all activities	19		191,296	7		67,904

Appropriation Estimate

REGIONAL MEDICAL PROGRAMS

To carry out title IX, sections 402(g), 403(a)(1), and, to the extent not otherwise provided, 301 and 311 of the Public Health Service Act, [$120,641,000] *$100,000,000,* of which [$96,000,000] *$74,000,000* shall remain available until June 30, 1971, for grants pursuant to such title IX.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Regional Medical Programs

Amounts Available for Obligation

	1970 Original Estimate	1970 Amendment	1970 Revised Estimate
Appropriation	$120,641,000	-$20,641,000	$100,000,000
Unobligated balance brought forward	.....	+20,000,000	20,000,000
Total available for obligation	120,641,000	-641,000	120,000,000

Obligations by Activity

	1970 Original Estimate		1970 Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
1. Operational and planning grants	...	$96,000,000	...	-$2,000,000	...	$94,000,000
2. Development, assistance, and chronic disease control:						
(a) Heart disease control	275	5,410,000	-43	-1,128,000	232	4,282,000
(b) Respiratory disease control	29	1,256,000	...	-140,000	29	1,116,000
(c) Cancer control	104	2,351,000	-6	-152,000	98	2,199,000
(d) Smoking and health	35	2,500,000	...	-150,000	35	2,350,000
(e) Diabetes and arthritis control	75	1,885,000	...	-35,000	75	1,850,000
(f) Neurological and sensory disease control	58	1,517,000	-8	-237,000	50	1,280,000
(g) Kidney Disease control	50	4,794,000	-2	-584,000	48	4,210,000
(h) Nutrition	16	950,000	+80	+4,050,000	96	5,000,000

	1970 Original Estimate		1970 Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
(i) Regionalization activities..	31	2,099,000	...	-115,000	31	1,984,000
Total.....	673	22,762,000	+21	+1,509,000	694	24,271,000
3. Program direction and management services.....	110	1,879,000	-13	-150,000	97	1,729,000
Total obligations.....	783	120,641,000	+8	-641,000	791	120,000,000

Obligations by Object

	1970 Original Estimate	1970 Amendment	1970 Revised Estimate
Total number of permanent positions.....	783	+8	791
Full-time equivalent of all other positions.....	70	...	70
Average number of all employees.....	827	+12	839
Personnel compensation:			
Permanent positions.....	$8,483,000	+$75,000	$8,558,000
Positions other than permanent.....	423,000	.....	423,000
Other personnel compensation.....	37,000	.....	37,000
Total personnel compensation.....	8,943,000	+75,000	9,018,000
Personnel benefits.....	1,181,000	.....	1,181,000
Travel and transportation of persons..	1,082,000	+40,000	1,122,000
Transportation of things.....	112,000	.....	112,000
Rent, communications, and utilities...	428,000	.....	428,000
Printing and reproduction.....	200,000	.....	200,000
Other services.....	1,068,000	-101,000	967,000
Project contracts.....	11,305,000	+1,347,000	12,652,000
Supplies and materials.....	156,000	-1,000	155,000
Equipment.....	166,000	-1,000	165,000
Grants, subsidies, and contributions..	96,000,000	-2,000,000	94,000,000
Total obligations by object.....	120,641,000	-641,000	120,000,000

Summary of Changes

1970 Obligations:

Original estimate	$120,641,000
Revised estimate	120,000,000
Net change	-641,000

	Original Estimates		Amendment	
	Positions	Amount	Positions	Amount
Increases				
A. Program				
1. Nutrition program	16	$950,000	+80	+$4,050,000
Decreases				
A. Program				
1. Operational and planning grants	...	96,000,000	...	-2,000,000
2. Heart disease control	275	5,410,000	-43	-1,128,000
3. Respiratory disease control	29	1,256,000	...	-140,000
4. Cancer control	104	2,351,000	-6	-152,000
5. Smoking and health	35	2,500,000	...	-150,000
6. Diabetes and arthritis control	75	1,885,000	...	-35,000
7. Neurological and sensory disease control	58	1,517,000	-8	-237,000
8. Kidney disease control	50	4,794,000	-2	-584,000
9. Regionalization activities	31	2,099,000	...	-115,000
10. Program direction and management services	110	1,879,000	-13	-150,000
Subtotal, decreases	xxx	xxx	-72	-4,691,000
Net change	xxx	xxx	+8	-641,000

Explanation of Changes

Nutrition--The increase of 80 positions and $4,050,000 will permit the compilation and analysis of the data obtained from the 10-state surveys begun in 1968 and 1969. In addition, support will be provided to launch approximately 50 demonstration projects aimed at remedying the medical defects associated with malnutrition and encouraging local participation in the process.

Operational and planning grants--The decrease of $2,000,000 will reduce the ability to support requests for supplemental grants to extend Regional Medical Program activities in heart disease, cancer and stroke, to peripheral areas of existing regions, as well as approved but unfunded projects carried over from 1969. The revised request for 1970 of $94,000,000 is comprised of $74,000,000 in budget authority and $20,000,000 of 1969 funds placed in administrative reserve and carried forward into 1970. This is an increase in budget authority of $17,800,000 over 1969.

Heart disease control--The decrease of 43 positions and $1,128,000 will mean a reduction for nurse training in coronary care and elimination of heart standardization field activity in evaluation of methods for typing and detecting streptococcal organisms and conducting a streptococcus infection prevalence program. In addition, the standardization of lipid, biochemical, and cardiovascular hemotologic tests will be discontinued.

Chronic respiratory diseases--The proposed reduction of $140,000 will require postponement of planned evaluation of on-going respiratory intensive care units.

Cancer Control--The proposed reduction of 6 positions and $152,000 in the Cancer Control Program will delay, for at least one year, evaluation and development of infra-red sensing as a modality for detecting breast disease.

Smoking and health--The reduction of $150,000 in Smoking and Health will reduce the expansion originally proposed in such areas as the effort to encourage less hazardous ways of smoking, including the development of a safer cigarette. In the area of Public Information, items such as "If You Must Smoke" pamphlet and T.V. spots will be curtailed.

Diabetes and Arthritis--A decrease of $35,000 will mean a reduction in the demonstration of diabetes case findings.

Neurological and sensory disease control--A decrease of 8 positions and $237,000 will limit research into auditory deprivation, implementation of recommendations of the National Conference on Noise as a Public Health Hazard, and evaluation of automated devices for visual screening.

Kidney disease control--The reduction of 2 positions and $584,000 will preclude the development of cadaver kidney procurement organization and methodology. Complete testing and evaluation of a computerized donor-recipient matching system will not be achieved. The decrease will not allow disease prevention programs to be funded. These include projects for testing of screening and detection programs, demonstrations of methods to control hospital infection, establishment of interrelationships between pregnancy and bacteriuria, and other activities.

Regionalization activities--The reduction of $115,000 will reduce support for proposed contracts related to evaluation of RMP programs.

Program direction and management services--The reduction of 13 positions and $150,000 will maintain staffing for the review and approval of operational and planning grant applications at the 1969 level.

The decreases that are noted above for the individual chronic disease programs do not reflect the total effort directed toward chronic disease proposed in this and other Health Services and Mental Health Administration appropriations. In some cases, Regional Medical Program and Comprehensive Health Project grants may provide a mechanism for the support of efforts previously supported by chronic disease contracts.

Regional Medical Programs

Year	Budget Estimate To Congress	House Allowance	Senate Allowance	Appropriation
1966	$25,000,000	N.C.	$25,000,000	$25,000,000
1967	$45,024,000	$45,004,000	$45,004,000	$45,004,000
1968	$64,314,000	$54,314,000	$64,314,000	$58,814,000
1969	$68,922,000	N.C.	$68,922,000	$61,907,000
1970	$100,000,000			

Regional Medical Programs

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	783	$10,124,000	+8	+$75,000	791	$10,199,000
Other expenses.....	...	110,517,000	...	-716,000	...	109,801,000
Total.....	783	120,641,000	+8	-641,000	791	120,000,000

General Statement

The revised estimate requests a net increase of 8 positions and a net decrease of $641,000 from the original estimate.

The amendment provides for a further increase in nutrition activities of $4,050,000 and 80 positions. This is being offset by reductions of $2,000,000 in grant support; $2,541,000 and 59 positions in the Development, Assistance and Chronic Disease Control activity; and $150,000 and 13 positions in the Program Direction and Management Services activity.

Operational and Planning Grants

	1969 Revised Estimate	1970 Original Estimate	Amendment	1970 Revised Estimate
Operational and planning grants....	$72,365,000	$96,000,000	-$2,000,000	$94,000,000

The revised request for 1970 of $94,000,000 is comprised of $74,000,000 in budget authority and $20,000,000 of 1969 funds placed in administrative reserve and carried forward into 1970. This is an increase in budget authority of $17,800,000 over 1969.

Of the $94,000,000 requested for grant support, it is projected that $72,000,000 will be needed to meet continuation commitments from planning and operational grants awarded in prior years as well as commitments stemming from the 21 new operational programs awarded in 1969. The balance of $22,000,000 will be needed to fund insofar as possible the remaining 12 regions expected to apply for operational grants in 1970; approved but unfunded projects carried into 1970; and the funding of operational supplements expected to be received during 1970.

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Development, Assistance, and Chronic Disease Control

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	673	$8,809,000	+21	+$200,000	694	$9,009,000
Other expenses	...	13,953,000	...	+1,309,000	...	15,262,000
Total	673	22,762,000	+21	+1,509,000	694	24,271,000
Subactivities:						
Heart Disease Control	275	5,410,000	-43	-1,128,000	232	4,282,000
Respiratory Disease Control	29	1,256,000	...	-140,000	29	1,116,000
Cancer Control	104	2,351,000	-6	-152,000	98	2,199,000
Smoking and Health	35	2,500,000	...	-150,000	35	2,350,000
Diabetes and Arthritis Control	75	1,885,000	...	-35,000	75	1,850,000
Neurological and Sensory Disease Control	58	1,517,000	-8	-237,000	50	1,280,000
Kidney Disease Control	50	4,794,000	-2	-584,000	48	4,210,000
Nutrition	16	950,000	+80	+4,050,000	96	5,000,000
Regionalization Activities	31	2,099,000	...	-115,000	31	1,984,000
Total	673	22,762,000	+21	+1,509,000	694	24,271,000

This activity is being increased by 21 positions and $1,509,000. A portion of the increase was accomplished by decreasing the following activities:

Heart Disease Control

A decrease of 43 positions and $1,128,000 will diminish support for nurse training in coronary care and the elimination of the heart standardization field activity in evaluation of methods for detecting and typing streptococcal organisms and conducting a streptococcus infection prevalence program. In addition, the standardization of lipid, biochemical, and cardiovascular hemotologic tests will be discontinued.

Chronic Respiratory Diseases

A reduction of $140,000 will require postponement of planned evaluation of respiratory intensive care units.

Cancer Control

A reduction of 6 positions and $152,000 in the Cancer Control Program will delay, for at least one year, evaluation and development of infra-red sensing as a modality for detecting breast disease.

Smoking and Health

A reduction of $150,000 will reduce the expansion originally proposed in such areas as the effort to encourage less hazardous ways of smoking, including the development of a safer cigarette. In the area of Public Information, items such as "If You Must Smoke" pamphlet and T.V. spots will be curtailed.

Diabetes and Arthritis

A reduction of $35,000 will diminish demonstration of diabetes case findings.

Neurological and Sensory Disease Control

A reduction of 8 positions and $237,000 will limit research into auditory deprivation, implementation of recommendations of the National Conference on Noise as a Public Health Hazard, and evaluation of automated devices for visual screening.

Kidney Disease Control

A reduction of 2 positions and $584,000 will preclude the development of cadaver kidney procurement organization and methodology. Complete testing and evaluation of a computerized donor-recipient matching system will not be achieved. The decrease will not allow disease prevention programs to be funded. These include projects for testing of screening and detection programs, demonstrations of methods to control hospital infection, establishment of interrelationships between pregnancy and bacteriuria and others.

Regionalization Activities

A reduction of $115,000 will reduce support **for proposed contracts related to evaluation of RMP programs.**

Nutrition

The increase of 80 positions and $4,050,000 for the Nutrition Program will permit the compilation and analysis of the data obtained from the 10-state surveys begun in 1968 and 1969, as well as to support continuing checks on the status of Nutrition under the National Health Survey. In addition, support will be provided to launch approximately 50 demonstration projects aimed at remedying the medical defects associated with malnutrition and stimulating local action in more than 50 sites; and to provide assistance to communities in the treatment of patients, especially children, suffering from malnutrition.

The decreases that are noted above for the individual chronic disease programs do not reflect the total effort directed toward chronic disease proposed in this and other Health Services and Mental Health Administration appropriations. In some cases, Regional Medical Program and Comprehensive Health Project grants may provide a mechanism for the support of efforts previously supported by chronic disease contracts.

Program Direction and Management Services

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	110	$1,315,000	-13	-$125,000	97	$1,190,000
Other expenses.....	...	564,000	...	-25,000	...	539,000
Total.....	110	1,879,000	-13	-150,000	97	1,729,000

The reduction of 13 positions and $150,000 will maintain review and approval staffing at the 1969 level.

New Positions Requested
Fiscal Year 1970

	Original Estimate			Revised Estimate		
	No.	Grade	Salary	No.	Grade	Salary
Public Health Program Specialist.	1	GS-15	$19,780	-	-	-------
Medical Officer.....	-	-	------	1	GS-15	$20,243
Public Health Program Specialist.	2	GS-14	33,892	-	-	-------
Health Educator.....	-	-	------	1	GS-14	16,946
Nutritionist.....	-	-	------	1	GS-14	16,946
Administrative Staff Assistant...	1	GS-13	14,409	-	-	-------
Information Specialist.....	1	GS-13	14,409	-	-	-------
Public Health Program Specialist.	4	GS-13	57,636	-	-	-------
Nutritionist.....	-	-	------	1	GS-13	14,409
Public Health Advisor.....	-	-	------	7	GS-13	100,863
Information Specialist.....	1	GS-12	12,174	-	-	-------
Public Health Advisor.....	-	-	------	7	GS-12	85,218
Statistician.....	1	GS-7	6,981	-	-	-------
Secretary.....	1	GS-5	5,732	1	GS-5	5,732
Clerk Stenographer.....	-	-	------	1	GS-4	5,145
Clerk-Typist.....	1	GS-4	5,145	-	-	-------
Clerk-Typist.....	-	-	------	1	GS-3	4,600
Total new positions.....	13		170,158	21		270,102

Appropriation Estimate

COMMUNICABLE DISEASES

To carry out, except as otherwise provided for, sections 301, 311, 315, 325, 328, 353, and 361 to 369 of the Public Health Service Act with respect to the prevention and suppression of communicable and preventable diseases and the introduction from foreign countries, and the interstate transmission and spread thereof; including care and treatment of quarantine detainees pursuant to section 322(e) of the Act in private or other public hospitals when facilities of the Public Health Service are not available, insurance of official motor vehicles in foreign countries when required by the law of such countries; licensing of laboratories; and purchase, hire, maintenance, and operation of aircraft; [$38,731,000] $38,638,000.

Communicable Diseases

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$38,731,000	-$93,000	$38,638,000
Total available for obligation	38,731,000	-93,000	38,638,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Laboratory improvement	434	$6,346,000	-15	-$93,000	419	$6,253,000
Prevention and control:						
a. Grants	---	2,921,000	---	---	---	2,921,000
b. Direct operations:						
Communicable diseases	763	11,370,000	---	---	763	11,370,000
Tuberculosis	202	3,549,000	---	---	202	3,549,000
Venereal diseases	314	4,937,000	---	---	314	4,937,000
Foreign quarantine	500	7,714,000	---	---	500	7,714,000
Total	2,213	36,837,000	---	---	2,198	36,744,000
Program direction and management services	161	1,894,000	---	---	161	1,894,000
Total obligations	2,374	38,731,000	-15	-93,000	2,359	38,638,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions ...	2,374	-15	2,359
Full-time equivalent of all other positions	275	---	275
Average number of all employees	2,575	-10	2,565
Personnel compensation:			
Permanent positions	$22,393,000	-$87,000	$22,306,000
Positions other than permanent.....	1,553,000	---	1,553,000
Other personnel compensation	639,000	---	639,000
Total personnel compensation	24,585,000	-87,000	24,498,000
Personnel benefits	2,635,000	-6,000	2,629,000
Travel and transportation of persons..	1,574,000	---	1,574,000
Transportation of things	421,000	---	421,000
Rent, communications and utilities....	1,204,000	---	1,204,000
Printing and reproduction	194,000	---	194,000
Other services:			
Project contracts	1,623,000	---	1,623,000
Other	1,973,000	---	1,973,000
Supplies and materials	1,257,000	---	1,257,000
Equipment	353,000	---	353,000
Grants, subsidies, and contributions..	2,921,000	---	2,921,000
Subtotal	38,740,000	-93,000	38,647,000
Deduct quarters and subsistence	-9,000	---	-9,000
Total obligations by object	38,731,000	-93,000	38,638,000

Summary of Changes

1970 obligations:

Original estimate	$38,731,000
Revised estimate	38,638,000
Net change	-93,000

	Original estimate		Amendment	
	Pos.	Amount	Pos.	Amount
B. Decreases:				
1. Program: Laboratory improvement ...	434	$6,346,000	-15	-$93,000
Total decreases	xxx	xxx	-15	-93,000
Net change	xxx	xxx	-15	-93,000

Explanation of Changes

The decrease of $93,000 and 15 positions reflects the policy of the Administration to restrict Federal employment.

Communicable Diseases

	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	8,175,000	8,140,000	8,275,000	8,157,500
1961 1/	9,578,500	8,578,500 2/	9,578,500	9,578,500
1962	9,778,100	9,778,000	10,028,000	10,000,000
1963	22,662,000	15,492,000	22,892,000	18,892,000
1964	30,613,000	25,405,000	30,405,000	28,405,000
1965	29,995,000	29,974,000	29,974,000	29,974,000
1966	48,347,000	40,347,000	40,497,000	40,497,000
1967	44,230,000	44,220,000	44,220,000	44,220,000
1968	72,272,000	72,109,000	72,109,000	72,109,000
1969	63,407,000	62,144,000	62,144,000	62,144,000
1970 3/	38,638,000			

1/ Excludes amounts for Control of Venereal Diseases which were carried as a part of this appropriation.

2/ Supplemental of $1,000,000 not considered by the House.

3/ Excludes amounts for Aedes aegypti eradication and pesticides transferred to Consumer Protection and Environmental Health Service.

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Laboratory improvement.....	434	$6,346,000	-15	-$93,000	419	$6,253,000

The original request has been amended in accordance with the policy of the Administration to restrict Federal employment.

The positions eliminated were originally proposed to strengthen proficiency testing and quality control programs, review of and assistance to State and local licensure and proficiency testing programs, and expansion of testing services of non-profit professional organizations.

New Positions Requested
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Salary	No.	Grade	Salary
Laboratory improvement						
Medical officer	2	GS-15	$42,196	---	---	---
Public health program specialist	2	GS-12	24,348	---	---	---
Laboratory technician	7	GS-5	40,124	---	---	---
Clerical assistant	3	GS-5	17,196	---	---	---
Clerical assistant	1	GS-4	5,145	---	---	---
	15		$129,009	---		---

Appropriation Estimate

HOSPITAL CONSTRUCTION

To carry out the provisions of title VI of the Public Health Service Act, and, except as otherwise provided, parts B and C of the Mental Retardation Facilities Construction Act (42 U.S.C. 2661-2677), the District of Columbia Medical Facilities Construction Act of 1968 (Public Law 90-457), and the Community Mental Health Centers Act (42 U.S.C. 2681-2687), [$258,415,000] *$153,923,000*, of which [$163,500,-000] *$50,000,000* shall be available until June 30, 1971 (except that funds for Guam, American Samoa, and the Virgin Islands shall be available until June 30, 1972), for grants or loans for hospitals and related facilities pursuant to section 601 (b) of the Public Health Service Act, and [$90,900,000] *$100,000,000* shall be available until June 30, 1971 (except that funds for Guam, American Samoa, and the Virgin Islands shall be available until June 30, 1972), for grants or loans for facilities pursuant to section 601 (a) of the Public Health Service Act.

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos	Amount	Pos	Amount	Pos	Amount
1. Construction:						
(a) Hospital and public health centers		$109,000,000		-$75,666,000		$33,334,000
(b) Long-term care facilities		63,600,000		+6,400,000		70,000,000
(c) Diagnostic or treatment centers		18,200,000		+1,800,000		20,000,000
(d) Rehabilitation facilities		9,100,000		+900,000		10,000,000
(e) Modernization		54,500,000		-37,834,000		16,666,000
2. Operations and technical services	258	4,015,000	-10	-92,000	248	3,923,000
Total obligations	258	258,415,000	-10	-104,492,000	248	153,923,000

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Hospital Construction

Amounts Available for Obligation 1/

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$258,415,000	-$104,492,000	$153,923,000

1/ Hospital construction grants are on an allocation basis.

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions	258	-10	248
Full-time equivalent of all other positions	3	..	3
Average number of all employees	251	-7	244
Personnel compensation:			
Permanent positions	$3,126,000	-$86,000	$3,040,000
Positions other than permanent	40,000	...	40,000
Total personnel compensation	3,166,000	- 86,000	3,080,000
Personnel benefits	306,000	-6,000	300,000
Travel and transportation of persons	228,000	...	228,000
Transportation of things	5,000	...	5,000
Rent, communications, and utilities	80,000	...	80,000
Printing and reproduction	60,000	...	60,000
Other services	125,000	...	125,000
Supplies and materials	35,000	...	35,000
Equipment	10,000	...	10,000
Grants, subsidies, and contributions	254,400,000	-104,400,000	150,000,000
Total obligations by object	258,415,000	-104,492,000	153,923,000

Summary of Changes

1970 obligations:

Original estimate	$258,415,000
Revised estimate	153,923,000
Net change	-104,492,000

	Original estimate Pos	Original estimate Amount	Amendment Pos	Amendment Amount
Decreases:				
1. Direct operations	258	$4,015,000	-10	-$92,000
2. Grants for hospital construction program		254,400,000		-104,400,000
Net change			-10	-104,492,000

Explanation of Changes

Operations and technical services

A decrease of $92,000 reflects the elimination of 10 new positions requested in the original submission.

Construction

The net decrease of $104,400,000 in grants for construction and modernization of hospitals and related health facilities represents a decrease of $75,666,000 for construction of hospitals, public health centers, etc. and $37,834,000 for modernization of all types of health facilities; and an increase of $9,500,000 for construction of long-term care facilities, diagnostic or treatment centers, and rehabilitation facilities. This action with the emphasis on ambulatory and extended care projects is in line with the proposed medical facilities construction legislation recently submitted to the Congress by the Administration.

Hospital Construction

Year	Budget Estimate To Congress	House Allowance	Senate Allowance	Appropriation
1960	$101,200,000	$143,700,000	$211,200,000	$186,200,000
1961	126,200,000	150,000,000	211,200,000	186,200,000
1962	196,972,000	187,972,000	221,972,000	211,500,000
1963	176,220,000	188,672,000	226,220,000	226,220,000
1964	184,589,000	182,981,000	233,281,000	231,287,000
1965	247,057,000	44,407,000	267,057,000	266,907,000
1966	303,304,000	257,089,000	313,304,000	303,304,000
1967	313,544,000	313,525,000	313,525,000	313,525,000
1968	308,357,000	293,357,000	293,357,000	293,357,000
1969	258,368,000	258,368,000	258,368,000	258,368,000
1970	153,923,000			

Justification

Hospital Construction

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos	Amount	Pos	Amount	Pos	Amount
Personnel compensation and benefits	258	$4,015,000	-10	-$92,000	248	$3,923,000
Other expenses	...	254,400,000	...	-104,400,000	...	150,000,000
Total	258	$258,415,000	-10	$-104,492,000	248	$153,923,000

A request for $153,923,000 is submitted for 1970. This amount provides $150,000,000 for the Hill-Burton construction program, and $3,923,000 for operations and technical services.

Construction under Title VI, the Public Health Service Act (Hill-Burton),

	1970 Original Estimate	Amendment	1970 Revised Estimate
Grants, subsidies, and contributions	$254,400,000	-$104,400,000	$150,000,000

The $150,000,000 requested for 1970 for construction under Title VI of the Public Health Service Act will provide $50,000,000 for grants or loans to assist in (a) the construction of hospitals, public health centers, and related facilities, and (b) the modernization of hospitals and other health facilities; $70,000,000 for long-term care facilities; $20,000,000 for diagnostic or treatment centers, and $10,000,000 for rehabilitation facilities.

The net reduction of $104,400,000 reflects the change in emphasis in the Administration's proposals for new medical facilities construction legislation. (The current legislation expires on June 30, 1970)

A total of $113.5 million in grants for new hospital construction and modernization would be cut from the 1970 budget--leaving $50 million for these purposes. This action is in line with the Administration's legislative proposal to shift from a system of grants to a system of mortgage guarantees as the means of financing the construction and modernization of acute care facilities.

The reduction of $113.5 million is offset by an increase in the new budget of $9.5 million for the construction of ambulatory, long-term care, and rehabilitation facilities. This increase will provide the full authorization of $100 million for these types of facilities. This increase is also in keeping with the legislative proposal which recognized that these kinds of facilities have the greatest need for direct Federal support.

1. Hospitals and public health centers--The amount of $33,334,000 is requested for the construction of new and expanded hospitals and public health centers out of the $50,000,000 requested pursuant to Section 601 (b). This represents a decrease of $85,951,000 from the amount available in 1969. The portion of the $33,334,000 that will be utilized for hospital construction will produce an estimated 2,965 beds. Construction taking place outside the program will produce an additional 12,000 beds for a total of 14,965 beds.

2. Modernization--An amount of $16,666,000 is requested for the modernization of hospitals and other health facilities out of the $50,000,000 requested pursuant to the provisions of Section 601 (b). The $16,666,000 requested for modernization will produce an estimated 31 projects providing 2,010 modernized beds.

3. Long-term care facilities--Construction of long-term care facilities should be accelerated in order to provide beds to meet the needs of an increasing number of older citizens. Also, the increased coverage of long-term care provided by various third party payment programs will unquestionably increase demand beyond current figures now reflected in State Plans. Further, increased Federal support of long-term care facilities is required since it is difficult to engender in the general public and working population a feeling of financial responsibility for the construction of nursing homes in which the bulk of patient load is aged persons. Moreover, industry, which is a large contributor to the construction facilities, often does not have the same interest in long-term care facilities as in the case of general hospitals since its employees are of working age and generally do not use such facilities.

According to Hill-Burton State plans 375,000 long-term care beds currently need to be added or modernized. The $70,000,000 requested for 1970 will produce an estimated 174 nursing home and chronic disease projects providing 9,820 beds.

4. Diagnostic or treatment centers and rehabilitation facilities--The construction of these outpatient facilities will provide a means of lessening the pressure for construction of additional expensive acute care inpatient facilities, and reducing the cost of health care to patients whose needs may be met through facilities providing outpatient care. The National Advisory Commission on Health Manpower concluded that a tremendous savings in hospital cost could be achieved by reducing acute inpatient usage through increased ambulatory care. According to Hill-Burton State plans, 2,300 diagnostic or treatment centers need to be newly built or modernized. The $20,000,000 requested for these centers will produce an estimated 70 projects. The State plans also show that 542 rehabilitation facilities need to be newly built or modernized. The $10,000,000 for this purpose will provide an estimated 29 projects.

Projects and Beds Produced by Funds Requested--Assuming that State agencies program projects along the same lines as occurred in 1966 and 1967, the funds requested above will produce the following projects and beds for 1970.

Type of Project	Number of Projects			Beds Provided		
	1970 Original Estimate	Amendment	1970 Revised Estimate	1970 Original Estimate	Amendment	1970 Revised Estimate
Hospitals, public health centers, and clinics:						
Hospitals	137	-95	42	9,695	-6,730	2,965
Public health centers and laboratories	30	-20	10	0	0	0
Subtotal	167	-115	52	9,695	-6,730	2,965
Long-term care facilities	158	+16	174	8,920	+900	9,820
Diagnostic or treatment centers	63	+7	70	0	0	0
Rehabilitation facilities	26	+3	29	0	0	0
Subtotal	247	+26	273	8,920	+900	9,820
Modernization	101	-70	31	6,575	-4,565	2,010
Grand total	515	-159	356	25,190	-10,395	14,795

Operations and Technical Services

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos	Amount	Pos	Amount	Pos	Amount
Personnel compensation and benefits	258	$3,472,000	-10	-$92,000	248	$3,380,000
Other expenses	...	543,000	...	...	...	543,000
Total	258	$4,015,000	-10	-$92,000	248	$3,923,000

This proposed decrease reflects savings from administratively established employment ceilings. It will eliminate all additional positions requested in fiscal year 1970.

New Positions Requested
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Salary	No.	Grade	Salary
Public health advisor	1	GS-14	$16,946	..	....	....
Architect	1	GS-13	14,409	..	....	....
Engineer	1	GS-13	14,409	..	....	....
Public health advisor	1	GS-13	14,409	..	....	....
Loan Advisor	1	GS-12	12,174	..	....	....
Secretary	1	GS-6	6,321	..	....	....
Clerical assistant	2	GS-5	11,464	..	....	....
Commissioned officers:						
Director grade	2		38,776	..		....
Total new positions	10		128,908	..		....

HOSPITAL CONSTRUCTION

ALLOCATIONS TO STATES EXHIBIT I

For Construction and Modernization of Hospitals
and Related Health Facilities

	1970 Original Estimate	Amendment	1970 Revised Estimate
Totals	$254,400,000	-$104,400,000	$150,000,000
Alabama	6,426,933	-2,474,069	3,952,864
Alaska	750,000	....	750,000
Arizona	2,378,115	-854,784	1,523,331
Arkansas	3,679,007	-1,297,032	2,381,975
California	15,359,956	-6,487,550	8,872,406
Colorado	2,631,441	-1,139,444	1,491,997
Connecticut	2,563,669	-1,300,305	1,263,364
Delaware	750,000	....	750,000
District of Columbia	750,000	....	750,000
Florida	8,427,807	-3,456,946	4,970,861
Georgia	7,026,358	-2,743,693	4,282,665
Hawaii	923,231	-141,600	781,631
Idaho	1,146,533	-281,290	865,243
Illinois	9,441,163	-4,367,532	5,073,631
Indiana	6,143,474	-2,777,989	3,365,485
Iowa	3,528,917	-1,599,687	1,929,230
Kansas	3,168,620	-1,448,800	1,719,820
Kentucky	5,370,069	-2,100,846	3,269,223
Louisiana	6,213,090	-2,503,751	3,709,339
Maine	1,569,543	-556,834	1,012,709
Maryland	3,498,679	-1,380,642	2,118,037
Massachusetts	6,233,578	-3,057,404	3,176,174
Michigan	8,999,688	-4,025,770	4,973,918
Minnesota	4,666,479	-2,056,639	2,609,840
Mississippi	4,755,672	-1,708,130	3,047,542
Missouri	6,236,918	-2,748,791	3,488,127
Montana	1,165,902	-334,145	831,757
Nebraska	1,822,610	-695,576	1,127,034
Nevada	750,000	....	750,000
New Hampshire	989,489	-187,336	802,153
New Jersey	6,859,908	-3,291,359	3,568,549
New Mexico	1,582,441	-479,331	1,103,110
New York	16,077,840	-7,539,385	8,538,455
North Carolina	8,800,736	-3,607,830	5,192,906
North Dakota	1,073,304	-233,644	839,660
Ohio	11,567,377	-4,883,082	6,684,295
Oklahoma	3,759,889	-1,452,024	2,307,865
Oregon	2,441,921	-971,637	1,470,284
Pennsylvania	15,138,450	-6,958,584	8,179,866
Rhode Island	1,037,329	-209,594	827,735

HOSPITAL CONSTRUCTION

ALLOCATIONS TO STATES - Continued

EXHIBIT I
Page 2

For Construction and Modernization of Hospitals
and Related Health Facilities

	1970 Original Estimate	Amendment	1970 Revised Estimate
South Carolina	4,957,456	-1,913,945	3,043,511
South Dakota	1,156,063	-305,449	850,614
Tennessee	7,130,596	-2,994,957	4,135,639
Texas	16,104,371	-6,675,188	9,429,183
Utah	1,531,905	-478,202	1,053,703
Vermont	820,501	-70,501	750,000
Virginia	6,635,516	-2,794,677	3,840,839
Washington	3,438,496	-1,552,223	1,886,273
West Virginia	3,441,992	-1,467,365	1,974,627
Wisconsin	5,003,579	-2,147,440	2,856,139
Wyoming	750,000	....	750,000
American Samoa	375,000	....	375,000
Guam	383,614	-8,614	375,000
Puerto Rico	6,589,775	-2,638,384	3,951,391
Virgin Islands	375,000	....	375,000

BASED ON ORIGINAL ESTIMATE

TENTATIVE ALLOCATIONS TO STATES
FOR CONSTRUCTION AND MODERNIZATION OF HOSPITALS AND RELATED HEALTH FACILITIES
for Fiscal Year 1970

EXHIBIT II

State	Total	Modernization	Hospitals and Public Health Centers	Long-term Care Facilities	Diagnostic or Treatment Centers	Rehabilitation Facilities
Total	$254,400,000	$54,500,000	$109,000,000	$63,600,000	$18,200,000	$9,100,000
Alabama	6,426,933	719,117	3,138,160	1,814,170	503,658	251,828
Alaska	750,000	200,000	200,000	200,000	100,000	50,000
Arizona	2,378,115	365,429	1,106,575	639,711	177,600	88,800
Arkansas	3,679,007	360,389	1,824,577	1,054,788	292,835	146,418
California	15,359,956	2,974,364	6,809,603	3,936,631	1,092,906	546,452
Colorado	2,631,441	666,414	1,080,373	624,563	173,394	86,697
Connecticut	2,563,669	1,023,801	846,620	489,431	135,878	67,939
Delaware	750,000	200,000	200,000	200,000	100,000	50,000
Dist. of Col.	750,000	200,000	200,000	200,000	100,000	50,000
Florida	8,427,807	1,383,011	3,873,232	2,239,115	621,633	310,816
Georgia	7,026,358	817,444	3,413,663	1,973,438	547,875	273,938
Hawaii	923,231	200,000	363,241	209,990	100,000	50,000
Idaho	1,146,533	216,384	494,360	285,789	100,000	50,000
Illinois	9,441,163	2,749,349	3,679,162	2,126,923	590,486	295,243
Indiana	6,143,474	1,633,815	2,479,412	1,433,348	397,933	198,966
Iowa	3,528,917	948,099	1,418,935	820,286	227,731	113,866
Kansas	3,168,620	881,458	1,257,482	726,951	201,819	100,910
Kentucky	5,370,069	702,014	2,566,498	1,483,693	411,909	205,955
Louisiana	6,213,090	911,053	2,915,062	1,685,197	467,852	233,926
Maine	1,569,543	337,174	677,557	391,696	108,744	54,372
Maryland	3,498,679	581,491	1,603,871	927,198	257,413	128,706
Massachusetts	6,233,578	2,236,483	2,197,604	1,270,435	352,704	176,352
Michigan	8,999,688	2,287,309	3,690,469	2,133,459	592,301	296,150
Minnesota	4,666,479	1,111,353	1,954,609	1,129,960	313,705	156,852
Mississippi	4,755,672	424,779	2,381,127	1,376,529	382,158	191,079

Missouri	6,236,918	1,485,413	2,612,379	1,510,216	419,273	209,637
Montana	1,165,902	318,624	441,847	255,431	100,000	50,000
Nebraska	1,822,610	412,662	775,190	448,137	124,414	62,207
Nevada	750,000	200,000	200,000	200,000	100,000	50,000
New Hampshire	989,489	215,472	395,423	228,594	100,000	50,000
New Jersey	6,859,908	2,283,609	2,516,051	1,454,529	403,813	201,906
New Mexico	1,582,441	208,878	755,185	436,573	121,203	60,602
New York	16,077,840	4,928,572	6,129,872	3,543,678	983,812	491,906
North Carolina	8,800,736	1,439,145	4,047,405	2,339,804	649,588	324,794
North Dakota	1,073,304	206,465	454,242	262,597	100,000	50,000
Ohio	11,567,377	2,233,641	5,131,692	2,966,630	823,609	411,805
Oklahoma	3,759,889	553,988	1,762,606	1,018,962	282,889	141,444
Oregon	2,441,921	509,917	1,062,217	614,067	170,480	85,240
Pennsylvania	15,138,450	4,300,438	5,958,743	3,444,748	956,347	478,174
Rhode Island	1,037,329	200,000	435,542	251,787	100,000	50,000
South Carolina	4,957,456	632,692	2,377,757	1,374,581	381,617	190,809
South Dakota	1,156,063	262,115	471,420	272,528	100,000	50,000
Tennessee	7,130,596	1,340,120	3,183,606	1,840,442	510,952	255,476
Texas	16,104,371	2,811,112	7,308,639	4,225,123	1,172,998	586,499
Utah	1,531,905	233,486	713,871	412,689	114,572	57,287
Vermont	820,501	200,000	270,501	200,000	100,000	50,000
Virginia	6,635,316	1,265,652	2,952,354	1,706,755	473,837	236,918
Washington	3,438,496	908,104	1,391,210	804,259	223,282	111,641
West Virginia	3,441,992	742,921	1,483,951	857,871	238,166	119,083
Wisconsin	5,003,579	1,051,573	2,172,815	1,256,104	348,725	174,362
Wyoming	750,000	200,000	200,000	200,000	100,000	50,000
American Samoa	375,000	100,000	100,000	100,000	50,000	25,000
Guam	383,614	100,000	108,614	100,000	50,000	25,000
Puerto Rico	6,589,775	924,671	3,114,676	1,800,594	499,889	249,945
Virgin Islands	375,000	100,000	100,000	100,000	50,000	25,000

Basis of Allocations, per Statutory Formula:

a. Total population, as estimated by the Bureau of the Census: (1) Provisional Estimates of the United States, July 1,1968 (Series P-25, No. 403, September 19, 1968); American Samoa, Guam, Puerto Rico, and Virgin Islands, Provisional Estimates as of July 1, 1967, (Series P-25, No. 392, May 2, 1968).

b. Allotment percentages for fiscal year 1970, as determined by the Surgeon General, September 30, 1968.

BASED ON REVISED ESTIMATE

TENTATIVE ALLOCATIONS TO STATES
FOR CONSTRUCTION AND MODERNIZATION OF HOSPITALS AND RELATED HEALTH FACILITIES
for Fiscal Year 1970

EXHIBIT III

State	Total	Modernization	Hospitals and Public Health Centers	Long-term Care Facilities	Diagnostic or Treatment Centers	Rehabilitation Facilities
Total	$150,000,000	$16,666,000	$33,334,000	$70,000,000	$20,000,000	$10,000,000
Alabama	3,952,864	200,000	915,052	2,001,138	557,783	278,891
Alaska	750,000	200,000	200,000	200,000	100,000	50,000
Arizona	1,523,331	200,000	322,664	705,640	196,685	98,342
Arkansas	2,381,975	200,000	532,025	1,163,494	324,304	162,152
California	8,872,406	728,939	1,985,601	4,342,338	1,210,352	605,176
Colorado	1,491,997	200,000	315,024	688,931	192,028	96,014
Connecticut	1,263,364	250,907	246,865	539,872	150,480	75,240
Delaware	750,000	200,000	200,000	200,000	100,000	50,000
Dist. of Col.	750,000	200,000	200,000	200,000	100,000	50,000
Florida	4,970,861	338,940	1,129,390	2,469,877	688,436	344,218
Georgia	4,282,665	200,335	995,384	2,176,820	606,751	303,375
Hawaii	781,631	200,000	200,000	231,631	100,000	50,000
Idaho	865,243	200,000	200,000	315,243	100,000	50,000
Illinois	5,073,631	673,794	1,072,802	2,346,123	653,941	326,971
Indiana	3,365,485	400,406	722,968	1,581,068	440,695	220,348
Iowa	1,929,230	232,355	413,745	904,824	252,204	126,102
Kansas	1,719,820	216,023	366,667	801,869	223,507	111,754
Kentucky	3,269,223	200,000	748,361	1,636,601	456,174	228,087
Louisiana	3,709,339	223,275	849,998	1,858,873	518,129	259,064
Maine	1,012,709	200,000	200,000	432,064	120,430	60,215
Maryland	2,118,037	200,000	467,670	1,022,754	285,075	142,538
Massachusetts	3,176,174	548,104	640,796	1,401,365	390,606	195,303
Michigan	4,973,918	560,560	1,076,098	2,353,333	655,951	327,976
Minnesota	2,609,840	272,361	569,942	1,246,413	347,416	173,708
Mississippi	3,047,542	200,000	694,309	1,518,394	423,226	211,613

Missouri	3,488,127	364,036	761,739	1,665,858	464,329	232,165
Montana	831,757	200,000	200,000	281,757	100,000	50,000
Nebraska	1,127,034	200,000	226,036	494,322	137,784	68,892
Nevada	750,000	200,000	200,000	200,000	100,000	50,000
New Hampshire	802,153	200,000	200,000	252,153	100,000	50,000
New Jersey	3,568,549	559,654	733,651	1,604,432	447,208	223,604
New Mexico	1,103,110	200,000	220,203	481,565	134,228	67,114
New York	8,538,455	1,207,865	1,787,399	3,908,888	1,089,535	544,768
North Carolina	5,192,906	352,697	1,180,176	2,580,943	719,393	359,697
North Dakota	839,660	200,000	200,000	289,660	100,000	50,000
Ohio	6,684,295	547,408	1,496,342	3,272,370	912,117	456,058
Oklahoma	2,307,865	200,000	513,956	1,123,976	313,289	156,644
Oregon	1,470,284	200,000	309,730	677,353	188,801	94,400
Pennsylvania	8,179,866	1,053,925	1,737,501	3,799,763	1,059,118	529,559
Rhode Island	827,735	200,000	200,000	277,735	100,000	50,000
South Carolina	3,043,511	200,000	693,327	1,516,244	422,627	211,313
South Dakota	850,614	200,000	200,000	300,614	100,000	50,000
Tennessee	4,135,639	328,429	928,302	2,030,118	565,860	282,930
Texas	9,429,183	688,930	2,131,114	4,660,562	1,299,051	649,526
Utah	1,053,703	200,000	208,156	455,220	126,885	63,442
Vermont	750,000	200,000	200,000	200,000	100,000	50,000
Virginia	3,840,839	310,178	860,872	1,882,653	524,757	262,379
Washington	1,886,273	222,553	405,661	887,145	247,276	123,638
West Virginia	1,974,627	200,000	432,703	946,284	263,760	131,880
Wisconsin	2,856,139	257,713	633,568	1,385,558	386,200	193,100
Wyoming	750,000	200,000	200,000	200,000	100,000	50,000
American Samoa	375,000	100,000	100,000	100,000	50,000	25,000
Guam	375,000	100,000	100,000	100,000	50,000	25,000
Puerto Rico	3,951,391	226,613	908,203	1,986,162	553,609	276,804
Virgin Islands	375,000	100,000	100,000	100,000	50,000	25,000

Basis of Allocations, per Statutory Formula:

a. Total pupulation, as estimated by the Bureau of the Census: (1) Provisional Estimates of the United States, July 1,1968 (Series P-25, No. 403, September 19, 1968); American Samoa, Guam, Puerto Rico, and Virgin Islands, Provisional Estimates as of July 1, 1967, (Series P-25, No. 392, May 2, 1968).

b. Allotment percentages for fiscal year 1970, as determined by the Surgeon General, September 30, 1968.

Appropriation Estimate

PATIENT CARE AND SPECIAL HEALTH SERVICES

For carrying out the functions of the Health Services and Mental Health Administration, not otherwise provided for, under the Act of August 8, 1946 (5 U.S.C. 7901), and under sections 301, 311, 321, 322, 324, 326, 328, 331, 332, 502, and 504 of the Public Health Service Act, section 810 of the Act of July 1, 1944 (33 U.S.C. 763c), and the Act of July 19, 1963 (Public Law 88-71) $72,224,000 of which $1,200,000 shall be available only for payments to the State of Hawaii for care and treatment of persons afflicted with leprosy: Provided, That when the Health Services and Mental Health Administration establishes or operates a health service program for any department or agency, payment for the estimated cost shall be made by way of reimbursement or in advance for deposit to the credit of this appropriation.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Patient Care and Special Health Services

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation	$72,224,000	...	$72,224,000
Receipts and reimbursements from:			
Federal funds	14,156,000	-$1,219,000	12,937,000
Non-Federal sources	322,000	...	322,000
Total obligations	86,702,000	-1,219,000	85,483,000

Obligations by Activity

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Operation of hospitals and clinics.....	6,000	$75,428,000	-323	-$547,000	5,677	$74,881,000
Medical care for special groups:						
(a) Coast Guard.....	152	2,655,000	-4	-50,000	148	2,605,000
(b) Federal employees..	262	3,707,000	-72	-622,000	190	3,085,000
Special health services:						
(a) Rehabilitative services.....	7	168,000	...	...	7	168,000
(b) Payments to Hawaii.....	...	1,200,000	...	...	...	1,200,000
Personnel detailed to other agencies	57	1,085,000	...	...	57	1,085,000
Program direction and management services.....	145	2,459,000	...	...	145	2,459,000
Total obligations	6,623	86,702,000	-399	-1,219,000	6,224	85,483,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions	6,623	-399	6,224
Full-time equivalent of all other positions	140	+30	170
Average number of all employees	6,558	-306	6,252
Personnel compensation:			
Permanent positions	$52,738,000	-$2,700,000	$50,038,000
Positions other than permanent	801,000	+164,000	965,000
Other personnel compensation	1,938,000	-93,000	1,845,000
Total personnel compensation	55,477,000	-2,629,000	52,848,000
Personnel benefits	7,200,000	-289,000	6,911,000
Benefits for former personnel	...	+292,000	292,000
Travel and transportation of persons	1,043,000	-19,000	1,024,000
Transportation of things	704,000	-7,000	697,000
Rent, communications, and utilities	1,518,000	-73,000	1,445,000
Printing and reproduction	214,000	-6,000	208,000
Other services	8,155,000	+1,931,000	10,086,000
Project contracts	7,000	...	7,000
Supplies and materials	8,520,000	-305,000	8,215,000
Equipment	2,939,000	-132,000	2,807,000
Grants, subsidies, and contributions	1,285,000	...	1,285,000
Subtotal	87,062,000	-1,237,000	85,825,000
Deduct quarters and subsistence charges	-360,000	+18,000	-342,000
Total obligations by object	86,702,000	-1,219,000	85,483,000

Summary of Changes

1970 obligations:

Original estimate	$86,702,000
Revised estimate	85,483,000
Net change	-1,219,000

	Original estimate Pos.	Original estimate Amount	Amendments Pos.	Amendments Amount
B. Decreases:				
1. Operation of hospitals and clinics	6,000	$75,428,000	-323	-$547,000
2. Medical care for special groups:				
(a) Coast Guard	152	2,655,000	-4	-50,000
(b) Federal employees	262	3,707,000	-72	-622,000
Net change	xxxx	xxxx	-399	-1,219,000

Explanation of Changes

Operations of hospitals and clinics

As a result of the closure of the Detroit, Michigan and Savannah, Georgia U. S. Public Health Service hospitals in 1970, there will be a saving of 268 positions and a decrease of $547,000 in total obligations.

The savings ($220,000) in budget authority which will accrue as a result of the closures, the opening of outpatient clinics at these locations, and the hospitalization costs for beneficiaries in contract facilities, will be more than offset in the first year by the one-time cost ($292,000) of severance pay for departing employees. Budget authority thus increases, overall, by $72,000.

Concurrent with the closures, there will be a loss of $619,000 in reimbursable funds from the Military and other paying patients. These funds would have been utilized in the operation of these hospitals, and would have increased the obligations incurred at these facilities.

Thus, the increase of $72,000 in budget authority and the decrease of $619,000 in reimbursable spending will result in a net decrease in obligations of $547,000.

The 55 additional positions requested for this activity are deleted from the revised request for 1970.

Medical care for special groups

Coast Guard

The four additional positions previously requested for this activity are deleted from the revised request for 1970. This reduces the request for 1970 by $50,000.

Federal employees

The 72 additional positions requested for this activity are deleted from the revised request for 1970. This reduces the request for 1970 by $622,000. Of the total decrease, 70 positions and $600,000 are reimbursable, and two positions and $22,000 are funded directly.

Patient Care and Special Health Services

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$51,689,500	$45,600,000	$49,722,500	$51,600,000
1961	52,434,000	56,023,000	56,023,000	56,023,000
1962	49,852,000	50,160,000	50,334,000	50,009,000
1963	51,514,000	51,477,000	48,820,000	48,820,000
1964	50,038,000	49,962,000	49,962,000	49,962,000
1965	54,436,000	54,436,000	55,064,000	55,064,000
1966	57,616,000	58,480,000	59,480,000	58,980,000
1967	64,121,000	64,121,000	64,121,000	64,121,000
1968	63,851,000	62,830,000	63,633,000	63,230,000
1969	71,193,000	70,443,000	70,443,000	70,443,000
1970	72,224,000			

Justification

Patient Care and Special Health Services

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	6,623	$62,677,000	-399	-$2,918,000	6,224	$59,759,000
Other expenses.....	...	24,385,000	...	+1,681,000	...	26,066,000
Subtotal.....	6,623	87,062,000	-399	-1,237,000	6,224	85,825,000
Deduct quarters and subsistence charges.....	...	-360,000	...	+18,000	...	-342,000
Total.....	6,623	86,702,000	-399	-1,219,000	6,224	85,483,000
Reimbursable obligations.....	...	-14,478,000	...	+1,219,000	...	-13,259,000
Direct obligations		72,224,000		...		72,224,000

Two U. S. Public Health Service hospitals, located in Detroit, Michigan and Savannah, Georgia will be closed effective with fiscal year 1970. Outpatient clinic facilities will be operated in lieu of these hospitals and beneficiaries in need of hospital care will be provided for through contractual arrangements with other hospitals. There will be a savings of 268 positions as the result of the hospital closures.

In addition to the hospital closures, the increase of 55 positions requested for the operation of hospitals and clinics, the increase of four positions requested for the Coast Guard medical services and the increase of 72 positions in the Federal Employee Health activity are deleted from our revised request for 1970.

There is no overall decrease in budget authority as a result of the above changes. The savings resulting from the closures of the hospitals and the deletion of the four Coast Guard positions and two directly funded Federal Employee Health positions are offset by the costs for opening outpatient clinics, providing contract hospital care, and making severance payments to separating employees.

However, there will be a decrease of $1,219,000 in total obligations. This represents the loss of $619,000 in reimbursable funds from the Military and other paying patients when the two hospital facilities are closed. In connection with having cared for these patients, these funds would have been received and obligated by the hospitals in maintaining their patient care activities. The remaining $600,000 decrease occurs in the Federal Employee Health program, where reimbursable funds in this amount will not be received from Federal agencies, since an additional 70 positions are not being requested to operate more Federal employee health units in 1970. The new units will not be opened in 1970.

1. Operation of hospitals and clinics

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	6,000	$55,158,000	-323	-$2,320,000	5,677	$52,838,000
Other expenses.....	...	20,630,000	...	+1,755,000	...	22,385,000
Subtotal.....	6,000	75,788,000	-323	-565,000	5,677	75,223,000
Deduct quarters and subsistence charges.	...	-360,000	...	+18,000	...	-342,000
Total	6,000	75,428,000	-323	-547,000	5,677	74,881,000
Reimbursable obligations.....	...	-9,843,000	...	+619,000	...	-9,224,000
Direct obligations....	...	65,585,000	...	+72,000	...	65,657,000

Effective June 30, 1969, the inpatient services at the Savannah and Detroit Public Health Service hospitals will be closed and outpatient clinics established in the existing buildings.

The relatively small size of these hospitals, Detroit-147 beds and Savannah-110 beds, precludes providing the scope of specialized services considered essential to the operation of a modern referral hospital. The present facilities are obsolete, inefficient, and in immediate need of extensive modernization or replacement. These deficiencies, compounded by the lack of training and research programs, seriously handicap the attraction and retention of professional staff.

Outpatient services will continue to be provided to beneficiaries in these two cities. Arrangements for necessary hospital care will be made through other Federal or community facilities.

As the result of the closure of these two hospitals, there will be a saving of 268 positions and a decrease of $547,000 in total obligations in 1970. This decrease results from two basic elements. First, in budget authority, there will be an increase of $72,000; the costs associated with contract hospital care for beneficiaries and severance pay for separating employees will more than offset the savings associated with closing the two hospitals and operating outpatient clinics in their place. Second, $619,000 will be lost in reimbursable funds from the military and other paying patients. These funds would have increased the amounts available for obligation for the two hospital facilities.

The reduction of 55 positions reflects the Administration's attempt to restrict employment

Comparative Statement of Reimbursements

	1970 Original Estimate			Amendment			1970 Revised Estimate		
	Avg. daily load	Rate per day	Amount	Avg. daily load	Rate per day	Amount	Avg. daily load	Rate per day	Amount
Operation of hospitals and clinics:									
Patient care:									
Special Study	43	$50.00	$ 784,800	...	...	...	43	$50.00	$ 784,800
Veterans	20	33.00	240,900	...	...	...	20	33.00	240,900
Foreign seamen	12	50.00	219,000	...	...	...	12	50.00	219,000
Immigration	..	33.00	4,700	...	...	...	..	33.00	4,700
Div. of Indian Health	11	33.00	132,500	...	...	...	11	33.00	132,500
Dept. of State - Dependents	..	50.00	4,300	...	...	...	..	50.00	4,300
Other (including emergency)	27	33.00	325,200	...	...	...	27	33.00	325,200
Dept. of Defense (Armed Forces)	124	33.00	1,493,600	-9	$33.00	-$108,000	115	33.00	1,385,600
Dept. of Defense (Dependents)	194	50.00a/	3,540,500	-28	50.00	-511,000	166	50.00	3,029,500
Coast Guard, U. S. Public Health Service and Environmental Science Services Administration Dependents	54	1.75	34,500	...	...	...	54	1.75	34,500
CG, USPHS, and ESSA Officers	..	1.00	14,000	...	...	...	..	1.00	14,000
Outpatient visits	..	...	110,000	...	...	...	..	...	110,000
Subtotal, patient care	485	...	6,904,000	-37	...	-619,000	448	...	6,285,000
Miscellaneous			2,939,000			...			2,939,000
Total, operation of hospitals and clinics			9,843,000			-619,000			9,224,000
Special health services									
(a) Rehabilitative services - Health Referral			...			...			...
Program direction and management services			250,000			...			250,000
Federal employees			3,300,000			-600,000			2,700,000
Personnel detailed to other agencies			1,085,000			...			1,085,000
Total reimbursements			14,478,000			-1,219,000			13,259,000

a/ These are estimated to be weighted rates from the following individual rates: Obstetrical and maternity services: first five days of stay $65 in 1969 and $66 in 1970; sixth and subsequent days of stay: mother $49 in 1969 and $50 in 1970, infant $11 in 1969 and in 1970; other than obstetrical and maternity service $49 in 1969 and $50 in 1970.

2. Medical care for special groups:
(a) Coast Guard

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	152	$1,947,000	-4	-$50,000	148	$1,897,000
Other expenses.....	...	708,000	...	...	...	708,000
Total.....	152	2,655,000	-4	-50,000	148	2,605,000

To keep Federal employment and expenditures to the minimum, the four additional positions and $50,000 previously requested for 1970 are deleted from the 1970 revised estimate.

2. Medical care for special groups:
(b) Federal employees

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits	262	$2,713,000	-72	-$548,000	190	$2,165,000
Other expenses.....	...	994,000	...	-74,000	...	920,000
Total.....	262	3,707,000	-72	-622,000	190	3,085,000
Reimbursable obligations.....	...	-3,300,000	...	-600,000	...	-2,700,000
Direct obligations..	...	407,000	...	-22,000	...	385,000

To keep Federal employment and expenditures to the minimum, the 72 positions and $622,000 previously requested for 1970 are deleted from the revised estimate. Of the total reduction, 70 positions and $600,000 are reimbursable and 2 positions and $22,000 are direct funds.

New Positions Requested
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Amount	No.	Grade	Amount
Operation of hospitals and clinics						
Dental staff technician.....	3	GS-8	$ 23,097	..	...	...
Medical staff technician....	4	GS-8	30,796	..	...	...
Nurses.....	8	GS-7	55,848	..	...	...
Clerical assistant.....	6	GS-3	27,600	..	...	...
Nursing assistant.....	32	GS-3	147,200	..	...	...
Ungraded positions at hourly rates equivalent to less than $16,946						
Housekeeping assistant.....	2		12,606	..	...	...
Subtotal.....	55		297,147	..	...	...
Medical care for special groups:						
(a) Coast Guard						
Grades established by Act of July 1, 1944 (42 U.S.C. 207)						
Senior assistant.....	4		38,808	..		...
(b) Federal employees						
Medical Officer.....	1	GS-15	21,098	..	...	...
Medical Officer.....	1	GS-14	19,771	..	...	...
Statistician.....	1	GS-11	10,203	..	...	...
Administrative staff assistant	1	GS-9	8,462	..	...	...
Nurse.....	5	GS-9	46,540	..	...	...
Nurse.....	50	GS-7	407,300	..	...	...
Property management assistant	1	GS-7	6,981	..	...	...
Laboratory technician.....	1	GS-6	6,321	..	...	...
Clerical assistant.....	4	GS-5	22,928	..	...	...
Clerical assistant.....	1	GS-4	5,145	..	...	...
Custodial worker.....	1	GS-3	4,600	..	...	...
Ungraded Positions:						
Housekeeping assistant.....	2		9,974	..		...
Grades established by Act of July 1, 1944 (42 U.S.C. 207)						
Director grade.....	1		14,051	..		...
Senior grade.....	1		14,071	..		...
Full grade.....	1		11,885	..		...
Subtotal.....	72		609,330	..		...
Total new positions, all activities.....	131		945,285	..	...	...

Appropriation Estimate

NATIONAL HEALTH STATISTICS

For expenses of the National Center for Health Statistics in carrying out the provisions of, to the extent not otherwise provided, sections 301, 305, 311, 312(a), 313, and 315 of the Public Health Service Act; [$9,773,000] *$9,641,000.*

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

National Health Statistics

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation.....	$9,773,000	-132,000	$9,641,000

Obligation by Activity

Page Ref.		1970 Original Estimate Pos.	Amount	Amendment Pos.	Amount	1970 Revised Estimate Pos.	Amount
	National vital and health statistics						
	Vital statistics....	183	$2,554,000	-3	-$24,000	180	$2,530,000
	Health interview statistics.....	69	2,288,000	-3	-22,000	66	2,266,000
	Health examination statistics.....	64	1,297,000	-1	-10,000	63	1,287,000
	Health resources statistics.....	85	2,051,000	-4	-14,000	81	2,037,000
	Health statistics analysis.....	20	307,000	--	---	20	307,000
	Professional and technical assistance	28	816,000	-8	-62,000	20	754,000
	Subtotal...	449	9,313,000	-19	-132,000	430	9,181,000
	Program direction and management service	39	460,000	--	---	39	460,000
	Total obligations	488	9,773,000	-19	-132,000	469	9,641,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions...	488	-19	469
Full-time equivalent of all other positions.....	13	--	13
Average number of all employees.....	479	-15	464
Personnel compensation:			
Permanent positions.....	$4,241,700	-113,700	4,128,000
Positions other than permanent..	112,000	---	112,000
Other personnel compensation....	90,000	---	90,000
Total personnel compensation..	4,443,700	-113,700	4,330,000
Personnel benefits.....	378,000	-9,000	369,000
Travel and transportation of persons.....	305,000	-4,000	301,000
Transportation of things.....	25,000	---	25,000
Rent, communciations and utilities	476,000	---	476,000
Printing and reproduction.....	188,000	---	188,000
Other Services.....	2,984,000	---	2,984,000
Project Contracts.....	807,000	---	807,000
Supplies and materials.....	73,300	-2,300	71,000
Equipment.....	93,000	-3,000	90,000
Total obligation by object..	9,773,000	-132,000	9,641,000

Summary of Changes

1970 Obligations

Original estimate	$9,773,000
Revised estimate	9,641,000
Net change	-132,000

	Original Estimate		Amendment	
	Positions	Amount	Positions	Amount
Decreases				
Program				
1. Vital Statistics	183	$2,554,000	-3	-$24,000
2. Health Interview Statistics	69	2,288,000	-3	-22,000
3. Health Examination Statistics	64	1,297,000	-1	-10,000
4. Health Resources Statistics	85	2,051,000	-4	-14,000
5. Professional and Technical Assistance	28	816,000	-8	-62,000
Net Change	xx	xxx	-19	-132,000

Explanation of Changes

Vital Statistics.....-$24,000
The decrease of 3 positions and $24,000 deletes the new positions requested and leaves a net increase of $298,000.

Health Interview Statistics.....-$22,000
The decrease of 3 positions and $22,000 deletes the new positions requested and leaves a net increase of $243,000.

Health Examination Statistics.....-$10,000
This change deletes the new position requested and $10,000 leaving a net increase of $132,000.

Health Resources Statistics.....-$14,000
A total of 4 positions and $14,000 has been deleted leaving a net increase of 9 positions and $502,000. With the deletion of 3 positions and $10,000 within the hospital resources programs, it is planned to expand the present sample of 450 hospitals to approximately 750 rather than approximately 900 as originally planned. The balance of the change will delete one position and $4,000 in the family planning program.

Professional and Technical Assistance.....-$62,000
This change deletes the 8 new positions requested and $62,000 leaving a net increase of $438,000.

NATIONAL HEALTH STATISTICS

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1962	$4,642,000	$4,642,000	$4,642,000	$4,642,000
1963	5,250,000	5,150,000	5,150,000	5,150,000
1964	5,949,000	5,949,000	5,949,000	5,949,000
1965	6,304,000	6,304,000	6,304,000	6,304,000
1966	7,310,000	7,230,000	7,230,000	7,230,000
1967	9,312,000	9,312,000	9,312,000	9,312,000
1968	9,767,000	8,317,000	8,317,000	8,317,000
1969	9,501,000	8,230,000	8,230,000	8,230,000
1970	9,641,000			

NATIONAL HEALTH STATISTICS

Justification

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation benefits:	488	$4,821,700	-19	-$122,700	469	$4,699,000
Other expenses.....		4,951,300		-9,300		4,942,000
Total.....	488	9,773,000	-19	-132,000	469	9,641,000

VITAL STATISTICS

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	183	$1,661,400	-3	-$22,500	180	$1,638,900
Other expenses.....		892,600		-1,500		891,100
Total.....	183	2,554,000	-3	-24,000	180	2,530,000

The reduction of three positions and $24,000 reflects the Administrations attempt to restrict employment.

HEALTH INTERVIEW STATISTICS

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	69	$712,200	-3	-$20,500	66	$691,700
Other expenses.....		1,575,800		-1,500		1,574,300
Total	69	2,288,000	-3	-22,000	66	2,266,000

The reduction of three positions and $22,000 reflects the Administrations attempt to restrict employment.

HEALTH EXAMINATION STATISTICS

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	64	$670,700	-1	-$9,400	63	$661,300
Other expenses.....		626,300		-600		625,700
Total.....	64	1,297,000	-1	10,000		1,287,000

The reduction of one position and $10,000 reflects the Administrations attempt to restrict employment.

HEALTH RESOURCES STATISTICS

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	85	$776,200	-4	-$12,200	81	$764,000
Other expenses.....		1,274,800		-1,800		1,273,000
Total.....	85	2,051,000	-4	-14,000	81	2,037,000

The reduction of four positions and $14,000 reflects the Administrations attempt to restrict employment and allows a net increase of 9 positions and $502,000. $256,000 of the requested increase will be used to increase the number of hospitals in the sample to approximately 750 and to carry out a comprehensive survey of physician practices and allied health manpower. The balance of the requested increase, 9 positions and $246,000, is requested for the development of a statistical information system on family planning clinics and services.

HEALTH STATISTICS ANALYSIS

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	20	$233,200	--	---	20	$233,200
Other expenses.....		73,800		---		73,800
Total.....	20	307,000	--	---	20	307,000

No change in funding for this program is requested this year.

PROFESSIONAL AND TECHNICAL ASSISTANCE

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	28	$327,000	-8	-$58,100	20	$268,900
Other expenses.....		489,000		-3,900		485,100
Total.....	28	816,000	-8	-62,000	20	754,000

The reduction of eight positions and $62,000 reflects the Administrations attempt to restrict employment.

PROGRAM DIRECTION AND MANAGEMENT SERVICES

	1970 Original Estimate		Amendment		1970 Revised Estimate	
	Pos.	Amount	Pos.	Amount	Pos.	Amount
Personnel compensation and benefits.....	39	$441,000	--	---	39	$441,000
Other expenses.....		19,000		---		19,000
Total.....	39	460,000	--	---	39	460,000

No change in funding for this program is requested this year.

New Positions Requested
Fiscal Year 1970

	1970 Original Estimate			1970 Revised Estimate		
	No.	Grade	Salary	No.	Grade	Salary
Vital Statistics						
Statistician	1	GS-13	$14,409	--	--	--
Statistician	1	GS-12	12,174	--	--	--
Secretary	1	GS-7	6,981	--	--	--
Subtotal	3		33,564	--		--
Health Interview Statistics						
Statistician	1	GS-13	14,409	--	--	--
Statistician	1	GS-12	12,174	--	--	--
Clerk	1	GS-4	5,145	--	--	--
Subtotal	3		31,728	--		--
Health Examination Statistics						
Statistician	1	GS-13	14,409	--	--	--
Health Resources Statistics						
Branch Chief	1	GS-14	16,946	1	GS-14	16,946
Section Chief	1	GS-13	14,409	1	GS-13	14,409
Statistician	1	GS-12	12,174	1	GS-12	12,174
Statistician	1	GS-11	10,203	1	GS-11	10,203
Programmer	1	GS-11	10,203	1	GS-11	10,203
Secretary	1	GS-6	6,321	1	GS-6	6,321
Clerk	3	GS-4	15,435	2	GS-4	10,290
Clerk-Typist	1	GS-4	5,145	--	--	--
Clerk	3	GS-3	13,800	1	GS-3	4,600
Subtotal	13		104,636	9		85,145
Professional and Technical Assistance						
Branch Chief	1	GS-14	16,946	--	--	--
Statistician	1	GS-13	14,409	--	--	--
Statistician	2	GS-12	24,348	--	--	--
Public Health Analyst	1	GS-12	12,174	--	--	--
Statistical Assistant	1	GS-9	8,462	--	--	--
Clerk-Typist	1	GS-5	5,732	--	--	--
Clerk-Typist	1	GS-4	5,145	--	--	--
Subtotal	8		87,216	--		--
Total new positions, all activities	28		271,553	9		85,146

Appropriation Estimate

SALARIES AND EXPENSES, OFFICE OF THE ADMINISTRATOR

For necessary expenses of the Office of the Administrator and for miscellaneous expenses of the Health Services and Mental Health Administration, to the extent not otherwise provided, [$9,978,000] *$9,898,000*, of which not to exceed $1,200,000 shall be available for rental and related expenses incidental to occupancy of a headquarters building.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

Salaries and expenses, Office of the Administrator

Amounts Available for Obligation

	1970 Original Estimate	Amendment	1970 Revised Estimate
Appropriation.....	$9,978,000	-$80,000	$9,898,000
Total obligations.....	9,978,000	-80,000	9,898,000

Obligations by Activity

Pos. Ref.	1970 Original Estimate Pos.	Amount	Amendment Pos.	Amount	1970 Revised Estimate Pos.	Amount
Immediate Office of the Administrator.....	41	$685,000	---	---	41	$685,000
Office of Program Planning and Evaluation.....	46	618,000	-5	-$70,000	41	548,000
Office of Information.....	62	911,000	---	---	62	911,000
Office of Legislation.....	13	198,000	---	---	13	198,000
Office of Administrative Management:						
Office of Assistant Administrator for Management.....	33	1,768,000	---	+37,000	33	1,805,000
Office of Buildings and Facilities.....	43	614,000	---	---	43	614,000
Office of Financial Management.....	119	1,612,000	-4	-47,000	115	1,565,000
Office of Grants Management.....	27	387,000	---	---	27	387,000
Office of Management Policy.....	22	353,000	---	---	22	353,000
Office of Personnel.	104	1,371,000	---	---	104	1,371,000
Office of Procurement and Materiel Management.....	64	912,000	---	---	64	912,000
Office of Systems Management.....	22	549,000	---	---	22	549,000
Total obligations	596	9,978,000	-9	-80,000	587	9,898,000

Obligations by Object

	1970 Original Estimate	Amendment	1970 Revised Estimate
Total number of permanent positions.....	596	-9	587
Full-time equivalent of all other positions.....	2		2
Average number of all employees.....	578	-9	569
Personnel compensation:			
Permanent positions.....	$6,813,000	-$101,000	$6,712,000
Positions other than permanent.....	12,000	---	12,000
Total personnel compensation.....	6,825,000	-101,000	6,724,000
Personnel benefits.....	486,000	-6,000	480,000
Travel and Transportation of persons.....	193,000	-2,000	191,000
Transportation of things.....	10,000	---	10,000
Rent, communications, and utilities.....	1,648,000	-5,000	1,643,000
Printing and reproduction.....	222,000	---	222,000
Other services.....	472,000	+37,000	509,000
Supplies and materials.....	70,000	---	70,000
Equipment.....	52,000	-3,000	49,000
Total obligations by object.....	9,978,000	-80,000	9,898,000

Summary of Changes

1970 obligations:

Original estimate	$9,978,000
Revised estimate	9,898,000
Net change	-80,000

	Original estimate Pos.	Original estimate Amount	Amendment Pos.	Amendment Amount
A. Increases:				
1. Rent and other expenses related to Parklawn Building	---	$1,200,000	---	+$37,000
Subtotal, increases	---	1,200,000	---	37,000
B. Decreases:				
1. Office of Financial Management	119	1,612,000	-4	-47,000
2. Office of Program Planning and Evaluation	46	618,000	-5	-70,000
Subtotal, decreases	xxx	xxx	-9	-117,000
Net change	xxx	xxx	-9	-80,000

Salaries and expenses, Office of the Administrator

Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
1960	$5,816,000	$5,816,000	$5,816,000	$5,816,000
1961	7,180,000	7,126,000	7,226,000	7,226,000
1962	5,275,000	5,275,000	5,375,000	5,375,000
1963	5,850,000	5,850,000	5,850,000	5,850,000
1964	6,140,000	6,111,000	6,111,000	6,111,000
1965	6,214,000	6,214,000	6,214,000	6,214,000
1966	6,648,000	6,648,000	6,648,000	6,648,000
1967	8,207,000	8,069,000	7,648,000	7,858,000
1968	9,087,000	8,358,000	8,358,000	8,358,000
1969	9,073,000	9,073,000	9,073,000	9,073,000
1970	9,898,000			

JUSTIFICATION
MANAGEMENT AND CENTRAL SERVICES

Personnel Compensation and Benefits	1970 Original Estimate Pos.	1970 Original Estimate Amount	Amendment Pos.	Amendment Amount	1970 Revised Estimate Pos.	1970 Revised Estimate Amount
Immediate Office of the Administrator...	41	$628,000	---	---	41	$628,000
Office of the Assistant Administrator for Management.....	33	344,000	---	---	33	344,000
Office of Buildings and Facilities.....	43	552,000	---	---	43	552,000
Office of Financial Management.....	119	1,461,000	-4	-$43,000	115	1,418,000
Office of Grants Management.....	27	350,000	---	---	27	350,000
Office of Information.....	62	717,000	---	---	62	717,000
Office of Legislation.	13	182,000	---	---	13	182,000
Office of Management Policy.....	22	325,000	---	---	22	325,000
Office of Personnel...	104	1,225,000	---	---	104	1,225,000
Office of Procurement and Materiel Management.....	64	731,000	---	---	64	731,000
Office of Program Planning and Evaluation.....	46	538,000	-5	-64,000	41	474,000
Office of Systems Management.....	22	258,000	---	---	22	258,000
Sub-total.....	596	7,311,000	-9	-107,000	587	7,204,000
Other expenses.....		2,667,000		+27,000		2,694,000
Total.....	596	9,978,000	-9	-80,000	587	9,898,000

General Statement

This appropriation provides funds to support the Office of the Administrator, Health Services and Mental Health Administration, which was established by the reorganization of the health activities within the Department of Health, Education, and Welfare.

This organization is the policy, planning and support staff for the Administrator and includes the following organizational components:

Immediate Office of the Administrator
Office of Program Planning and Evaluation
Office of Information
Office of Legislation
Office of Administrative Management

This amendment is a net reduction of $80,000, which includes the following changes:

1. A $37,000 increase for rent and other expenses related to the Parklawn Building

2 A decrease of 4 positions and $47,000 for the Office of Financial Management budgeted to provide two positions for budget and two for accounting services

3. A decrease of 5 positions and $70,000 for the Office of Program Planning and Evaluation budgeted to provide increased staff capability for program evaluation.

List of Positions

	1970 Original			1970 Revised Estimate		
	No.	Gr.	Salary	No.	Gr.	Salary
Office of Financial Management						
Financial Analyst	1	GS-13	$14,409	---	---	---
Budget Analyst	1	GS-12	12,174	---	---	---
Accountant	1	GS-11	10,203	---	---	---
Financial Analyst	1	GS-9	8,462	---	---	---
	4		45,248			
Office of Program Planning and Evaluation						
Planning Officer	1	GS-14	16,946	---	---	---
(3) Program Analyst	3	GS-13	43,227	---	---	---
Secretary	1	GS-6	6,321	---	---	---
	5		66,494			
Total new positions, all activities.	9		111,742			

LIST OF WITNESSES

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