



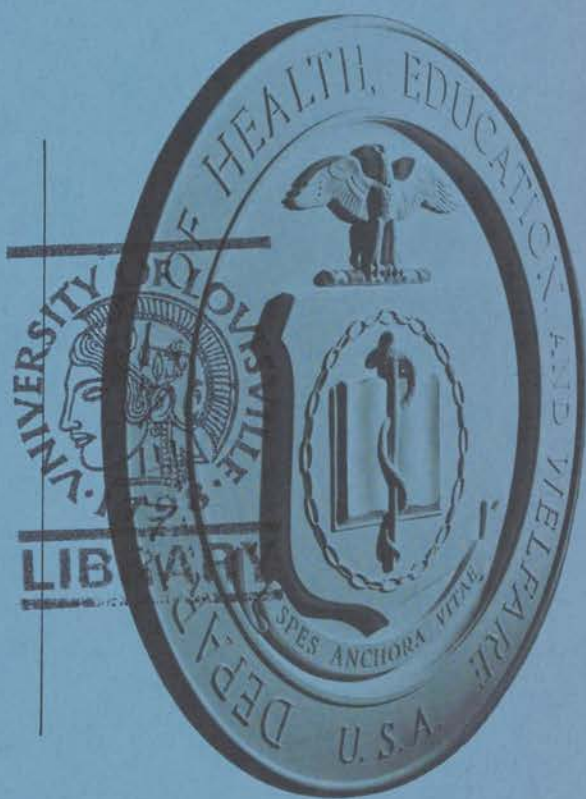
1957

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

annual
report



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U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

As of June 30, 1957

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Letter of Transmittal

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
Washington, D. C., December 1, 1957.

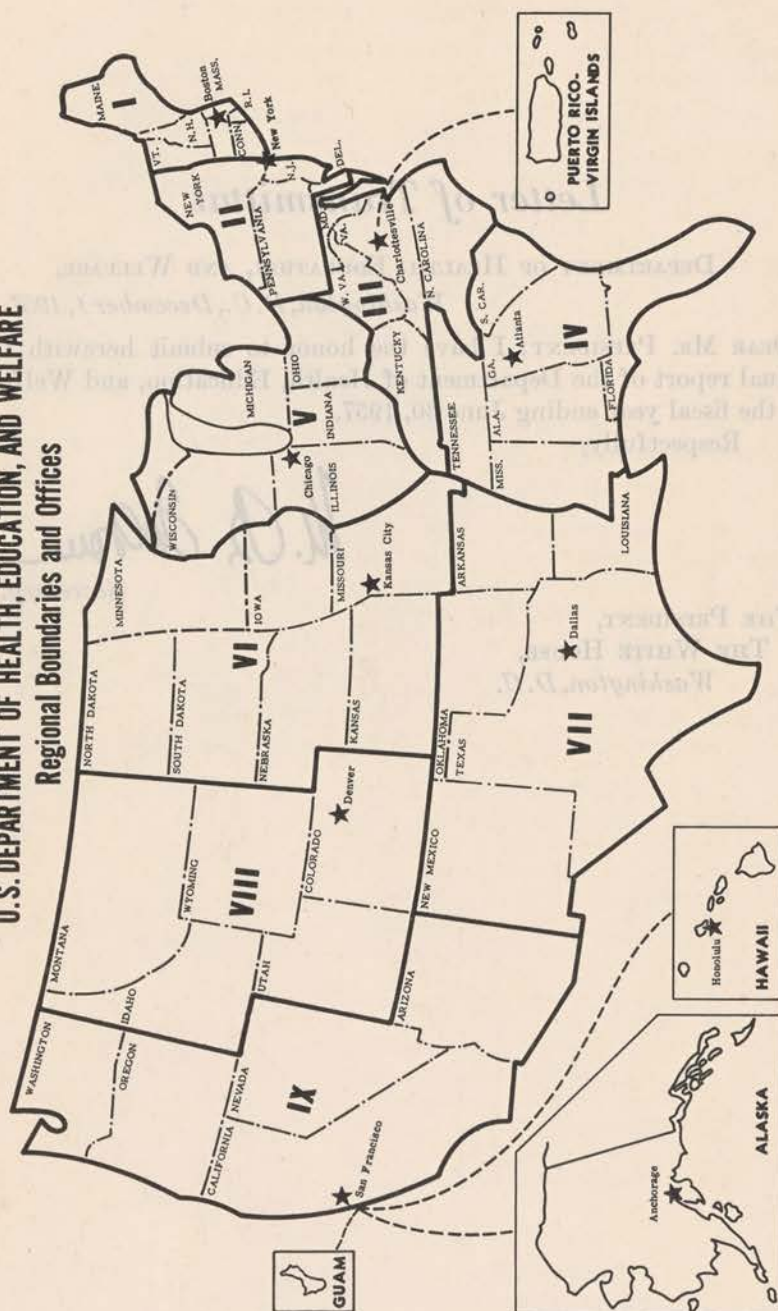
DEAR MR. PRESIDENT: I have the honor to submit herewith the annual report of the Department of Health, Education, and Welfare for the fiscal year ending June 30, 1957.

Respectfully,

W. B. Tolson
Secretary.

THE PRESIDENT,
THE WHITE HOUSE,
Washington, D. C.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE Regional Boundaries and Offices



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The Secretary's Report

THE CONCERN of the Federal Government for the human problems of its citizens runs deep in the mainstream of American history.

The Public Health Service began in 1798 to care for sick and injured merchant seamen. Today it is the principal health agency of the Federal Government and the largest sponsor of medical research in the United States. The Food and Drug Administration, originating in 1906 as a bureau of the Department of Agriculture, now has heavy responsibilities for the safety and purity of more than \$62 billion worth of foods, drugs, and cosmetics.

The Office of Education, established in 1867, has grown with the increasing importance of education in the United States. Today it conducts research, provides educational information services, and administers grants to improve the education of the American people. Social security, a product of the depression of the 1930's, today is a key bulwark to a strong national economy. Under it: old-age, survivors, and disability insurance provides a base of protection for most Americans; public assistance provides financial help for millions of needy persons; and the Children's Bureau is a focus of national concern for the health and welfare of children. The Office of Vocational Rehabilitation was created in 1920 and has steadily expanded its services to the disabled as new knowledge in its field has become available.

When these agencies were brought together, and then in 1953 elevated to a Department of the President's Cabinet, their well-established traditions were carried forward to provide better service to all Americans.

This Government's concern for human problems has its roots in America's belief in the worth of the individual. This dedication, which was expressed by the Founding Fathers, has grown stronger

with time as our way of life has successfully withstood attack from without and from within. It has taken on added meaning in recent years as the physical and social sciences have developed new means and methods for advancing human welfare. Today it is generally recognized that contributions to the betterment of the individual measurably increase the strength of the whole Nation.

When people are healthy they produce more and buy more. Educated people increase not only their own earning potentials but they add to the cultural and material wealth of their communities. Workers whose retirement and dependents are protected by social security feel more secure in their work and are less likely to need tax-supported relief.

All the activities of this Department in the past year were directed toward improving the health, education, and economic security of the American people. These remain our primary objectives.

Health

Americans are among the healthiest people in the world. A child born in the United States today can reasonably expect to live 21 years longer than if he had been born at the turn of the century.

This year the Nation's population grew by more than 2.6 million people—an increase of about 16 people out of each 1,000—one of the highest rates of population increase in recent American history.

This came about largely because the health sciences devised better ways both to prevent and to cure illnesses, and also because people knew more about keeping themselves well.

While the Nation's birthrate has remained high since the end of World War II, the rate of deaths has been declining. For instance, from 1946 to 1956 maternal death rates fell 76 percent and infant death rates dropped 23 percent. Sharp declines have taken place in the mortality rate for several diseases, most remarkable being that of tuberculosis, which dropped from about 36 deaths per 100,000 population in 1946 to about 8 in 1956. This year even polio, that dread destroyer of children, was receding dramatically in the wake of a frontal assault with the vaccine developed by Dr. Jonas E. Salk.

But there were new health problems to be met and many old ones whose solution seemed long overdue. The chronic diseases accounted for an increasingly larger proportion of all ailments. The two major killers of all persons were heart disease and cancer. They were particularly virulent among the aged, causing four-fifths of all deaths in persons 65 years of age or older.

RESEARCH

Research is the essential base for medical and public health progress. Both direct research by the Public Health Service and the sponsorship of research outside the Government have grown rapidly in recent years.

In the past 10 years, research programs of the National Institutes of Health—the principal research arm of the Public Health Service—increased from \$8 million to \$183 million this year. More than two-thirds of this money went to sponsor research by scientists working in schools, hospitals, and other institutions outside the Federal Government.

As research work expanded, it became clear that a balanced and effective program would require more emphasis on the training of personnel needed to conduct research. NIH support for the training of promising scientists has been increased from \$2 million in 1953 to more than \$5 million this year.

More recently, when inadequate facilities threatened to interfere with the medical research effort, a new program was launched to provide \$90 million over 3 years for matching aid to build and equip health research facilities. A total of 109 grants to nonprofit institutions in 31 States was awarded under the first \$30 million appropriation by the Congress. Before the close of the year, Congress appropriated another \$30 million for this purpose.

Some of the discoveries at the National Institutes of Health in the past year illustrate the extent to which it is developing new knowledge.

Researchers reported several developments in the treatment of cancer with drugs. A rare type of malignant solid tumor apparently was entirely suppressed by treatment with a drug, methotrexate, a chemical originally developed for the treatment of leukemia. Secondary cancers which had spread from the original also were healed. Other experiments with reserpine, known for its benefits as a tranquilizer, suggested that it may also have application in treatment of leukemia. The Cancer Chemotherapy National Service Center, in its second year as headquarters for the nationwide cooperative research program, arranged for the testing of more than 24,000 compounds for their possible use as anticancer agents.

Long research culminated in the development of an experimental vaccine against a number of respiratory disorders which cause widespread hardship among large numbers of Americans. Researchers on the treatment of burns discovered that an injection of human gamma globulin, a blood derivative, would reduce the possibility of death from infections which often follow severe burns.

The Nation benefits from all research which helps to advance the body of scientific knowledge. Identifiable achievements in science invariably come as the combination of many efforts. Since one discovery builds upon the foundation of another, the earlier work is just as important to the final result as those which eventually are recognized as helping to save lives and advance human welfare.

MEDICAL SERVICES

The Public Health Service provides medical services for merchant seamen, American Indians, and certain other designated groups, and it assists other Federal agencies in providing needed medical care.

It also administers the local-State-Federal program of hospital construction, an example of how Federal assistance has encouraged greater initiative and enterprise by individuals, private agencies, local and State governments.

When the Hospital and Medical Facilities Construction program was started in 1946, there were about 10 million people who lived in areas without acceptable hospitals. That number has been cut by more than two-thirds in the past 11 years as more than 3,000 medical and hospital facilities have been built under the program—including 1,100 completely new general hospitals.

In 1954, the President requested and Congress enacted legislation expanding the program to include Federal aid for four new categories: nursing homes, chronic-disease hospitals, diagnostic and treatment centers, and rehabilitation facilities. Since then 344 such projects have been approved for construction. They will provide 7,186 beds for elderly and chronic patients and 193 centers for outpatient care and rehabilitation.

One of the serious limiting factors that retards the expansion of health services is the shortage of trained professional workers. This is especially true of nurses who, although their number has increased, are still in very short supply. To meet the most severe shortage, the Congress enacted and the Department established a program of aid to educate professional nursing teachers and administrators. The \$2 million appropriated for the first year started 587 traineeships.

Other medical services by the Public Health Service played important roles this year in protecting health:

The Nation was free from smallpox for the fourth straight year. Much of the credit must go to the Quarantine Service, which inspected planes and ships bringing a record number of passengers into the United States. Many of these people came from other areas of the world where smallpox was epidemic.

There was a mass migration of Hungarian refugees to this country, which required that these people be examined in large numbers and in

places where facilities had to be improvised. By the end of the year, 33,413 refugees had been examined for admission to the United States.

Substantial progress has been made in improving health facilities and services provided for American Indians and Alaska natives since July 1, 1955, when the Public Health Service assumed responsibility for the Government's Indian health program. Additional physicians and other health workers were brought into the program, services were expanded, and the physical plant was improved. Better health services and facilities for Indians are bringing about improvement in the unfavorable health conditions which are prevalent among them. Particularly notable are downward trends in death rates from tuberculosis and childhood diseases.

SERVICES TO THE STATES

About one-third of the Public Health Service's budget this year was spent in grants to States and Territories in support of public health programs. The primary objective of the Department's assistance was to bring the benefits of the latest health knowledge to the maximum number of people.

One of the most dramatic health stories of the year was the rallying of health forces to fight an epidemic of Asian influenza.

On April 18, 1957, doctors at Walter Reed Army Institute of Research in Washington cabled its military medical laboratory in Japan requesting cultures of a flu virus that had reportedly struck 10 percent of the population of Hong Kong. Just 25 days after the request, the cultures were flown into Washington. About a week later, Walter Reed scientists reported definitely that this was a new variant of influenza virus.

This meant that people had no natural immunity to the disease and that vaccines developed against flu in the past would not protect against the Asian strain. Walter Reed immediately gave the virus to the National Institutes of Health, which transmitted prototype strains to six licensed vaccine manufacturers. By June 7 a manufacturer submitted an experimental lot of vaccine to the Public Health Service for testing.

The Nation had developed a vaccine of considerable effectiveness against Asian flu before a case of the disease was confirmed in the United States.

A few days later, when the first confirmed outbreak of Asian flu was reported in Newport, Rhode Island, the Public Health Service was already moving fast.

Consultations immediately began with manufacturers who went into full-scale production of the new vaccine and agreed to distribute it according to a voluntary allocation system. In cooperation with professional and voluntary health groups, the Service conducted a na-

tional campaign of public information to encourage maximum use of the vaccine. Medical and hospital authorities organized their resources to care for large numbers of sick. Additional money appropriated by the Congress permitted more scientific and laboratory support of the fight against Asian flu.

By the fall of 1957, the Nation had weathered the most widespread influenza epidemic in 40 years—one whose impact had been reduced by the extensive use of vaccine. The fast identification of the virus, quick action by the Public Health Service, and prompt cooperation of health groups and pharmaceutical manufacturers throughout the country made it possible for a nation to organize in advance of an oncoming epidemic for the first time in history.

Another striking illustration of nationwide organization to battle a disease was the attack on poliomyelitis.

Only a few years ago, despite the generous gifts of the public and the hard work of the scientists, victory over polio seemed only a distant hope. No one knew how to cure it; no one knew how to protect himself against it. Polio was a mystery disease.

And then, the Salk vaccine was developed. All the years of work, and the faith and hope that prompted them, were justified. The Nation had a vaccine which, in test after test, proved highly effective in preventing paralytic polio.

To encourage widespread vaccination, Congress appropriated \$53.6 million for the purchase of vaccine—a program that was administered by this Department. About 64 million Americans had been vaccinated by the fall of 1957, almost half of them with the federally purchased vaccine. As the supply of the vaccine increased and as it was administered to greater numbers of people, the polio rates went down.

Paralytic polio cases in 1956—a year after polio vaccine had been administered on a large scale—were about half of what they had been in 1955. By the fall of 1957, paralytic cases were 80 percent below what they had been in 1955 and victory over this terrible disease seemed to be within reach.

But public apathy threatened to interfere with the knockout blow. About 45 million Americans under 40 had received no vaccine, and 30 million had taken only one or two doses and have yet to complete the full schedule of three doses. Millions of doses of polio vaccine were lying unused on the shelves of manufacturers and druggists. And millions of unvaccinated people ran the needless risk of being crippled or killed by polio.

The Department continued a vigorous public information effect to encourage greater use of the polio vaccine.

The Department was also engaged on several other health fronts. To estimate the extent to which the population is being exposed to

radiation, arrangements were made to take a number of air samples from 80 points around the country, water samples from 10 streams, and milk samples from 5 milk-producing areas. Air pollution of all kinds is now being measured in every State through a newly established National Network of Air Sampling Stations. During the first year that Federal funds were available for construction of sewage-treatment works to reduce water pollution, payments totaling \$37.9 million were approved for 446 communities.

An expanded accident-prevention program, in its first year of operation, organized a National Clearing House for Poison Control Centers. These centers have been established by about 100 communities to give physicians fast advice on the emergency treatment of patients who have been poisoned. The most frequent victims are children. The National Clearing House keeps these centers informed on the toxic contents of products sold for household use, and it recommends the treatment for people who eat or drink the products.

The Public Health Service was authorized a year ago to begin a continuing survey of the Nation's health so that the extent of illness and disability in the country would be more clearly defined. After a year of operation, the U. S. National Health Survey was preparing to publish its first statistics collected from door-to-door interviews throughout the Nation. A next step was to be medical examinations of a sample of the population. This continuing study will provide a valid basis for appraising the health of the American people and for planning methods to meet the health needs of the Nation.

There has been remarkable progress in improving the health of the American people, and it is worth noting. But the real value of noting progress lies, not in self-satisfaction over achievements but in charting what must yet be done. Medical science is changing rapidly, and its scope is broadening. Medical progress itself has not only created new problems; it has sharpened our awareness of human needs still unmet. Every forward step rightfully serves as a reminder of the distance yet to go.

Food and Drugs

A century ago the American family bought a comparatively small number of items. Most of the foods that a family ate were either raised or processed at home. "Boughten" foods were suspect—and with good reason, because too often they were unclean or adulterated. Medicines were simpler and less effective. The wise person either took the mixture compounded by the family doctor or brewed up a home remedy, because those were a lot safer than the kind that came from stores. The few people who used cosmetics settled pretty much for cold cream, rice powder, and simple fragrances.

Today the country is in the midst of a revolution in consumption. The homemaker's chores of food preparation—washing, peeling, shelling, and plucking—are greatly reduced by a host of foods that are ready to eat or nearly so. Bulk foods have almost disappeared. The average food store today stocks more than 5,000 items of packaged, frozen or canned edibles. In the drug field, over half the medicine used today by physicians and hospitals were unknown 15 years ago. And the cosmetics industry is one of the Nation's largest.

Yet the housewife seldom worries about the wholesomeness of a can of food, the safety of a bottle of medicine or the purity of a tube of lipstick. Her confidence is based upon the consumer safeguards which began in 1906 with the passage of the original "Pure Food and Drug Law" and much subsequent legislation which provides her with protection by the Food and Drug Administration and the State and local enforcement agencies.

The average family spends about one-quarter of its income on the foods, drugs, cosmetics and therapeutic devices which are subject to inspection by the Food and Drug Administration. While Food and Drug Administration enforcement is necessarily very selective, in the past year it made 20,241 establishment inspections, seized 809 shipments of products which did not comply with the law, and completed 182 criminal actions against violators.

But to protect the public adequately it is necessary to keep legislation up to date and in line with the swift changes in science and technology of recent years. For instance, producers now add to foods: artificial sweeteners, colors, flavorings, stabilizers, preservatives, antioxidants, tenderizers, and emulsifiers. And other chemicals find their way into the food supply as residues of fungicides, insecticides, defoliants, herbicides, and growth promoters.

Under present law, to prevent the use of a harmful chemical in a food the Government must prove that it is poisonous or deleterious. Yet little is known about the toxicology of many of the new compounds and long studies are required. Therefore, the Department has recommended to Congress a bill to require that the manufacturers concerned must furnish scientific evidence that chemical food additives are safe before they are used in foods.

On another front, the promotion of quack medicines continues to be a serious public health problem. One can no longer buy Indian Swamp Root Oil at the corner store, with labeling that promises to cure diabetes, cancer, or heart disease. But last year people were still going to some "clinics" to get a worthless medicine for cancer.

Because protracted litigation could not be relied on to protect cancer victims and their families adequately, the Department posted a public warning against the treatment in thousands of U. S. post

offices and other public buildings. These warnings and subsequent tighter enforcement measures by State agencies markedly reduced the number of persons who risk their lives by going to these "clinics."

Many types of fraudulent practices are not only becoming more widespread but are taking on the trappings of national movements and are bidding for wider public support. Associations have been formed with names calculated to convey the impression of scientific, medical, and public health aims. Conventions are held with pseudo-scientific agenda. The roster of speakers includes numerous persons convicted of violating the Federal Food, Drug, and Cosmetic Act. They attack organized medicine and the Government, alleging that there is a medical trust which seeks to suppress lifesaving medicines and treatments.

Many people are influenced by these views, with a resulting loss of confidence in the medical profession and in rational medical treatment.

Effective administration of the food, drug, and cosmetic law involves not only enforcement activities but a substantial educational program. The Food and Drug Administration increasingly directed its public information activities to counteract the growing efforts to promote fads and nostrums among the American people in place of sound health practices.

Education

In the past century sweeping changes have come about in American education. Teaching, curricula, methods, and materials have been changing and growing to keep pace with the growing Nation, with new scientific development, with the expanding sum total of knowledge, and with our increasingly important world position.

With some 41 million Americans—a fourth of our population—in school or college during the year, the serious problems facing our schools remained a major concern of the Department.

Enrollments in all elementary and secondary schools reached 39.1 million pupils—a record high for the Nation—and seriously overtaxed the ability of many schools to educate their students. This problem shortly will be inherited by American higher education. The number of young people knocking at the doors of our colleges and universities will almost double by 1970.

The measures of increasing enrollments have brought into sharp focus deficiencies in the supply of competent teachers and other school personnel as well as crowded and inadequate physical facilities for instruction.

The States built a record number of new classrooms last year and improved the operating efficiency of their school districts. Yet they reported in February 1957 that obsolescence and mounting enrollments created a total shortage of 159,000 classrooms. Proposed Federal legislation to help ease the classroom shortage was defeated in Congress for the second successive year.

But Federal assistance continued to go to communities where school enrollments had increased significantly as a result of Federal activities in their areas. This year Congress provided about \$223 million, for both the operation and construction of schools in these communities.

The finest school—the most helpful curriculum—can impart little of value without good teaching. The States reported that, while 1.2 million public school teachers were employed in elementary and secondary schools, there was a nationwide shortage of nearly 121,000 qualified teachers. This shortage was met by employing additional emergency teachers and by further increasing the size of classes.

The shortage of teachers, which is present today when our schools and colleges have some 42.5 million students enrolled, threatens to worsen steadily as enrollment grows to an expected 65 million students by 1970. If this is allowed to happen, it will be a severe blow to our national strength and welfare. Americans should recognize one awesome fact: whatever coming generations think and do about law and government and the free way of life, about labor and industry, about the quest for a durable world peace, about defense against aggressors will be determined to a substantial degree by the day-to-day influence of the teachers provided for them.

Another problem of far-reaching significance to the Nation was the very large number of capable students who are unable or unwilling to continue their education to the limits of their intellectual abilities. This is a waste, not only of individual opportunity but of the most valuable resource of the Nation as a whole—the talents of its young people.

This attrition works all through the school years. About 60,000 of the more talented students drop out of high school each year before graduation, according to some studies. But—and this may be even more important—of those who do graduate in the upper fourth of their class, more than 1 out of 3 do not go on to college. In all, more than 200,000 of the students who could profit most and make the best contribution to society end their education below the college level.

While several major problems—buildings, teachers, and manpower needs—have been widely publicized, many others are important and are receiving the attention of the Office of Education and private agencies. It is encouraging that in the past year the Office of Edu-

cation has been able to launch a promising new program of research in cooperation with colleges and universities and State educational agencies. As required by Congress, about half of the first year's projects dealt with the important problem of education of mentally retarded children.

The Office of Education has also been able to expand and improve its fact-finding and consultant services. These services are concerned with such matters of widespread concern as school finance, instructional programs, adult education, guidance, effective and economical design of classrooms, improvement of practical nurse training, and other vocational education programs.

The budget for the operations of this Office has been substantially increased in the past 2 years, but much remains to be done before the Office can make a maximum contribution to the cause of education throughout the country.

If American education is to be improved significantly many matters must receive closer attention at the State and local levels. These involve such matters as the curriculum, the methods, and the philosophy of education. They touch on such questions as whether Americans are neglecting basic learning in such fields as the sciences, mathematics, English, foreign languages, and history, and whether some scholastic standards are failing to challenge the best in many young minds.

One fact has been demonstrated so often and so clearly as to be beyond dispute: education is a keystone in the economic and social progress of the American people. At any time, to fall behind in education is short-sighted false economy. In today's perilous world, to fail to invest enough of our expanding resources to support education on the scale that is necessary could be tragic.

Old-Age, Survivors, and Disability Insurance

This year the 10 millionth person began receiving social security (OASDI) benefit payments. At this milestone it is appropriate to restate some principles upon which this social insurance system is founded, to examine where it stands today, and to explore some of the results of this system after two decades of operation.

One of the social security system's most important principles is that benefits are earned through work—and the right to benefits is paid for by contributions from the worker's own earnings and from his employer, as fixed by law.

Another fundamental principle is that social security payments are not intended as a substitute for private initiative but, rather, are intended to provide a foundation upon which to build additional security through private effort and individual thrift.

A third important principle is that social security should be flexible, keeping abreast of the times and utilizing new knowledge. Despite a sharp growth in population, despite rapid economic change, and despite the shocks of war, the social security system has remained strong as its provisions have been adjusted in the light of changing conditions.

Today—as the result of changes made in the law as recently as this year—more than 9 out of 10 workers, including self-employed persons, are covered under the OASDI program. They are earning protection for themselves and their families against the hazards of old age, disability, and death. And 73 million people, by their work now or in the past, are already insured under the system.

Some 10.3 million former workers, their dependents, and their survivors were receiving \$554.6 million in monthly benefit payments in June. About 8.5 million of these people were men aged 65 and over and women aged 62 and over, and the remaining 1.8 million were mothers and children. The first benefit checks were issued in July to more than 100,000 disabled workers aged 50 to 64 who were covered by the 1956 amendments to the Social Security Act. Many more applications had been filed and were being processed.

The Federal old-age and survivors insurance trust fund totaled \$23 billion at the close of the fiscal year, and the Federal disability insurance trust fund, created the previous year, totaled \$337 million.

The results of social security can be stated in two ways: what it did not do and what it did.

Social security did not lower the standard of living or kill individual thrift, as was predicted by some critics of this system in its early years.

But what did it do? It has benefited millions of individuals and has had broad and profound effects on our society as a whole. Perhaps the finest thing about the program is that it removed the fear of a penniless old age from the minds of many people.

The social security system also plays an important part in maintaining the Nation's economic growth and stability by providing purchasing power for many persons who otherwise might be most in need.

Finally, by providing for people at ages when they are least likely to have a source of income, it reduces the number of those who require public assistance.

Public Assistance

About 3.4 percent of our total civilian population receives some form of public assistance. Federal, State, and local governments this year paid almost \$3 billion to assist some 6 million needy persons

including dependent children, and aged, blind, or disabled adults.

These programs were set up during the bleak days of the Great Depression. Why then, in the midst of prosperity and when income insurance programs are available, should the Nation be spending more than half again as much (in constant dollar terms) on public assistance as it did in 1938?

One factor is the nature of the growth in our population. Our young and old—among whom dependency occurs most frequently—account for 80 percent of the persons receiving special types of assistance. And the young and old today represent a larger proportion of our total population than they did two decades ago.

Secondly, many persons are receiving public assistance today because the work they did in the past or the work of those who supported them was not covered by social security. It has been only within the last few years that the social security system has covered nearly all the working population and thereby reduced the number of people who would be dependent upon public assistance in their later years.

Furthermore, in aid to dependent children, the need for assistance arises from situations that are not covered by the old-age and survivors insurance program. Most of the children have been deprived of parental support for reasons other than death—the only circumstance under which children are eligible for survivors insurance benefits.

Along with providing assistance, a primary objective of these Federal programs is to develop services that will encourage self-care, self-support, and the strengthening of family ties. One of the by-products of such services should be the reduction of the number of those who are dependent on public assistance.

Toward that end the Department proposed and the Congress authorized 2 programs: for more intensive research into the causes of dependency and for training social workers to help needy persons deal constructively with the complex problems contributing to their dependency. By the close of the year, however, funds to carry out these programs had not been made available.

Services for Children

The Children's Bureau, which for 45 years has been the only Federal agency exclusively concerned with the welfare of America's youth, this year gave special attention to two problems of great magnitude: juvenile delinquency and mental retardation.

The adolescent today is under increased pressures. Although the vast majority grow up to be responsible adults, a sufficient number engage in delinquent behavior to cause concern all across the country.

The Children's Bureau continued its work on delinquency, concentrating especially on developing standards for care and on training needed personnel.

New emphasis was given to develop programs for a long-neglected segment of our child population—the mentally retarded. On the basis of the increased funds earmarked by Congress for this group of children, the Children's Bureau approved 26 special demonstration projects to be operated as part of State health department programs in maternal and child health. In addition, regular maternal and child health funds in many States went into programs for mentally retarded children.

Vocational Rehabilitation

Of the many handicapped and disabled people in America, there are many who—with some professional assistance—could become self-supporting.

For the second consecutive year the State and private rehabilitation agencies, working with the support of the Federal Office of Vocational Rehabilitation, set a new record in the rehabilitation of handicapped persons. This year 71,570 handicapped persons were prepared for jobs and established in gainful employment, an increase of 8 percent over the previous year.

The State-Federal programs cost \$57.6 million to operate—\$36 million in Federal grants and \$21.6 million provided by the States. The men and women rehabilitated will increase their annual earnings from about \$19 million to about \$137 million in their first full year of employment. It is estimated that during their average working life they will pay back in Federal income taxes a larger amount of money than the Federal grants used for their rehabilitation.

Last year 14,000 of those rehabilitated were on public assistance rolls, receiving about \$11 million each year. That same sum of money was spent once to rehabilitate these people and take them off public assistance.

It is worth noting further that of the handicapped people rehabilitated last year under the State-Federal programs, some 3,500 went into professions such as teaching, medicine, and engineering—all making important contributions to the Nation's productivity.

To alleviate the shortage of trained personnel, the Office of Vocational Rehabilitation allocated an additional \$3 million in 200 awards for teaching grants and traineeships in rehabilitation. Ten medical schools received grants for training medical students in rehabilitation, and more than 100 doctors received stipends toward their training in physical medicine and rehabilitation. More than 2,000 persons already in rehabilitation work studied in 80 short-term courses, financed

in part by Federal grants. The Office also granted \$1 million for the expansion of rehabilitation facilities or sheltered workshops, and another \$2 million for research and demonstration projects.

Special Planning for the Aged

Since the turn of the century, our population has doubled. At the same time the number of those aged 65 and older has multiplied 4 times. They represent more than 8 percent of our total population, and the proportion is expected to increase.

If American society can better adjust to the needs of this growing number of older persons, it would both assist these people in living more meaningful lives and would enlarge the proportion of the population that is self-supporting and productive.

Older persons—like everybody else—want and should have certain basic conditions of life. Chief among these is economic security—the financial ability on a continuing basis to maintain a level of living compatible with their standards and needs.

But they should have more than financial security alone. Satisfactory living for older people would certainly include health services and housing suitable to their needs. Older people, like others, require opportunities for education, recreation, and full participation in community life.

Many activities of the Department directly benefit the aged. Others assist them indirectly. Social security is one of the most important sources of income for retired workers and their survivors. Medical research is increasingly directed toward chronic and degenerative diseases. New grants are going for construction of chronic-disease hospitals and nursing homes. And the Office of Vocational Rehabilitation, the Office of Education, and the Food and Drug Administration pay special attention to the needs of older persons.

To further strengthen this Department's activities for the aged, a Special Staff on Aging was established this year in the Office of the Secretary. It provides consultation and information to States, communities, and voluntary agencies; serves as a clearinghouse for information and material on aging; and issues a monthly news bulletin, *Aging*. It also serves as the secretariat for the Federal Council on Aging which was created by the President in 1956. The Council itself consists of representatives of 13 Federal departments and agencies.

* * * * *

The activities described here have not been the functions of a government far removed from people. They are related intimately to human beings today.

In the Nation's efforts to improve health, education, and economic security, the goal is to develop opportunities for a better life for the

individual. As the individual advances in these fields, not only is his own life enlarged but the Nation as a whole is enriched.

This progress, therefore, is not the exclusive concern of private endeavor, of any one group of people, of any one administration, of any one level of government. Its fulfillment should be an aspiration of all men.

Table 1.—Grants to States: Total grants under all Department of Health, Education, and Welfare programs, fiscal year 1957

[On checks-issued basis]

States, Territories, and possessions	Total	Social Security Administration	Public Health Service	Office of Education	Office of Vocational Rehabilitation	American Printing House for the Blind
Total.....	\$1,963,870,093	\$1,594,674,421	\$130,390,272	\$204,336,577	\$34,228,823	\$240,000
Alabama.....	61,212,620	50,593,352	5,087,664	4,440,916	1,085,431	5,257
Arizona.....	14,730,449	10,933,758	1,217,585	2,312,158	265,206	1,742
Arkansas.....	28,475,397	23,350,788	2,052,286	2,337,833	729,323	5,167
California.....	214,054,627	171,901,675	6,217,198	33,748,271	2,169,849	17,634
Colorado.....	33,686,804	27,608,088	1,413,622	4,428,815	234,386	1,893
Connecticut.....	16,111,563	11,998,464	1,575,754	2,175,268	358,292	3,785
Delaware.....	2,804,930	2,030,261	178,584	407,328	188,006	751
District of Columbia.....	5,766,265	4,993,937	463,490	79,961	227,826	1,051
Florida.....	54,651,488	45,333,978	2,859,678	5,429,497	1,122,537	5,798
Georgia.....	62,878,000	50,153,923	4,682,198	6,118,713	1,915,986	7,180
Idaho.....	7,578,030	5,631,177	1,011,929	867,535	66,277	1,112
Illinois.....	69,431,797	59,731,222	3,626,024	4,521,467	1,541,428	11,556
Indiana.....	26,066,010	21,315,348	2,335,098	1,928,961	482,487	4,116
Iowa.....	27,914,403	24,039,713	2,029,583	1,315,854	525,257	3,996
Kansas.....	27,879,787	21,074,145	2,259,607	4,198,327	345,275	2,433
Kentucky.....	41,305,703	36,009,394	2,646,689	2,268,184	377,501	3,935
Louisiana.....	87,153,376	80,694,527	3,658,481	1,827,217	972,035	4,056
Maine.....	10,705,880	8,336,552	1,046,970	1,107,971	214,387	-----
Maryland.....	24,949,435	12,811,218	2,084,390	9,674,701	374,470	4,656
Massachusetts.....	56,697,856	51,144,023	1,881,016	3,049,749	613,244	9,824
Michigan.....	58,348,681	44,562,897	5,471,029	7,008,278	1,293,769	12,708
Minnesota.....	34,873,220	29,240,426	3,236,461	1,594,176	796,509	5,648
Mississippi.....	31,989,934	26,223,936	3,427,081	1,780,390	554,682	3,845
Missouri.....	89,295,372	80,276,605	4,587,759	3,717,508	709,234	4,266
Montana.....	8,551,118	6,566,056	549,931	1,263,528	170,642	961
Nebraska.....	14,435,117	10,822,056	1,407,112	1,970,096	234,411	1,442
Nevada.....	3,258,253	1,856,651	423,909	944,319	33,374	-----
New Hampshire.....	4,594,310	3,273,132	501,224	732,599	87,355	-----
New Jersey.....	21,622,165	16,020,883	1,727,280	3,215,614	650,697	7,691
New Mexico.....	16,828,501	10,921,606	1,200,375	4,552,144	151,883	2,493
New York.....	135,125,027	119,821,080	6,502,991	6,526,311	2,255,028	19,617
North Carolina.....	49,444,674	38,965,494	6,103,765	3,053,848	1,310,422	11,145
North Dakota.....	7,439,843	5,649,843	994,019	577,236	217,964	781
Ohio.....	68,467,207	57,634,310	3,847,831	6,296,978	677,003	11,085
Oklahoma.....	63,212,680	51,987,194	3,099,316	7,391,471	732,085	2,614
Oregon.....	15,430,630	11,784,367	1,502,763	1,733,154	407,282	3,064
Pennsylvania.....	70,170,217	57,890,780	5,309,500	3,904,622	3,049,994	15,321
Rhode Island.....	9,790,308	7,071,312	1,018,815	1,475,735	224,446	-----
South Carolina.....	27,804,266	21,184,730	2,825,206	3,152,164	639,072	3,094
South Dakota.....	9,730,161	6,771,361	993,034	1,821,457	143,047	1,262
Tennessee.....	42,503,932	35,035,802	3,302,210	3,293,230	867,523	5,167
Texas.....	126,575,646	105,403,048	7,777,958	12,348,662	1,037,236	8,742
Utah.....	9,735,931	6,833,482	726,911	1,973,903	200,253	1,382
Vermont.....	4,610,234	3,601,053	417,125	330,302	161,754	-----
Virginia.....	33,110,928	14,618,186	3,233,589	14,284,826	968,259	6,068
Washington.....	45,545,456	37,066,602	1,264,599	6,633,305	577,135	3,815
West Virginia.....	28,658,846	24,390,627	2,540,362	938,918	785,664	3,275
Wisconsin.....	26,477,413	21,910,172	2,163,733	1,623,066	774,824	5,618
Wyoming.....	3,880,686	2,704,242	404,236	688,791	83,417	-----
Alaska.....	6,201,251	2,191,025	435,641	3,478,734	95,851	-----
Hawaii.....	7,777,305	4,046,214	661,207	2,889,362	180,131	391
Puerto Rico.....	13,550,510	8,307,848	4,302,303	595,964	341,932	2,463
Virgin Islands.....	429,631	355,858	47,091	20,000	6,682	-----
Other possessions.....	343,220	-----	56,060	287,160	-----	-----

Social Security Administration

Social Security in 1957

Program Emphasis

RELATIONSHIPS BETWEEN income-maintenance and service aspects of social security measures claimed special emphasis throughout the Social Security Administration.

With the achievement of almost universal coverage under old-age, survivors, and disability insurance—about 92 out of every 100 jobs are now within the scope of the program—and as a result of the aging of the beneficiaries, questions relating to the need for certain kinds of services have come increasingly to the fore. The provision of disability benefits through the 1956 amendments focused special attention on the relation between income-maintenance and rehabilitation services.

Increased emphasis on medical and social services for public assistance recipients reflected the special impetus resulting from the 1956 amendments. The new provision for separate Federal matching to help States broaden medical care for public assistance recipients, while not effective until July 1, 1957, was already leading to the development of new medical care programs in several States where none previously existed and to planning for improvement or expansion of existing programs in other States. The 1956 amendment relating to the purpose of public assistance resulted in greater emphasis on social services leading to the strengthening of individual and family independence. During the year, the States took stock of the scope and level of services being provided and planned for their further development. With the focus on constructive and preventive approaches, the goals of public assistance as they relate to income-maintenance and other services were examined.

The primary objective of the grant-in-aid programs of the Children's Bureau is of course that of service. The amount and source of the income of families receiving these services is nevertheless also of concern.

This focus on the relationships between maintenance and service aspects in each of the Social Security Administration programs in 1957 was extended also to interprogram activities. Continuing joint explorations by the Children's Bureau and the Bureau of Public Assistance of welfare services for aid to dependent children families provided further opportunity for a reevaluation of the interrelatedness of income and other welfare service needs. The health needs and medical care problems of persons receiving insurance benefits or assistance received special attention. Stepped-up activities in the field of aging cut across program lines and took into consideration both service needs and income-maintenance aspects.

Program Operations

The number of beneficiaries of the old-age, survivors, and disability insurance program reached the 10-million mark in May 1957. At the end of the fiscal year, 10.3 million persons were receiving monthly benefits at an annual rate of \$6.7 billion. This was an increase of nearly 2 million beneficiaries during the year and \$1.4 billion in the annual rate.

During the period between the 1956 amendments and the end of the fiscal year, 753,000 monthly benefit awards were made to women between 62 and 65 years of age. A total of 541,000 applications were received from persons having farm self-employment income, or their dependents or survivors. By the end of the fiscal year a period of disability had been established for 273,000 disabled workers. About 301,000 applications (including 86,000 from persons for whom a period of disability had already been established) had been received in district offices for the disability benefits provided under the 1956 amendments, first payable for the month of July 1957.

Of the total of 10.3 million beneficiaries at the end of the year, 8.5 million or 82 percent were aged men and women, including 600,000 women aged 62-64. At the beginning of the year, aged beneficiaries—all of whom were 65 and over—made up 80 percent of the beneficiary rolls.

In June 1957, more than half (52.4 percent) of the Nation's 14¾ million people who had passed their 65th birthday were actually receiving benefit checks under the insurance program. Additional aged persons had their benefits withheld, generally because of employment, and others had not yet retired and filed a claim. In all,

more than three-fifths of the Nation's aged men and women were eligible for benefits. Of the individuals who will reach age 65 in 1957, 3 out of 4 will be eligible.

Old-age assistance caseloads declined by 20,000 over the year. The 2,504,000 receiving old-age assistance in June 1957 represented 17 percent of the total population 65 and over, a marked drop from the 23 percent who received assistance in the autumn of 1950 when old-age assistance caseloads first began to decline.

Under each of the other three federally aided assistance programs, caseloads rose slightly. A total of 2.8 million recipients of aid to dependent children, aid to the blind, or aid to the permanently and totally disabled were receiving payments in June, 177,000 more than a year earlier.

Payments under each of the programs averaged somewhat higher in June 1957 than in the same month last year. The aggregate of payments under the four programs rose 9 percent during the year to \$233 million in June 1957. The higher expenditures, reflecting upward revisions in State standards of assistance to meet rising living costs, resulted in part from the 1956 amendments increasing the Federal share in State assistance payments.

State maternal and child health agencies provided health supervision in prenatal clinics for some 224,000 mothers in 1957. About 445,000 infants and 640,000 other children received health supervision through well-child clinics. In addition, health departments provided nursing service for about 2,660,000 infants and other children.

Crippled children's services under federally aided programs reached some 290,000 children. A significant development during the past year is the trend toward the establishment of diagnostic and treatment centers in medical schools for children with handicaps.

Efforts to strengthen and expand social services for children became increasingly difficult due to an insufficiency of qualified child welfare workers and to recruitment problems. State welfare agencies continued to use Federal funds for child welfare services primarily for personnel and professional education.

The Congress, in appropriating \$16 million for maternal and child health grants for the fiscal year 1957, earmarked \$1 million for special projects for mentally retarded children and the House Committee on Appropriations recommended that approximately \$1 million additional also be used on the problems of mentally retarded children. By the end of the year projects had been approved in 26 States by the Children's Bureau, with commitments totaling about \$1,300,000. In addition, State health departments have reported budgeting over

\$500,000 of other Federal maternal and child health funds for children with mental retardation.

Juvenile delinquency continues to increase. Provisional figures for 1956, based on juvenile court reports received thus far by the Children's Bureau, show an increase of about 20 percent in juvenile delinquency cases over 1955. During the same period the child population in the age group 10-17 went up only about 3 percent. The latest annual bulletin of the Federal Bureau of Investigation's Uniform Crime Reports shows an increase of 17.3 percent in police arrests of young persons under 18 in 1956 as compared with 1955. Reflecting this trend is the increasing volume of technical consultation and written guides for practice provided the State and local agencies working to improve their programs to combat juvenile delinquency.

Federal credit union operations continued upward during 1957 to new high levels. The number of operating Federal credit unions was 8,592 on June 30, 1957, a gain of 484. An 11-percent increase in membership brought the total to nearly 4.8 million. Members' savings in Federal credit unions rose 18 percent, to \$1,464 million at the end of the fiscal year, while average shareholdings moved up from \$288 to \$307. Loans outstanding to members amounted to \$1,157 million as the fiscal year ended, an increase of 22 percent. Aggregate assets of Federal credit unions exceeded \$1.6 billion, 19 percent more than a year earlier.

Program Administration in 1957

To carry out the tremendously expanded operations of its programs the Social Security Administration had 22,472 employees at the end of June, not quite 4,000 more than the total on the payroll a year earlier. The vast majority of these employees were in field, area, and regional offices.

The Bureau of Old-Age and Survivors Insurance had to adopt emergency measures to meet the operating demands resulting from the 1956 amendments. Benefits became payable to two new categories of beneficiaries soon after the amendments were enacted: benefits to women between ages 62 and 65 were first payable for November 1956 and, for January 1957, benefits to disabled children aged 18 or over with a total disability that began before age 18. Applications based on farm self-employment swelled the workload during the spring of 1957. Intensive efforts were made during the last part of the fiscal year to publicize the deadline of June 30 for filing applications to establish a period of disability with a beginning date more than 1 year prior to filing and as early as the actual onset of disablement. (Legislation enacted just after the end of the fiscal year extended this deadline through June 30, 1958.) The Bureau gave top priority to

processing as many disability claims as possible in preparation for the payment of benefits in August 1957.

During the year, plans were developed for two beneficiary surveys to be conducted by the Bureau of Old-Age and Survivors Insurance in fiscal year 1958. One is designed to provide current data on the economic situation of beneficiaries. The other is a long-term survey involving revisits at 1- or 2-year intervals and is focused on the gathering of information that will show how the situation of beneficiaries changes with the passage of time.

In September 1956, procedures were established to combine monthly benefit checks to husband and wife beneficiaries. When these procedures become fully operative, savings to the old-age and survivors insurance trust fund will approximate \$1 million a year.

In the Bureau of Public Assistance, priority was given to work necessary to implement the 1956 amendments to the public assistance titles. The amendments relating to medical care and increased emphasis on services involved considerable preparation on the part of both Federal and State agencies and, in some instances, the enactment of new State legislation. The Bureau of Public Assistance issued policy and guide materials for use of the States in reexamining their provisions for medical care, welfare services, and staff training and in planning improvements. By the end of the fiscal year, all States had submitted descriptions of the services they make available, reflecting in part the past year's increased and expanded activities in this area.

The Bureau of Public Assistance, in its continuing work with the States, placed emphasis on the development and maintenance of sound and efficient public assistance programs, including review of administrative costs in relation to program objectives, and on cooperation with public and national voluntary agencies in areas of mutual concern and interest.

The Children's Bureau launched a large-scale study to examine the reasons for the large number of staff losses in child welfare and private family service agencies.

The Interdepartmental Committee on Children and Youth, for which the Children's Bureau furnishes the secretariat, was a co-sponsor of the Joint Conference on Children and Youth held in Washington in December 1956, at which over 200 representatives of State, national voluntary, and Federal agencies participated.

Federal credit unions continue to increase in size as well as number, a trend having important implications for the program administration responsibilities of the Bureau of Federal Credit Unions. To anticipate the need for changes in procedures, Bureau policies pertaining to chartering, examination, and supervision were studied.

During the fiscal year, the Bureau of Federal Credit Unions completed a special survey of the purposes for which loans were made to members during 1956.

International Activities

The Social Security Administration, through its various cooperative activities, had the benefit of exchange with the experts from programs in 65 countries during 1957. Increased interest of governments in improving social conditions in their countries is reflected in the growing status of social work in the exchange programs in every geographical area.

The Social Security Administration continued to participate in policy development in the international social welfare field through representation at the United Nations meetings and those of the Organization of American States. The Interdepartmental Committee on International Social Welfare Policy, under the chairmanship of the Director of the Bureau of Public Assistance, developed policy recommendations for meetings of the UN General Assembly, the Economic and Social Council, the Social Commission, and the International Labor Organization. Papers were also prepared in connection with meetings of the United Nations Children's Fund (UNICEF) and the Organization of American States.

The largest international meeting during the year was the Eighth Session of the International Conference of Social Work, held in Munich, Germany, during the week of August 5. The Commissioner participated as a plenary speaker and Social Security Administration staff participated in expert groups.

A new activity that developed during the year was the implementation of plans for the reciprocal exchange of social workers with five European countries—Austria, Belgium, Norway, Sweden, and Yugoslavia. This program was undertaken in cooperation with the International Exchange Service of the Department of State. National Exchange Committees already established in the various countries in cooperation with the United Nations program are assisting with program and hospitality.

During fiscal year 1957, the Social Security Administration offered training facilities to 770 persons, 10 percent more than in 1956. The trainees came from 65 different countries, representing every degree of development in social welfare and in maternal and child health. Of the 149 persons who were here as long-term trainees under the sponsorship of the International Cooperation Administration, or as scholars or fellows under the United Nations and the World Health Organization, slightly more than half were studying and observing

aspects of child welfare services or of maternal and child health under the auspices of the Children's Bureau. In contrast, almost 2 out of every 3 of the 621 persons who came to the Social Security Administration for a shorter time were interested in the social insurance and public assistance programs and administration. The increase in the number interested in social work education reflected the trend in other countries to develop their own social work training facilities.

As in past years, the Social Security Administration cooperated with the International Cooperation Administration in the nomination and technical support of experts in the fields of social welfare, social insurance, and maternal and child health, as required by the agreements between that organization and the Department. The total number of experts assigned this year was 25, compared to 23 in 1956. New assignments in Tunisia and Korea increased to 13 the number of countries in which assignments were made or continued.

Old-Age, Survivors, and Disability Insurance

In May 1957, the number of beneficiaries receiving old-age and survivors insurance benefits reached 10 million. Speaking on that occasion of the growth of the social security insurance system, the Secretary of Health, Education, and Welfare remarked:

Truly this is a milestone in the progress of the American people toward freedom from the fear of want. . . . Few people now question whether we should have a basic social security system. . . . Rather, it is evident that as the productivity of the people steadily increases, as more and more goods and services become available for all, there are still further opportunities for sound, forward-looking steps toward the prevention or elimination of want in this country. . . . Both political parties strongly support a sound social security system. Although long-range projections cannot be precise, the present schedule of taxes provided in the law and the present schedule of benefits are approximately in balance. The system is in very sound condition and should continue to be self-sustaining. . . .

The social security system plays an important part in maintaining general economic growth and stability. It provides purchasing power for many persons who otherwise might be most in need. The benefits—some \$7 billion this year—quickly enter the stream of commerce and help sustain business and industry against sudden troughs and down-turns.

Among the most important activities of the Bureau of Old-Age and Survivors Insurance during fiscal year 1957 was the effectuation of the 1956 amendments. Coverage was effected for members of the uniformed services, almost all previously excluded professional self-employed groups, additional self-employed farmers, and certain

other groups of workers. With these extensions of coverage, the program now provides protection for almost all American families. The only major groups that still remain excluded are Federal employees already under a retirement system, doctors of medicine, nonregularly employed farm and domestic workers, and low-income farm and nonfarm self-employed persons.

During 1957 the Bureau faced the largest workload in its history. This was the first year in which a large number of farmers and their families became beneficiaries under the program. Lowering the retirement age for women to 62 also accounted for a substantial part of the great increase in the number of old-age and survivors insurance benefit awards. The payment of monthly benefits to disabled workers between the ages of 50 and 65, beginning for July 1957, added much to the volume of the Bureau's work. Extensive administrative adjustments were made necessary by the unprecedented volume and complexity of the Bureau workload. At the same time every effort was made to uphold the Bureau's high standard of service to the public. Throughout the year the Bureau maintained as its primary objective the combination of efficiency in its mass operations and sympathetic treatment of the people that the program serves.

A more detailed record of the year's significant events and accomplishments is given in the following sections.

What the Program Is Doing

BENEFICIARIES AND BENEFIT AMOUNTS

Unprecedented increases occurred in fiscal year 1957 in the number and amount of monthly benefits being paid under the program. In June 1957, 10.3 million persons were receiving benefits at a monthly rate of \$554.6 million—increases from June 1956 of almost 2.0 million in number and \$115.2 million in amount. About 8.5 million of the beneficiaries were men aged 65 or over and women aged 62 or over—5.8 million of them retired workers and 2.7 million the wives and dependent husbands of retired workers and the widows, dependent widowers, and dependent parents of workers who had died. Of the remaining 1.8 million, about 400,000 were mothers and 1.4 million were children.

The growth in the number of beneficiaries stemmed partly from the large number of benefit awards to women under the 1956 amendment that lowered to 62 the retirement age for women, effective in November 1956; about 600,000 women aged 62–64 were receiving benefits at the end of June 1957. Contributing also to the increase in the number of beneficiaries was the large number of awards flowing from the provision in the 1954 amendments to the Social Security

Act that extended coverage to self-employed farm operators; applications for benefits were received from more than half a million farmers and their dependents. The increase in the total amount of benefits payable monthly resulted from the marked growth in the total number of beneficiaries, the rising proportion of benefits computed on the basis of earnings after 1950, and the increasing number computed under the provision permitting up to 5 years of lowest earnings and periods of total and permanent disability to be dropped in the computation of the average monthly wage.

In June 1957, the average old-age insurance benefit paid to a retired worker who had no dependents also receiving benefits was \$59.90 a month. When the worker and his wife both received benefits, the average for the family was \$107.80. Families consisting of a widowed mother and two children received on the average \$144.60. Among beneficiaries on the rolls at the end of June 1957 whose benefits are based on earnings after 1950 with eligibility to omit years of lowest earnings, the average for a retired worker with no dependents receiving benefits was about \$73.00, for an aged couple about \$121.00, and for a widowed mother and two children about \$182.00.

DISABILITY PROVISIONS

During the fiscal year, a period of disability was established for about 138,000 disabled workers; the total number established since the beginning of the program in July 1955 was 273,000. About 127,000 applications for a period of disability were denied during the fiscal year; the total number of denials since July 1955 was 234,000. A person for whom a period of disability has been established has his insurance rights preserved during the period in which permanent and total disability prevents him from performing any substantial gainful work. Thus, such periods will not count against the disabled person in determining whether he or his survivors are eligible for benefits or in calculating the amount of the benefits.

By the end of December 1956 almost 40,300 persons were receiving old-age benefits that had been increased by an average of \$9.76 a month as a result of having had a period of disability established. The higher benefits were attributable to the exclusion of a period of disability and also to the dropping of as many as 5 years of lowest earnings in the computation of the worker's average monthly wage when eligibility for such dropout stemmed from the disability freeze. About 13,000 wives and young children of retired workers and about 5,500 widows, children, and dependent parents of workers who had established a period of disability before death were also receiving larger monthly benefits because of the freeze. For the same reason, lump-sum death payments during the calendar year ended December

1956 based on the earnings records of 8,900 deceased workers were increased by an average amount of \$21.66 per worker.

The 1956 amendments to the Social Security Act provided for payment of monthly disability insurance benefits beginning July 1957 to workers aged 50-64 who are totally and permanently disabled. More than 300,000 persons (including 86,000 persons for whom a period of disability had already been established) had filed applications for monthly disability benefits by the end of June 1957. Over 100,000 benefit checks were issued to disabled workers in August as payment for the month of July, the first month for which such benefits were payable. The applications not yet acted upon were being processed and benefits will be paid retroactively to July 1957 to those who meet the requirements. Monthly benefits became payable, beginning January 1957, to totally disabled persons aged 18 or over whose disability began before they reached age 18 and who were children of retired or deceased insured workers. By the end of June 1957, such monthly benefits were being paid to 10,000 persons. Many more applications had been filed and were being processed.

THE PROTECTION PROVIDED

Of the population under age 65, an estimated 65.8 million were insured at the beginning of the calendar year 1957. Some 28.2 million of these people were permanently insured—that is, whether or not they continued to work in covered jobs they will be eligible for benefits when they reach retirement age, and their families are assured of protection in the event of their death (included in this total were some 0.7 million women aged 62-64 who were already eligible for old-age benefits). The remaining 37.6 million were insured but would have to continue in covered work for an additional period to make their insured status permanent. Nine out of ten of the mothers and young children in the Nation were assured that they would receive monthly benefits in case of the death of the family earner. An estimated 36 million of the insured persons under age 65 also met the work requirements for protection against the risk of long-term and severe disability.

Of the 14.7 million people aged 65 or over in the United States in December 1956, 62 percent were eligible for benefits under the program. Forty-seven percent were actually receiving benefits, and 15 percent were not receiving benefits because they or their husbands were receiving substantial income from work. The percentage of aged persons who are eligible is expected to rise to over 70 percent by 1960.

THE COVERAGE OF THE PROGRAM

Approximately 75 million workers were covered by old-age, survivors, and disability insurance during the course of the calendar year 1957. An additional 1½ million people employed in the railroad industry were assured, through the close coordination of the railroad retirement and old-age, survivors, and disability insurance programs, benefits at least equal in amount to those that would have been payable if their railroad employment had been covered under the Social Security Act. Altogether, including State and local government and nonprofit employees for whom coverage is available on a group-election basis and members of the Armed Forces, nine-tenths of all persons in paid employment in the continental United States were covered or could have been covered by old-age, survivors, and disability insurance in June 1957.

Of the workers not eligible for coverage, about one-third were covered by other public retirement programs—Federal, State, or local. The remaining two-thirds—6 percent of the Nation's paid employment—were not covered by any public retirement program. Those without retirement protection under a public system consisted principally of self-employed persons whose annual net earnings were less than \$400 and of domestic and farm workers who did not earn sufficient wages from any one employer to meet the minimum coverage requirements of the law.

INCOME AND DISBURSEMENTS

Expenditures from the Federal old-age and survivors insurance trust fund during the fiscal year totaled \$6,665 million, of which \$6,515 million was for benefit payments and \$150 million, including Treasury Department costs, for administrative expenses. Total receipts were \$7,100 million including \$6,540 million in net contributions, \$555 million in interest on investments, and \$5 million in transfers from the railroad retirement account. Receipts exceeded disbursements by \$436 million, the amount of the increase in the trust fund during the year. At the end of June 1957 this fund totaled \$23.0 billion.

Total assets of the old-age and survivors insurance trust fund, except for \$766 million held in cash, were invested in United States Government securities as required by law; \$2.8 billion were invested in public issues (identical with similar securities owned by private investors), and \$19.5 billion were invested in securities of varying maturities issued for purchase by the trust fund. The average interest rate on all investments of this fund at the end of the fiscal year was 2.5 percent.

The Federal disability insurance trust fund was created by the Social Security Amendments of 1956. Contributions to this fund became payable starting in January 1957. Benefit disbursements began in August 1957. Assets of the disability trust fund at the end of the fiscal year totaled \$337 million, consisting of \$12 million held in cash, and \$325 million invested in 2.5-percent United States Government securities of varying maturities issued for purchase by the trust fund.

Administering the Program

The 1956 amendments imposed the greatest management challenge in terms of volume and complexity of workload that the Bureau has ever faced in a single year. The need to develop methods for the administration of new program provisions was coupled with the necessity to gear the organization to handle large workload increases with dispatch and with the least possible diminution in quality and service to the public.

The recruitment and training of new staff were among the first problems to be met. Personnel requirements measured against estimated increased workloads alone would have required the addition of about 7,000 fully trained employees. These requirements, however, had to be balanced against recruitment possibilities, capacities to train and absorb into production, overtime that could be used, and anticipated workload levels beyond 1957. By balancing these various factors, a recruitment objective of some 3,500 employees was established. This brought employment at the end of the fiscal year to approximately 21,560, a figure reasonably close to the staff needed for continuing Bureau operations in subsequent years.

An accelerated training program was used throughout the Bureau. Experienced employees were given training immediately on the amendments, with particular attention to the disability provisions. Emphasis was placed on partial training to equip new employees to handle specialized areas of work, and thus get quickly into production. Three-week central-office courses were given in Baltimore to equip new field employees with the knowledge essential in the claims process. More than 1,400 new district office employees received this intensive training during the fiscal year.

The Bureau took a number of other significant actions to gear its resources to the amendment requirements. Twenty new district offices were opened to provide more adequate facilities and better service to the public, bringing to 558 the number of full-time district offices in operation. The number of field contact stations was increased from 3,537 to 3,660, and additional space was acquired for

each of the six area offices. Through the use of public informational devices, it was possible to strike some balance between the receipt of claims on which payment was scheduled to be made quickly and the receipt of disability insurance claims which could not be paid by law until August 1957. The Bureau also deferred or gave low priority to certain areas of work.

In the first 6 months of the year, the Bureau kept the workload situation within planned control limits despite the receipt of 1,500,000 retirement and survivor claims applications in the district offices, almost twice as many as in the same period of the preceding year. The high point in the first 6 months, in the number of claims pending in the district offices (292,500) was reached in mid-October due mainly to the receipt of claims from women aged 62-64. At the end of December, the pending load was down to 260,000.

The most crucial period in the processing of retirement and survivor claims under the amendments came in the second half of the fiscal year. The extent of filing of claims after January 1, 1957, rose considerably above expectations. In January and February, embracing a period of 9 weeks, over 750,000 claims applications were received in the district offices. These tremendous workloads resulted in the largest number of pending cases in Bureau history and a substantial increase in processing times. The highpoint was reached in early February when 473,000 claims were on hand in the district offices.

The Bureau brought all its administrative forces to bear to get this emergency situation under control as quickly as possible. Measures which were adopted included the shifting of workloads and personnel between offices to meet workload bulges in certain parts of the country; the hiring of temporary and part-time clerical staff; transferring some of the adjudication activity normally performed in the district offices to the area offices; deferring certain types of district office nonclaims work to a later date; specialization in the use of personnel; and the extensive use of overtime. Through use of these emergency measures the district offices were able to reduce the pending load by the end of the year to about 200,000 claims, the operational goal established for that date.

The following actions were taken to implement the disability insurance benefit provisions of the 1956 amendments: renegotiation of State agency agreements; development of policies and procedures with the Office of Vocational Rehabilitation on provisions regarding acceptance of rehabilitation services; development of policies and procedures for disability benefit reductions for workmen's compensation benefits and other Federal benefits based on disability; development of plans and procedures for determining continuance or

cessation of disability; and development of alternative procedures for determining charges to the disability trust fund.

The first applications for disability insurance benefits and benefits for disabled children aged 18 and over were taken in district offices on October 1, 1956, with the first benefits for disabled children payable for the month of January 1957 and the first disability insurance benefits payable for the month of July 1957. As mentioned earlier, by the end of the fiscal year district offices had received applications for more than 300,000 disability insurance benefits and 45,000 claims for benefits for disabled children aged 18 and over. In the last several months of the year emphasis in the public information program was turned to the disability benefit provisions, and processing procedures were streamlined and accelerated. Over 100,000 checks were issued to disabled beneficiaries in August as payment for the month of July.

During the year the Bureau also issued about 744,000 original and duplicate account numbers to members of the Armed Forces covered for the first time by Public Law 881 (84th Congress). To achieve a balancing of work distribution, the job of issuing these accounts, normally done in the district offices, was transferred to the Division of Accounting Operations. The total number of original and duplicate account numbers issued during 1957 was 7,567,000.

Along with the planning and actions to meet the impact of the 1956 amendments, attention was given during the year to management improvement undertakings of varying scope and significance.

Large scale electronic processing equipment was used successfully during the year in operations dealing with the maintenance of earnings records, the reinstatement of incorrectly reported earnings items, and the computation of benefit amounts. In December, the Bureau reached a decision to secure an additional electronic data processing installation to be placed in operation early in fiscal year 1958. The additional machine will make it possible to eliminate existing electrical accounting machine listing and collating operations and punch-card file records of detailed and summary earnings. The earlier installation will reduce costs by about \$1,000,000 a year beginning in fiscal year 1958; the second installation by an estimated \$500,000, starting in fiscal year 1959.

In September 1956, procedures were established to combine monthly benefit checks to a husband and wife where one is entitled to old-age insurance benefits and the other to wife's insurance or dependent husband's insurance benefits in cases in which (a) both parties reside at the same address; (b) neither is incompetent; (c) neither voices any objection to the combination; and (d) no other reason exists that would make the combination undesirable. The combination was made

as new claims were awarded or as certain adjustment actions were taken for beneficiaries already on the rolls. Experience maintained to date indicates that public reaction to this combination is favorable and plans have now been made for the mass conversion of the separate payments remaining on the benefit rolls. These cases number 1,100,000. Savings to the trust fund resulting principally from reductions in the check writing and mailing costs of the Treasury Department will approximate \$1,000,000 a year.

Architectural planning for the new Bureau headquarters building on the outskirts of Baltimore has been completed. In addition to the amounts previously authorized, the Congress approved \$5,710,000 in additional funds for the construction of the building. This makes a total of \$31,080,000 which has been made available for this purpose. The new legislation contains an escalator clause to take care of changes in building costs after October 1, 1956. The contract for construction was signed on October 31, 1957.

Arrangements were completed for a review of Bureau operations by a small group of business leaders. This review, to be made in the first part of fiscal year 1958, has among its specific objectives: a review of the broad aspects of the process by which the Bureau discharges its responsibilities; identification of specific operations where any new techniques or methods used by industry could be adopted with resultant improvements in efficiency and economy; and recommendations as to whether the Bureau should seek outside assistance in the development of any proposed studies. The results of this review are expected to furnish valuable perspective and guidance to the Bureau in its administration of the program.

Total administrative costs for the program in fiscal year 1957 represented about 2 percent of contributions to the trust fund. The key to this low level of administrative cost is the fact that while the composite measurable workload of the Bureau has increased by 223 percent since 1950, personnel has increased by only 97 percent.

Legislative Developments During the Year

Even though major social security amendments had been enacted at the start of the fiscal year, wide public interest in the program was reflected in a continuance of legislative activity affecting the program. Six bills involving relatively small but important changes in the old-age, survivors, and disability insurance provisions received active congressional consideration during the last half of the fiscal year and were subsequently enacted into law by the Eighty-fifth Congress.

PROVISIONS OF THE 1957 AMENDMENTS

Changes in coverage of employees of State and local governments.—During 1957 three new laws (P. L. 85-226, P. L. 85-227, and P. L. 85-229) amended the coverage provisions as they apply to employees of States and localities.

P. L. 85-226 provides a general extension of the time during which retroactive coverage for prior years may be arranged under the State and local coverage provisions. Under previous law, coverage arranged before 1958 could begin as early as January 1, 1955; under the new provision, coverage arranged in 1958 or 1959 can begin as early as January 1, 1956. This law also permits old-age, survivors, and disability insurance coverage of policemen and firemen under retirement systems in Alabama, Georgia, Maryland, Tennessee, and the Territory of Hawaii. (Coverage of policemen and firemen under public retirement systems had been authorized by the 1956 amendments for only Florida, North Carolina, South Carolina, and South Dakota.)

Another provision of P. L. 85-226 extends to all interstate instrumentalities a provision, enacted in 1956, under which specified States may divide retirement systems into two parts and provide coverage under the Social Security Act only for the part consisting of the positions of those employees who desire coverage. This provision has made it possible for some members of retirement systems to obtain old-age, survivors, and disability insurance coverage even though a majority of the present members of their retirement system do not want such coverage. At the same time the old-age, survivors, and disability insurance system is protected against "adverse selection" in the long run because all new employees who enter positions originally covered by a "divided" retirement system must be covered under the Social Security Act.

The changes made by the other two new laws were also concerned with the "divided retirement system" provision. Under P. L. 85-227 the States of California, Connecticut, Minnesota, and Rhode Island were included with those previously authorized to divide retirement systems for purposes of securing coverage under the Social Security Act; this change increased to 13 the number of States (including Hawaii) that are named under the provision. P. L. 85-229 is designed to make it easier for retirement system groups to obtain old-age, survivors, and disability insurance coverage under the divided retirement system provision. It was formerly necessary to follow a procedure involving two separate polls of retirement system members where this provision was used. First, the members of the system expressed their desire for or against coverage under the Social Security Act. Then, after the required additional 90-day-notice

period, a referendum was held among only those members of the system who had already expressed a desire for coverage. The amendment allows the affected States and interstate instrumentalities to combine these two polls into a single vote which retains the principal features of the referendum provision, such as the 90-day-notice period.

Changes affecting disability provisions.—P. L. 85-109 made two changes in the disability provisions of the program. An amendment requested by the Department extends for 1 year—through June 30, 1958—the time within which disabled workers may file applications which will permit the beginning of a period of disability to be established as early as the actual onset of disablement even though that date is more than 1 year prior to filing. Disabled workers who would otherwise have lost valuable social security protection because they failed to file applications before the June 30, 1957, deadline in prior law were thus given a further opportunity to assure themselves of that protection.

P. L. 85-109 also modified the disability benefits offset provision. Under this provision, before it was amended, the disability insurance benefit under the Social Security Act had to be reduced by the amount of any periodic Federal benefit or Federal or State workmen's compensation paid on account of disability. The amendment specifically excludes veterans' compensation (compensation paid to a veteran by the Veterans Administration on account of a service-connected disability) from the periodic Federal benefits that cause disability insurance benefits under the Act to be reduced. The disability benefits offset provision continues to be applicable in cases involving veterans' pensions, which are paid on account of non-service-connected disability. There was no change in the offset provision as it applies to persons receiving benefits because of a disability that began in childhood.

Changes in coverage of ministers.—As a result of amendments made by P. L. 85-239, ministers who failed to file certificates to elect old-age, survivors, and disability insurance coverage under the self-employment provisions within the time prescribed by the prior law will have an extension of time (generally through April 15, 1959) within which to elect coverage. Under the amendments, ministers who elect coverage during the extended period will be covered retroactively for taxable years ending after 1955 in which they have net earnings from self-employment of \$400 or more, including earnings from the exercise of their ministry. Ministers (chiefly those newly ordained) who are eligible to elect coverage after April 15, 1959, will have retroactive coverage for only 1 year.

P. L. 85-239 also provides that a minister who has elected coverage shall, in determining his net earnings from self-employment, include

the rental value of a parsonage (or any allowance for the rental of a parsonage) and the value of meals and lodging furnished to him for the convenience of the employer. This provision recognizes that in many instances noncash remuneration received by ministers constitutes a significant portion of their total earnings; also, it assures that, for old-age, survivors, and disability insurance purposes, the noncash remuneration of the ministers affected (who are actually employees) will be treated much like the noncash remuneration of employees generally. For purposes of coverage, this provision applies to taxable years ending on or after December 31, 1957; for purposes of the retirement test under the program, however, the provision applies to taxable years beginning after August 30, 1957 (the date of enactment).

Another provision of this legislation relates to the crediting of remuneration of ordained ministers who were excluded from coverage as employees because they were in the employ of nonprofit church-related organizations and were in the exercise of their ministry but whose remuneration was erroneously reported as wages in 1955 and 1956. It was found that these mistakes were usually the result of confusion as to whether certain of these ministers, usually performing teaching or administrative duties, were engaged in the exercise of their ministry. Under the new provision the remuneration in question will be credited in the same manner as correctly reported wages for old-age, survivors, and disability insurance purposes to the extent that the employer or employee tax was not refunded before August 31, 1957.

Benefits for alien survivors of servicemen who died of service-connected disabilities.—P. L. 85-238 provides that the provision for suspending benefits of certain aliens outside the United States, enacted as part of the 1956 amendments, is not to apply to alien survivors where the individual on whose wages and self-employment income the benefits would be payable died while serving in the Armed Forces of the United States or died as a result of disease or injury incurred or aggravated in the service. The new provision applies only to survivor benefits (monthly benefits and lump-sum death payments) and not to retirement or disability insurance benefits.

Although P. L. 85-238 applies to nonresident alien survivors of all servicemen dying in service or from service-connected causes, under present practice relating to recruitment of aliens into the armed services it will affect primarily a small number of survivors of Filipinos who serve in the Navy and Coast Guard, mainly as messmen.

The Department of Defense and the Department of Health, Education, and Welfare favored the enactment of the provision of P. L. 85-238 dealing with alien survivors of servicemen because it was necessary in order to coordinate the coverage of servicemen under old-age, survivors, and disability insurance with the Servicemen and

Veterans' Survivor Benefits Act. The latter act establishes dependency and indemnity compensation for survivors of servicemen and veterans at a level which presumes the concurrent payment of benefits under old-age, survivors, and disability insurance.

Change in the requirements for entitlement to spouse's benefits.—P. L. 85-238 also removes the requirement that for entitlement to wife's, husband's, widow's, or widower's insurance benefits the spouse must have been a member of the worker's household or must have been receiving regular support payments from him or the worker must have been under order by a court to contribute to the spouse's support. Monthly benefits will be paid to wives, widows, and young widows with children on the basis of legal relationship alone. This change will give the protection of the program to a wife who was deserted by her husband and who for some reason had not secured a court order requiring the deserting husband to contribute to her support.

Under the change a spouse will meet the definition of wife, widow, husband, or widower (1) if the courts of the State of the worker's domicile at the time of his death or (if he is alive) at the time of the spouse's application for benefits would find that the spouse and the worker were validly married at such time, or, (2) if they would not so find, if the spouse would nevertheless have the right to share as a spouse in the intestate personal property of the worker under the law of such domicile. These changes are effective for monthly benefits payable beginning with September 1957.

A saving clause was incorporated in the law so that parents of a deceased worker who had already filed proof that they were supported by the worker would not be denied parent's insurance benefits because a widow or widower became eligible as a result of the new provisions. (Parent's insurance benefits cannot ordinarily be paid to a dependent parent of a worker who was survived by a child, a widow, or a dependent widower who might eventually qualify for benefits based on the worker's earnings record.) Saving clauses were also incorporated which provide that neither a parent's benefit nor the benefit of a spouse who becomes entitled to benefits as a result of these changes shall be reduced because of the entitlement of the other, even though the total benefits to the family exceed the maximum that could otherwise be paid.

COMBINED REPORTING FOR SOCIAL SECURITY AND INCOME-TAX WITHHOLDING PURPOSES

The plan for integrating old-age, survivors, and disability insurance wage reporting with annual reporting of income taxes withheld was resubmitted to the Eighty-Fifth Congress by the Department of Health, Education, and Welfare. The bill embodying the pro-

posals (H. R. 8309) also contains the necessary provisions for putting the definitions of insured status and related provisions on an annual rather than a quarterly basis.

The plan would make it possible to eliminate the detailed quarterly wage reports now filed by employers for social security purposes. The information needed would be obtained from the reports of each employee's wages filed annually by employers on withholding-tax statements (Forms W-2). The Hoover Commission had estimated that elimination of the quarterly reports would save employers about \$22 million a year.

The substitution of annual for quarterly reports would also bring about substantial reductions in the workload of wage items to be processed by the Bureau of Old-Age and Survivors Insurance. It is estimated that in fiscal year 1960, nearly 262 million wage report items would have to be processed for social security purposes under the present quarterly reporting provisions. Under annual reporting, this number would be reduced by at least one half. (The reduction would not be three-fourths, as might be expected, because a large number of workers are not employed by the same employer in all 4 quarters of a year.)

The plan also provides that the Treasury Department and the Department of Health, Education, and Welfare might enter into an agreement under which Forms W-2 filed by employees with their income-tax returns would be sent to the Bureau of Old-Age and Survivors Insurance to be matched mechanically against the forms filed by employers. This matching process would improve tax administration through the discovery of errors in reporting of wages for both income-tax and social security tax purposes.

COORDINATION OF TVA RETIREMENT SYSTEM WITH OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE

The Social Security Amendments of 1956 authorized the extension of the program's coverage to members of the retirement systems of the Tennessee Valley Authority and the Federal Home Loan Banks, subject, in each case, to approval by the Secretary of Health, Education, and Welfare of a plan for coordinating the existing staff retirement system with the Social Security Act system. The plan submitted to the Department by the Tennessee Valley Authority to modify its retirement system and provide an equitable basis, as required by the law, for coordinating the system with old-age, survivors, and disability insurance was approved by the Secretary on December 28, 1956. As a result of this legislation members of the Tennessee Valley Authority retirement system became the first group of civilian employees of the Federal Government to be covered by both old-age, survivors, and

disability insurance and a supplementary Federal staff retirement system.

RETIREMENT SYSTEM OF FEDERAL HOME LOAN BANKS

The Secretary was unable to approve proposed coordination plans that were submitted to the Department by the Federal Home Loan Bank Board. Since the law specified June 30, 1957, as the deadline for an approved plan of coordination, some 200 members of the Banks' retirement system continue to be excluded from coverage under the Social Security Act.

SIMPLIFICATION STUDY

The Bureau moved forward with its project of developing legislative proposals to make the program easier for the public to understand and comply with, and easier for the Department to administer. The project also seeks to improve the program so that it will be more acceptable to the public as fair and equitable.

The initial phase of this study was to examine two areas which have considerable complexity and which have been of much interest to the public—the retirement test and the computation of benefits. Work groups of Bureau employees have been formed for each of these areas. These groups are staffed with people who have had firsthand experience in the administration of the law, technicians skilled in the evaluation of program matters, and employees with legal training. Because of the intricate and delicately balanced considerations involved, many months of concentrated study will be necessary before recommendations can be made to the Congress on how to simplify these two areas within the framework of the existing program. In the meantime, plans are being made for the examination of other complex phases of the law.

Financing the Program

In modifying the schedule of contributions under the old-age, survivors, and disability insurance program at the time it enacted the amendments in 1956, Congress again made clear its intent that the program be self-supporting from contributions of covered workers and employers. The revision in the schedule was arrived at after careful review of long-range actuarial cost estimates prepared for use of the congressional committees in their legislative considerations.

OLD-AGE AND SURVIVORS INSURANCE BENEFITS

The level-premium cost of old-age and survivors benefits after 1955, on an intermediate basis, assuming interest at 2.6 percent and earnings

at about the levels that prevailed during 1955, is estimated at 7.43 percent of payroll (after adjustments to allow for administrative expenses and interest earnings on the existing trust fund). The level contribution rate, equivalent to the graduated rates in the law, is estimated at 7.23 percent of payroll, leaving a small actuarial insufficiency of 0.20 percent of payroll. The old-age and survivors insurance benefit system may for practical purposes therefore be said to be in actuarial balance.

DISABILITY INSURANCE BENEFITS

The Social Security Amendments of 1956 established a system for financing disability insurance benefits which is entirely separate from the financing of old-age and survivors insurance benefits. The level premium cost of the disability insurance benefits and the applicable administrative expenses on an intermediate basis is 0.42 percent of payroll. Contribution income has been specifically allocated to finance these benefits; this income is equivalent to 0.49 percent of payroll, thereby producing an actuarial surplus of 0.07 percent of payroll.

The difficulties involved in making exact predictions of the actuarial status of a program that reaches into the distant future are widely recognized. If different assumptions as to, say, interest, mortality, retirement, disability, or earnings had been used, different results would have been obtained. Accordingly, no one set of estimates should be looked upon as final. The Department, in carrying out its policy of continually reexamining the long-range cost estimates of the program in the light of the latest information available, is now in process of a complete review and revision of its cost estimates.

Public Assistance

Effect of the 1956 Amendments

The implementation of amendments to the public assistance titles of the Social Security Act passed in 1956, which included some of the most fundamental changes in the public assistance programs since their inception, provided a major focus of activities at both the Federal and State level during the year. The impact of increased program responsibility resulting from these legislative changes was immediate and substantial.

The new provision to help States extend and broaden medical care for public assistance recipients through separate Federal sharing in costs paid directly to suppliers of medical care services required con-

siderable preparation on the part of both Federal and State agencies. The clarification of the objective of public assistance as including both financial assistance and other welfare services to help recipients achieve increased self-care, self-support, and to strengthen family life, resulted in States' taking stock of the scope and level of the services they were already providing and in planning for their further development.

Similarly, a companion provision which authorized Federal grants to States for training public assistance personnel to deal constructively with complex problems involving dependency and seriously affecting family life resulted in stepped-up efforts by the States in their on-going training programs, and in the development of long-term plans for increasing the availability of qualified persons to work in the public assistance program.

As a result of raising the Federal share of State public assistance payments and the maximum payment subject to participation, effective October 1, 1956, through June 30, 1959, all but a few States increased individual payments by \$3 to \$4 a month for the needy aged, blind, and disabled; and by \$1 to \$2 per person receiving aid to dependent children. The availability of additional Federal funds thus made it possible for many States to make long-overdue adjustments in payments in relation to increased living costs.

Amendments broadening the aid to dependent children program were implemented through legal or administrative actions taken by 42 states to add certain relatives (first cousins, nephews, and nieces) to those with whom the needy child may live and receive federally aided assistance and by 31 States to obtain Federal sharing in assistance expenditures for children aged 16 and 17 without regard to whether they are regularly attending school. Both provisions were effective July 1, 1957.

*Trends in Caseloads and Expenditures*¹

In June 1957, 5.9 million persons, 3.4 percent of the total civilian population, received either federally aided categorical public assistance or State and/or locally financed general assistance. The total number of persons assisted increased 198,000 or 3.4 percent from June 1956 to June 1957. The greatest increase occurred in the number of persons receiving aid to dependent children (148,000). Smaller increases occurred in the number receiving general assistance (41,000), aid to the permanently and totally disabled (26,000), and aid to the

¹ Caseloads, averages, and total expenditures in all programs except general assistance are based on data which include vendor payments for medical care and cases receiving only medical care.

blind (2,600). In old-age assistance, the number of recipients decreased by 20,000. Drought conditions in some sections of the country, a strike in the steel industry, and the largest increase in living costs in 6 years undoubtedly contributed to the need of some individuals for public assistance.

Total expenditures for assistance payments from Federal, State, and local funds were \$2,969 million during fiscal 1957, an increase of \$187 million or 6.7 percent over expenditures in the preceding year. The rise was due in part to the availability of additional funds authorized by the 1956 amendments. The largest increases in payments occurred in old-age assistance, \$90 million; and aid to dependent children, \$61 million. The Federal share of expenditures was \$1,505 million. Assistance payments for the past year represented about 0.9 percent of personal income payments in the Nation during 1956.

Old-age assistance.—The number of persons receiving old-age assistance in June 1957 (2.5 million) was 0.8 percent lower than in June 1956, with a corresponding decline in the proportion of persons aged 65 or over in the country receiving old-age assistance—168 per 1,000 in June 1957 compared with 173 per 1,000 a year earlier. Although caseloads were lower in 42 States, the national annual decrease of 20,000 was the smallest in 6 years. The national average monthly payment for old-age assistance was \$58.66 in June 1957, an increase of \$4.37 from the previous June. Average payments, exclusive of Puerto Rico (\$7.99) and the Virgin Islands (\$18.53), ranged from a low of \$28.67 in Mississippi to a high of \$94.15 in Washington.

Aid to dependent children.—Increases during the year in the number of families receiving aid to dependent children were fairly substantial for the Nation and for a majority of the States. The 647,200 families receiving assistance in June 1957 represented a 5.5-percent increase; and the 1,831,900 children, a 7.3-percent increase over June 1956. Although there was a seasonal decline between July and October, the national caseload increased in subsequent months of the fiscal year. The national average assistance payment in June 1957 was \$96.52 per family (\$26.04 per person), an increase of \$7.25 per family (\$1.69 per person) from the previous June. Average payments per family, exclusive of Puerto Rico (\$12.72), ranged from \$28.18 in Mississippi to \$150.12 in Wisconsin.

Aid to the blind.—There was a small but steady rise (2.5 percent) in the total number of persons receiving aid to the blind (from 105,800 in June 1956 to 108,400 in June 1957), even though 27 States had lower caseloads at the end than at the beginning of the year. The average assistance payment for all States in June 1957 was

\$63.87, an increase of \$3.45 from the previous June. Average payments, exclusive of Puerto Rico (\$7.91), ranged from \$37.77 in West Virginia to \$116.78 in Washington.

Aid to the permanently and totally disabled.—Recipients of aid to the permanently and totally disabled numbered 283,900 in June 1957, compared with 258,300 in June 1956. The 9.9-percent increase was largely the result of the relative newness of the program and the initiation of a new federally aided State program in Kentucky, which brought to 46 the number of States administering such programs. The national average payment per recipient in June 1957 was \$59.10, an increase of \$2.38 from the previous June. Average payments, exclusive of Puerto Rico (\$8.68) and the Virgin Islands (\$19.81), ranged from \$24.60 in Mississippi to \$116.91 in Connecticut.

General assistance.—About 294,000 cases received State and/or locally financed general assistance in June 1957, an increase of 4,000, or 1.5 percent from the preceding June. Decreases and increases over the year were divided about equally among the States. The national average payment per case in June 1957 was \$54.90, an increase of \$2.83 from the previous June. Average payments for States reporting on a comparable basis ranged from \$12.28 in Alabama to \$78.29 in New York.

OASI BENEFICIARIES RECEIVING SUPPLEMENTARY ASSISTANCE PAYMENTS

The number of aged beneficiaries of old-age, survivors, and disability insurance who receive old-age assistance to supplement their benefits continues to increase. In February 1957, nearly a fourth (22.2 percent) of the 2.5 million old-age assistance recipients were receiving such assistance to supplement their insurance benefits. The number (555,300) of recipients of old-age assistance also receiving insurance benefits in February 1957 represents an increase of 39,000 or 7.4 percent from the preceding February.

The national average old-age assistance payment for recipients receiving both insurance and assistance in February continues to be less than for those receiving only assistance—\$48 compared with \$60.77. About 18 percent (a little over \$26.6 million) of the total amount expended for old-age assistance was paid to the needy aged receiving both assistance and insurance benefits.

In contrast to the increasing number of aged receiving both insurance benefits and assistance payments, the number of families receiving aid to dependent children to supplement insurance benefits showed a slight (2 percent) decline in February 1957 from the number in the preceding February. The 31,900 families receiving both insurance

benefits and assistance payments represented 5.1 percent of all families receiving aid to dependent children. As in old-age assistance, the average assistance payment to families receiving both types of payments was less than to families receiving only assistance. The national average assistance payment in February to families receiving both types of payment was \$75.75 compared with \$96.39 for families receiving only assistance.

Major changes in old-age and survivors insurance made by the 1956 amendments to the Social Security Act will extend benefits to more people. These changes include reduction of the retirement age for women, extension of child's benefits to disabled children aged 18 or over, and the addition of disability insurance benefits. The immediate effect of these amendments on the public assistance program, however, is not expected to be very great.

Program and Administrative Developments

During the year, priority was given by the Bureau of Public Assistance to work necessary to implement the 1956 amendments to the public assistance titles of the Social Security Act. This included, for example, the issuance of information explaining the amendments to interested groups and individuals, consideration of their implications, exploration of problems that could be anticipated, identification of major policy issues that needed to be resolved, and the development of pertinent Federal policy and recommendations. In addition, fiscal and administrative procedures were developed to effect the necessary changes in grants to States, and technical assistance was provided to State agencies in carrying out the purposes of the new legislation.

This work was carried on along with the Bureau's continuing emphasis on the development and maintenance of sound and efficient public assistance programs, including review of administrative costs in relation to program objectives, cooperation with national public and voluntary agencies in areas of mutual concern and interest, and improvement in internal Bureau management.

Although the full effect of the potentials for significant developments in the assistance and services available to needy persons made possible by these amendments will not be realized until the States have had more time to put the legislation into operation, substantial progress is already evident. Developments in some of the program areas, such as medical care, welfare services, and staff training, which involve Federal, State, and local cooperation and planning, are of special interest.

IMPROVING MEDICAL CARE FOR PUBLIC ASSISTANCE RECIPIENTS

Traditionally, public welfare agencies provided some medical care through staff physicians, by operating institutions giving medical care to the indigent, or by paying for the medical care given to needy persons. Under the Social Security Act as passed in 1935, Federal financial participation was available in the costs of medical care when included in the monthly payment to the recipient within the limits of the Federal maximum on the monthly assistance payment. However, the amount of medical care that could be provided to assistance recipients under this provision was limited, and its nature and extent varied greatly between States, and often between localities in the same State.

Yet the cause of dependency for many is directly related to disabling effects of illness. For example, of the 2½ million persons over 65 years of age receiving old-age assistance, nearly half are 75 or over—an age group with a high incidence of chronic illness. Disability itself is a basic eligibility condition for the nearly 284,000 needy persons receiving aid to the permanently and totally disabled, for the 108,000 receiving aid to the blind, and for the approximately 484,000 children and 125,000 adult caretakers receiving aid to dependent children whose need is due to the physical or mental incapacity of a parent. It also plays a large part in the need of many of the 294,000 cases receiving State and/or locally financed general assistance.

The increasing need for medical care and its higher cost resulted in an amendment to the Social Security Act in 1950 which broadened the definition of "assistance" to include payment for medical care or other remedial care made directly to the suppliers of such services. The amount allowed for medical care, however, still had to come within the specified individual matchable assistance payment maximum, as previously. To provide greater flexibility in meeting high medical expenses in individual cases, some public assistance agencies used a pooled fund—a prepayment arrangement—into which a fixed monthly payment was made for each recipient, and from which was paid the costs of medical care for individual recipients. The averaging of costs through the pooled fund helped to some extent in meeting the higher medical care costs in individual instances.

In fiscal year 1957, only about 10 percent (\$288 million) of the total (\$3 billion) expended for public assistance, including general assistance, was spent for medical care payments made directly to the suppliers of such services. Only about a fifth of this amount came from Federal funds; most of the vendor payments were made by States with the greatest resources, with a high concentration in only

a few States. For example, a little more than half the vendor payments made for the aged in June 1956 were in three States—New York, Illinois, and Massachusetts. A few States made vendor payments financed entirely from State and local funds.

To increase the availability of medical care for needy persons, the Social Security Act was amended again in 1956 (Public Law 880, 84th Congress) to permit Federal sharing in vendor payments for medical care separate from the money payment. This amendment provides for separate Federal sharing in a State's total expenditures for medical care paid directly to suppliers of medical services in behalf of assistance recipients up to one-half of the sum of \$6 times the number of adult recipients and \$3 times the number of child recipients per month. As a result, most States will be able to provide more medical care for the needy, and the use of an average in determining the amount of the Federal share will make it possible to meet larger medical care expenses in individual cases.

The provision for additional Federal matching in medical care costs, beginning July 1, 1957, provided the stimulus for extensive planning and preparation on the part of both Federal and State agencies during the year. At the Federal level, discussions were held with representatives of various groups to interpret the provisions of the amendment and to get the benefit of their specialized knowledge and suggestions for its implementation. These groups included the American Medical Association, American Dental Association, American Pharmaceutical Association, American Hospital Association, the Christian Science Church, American Nursing Homes Association, and the National Social Welfare Assembly; medical staff in the Department of Health, Education, and Welfare; and State public welfare directors and other State staff. In June, representatives of interested national organizations and staff of State public assistance agencies came together in Washington to discuss the problems and questions which had arisen around the implementation of this amendment.

The States reviewed existing medical care provisions to see how they could best be broadened and strengthened, and new provisions were planned. In 12 States, legislation was enacted to authorize making vendor payments for medical care; and in six others, similar legislation was considered. Special interest was shown by States which previously had provided little or no medical care; many were interested in planning for payment of hospital care.

Further legislation was enacted in 1957 because a few States which had been able to make substantial vendor payments for medical care within the Federal matching maximums on individual assistance payments would have been adversely affected by the limits of the new

provision for separate Federal sharing in medical care expenditures. As a result, Public Law 85-110 was passed in July 1957 to give the States an option with respect to the basis for claiming Federal participation in their vendor payments for medical care. Before May 16 of each year or less often if desired, States can elect for the following fiscal year to receive Federal financial participation for combined money and vendor payments within the specified individual matchable assistance payment maximum, as previously, rather than to claim separate Federal matching for vendor medical care payments under the 1956 provision for separate matching of medical care expenditures. The new law amends section 305 of Public Law 880. Two States exercised this option for fiscal year 1958 for some of their programs.

While the provision for separate Federal matching in medical care costs will not make it possible for States to finance a comprehensive program of medical service for assistance recipients, it has enabled States with no statewide provision for medical care to begin to pay the cost of some medical services, and others to expand their existing medical care provisions. Within several months after the effective date of the amendment, 35 States planned to use Federal funds in separate vendor payments for medical care. This includes 11 utilizing Federal funds for the first time in providing medical care and 11 using the additional Federal money to extend their existing medical care programs.

Six States have not yet taken action, although two are working on plans with their respective departments of health. The remaining 12 States have indicated that they cannot yet benefit by this amendment either because they lack enabling legislation or appropriations, or because of other problems which must be worked out first. However, some of these States, as well as some others with vendor payment plans limited in coverage, expect to continue to include an amount for certain kinds of medical services in the money payment.

Sixteen States will use a pooled-fund arrangement (including 12 which had used this plan previously); 16 States will make direct payments to the suppliers of medical care services; and 3 States will use prepayment arrangements such as a contract for service with a State health department, State medical association, or a hospital insurance plan. For example, one State is entering into contracts with Blue Cross-Blue Shield to provide hospitalization and physician's services in the hospital for recipients of aid to the blind and aid to dependent children programs. Another State is contracting with the State medical society to provide physician's services, drugs, and certain other items on a prepayment capitation basis. Some of these arrangements are being tried on an experimental basis.

Some of the new plans are from States with limited funds and provide mainly for hospitalization for life-endangering illnesses. Where hospitalization is available through existing facilities or programs, some States are beginning with payments for doctors, drugs, and nursing-home care. As more experience is gained in determining cost figures and in handling other administrative aspects of this program, and as more State money becomes available, some of these States may be able to extend their coverage of services.

STRENGTHENING SOCIAL SERVICES FOR NEEDY PEOPLE

All those who come to the public assistance agency are struggling with problems of inadequate income. The definitions of the groups receiving federally aided assistance mean that, for many, this is further compounded by other serious personal problems such as those related to old age, illness, physical or mental handicap, or family disruption. Public assistance agencies have long recognized that without appropriate help such problems will often result in deteriorating situations harmful to both the individual and the community.

Within the limits of their capacity and availability of community resources, many public assistance workers have been assisting these needy individuals to find and use their own strengths and other available resources to develop their best potentials for more satisfying and independent living. For example, workers arrange for necessary medical care and other rehabilitation services within the public welfare agency or offered elsewhere. They provide services that enable the needy person to remain in his own home and with his family and friends as long as possible, plan other kinds of custodial care when necessary, and arrange for specialized services and home-helps that enable persons no longer in need of institutional care to return to normal living patterns in the community. Some workers also help with more intangible but equally serious emotional problems, such as a disturbed relationship between parent and child, tensions threatening family solidarity, or feelings of inadequacy blocking the way to independent activities.

The extent to which these and other social welfare services are being provided, however, varies greatly across the country. Some agencies lack staff time and/or professional skill to provide many services, and supporting community resources are often missing or very limited. Yet heartening advances have been made in the number of people helped to greater self-sufficiency; some savings have also resulted through decreased assistance costs. Special projects have also demonstrated the benefits of cooperative effort between public and voluntary agencies and other groups in the community.

For example, several projects were set up to relieve pressing problems that stem from the increased number of aged people in nursing homes and mental hospitals. By providing outside living arrangements and such aids as homemaker service, visiting nurse services, and friendly visiting, some aged persons no longer in need of sheltered care were able to return to the community. In addition to greater personal satisfactions in home living for the individual and freeing institutional beds for those needing them, some savings also resulted through reduction in expenditures for costly institutional care.

Other demonstration projects used a team of experts—often including doctors, rehabilitation and employment counselors, and social workers—to consider latent capacities and resources of handicapped individuals. This approach has shown substantial results especially with incapacitated parents of children receiving aid to dependent children. Some were helped to become self-supporting, while others embarked on plans for at least partial rehabilitation.

The value of such services was recognized and affirmed in the 1956 amendment to the Social Security Act which endorsed Federal sharing in expenditures incurred by a State public assistance agency in providing, in addition to financial aid, other staff services to help assistance applicants or recipients achieve increased capacity for personal and economic independence and strengthen their family life. The passage of this amendment, in turn, provided the stimulus for renewed and strengthened activities on the part of the State agencies.

Effective July 1, 1957, State plans were to describe the services made available by the State agency and the steps taken to assure maximum utilization of similar or related services furnished by other agencies. This requirement provided a focus for evaluating services already provided and planning for their extension and increasing effectiveness. It also resulted in clarification of the responsibility of staff at all levels for the provision of such services, more emphasis on effective cooperation with other agencies, and added emphasis on participation in community planning to develop new resources.

In developing policy and guide materials to implement the "services" amendment, the Bureau enlisted the help of a National Advisory Committee including representatives from State and local public welfare agencies, national voluntary agencies, graduate schools of social work, and staff from other units of the Department. A policy statement on "Social Services in Public Assistance" was developed; and a monograph on "The Role of the Caseworker" was prepared as Part I of a series on *Services in Public Assistance*, and Part II—"The Role of the Agency"—is in process.

Similarly, a 2-day National Conference on Homemaker Service was held in June 1957 under the joint auspices of the Children's Bureau,

the Bureau of Public Assistance, and the Public Health Service, to stimulate the further development of homemaker service. Effective results have already been achieved in its use to release family members caring for assistance recipients to seek gainful employment; to permit the chronically ill, the emotionally handicapped, the physically disabled, and the aged to remain in their own homes as long as possible; or to maintain a home for dependent children where the mother is ill or otherwise temporarily unable to care for them. A monograph on "Homemaker Service in Public Assistance" was prepared discussing the problems best served by homemaker service, the other types of home-help needed, and the ways in which this specialized agency resource might be made more widely available.

In addition, under the auspices of the National Social Welfare Assembly, a meeting was held with representatives of national voluntary agencies to consider how voluntary and public social welfare agencies can work together in developing and providing the services needed by children receiving aid to dependent children. A report on "Services in the ADC Program—Implications for Federal and State Administration" also was prepared, summarizing State comments on the earlier draft report on "Services in the ADC Program" prepared jointly by the Bureau of Public Assistance and the Children's Bureau.

The States' Vocational Rehabilitation Council Committee on Relationships with Public Assistance also met in Washington in April 1957 with representatives of both the Bureau of Public Assistance and the Office of Vocational Rehabilitation to explore ways in which State agencies of both programs can work more cooperatively and effectively. Similar discussions were held between State vocational rehabilitation and public assistance agencies.

Planning for the most effective use of all these resources was reflected in many State social services plans, along with clarification of the problems and needs for which the State offers casework and counseling services. Some State plans provide special help to the handicapped, homemaker service for the ill and aged, and/or foster care for ill or aged adults unable to live alone but not in need of custodial care. Although there is great variation in the range of problems identified on which States will offer services, certain common areas were recognized by most States—the effects of financial need, illness, disturbed family relationships, and lack of education and training for employment. To insure the progressive development of their social services some States have also established methods to assess the range and nature of problems identified, and the adequacy of agency and community resources in meeting them.

EFFORTS TO INCREASE AVAILABILITY OF QUALIFIED STAFF

With increasing recognition of the need for social services has come greater awareness of the direct relationship between the quality of services provided and the skill of staff providing them. Yet only about 20 percent of staff in social work positions in public assistance agencies have any social work training, and only 4 percent have completed professional training.

To increase the number of qualified persons available to provide the quality of services needed in administering public assistance today, a 1956 amendment authorized the use of additional Federal funds, effective July 1, 1957, to assist the States in meeting the costs of training personnel employed or preparing for employment in public assistance programs. This permits States to provide financial aid both to individuals and institutions for training in social work and other professional and technical fields related to public assistance administration.

In anticipation of additional Federal funds for training purposes, intensive effort was made by the States during the year to expand and strengthen their training programs. Proposed policy for operating under this amendment and principles underlying long-range staff development plans developed by the Bureau were also used by the States in developing their training plans. Many of the States requested Bureau consultation and written materials on staff development.

Emphasis in all the States was placed on reevaluation of current staff development plans and development of long-range plans, including the use of funds for graduate social work education for current employees. Some of the States added training consultants to their staffs, and others increased the number of persons assigned to training jobs.

Based on study of the education and experience of current staff, the minimum educational requirements for beginning positions were raised in some States, and recruitment plans were developed in others. Many of the States held short-term courses to strengthen the skill of administrative and supervisory staff in helping workers to administer medical care provisions and provide other social services. Some of the States increased the use of faculty from schools of social work to conduct short-term institutes within the agency.

Most of the States increased the number of persons granted educational leave for graduate professional training during the year and made plans for expanding this number in succeeding years. Legislation was passed in several States authorizing the use of funds for training purposes. Appropriations made specifically for training enabled a few States for the first time to develop plans for educational

leave. Consideration was given also to the need for readjustment of salary scales in relation to increased competence of staff, in order to retain staff being given professional training.

Closer working relations between State public welfare agencies and schools of social work resulted from the increasing use of faculty members in conducting institutes within the agency, and from the increasing number of staff attending schools of social work. For example, in the New England area, a committee of State agency staff and faculty from five professional schools are working toward improving the professional performance of public assistance and child welfare personnel and toward defining the level of performance expected.

In addition to working directly with schools of social work, Bureau staff also worked with the Council on Social Work Education in developing teaching materials for use in training for work in public welfare programs. They also participated in developing materials for the use of the Council in a curriculum study designed to improve the quality of training for social work positions in public welfare programs, including the development with the North Carolina Department of Public Welfare of a statement of problems in public assistance.

Several institutes were held by the Bureau for State staff on the use of the group process in training programs. A seminar on this subject was held in June 1957 under the joint sponsorship of the Children's Bureau and the Bureau of Public Assistance, with representation from 26 States; and a monograph on "Group Leadership in Staff Training" was also issued under their joint sponsorship.

The momentum in staff development activities gathered during the year has been seriously hampered by the omission of funds for training in the 1958 Federal appropriation. The States' interest in moving ahead in this area, however, is reflected in the plans of many States to carry through in the coming year some of the activities previously considered, although necessarily on a much more limited scale.

OTHER ADMINISTRATIVE DEVELOPMENTS

Nationwide increases and variation among States in the cost of administering public assistance and congressional consideration of measures affecting the use of Federal funds in matching State and local expenditures pointed to the need for study of underlying factors.

Since people receiving public assistance are dependent because of financial need compounded by other personal or social problems, the work of State and local agencies has been increasingly directed both

toward dealing with problems which created the dependency and helping individuals move to a fuller use of their own strengths and capacities. In addition to determining initial and continuing eligibility for assistance and the extent of need for financial assistance, the worker also assesses the individual's need for, and provides or arranges for the provision of, other services that will assist him to deal constructively with his economic and social problems. This broader concept of the purpose of public assistance, under which most States are operating even though in varying degrees, received congressional recognition and approval through the "services" amendment to the Social Security Act in 1956. This amendment also recognized that the costs of administration would include expenditures necessary in providing these services.

During the year, therefore, intensive study was made of the component elements included in State and local expenditures for administering assistance to provide a basis for the development of proposals relating to administrative costs which would meet the realities of current program objectives, as well as carry out responsibility for proper and efficient administration.

Continuing efforts also have been made by regional and departmental staff in advancing more efficient and effective administration of public assistance programs through review of State plan and administrative practice, and providing technical assistance to the States. For example, during the year, administrative reviews were conducted in 23 States, covering 920 local agencies. Emphasis was placed on eligibility determination, with study in other program areas on a selected basis including the application process, appeals and hearings, rehabilitation and other welfare services, State supervision of local agencies, and determining disability in the aid to the disabled program. Findings from these reviews were used in strengthening program operations both in the States and in the Bureau.

Technical assistance and consultation also continued to be provided to the States on request in both program and administrative areas. In addition to the continuing help given by regional staff, during the year, for example, 104 consultations were provided by specialists in such areas as: implementation of new legislation on medical care, training, and social services; team activities and other aspects of the aid to the disabled program; need determination and standards of assistance; administrative costs; staff training; various aspects of the aid to dependent children program; administrative and fiscal standards; and methods for quality control and improvement of various aspects of public assistance administration.

In addition to the issuance of reports mentioned above, other publications processed for distribution during the year included: *Illness and Disability—Selected References for Public Assistance Caseworkers*; *Digest of Special Studies Relating to Public Assistance*; *Trend Report—Graphic Presentation of Public Assistance and Related Data*; and *National Manual—Emergency Financial Assistance and Emergency Clothing*.

DEFENSE WELFARE SERVICES

Under a delegation from the Federal Civil Defense Administration, the Bureau completed its second year of work in planning for emergency financial assistance and emergency clothing in the event of an enemy attack. The signing of agreements between the Social Security Administration and 43 State departments of public welfare during the year provided a firm base for establishing a nationwide organization through which welfare needs of people could be met promptly during an emergency. The issuance of a national manual for emergency financial assistance and emergency clothing provided the guideposts for continuing State and local civil defense welfare activities.

A national advisory committee broadly representative of the retail clothing industry, national clothing trade associations, and public and voluntary social agencies helped in planning this aspect of the program. Working relationships with other governmental agencies having delegations from the FCDA, particularly the Department of Labor and the Business and Defense Services Administration of the Department of Commerce, contributed to the better coordination of civil defense welfare activities.

Termination of the appropriation to the FCDA for delegated civil defense activities necessitated the discontinuance as of June 30 of the Bureau's planning activities in relation to the emergency financial assistance and clothing programs. However, with the Department's willingness to consider resumption of these activities if funds again become available, the Bureau is maintaining liaison with the FCDA and is continuing staff work involved in planning for the continuity of essential functions required by the Office of Defense Mobilization.

SERVICES FOR REPATRIATED AMERICANS

Since World War II the Bureau has been cooperating with the Department of State in the repatriation of American citizens. Although relatively few become stranded in foreign countries in peacetime, the hardships of some are great. The Department of State makes loans to pay for return transportation but not for emergency medical care or maintenance abroad, nor for aid after reaching this

country. Yet many of these individuals no longer can claim residence in any State and are not eligible for public aid or public hospitalization.

During the calendar year 1956, 42 cases from 22 countries were referred to the Bureau by the Department of State for help in meeting individual or family problems. Since Federal funds are not available for this purpose, the Bureau, through its regional offices, tried to locate other available resources to provide the assistance and services needed. These include, for example, reception services at the port of entry, making contacts with relatives and friends, arranging for medical or hospital care, providing temporary income maintenance, or providing help with family relationship problems.

In the fall of 1957 when a small group of Americans were evacuated from trouble areas in the Middle East, the Bureau was given a special allocation from the President's Emergency Fund and requested by the Department of State to meet the evacuees at the airport and help them on to their destinations. Recognizing that problems relating to repatriation of Americans will become more acute in a period of international tensions, the Bureau has been working with the Department of State and the Department of Defense in developing plans and legislative proposals for more adequate meeting of peacetime repatriation needs and for prompt activation of stand-by plans for reception and provision of services to evacuees during an emergency.

Children's Bureau

A broad mandate to "investigate and report upon all matters pertaining to the welfare of children and child life" was given the Children's Bureau in the act of 1912 creating the Bureau. To its investigative and reporting functions was added an additional responsibility under title V of the Social Security Act of 1935, as amended—that of administering grants to States to assist them in extending and improving their health and welfare services to children, especially in rural areas and areas of special need.

Improving the conditions under which children are born and grow up has been the concern of the Children's Bureau through 45 years of service. To this end it makes studies and reports, works with public and voluntary agencies in an advisory capacity, develops guides and standards for service, and administers the grants for maternal and child health, crippled children's services, and child welfare services.

Some Facts and Figures About Mothers and Children

For the third consecutive year, the number of live births in 1956 exceeded 4 million. Crude birth rates have stabilized since 1950 at about 25 per 1,000 total population but fertility rates in relation to women of child-bearing age continue to increase, and birth rates for third and fourth children indicate the possibility of larger families.

The United States child population under age 18 increased from 47 million in 1950 to an estimated 57 million in 1956. By 1965, the number is expected to rise to about 70 million.

Infant mortality is reported provisionally for 1956 at 26 deaths per 1,000 live births, the lowest rate ever recorded, but many States still have relatively high rates, particularly for nonwhite infants.

About 320,000 infants were born prematurely in 1956. Sixty percent of neonatal deaths and 44 percent of all infant deaths in 1955 were reported as associated with prematurity. In 1955, almost 4 percent of reported pregnancies that reached 20 weeks or more in duration resulted in a stillborn infant or death in the neonatal period.

Maternal mortality has declined steadily since 1929, from a rate of 69.5 maternal deaths per 10,000 live births to an estimated 3.8 in 1956.

In 1955 in 17 percent of the births to nonwhite mothers and in over 8 percent of the births to mothers in rural nonmetropolitan counties no medical attendant was present at delivery. These proportions, however, are lower than in previous years.

Accidents are the leading cause of death for children. They took the lives of 16,707 children aged 1 to 19 in 1955 and accounted for 40 percent of the mortality in this age group.

Among other deaths, cancer has become the leading cause for death of children 5 to 19 years of age, while influenza and pneumonia lead in the preschool group. Next in importance among all deaths of children 1 to 19 years old are congenital malformations and diseases of the heart, including acute rheumatic fever.

The number of children born out of wedlock during 1955 was estimated at 183,300, a 4-percent increase over 1954. Of these, 64,200 were white children and 119,200 nonwhite. About 73,000 unmarried mothers were under 20 years of age.

Juvenile delinquency continues its upswing. Police arrest data reported by the Federal Bureau of Investigation for 1,160 cities show that arrests of juveniles under 18 increased 17.3 percent from 1955 to 1956. In 1956, juveniles represented 66.4 percent of all persons arrested for auto theft, 53.9 percent for burglaries, 50.4 percent for larcenies. Preliminary juvenile court data, too, show a rise in delinquency cases between 1955 and 1956, possibly by as much as 20 per-

cent. This is the eighth consecutive year of increase. Roughly 2 percent of the child population aged 10 through 17 are estimated to be involved each year in delinquency cases that reach court.

Family income in the United States reached an all-time high in 1955, with a median money income of \$4,421 per family. But families with four children had a median money income of \$4,360; families with five children, \$3,622; and families with six or more children, \$3,434. In 1955 families with four or more children constituted only 9 percent of all families, but they contained 31 percent of the country's children.

The mother's work outside the home has been one of the major factors in rising family income in recent years. Between 1948 and 1953 the proportion of married women living with their husbands and with preschool age children increased from 11 to 16 percent. In March 1956 more than two million such mothers with children under age 6 were in the labor force.

Children With Special Needs

Though all children are its concern, the Children's Bureau continues to recognize certain groups as being under special handicap and in special need.

The adolescent in contemporary society is under increased pressures and though the vast majority grow up to be responsible adults, a sufficient number engage in delinquent behavior to cause concern all across the country. The Children's Bureau has continued through 1957 its drive on delinquency, concentrating especially on developing standards for care and on training needed personnel.

The children of migrant agricultural workers continue to be a concern of the Children's Bureau though progress in improving their lot has been made. A study in Florida made possible through a special grant has borne fruit in a service project in two counties. Colorado, also, with the stimulus of a special grant, has gradually extended and improved its program. In Pennsylvania child welfare services to migrant children have been considerably expanded. In a number of other States there is evidence of increased awareness of the problem and of willingness to accept more responsibility for these children.

In appropriating \$16 million for maternal and child health grants for the fiscal year 1957, the Congress earmarked \$1 million for special projects for mentally retarded children and the House Committee on Appropriations recommended that approximately \$1 million additional also be used on the problems of mentally retarded children. By the end of the year projects had been approved in 26 States by the

Children's Bureau, with commitments totaling about \$1,300,000. In addition, State health departments have reported budgeting over \$500,000 of other Federal maternal and child health funds for children with mental retardation.

Adoptive placement of children without benefit of prior social agency services has received special attention. Emphasis is being given to the social, medical and legal protections needed by natural parents, the child and adoptive parents. Social workers from various States attended a Children's Bureau sponsored meeting to consider "The Role of the Social Agency in Adoption."

Federal Interdepartmental Committee on Children and Youth

The Congress places responsibility upon a number of the agencies of the U. S. Government for programs which contribute in varying degrees to the social well-being of children and youth. In 1948 the President requested these agencies to form an Interdepartmental Committee on Children and Youth to assist each other in keeping informed about program developments, to work together for greater effectiveness in program planning, and to strengthen working relationships between the Federal Government and the States. This triple assignment has been carried out during fiscal year 1957 by the regular monthly meetings of the full Committee, the work of its subcommittees, and an informational exchange with the State and Territorial Committees on Children and Youth. Thirty-four Federal agencies are represented on the Committee which meets monthly from September to June. The Children's Bureau furnishes the secretariat for the Interdepartmental Committee on Children and Youth.

The Interdepartmental Committee was a cosponsor of the Joint Conference on Children and Youth held in Washington, D. C., in December 1956 at which over 200 representatives of State, national voluntary, and Federal agencies participated.

Programs of the Bureau

RESEARCH IN CHILD LIFE

The Bureau's small research staff has the chief responsibility of carrying out the legislative mandate "to investigate and report upon all matters pertaining to the welfare of children." In addition to its own studies and those conducted jointly with others, the Bureau seeks to stimulate research in child life by other agencies by formulating the questions requiring study and by developing research methods and by advising agencies engaged in such research.

Technical research under way during the year included development of a method for determining unit costs in institutional care of children and analysis of methods and findings of evaluative research. Two large-scale studies were launched to examine, respectively, the outcome of independent adoptions and the reasons for the large number of staff losses in child welfare and private family service agencies. Work continued on assembling information about programs and services for mentally retarded children. Improvement in hospital statistics on maternity and newborn infant care was stressed in the development of a joint research study of the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, the Connecticut State Department of Health, and the Children's Bureau.

Throughout the country juvenile delinquency is being studied from both psychological and sociological perspectives—the former focusing primarily on the inner personality dynamics of individual children, the latter directing attention to the effects of situational or environmental social and cultural factors. In an attempt to bridge the gap between these two approaches, the Bureau published a report of a conference of experts from both fields.

The Bureau receives annual statistical reports from official State agencies regarding State and local health and welfare services for children. It also receives certain statistical information on voluntary child welfare services, on the work of juvenile courts and public training schools for juvenile delinquents, and on adoption. These reports are occasionally supplemented by special statistical inquiries. During 1957 the following publications based on such statistical data were published: *Some Facts About Public State Training Schools for Juvenile Delinquents*, *Training Under the Maternal and Child Health and Crippled Children's Programs*, *Crippled Children's Services at the Mid-Decade*, *Selected Child Welfare Expenditures of State and Local Public Welfare Agencies*, *Juvenile Court Statistics*, *Maternal and Child Health Services*, *Adoption in the United States and Its Territories*, and *Public Programs for Crippled Children*.

As a part of its research interpretation activities, the Bureau has been reviewing its role in parent education as an interdisciplinary movement, with special reference to current issues and problems requiring new approaches. Three issues of *Research Relating to Children* under a new plan of coverage were published. This series is an inventory of current research to help investigators in the field of child life keep informed about studies being conducted in their areas of special interest.

The research staff worked with or provided technical consultation requested by State health departments and other health agencies on

studies concerning subjects such as prematurity, emotionally disturbed children, mental retardation, neurological defects of infancy and childhood, and attitudes of professional health workers. State welfare departments and other welfare agencies were assisted in studies on such problems as family life education, value of a central register for juvenile delinquents, optimum caseload for child welfare workers, administrative uses of child welfare reports, and evaluation of juvenile delinquency control measures.

MATERNAL AND CHILD HEALTH SERVICES

All of the States, the District of Columbia, Alaska, Hawaii, Puerto Rico, and the Virgin Islands receive Federal funds to extend and improve services for promoting the health of mothers and children.

The Congress for the year 1957 increased the appropriation for maternal and child health to \$16,000,000 and earmarked \$1,000,000 to be used only for special projects for mentally retarded children.

The ongoing programs of the State maternal and child health agencies continue to make a major contribution to the health of the Nation. Preliminary and incomplete figures from State maternal and child health reports show that about 224,000 mothers received services at maternity medical clinics in 1956. In addition, health nurses served some 430,000 mothers before or after delivery.

About 445,000 infants and 640,000 other children received health supervision through well-child clinics. In addition, health department programs provided nursing service for about 2,660,000 infants and other children.

Almost 1,248,000 children were vaccinated for smallpox and nearly the same number were immunized for diphtheria by State and local health departments through grants provided by the maternal and child health programs. Polio immunization through these programs reached ten and a half million children.

To better prepare personnel for maternal and child health programs a number of States carried out institutes and special training projects.

Of unusual significance is the First Illinois Congress on Maternal Care sponsored by the new Illinois Committee on Maternal Welfare, held in February 1957. The Illinois Committee on Maternal Welfare was a pilot project of the American Committee on Maternal Welfare designed to invite the active participation of the several professions concerned with achieving optimum maternal and newborn care. The Illinois Department of Health played an active role in the planning and execution of this program.

An institute attended by 150 physicians and nurses on Maternity Newborn Care sponsored by the Montana State Health Department, Montana State Medical Society, and the Montana State Nurses Asso-

ciation was held June 9-12, 1957. The focus of the institute was on the medical and nursing clinical aspects of obstetrical and newborn care in respect to complications in pregnancy, abnormal labor, and conditions causing stress in the newborn.

Representatives from 17 schools of nursing with degree programs met in Atlanta, Georgia, for a workshop on The Maternal and Child Health Component of the Basic Curriculum for Nurses. This workshop was sponsored by the Southern Regional Education Board, the Georgia State Department of Public Health, and the Children's Bureau.

The Utah State Health Department with the University of Utah sponsored an institute for nurses on child growth and development in June as a follow-up of the Regional Institute held at the University of Wyoming, June 1956.

Special emphasis has been given to the development of programs to a long-neglected segment of our child population—the mentally retarded. On the basis of the increased maternal and child health funds earmarked by Congress for this group of children, the Children's Bureau approved 26 special demonstration projects to be operated as part of State health department programs in maternal and child health. These are designed to:

1. Provide early casefinding, evaluation, diagnosis and treatment, planning, and follow-up care, particularly for preschool mentally retarded children and their families.
2. Evolve patterns of service and methods of providing services which State health departments can utilize.
3. Provide training and orientation for a variety of professional personnel.

In addition to special project funds, regular maternal and child health funds in many States have gone into programs for mentally retarded children.

Through regional and State conferences on mental retardation professional personnel, official State agencies and representative parents' groups in at least 28 States were involved in institutes on this problem. During the year the Denver and Dallas Regions each had conferences on mental retardation, and the Charlottesville and Atlanta Regions held one jointly. Among the States which had State meetings were: Arkansas, Colorado, Iowa, Kentucky, Minnesota, Mississippi, Virginia, and Washington.

In addition, an institute on mental retardation for public health nurses at Boston University and one for social workers at Tulane University were utilized to evolve patterns for similar institutes being planned and geared to a variety of professional disciplines. Most States having special projects have provided for orientation of project personnel and maternal and child health staff through visits in existing special facilities serving the mentally retarded,

There has been renewed interest by maternal and child health directors in programs for the improvement of hospital care of maternity patients and their newborn infants. The planning in most instances is a cooperative venture with the appropriate committees of the State medical societies, State chapters of the Academy of Pediatrics, the official State agency responsible for hospital licensing, the State hospital association, and, in some instances, the staffs of individual or local groups of hospitals. With an increasing number of births occurring in hospitals, and most of the prenatal care provided by private physicians or hospital clinics, this is a logical focus of emphasis in any efforts to improve the quality of care and to lower the morbidity and mortality rates.

The intensification of interest at the State level is in part a result of the cooperative efforts at the national level. The Children's Bureau has had a representative on the American Academy of Pediatrics Committee which, with the cooperation of the American College of Obstetricians and Gynecologists, the American Public Health Association, the American Hospital Association, and the National League for Nursing, developed "Standards and Recommendations for Hospital Care of Newborn Infants—Full Term and Premature," and this year revised it. The Children's Bureau has also been represented on a committee of the American Committee on Maternal Welfare (now the American Association for Maternal and Infant Health), which with a number of professional organizations is in the process of developing a "Guide to Hospital Care of Maternity Patients."

Eighty-three public health nurses in North Carolina have completed short courses in home and farm accident prevention over the past 3 years. These courses have been sponsored jointly by the State Board of Health and the University of North Carolina. This is considered a significant accomplishment within the State since accidents, particularly those of home and farm, are one of the leading causes of death in North Carolina children.

CRIPPLED CHILDREN'S SERVICES

All of the 53 States and Territories, with the exception of Arizona, are participating in the crippled children's program. Though the State agency auspices vary, the objective is uniform, namely: to locate children who require care, and to provide restoration through diagnosis, medical and surgical treatment, and alleviation of unfavorable social and psychological influences which adversely affect the degree and duration of the disability. The appropriation for crippled children's services is \$15,000,000, the amount authorized.

Preliminary figures from State reports indicate that a new peak was reached in 1956 in the number of handicapped children served

under federally aided programs. Some 290,000 children were cared for during the year. Most of the children (232,000) were seen in clinics; about 60,000 received physician's services through home or office visits. Children who were hospitalized numbered approximately 52,000. Convalescent home care was given to the smallest group, around 3,800.

A significant development during the past year is the trend toward the establishment of diagnostic and treatment centers for children—children with all kinds of handicaps—in medical schools. These centers are based in the pediatric department but available to the centers are all medical specialties; medical social work; nursing; psychology; physical, occupational, and speech therapy; and a variety of other disciplines, including special education.

Both the Arkansas and Louisiana maternal and child health divisions employed consultants in safety and accident prevention, and the Poison Control Center in Oklahoma is continuing to develop its service.

The Michigan Child Amputee Program has established a training course for physicians, occupational therapists, physical therapists, and medical social workers. This is the first child amputee course to be offered in the country. As a result there is awakened interest in this group of handicapped children on the part of other State agencies. While the Grand Rapids Center is accepting many severely handicapped children, including a number of quadruple amputees, the crippled children's agencies in other States are gradually assuming more responsibility for the less severely handicapped amputees as knowledge from the Grand Rapids Center is being disseminated to professional personnel in other States and countries. Washington is one of the States which has established a special crippled children's clinic for amputees during the year.

Several States are beginning to develop services for children with nephrosis, cystic fibrosis, and other selected metabolic and degenerative diseases in which the prognosis can be materially improved through early recognition and continuous and proper medical treatment and follow-up. Such services have been initiated in Connecticut, Massachusetts, New Hampshire, New Jersey, and Pennsylvania.

During the past year the number of States accepting children with congenital heart disease under their crippled children's program has continued to increase, and the number of States which have their own centers which have been approved for cardiac surgery has also increased. Some States use the State center for cases requiring simpler cardiac surgery and the Regional Cardiac Centers for the more complicated cases. Children of the Territory of Guam are now served through the Regional Cardiac Center in California.

Among the States which have initiated programs for children with congenital heart disease this year are Alabama, Missouri, and Kansas.

A few centers which have been approved for cardiac surgery by their respective States are: Vanderbilt University Hospital, University of Tennessee Hospital, St. Louis University Hospital, and University of Missouri Hospital.

In addition to the University Hospitals in Minneapolis, Minnesota, two other centers were added to the Minnesota Regional Heart Center program—the Mayo Clinic, Rochester, Minn., and Mt. Sinai Hospital, Minneapolis, Minn. A major problem which arose in these centers was that of obtaining a large amount of fresh blood on the day of the operation. There were not enough paid donors available and the lack of donors was holding up operations. Largely as a result of newspaper publicity plans were worked out for obtaining voluntary donors from Minnesota State Prison, St. Cloud Reformatory, and other correctional institutions.

Increased activity in development of services for children with rheumatic fever and congenital heart conditions has been a marked trend in crippled children's programs in Alabama, Florida, Georgia, North Carolina and Tennessee. Because of mutual interest of the Children's Bureau and of the Public Health Service, there have been joint activities with State heart programs. A symposium on rheumatic fever sponsored by the maternal and child health and crippled children's divisions of the North Carolina State Health Department was held at Chapel Hill during the year.

State health departments and crippled children's agencies continue to show extension and improvement of speech and hearing programs. The program in Arkansas is now to be housed in the Children's Hospital and is thereby established as part of a general children's medical service. A new program is being developed by the Texas maternal and child health division, and the New Mexico program is being reorganized following the return from training of their audiologist. The Tennessee Conference on Handicapped Children highlighted the speech and hearing program in that State, and the audiology training program of the Bill Wilkerson Speech and Hearing Center which is affiliated with Vanderbilt University is being expanded, aided by a grant from the Children's Bureau, through the State health department. California, with a special project grant, has started a program at the John Tracy Clinic which is devoting particular attention to the problems of central nerve deafness in children. Indiana, Wisconsin, and Ohio are States which provided fellowships for training in audiology. The Colorado special project in hearing conservation started last spring. The program is emphasizing the development of preventive and treatment services in rural parts of the State and is making a particular effort at the casefinding of preschool children.

In several States cognizance has been taken of the radiation hazard to public health. In Connecticut enabling legislation for control of

sources of ionizing radiation by the State Health Department was passed. New York has a new regulation prohibiting the use of radioactive materials, X-ray machines, and similar radiation-producing equipment on human beings by anyone not licensed to practice medicine, osteopathy, dentistry, or podiatry. In North Dakota, also, the Health Department was given responsibility for the control of radioactive developments in the State.

CHILD WELFARE SERVICES

The Children's Bureau has continued to work with public and voluntary, national, State, and local welfare agencies in planning for better social services for children. One part of this work is the joint planning with welfare agencies in the 48 States, Alaska, Hawaii, Puerto Rico, Virgin Islands, and the District of Columbia for the most effective use of Federal grant-in-aid funds for strengthening and extending child welfare services.

The method for providing social services for all children in need of them in all geographical areas continues to be a major concern of the Bureau. The importance of structure, organization, and administration in the provision of public social services for children is increasingly recognized. State child welfare advisory committees, planning commissions, and youth councils are taking a broader look at the total framework within which services are provided and are asking for help in relation to principles of organization and administration and in effective planning for the coordination of services.

State welfare agencies continue to use Federal funds for child welfare services available under the grant-in-aid program primarily for personnel and professional education. Still, the lack of a sufficient number of qualified child welfare staff and difficulties in recruitment present increasing problems in strengthening and expanding social services for children. In spite of salary increases in many States, salaries for social workers generally seem to be too low to compete with industry, education, and other fields. Some States are facing the fact that fully trained and competent staff in adequate supply will not be available for many years to come and are developing long-range recruitment methods. Arkansas, Louisiana, and Maine are employing college juniors during the summer months. This is in effect a paid orientation to the public social services with the hope that upon graduation from college such students may be interested in further training and employment in the social work field.

In Florida, a special committee on recruitment has been appointed with representatives from the departments of education and welfare and from the fields of public relations, counseling, youth guidance, and industry. The personnel officers of the State department of public welfare have been working with high schools in the prepara-

tion of material on social work to be included in textbooks. They have also been developing a rating scale for high school senior aptitude tests to indicate the potential aptitude for social work. This recruitment project involves long-range plans beginning with the eighth grade social study textbooks.

In an attempt to improve the quality of services provided to children, many States are providing special workshops for supervisory staff. A seminar on "Group Leadership in Staff Training" in public welfare agencies sponsored jointly by the Children's Bureau and the Bureau of Public Assistance was held in June 1957. Thirty-six State supervisors and consultants carrying responsibility for staff development in 26 States attended.

State public welfare departments are giving increasing consideration to the kinds of services needed in strengthening the child's own home. Interest in the development of programs of services to children in their own homes, particularly protective services, has continued with even greater momentum this year than last year on national, State, and local levels. Several sessions at the National Conference on Social Welfare were devoted to services to children in their own homes and to protective services. State conferences of social work have increasingly included institutes on services to children in their own homes. The requests to the Children's Bureau for special consultation in this area have greatly increased.

More and more, State and local welfare agencies are interested in developing homemaker services as a way of keeping children in their own homes. During the year, the Children's Bureau issued a new *Directory of Agencies Providing Homemaker Services in the United States and Canada* which included 128 agencies in 89 cities and 31 States. A small meeting on homemaker service under the auspices of the Children's Bureau, the Bureau of Public Assistance, and the Public Health Service was called on June 17-18, 1957. Nurses, doctors, and social workers discussed how to stimulate an expansion of homemaker services throughout the country; considered the kind of situations that require help in the home by an outside person; defined the types of home helps needed; specified some of the knowledge and skills involved; and outlined steps to be taken in planning for a national conference on homemaker and related services.

In considering how to assure the best possible care to children of unmarried mothers, child welfare staffs in the States have been faced with a dilemma. On the one hand they recognize that the continuation of independent placement of babies for adoption results, to a great extent, from the lack of services for unmarried mothers. On the other hand, great expansion of such services with-

out good public understanding of the needs of these children frequently produces public reaction against all unmarried mothers.

Considerable progress is being made in getting social workers, doctors, lawyers, nurses, and other professional groups to consider together their responsibilities in providing services to unmarried mothers and services in adoption. Connecticut, Maine, Rhode Island, and Vermont have ongoing committees with broad representation of physicians, lawyers, clergymen, social workers, and others including adoptive parents studying the need for more adequate State and local community adoption programs. A conference in Estes Park, Colorado, in September 1956, sponsored by the Colorado Medical School, the State health and welfare departments in the surrounding region, and the Children's Bureau, brought together about 90 representatives of the medical, legal, and social work professions to consider how the knowledge and skills of each could be brought to bear in protecting children placed for adoption.

Statistical reports on adoptions (covering the calendar year 1955) show that of the children adopted by nonrelatives, 56 percent were placed by social agencies and 44 percent were placed independently. Public interest in adoptions and in practices of social agencies has continued with an increase in the number of articles in popular magazines and number of programs on adoptions on television and radio.

Interest in the foster-care needs of children of minority groups has increased. The project called MARCH in San Francisco for recruitment of adoptive homes for children in minority groups has continued. A number of States, including the Middle Atlantic and Middle Western, have been giving special attention to the needs of Negro children. In South Carolina the State Department of Welfare has developed a new adoptive service for hard-to-place children. Colorado, Montana, and Wyoming have continued their efforts to find adoptive homes for handicapped children, older children, and children from mixed races or minority groups. In Colorado a series of newspaper articles about 51 of these children brought immediate and warm response from the public in the form of over 100 letters and 300 telephone calls from interested families in Colorado and surrounding States.

In addition to these many problems in regard to adoptions, State and local communities are requesting help and advice in regard to adoption legislation, fee charging in adoption service, and the establishment of a State adoption resource exchange.

In nonadoptive full-time foster-care programs, child welfare staffs are being encouraged to use foster care as a temporary arrangement until the child can be returned to his own family or placed in an adoptive home. The recruitment, selection, and development of fos-

ter family homes for children with special needs such as disturbed children and children who are physically handicapped are of major concern. Many agencies are looking carefully at the size of caseloads and board rates and are attempting to identify and measure the costs of foster-care services. An examination of the nature of "purchase of care" from voluntary agencies by public agencies and the responsibilities involved for both the public and voluntary agencies is the center of a great deal of attention.

Increase in commercial day-care facilities is reported in certain sections of the country, especially in the Southeastern States where rapid industrialization has occurred. Here the need for day-care services is the most outstanding gap in services. The welfare departments have struggled to meet this need and have taken considerable initiative through their child welfare licensing responsibility to raise the standards of day-care services. Three of the Southeastern States have two or more State staff members who are devoting full time to this service. Tennessee has six staff members giving full time to the development of day-care services.

In North Carolina, Maryland, and Virginia work on licensing day-care facilities is beginning. In Arizona and Louisiana the State welfare departments have been given new responsibility for licensing group day-care facilities. Minnesota and Missouri have issued up-to-date standards for day-care centers.

In institutional care of children, the progress varies. In most States there is real concern not only for improving the quality of institutional care but also for providing small specialized institutions for certain groups, such as emotionally disturbed, delinquent, and retarded children. By and large, however, plants are being improved, standards are being adhered to, and emphasis is gradually being placed on program and special services for children, such as psychiatric care and specialized medical care.

The limited usefulness of traditional institutions and foster-family homes for adolescents has prompted increasing experimentation with agency purchased or rented group homes. Recent ventures of this kind have been introduced or considered in California, Connecticut, New York, North Carolina, and Tennessee and in a number of other States.

Schools of Social Work are providing help in the improvement of institutional programs. The University of North Carolina School of Social Work has established a three-fold program of consultation, in-service training, and research for child-caring institutions in the Southeastern States. St. Louis University School of Social Service established in June 1957 a combined field and classroom curriculum for house parents employed in institutions in the St. Louis area.

During the year real progress has been noted in the way States are moving ahead in taking responsibility for consultation to and licensing of voluntary agencies and institutions. A number of States have issued new standards for child-placing agencies, institutions, maternity homes, day-care centers, and foster homes. Three workshops on licensing were conducted under the leadership of the Children's Bureau.

In all the New England States, public and voluntary health, education, and welfare agencies and organizations are working with organized parent groups in the interest of better health, education, and welfare programs for the mentally retarded child. In some States this cooperative effort has been focused on the need for improved institutional services and facilities; in others on family counseling and the development of camps and day-care services, and in still others, on special classes and vocational training and employment.

Colorado, Utah, and Wyoming participated in the regional workshop on services to mentally retarded children held in February under the sponsorship of the Colorado State Health and Welfare Departments, the Colorado Medical School, and the Children's Bureau. A similar regional conference was held in Dallas. Child welfare staff in these States are particularly desirous of incorporating modern concepts in the field of mental retardation into their in-service training for social workers and to develop joint efforts between physicians, educators, and social workers in meeting the needs of mentally retarded children and their parents.

Definite and continuing progress is evident in States in cooperative efforts among public and voluntary agencies. For example, in both Connecticut and New Hampshire, State-wide voluntary associations have spearheaded moves for better legislation, for foster-home finding, and for general interpretation of the needs of children.

Publications completed during 1957 were: *Child Welfare Services—How They Help Children and Their Parents*; *Meeting Family Need Through Homemaker Service*; *Homemaker Service, 1956—A Directory of Agencies in the United States and Canada*; *Educational Leave in Public Child Welfare Programs* (Child Welfare Reports, No. 6); *Child Welfare in Wisconsin: A Picture of a Program* (Child Welfare Reports, No. 7); *Foster Care, 1956* (Child Welfare Reports, No. 8); *Group Leadership in Staff Training* (Children's Bureau and the Bureau of Public Assistance); and *Proposals for Drafting Principles and Suggested Language for Legislation on Public Child Welfare and Youth Services*.

JUVENILE DELINQUENCY SERVICES

For the eighth consecutive year reports show a rise in juvenile delinquency—percentagewise faster than our juvenile population.

The Children's Bureau is giving consultative service to States and communities in relation to juvenile and family courts, probation services, police work, training of personnel in the law enforcement and correctional fields, social group work, and community organization activities in relation to juvenile delinquency.

Interest in State and local programs for the control and treatment of juvenile delinquency continues at a high level. In a number of States legislation has been proposed or passed which provided for separate agencies or for units within established agencies to administer services for delinquent children. A number of States have revised their juvenile court laws. Other States have added consultants to staffs of State agencies in areas such as probation services, institutional care, and community organization.

There is also considerable activity in the establishment of new or reactivation of old State and local committees or commissions for communication, joint planning and coordination of services and activities in relation to juvenile delinquency.

The use of forestry camps as treatment facilities is increasing. Camps have been established in at least 10 States, with five others planning such facilities. New construction is underway with six States building new training schools and a number of others expanding and renovating existing facilities.

The emphasis on the training of staff continues to be great in the probation, institutional, and police fields. Bureau consultants were involved in joint planning and leadership in various training institutes.

A workshop for staff responsible for training personnel in correctional institutions for juvenile delinquents, supported by a grant from the American Legion Child Welfare Foundation, was held at Rutgers University in April. Joining with the Bureau as cosponsors were the National Association of Training Schools and Juvenile Agencies, the National Probation and Parole Association, the Council on Social Work Education, and Rutgers University. The report of the workshop will include a formulation of new ideas regarding in-service training in correctional schools.

A 4-day national conference on Youth Groups in Conflict held in May attracted over 200 persons from 22 States. The National Social Welfare Assembly, United Community Funds and Councils of America, and the National Association of Social Workers joined with the Children's Bureau in sponsoring this conference. In recent years, programs to reach and help the members of hostile, antisocial youth

gangs have multiplied rapidly across the country. An increasing amount of agency time, money, and personnel has been going into these programs. There has not yet been much formulation of theory, practice, or built-in research to guide programs or to measure effectiveness. The conference proceedings will be published.

The Children's Bureau continued to work closely with the Bureau of Indian Affairs in relation to law enforcement activities and to care of Indian children in correctional institutions. Discussions were held with representatives of the Bureau of Old-Age and Survivors Insurance in relation to the use of benefits for support of children in correctional institutions and with representatives of the American Institute of Architects concerning developments relating to the construction of correctional schools. Cooperative work with the National Council of Juvenile Court Judges in the development of standard juvenile court and family court acts has continued.

Institutions Serving Delinquent Children—Guides and Goals was published this year, as were articles written by staff members.

INTERNATIONAL COOPERATION

The cooperative program with the International Cooperation Administration of the State Department is continuing, with a moderate increase in persons sent to this country for training by that organization. The World Health Organization and the United Nations continue to refer people from other countries to us for observation and training.

During the year the international staff of the Bureau has planned and arranged training programs for 78 long-term trainees and observers and 156 short-term visitors. The trainees were in programs 12 months or more, the observers 2 to 6 months, and the short-term visitors a few hours to 2 months. Of the 78 long-term trainees and observers, 51 were in the health field and 27 in the welfare field. In the health field, 21 physicians took courses in public health with a specialty in maternal and child health, nine physicians took graduate work in pediatrics, and two took graduate work in child psychiatry. Seventeen nurses were trained in pediatric, maternity, or orthopedic nursing. Two dentists had graduate training in pedodontics. In the field of child and youth welfare there were 13 trainees in child welfare, three in group work, and seven in juvenile delinquency prevention and treatment. Four social workers received training in medical social work.

Of the 78 trainees and observers, 53 came through the International Cooperation Administration, 11 through the World Health Organization, 13 through the United Nations, and one on her own. The long-term trainees came from 34 countries, the short-termers from 53.

The maternal and child health and child welfare specialists recruited and backstopped by the Bureau contributed to programs in nine countries. During the year two pediatric nurse educators, a nurse midwife, and a maternal and child health physician left for assignments to Latin American countries. At the end of the year two specialists returned from Latin America after very successful experiences—one a nurse midwife in Mexico, and one a medical social worker in Panama. Both made a great contribution to the development of their respective professions in these countries, and both have left behind them an organized program with trained, competent native persons in charge.

The Chief of the Bureau served as United States representative on the Executive Board of the United Nations Children's Fund (UNICEF). Also, the Assistant to the Chief for Program Development visited eight countries in the Eastern Mediterranean and South East Asian areas to see maternal and child health services aided by UNICEF. For one part of the trip she was loaned to ICA to take part in a conference on nursing education in Iran, and at another point was a Special Adviser to the United States Delegation at the meeting of the Western Pacific Region of WHO in Manila.

Federal Credit Unions

As general business activity continued upward throughout the fiscal year, Federal credit union operations advanced to new high levels in savings, membership, loans to members, assets, and number of active units. On June 30, 1957, outstanding charters totaled 9,022; of this number, there were 8,592 credit unions actually in operation, 343 in process of liquidation, and 87 which had received a Federal charter but had not yet commenced operations. The 8,592 operating Federal credit unions reported aggregate assets of more than \$1.6 billion, or 19 percent more than the total a year earlier. Membership increased from 4.3 million in mid-1956 to almost 4.8 million on June 30, 1957, a gain of 11 percent. Members' savings (shares) in Federal credit unions rose 18 percent, from \$1,239 million on June 30, 1956, to \$1,464 million at the end of the current fiscal year, while average shareholdings moved up from \$288 to \$307 on June 30, 1957. Loans outstanding to members of Federal credit unions stood at \$1,157 million as the fiscal year ended, an increase of \$211 million, or 22 percent, over the amount a year earlier.

Although inflationary pressures on the Nation's economy have been in evidence for some time, prompting measures by the Federal government to combat the trend, Federal credit union activities cannot be characterized as inflationary. Savings have always outpaced loans

to members. The \$1,157 million in loans outstanding on June 30, 1957, represented 79 percent of shares and 71 percent of total assets of Federal credit unions. By encouraging borrowers to continue to save while they are still repaying their loans from the credit union, and by stimulating saving by nonborrowers as well, the thrift aspect of credit union operations is emphasized. As a consequence, money taken out of circulation in the form of savings has exceeded the money put into circulation in the form of borrowing in every year since the inception of the Federal credit union program.

Encouragement of thrift has always been a major function of credit union operations. The habit of saving is instilled in the members by the educational efforts of the officials in the form of personal contact and distribution of literature explaining the functions and objectives of the credit union. While some individuals undoubtedly join the credit union only when they need a loan, many others have developed the habit of saving through the credit union, and many of them would very likely have accumulated no savings whatsoever were it not for the accessibility of the credit union at their place of employment, church or fraternal group, or in their own community.

In the 23 years since passage of the Federal Credit Union Act on June 26, 1934, Federal credit unions have weathered periods of recession and war and have emerged today in a period of unprecedented business activity in a stronger position than they were when the need was believed greatest. Arising out of the ashes of one of the worst depressions in the Nation's history, the credit union movement continues to serve a need for provident and productive loans at reasonable rates of interest, a need which has not diminished over the span from depression to prosperity. Another major function of credit unions—promotion of thrift—is just as important today as it was in the earliest days of our history when our forefathers so assiduously followed the principle of "waste not, want not."

Research and Development

The Bureau of Federal Credit Unions is responsible for the chartering, examination, and overall supervision of all Federal credit unions, and for examination of credit unions chartered under the District of Columbia credit union law. During fiscal year 1957, the Bureau issued 692 charters to newly organized groups, and conducted 7,115 examinations among established groups. On June 30, 1957, Federal credit unions were in operation in all 48 States, the District of Columbia, Alaska, Hawaii, Canal Zone, Puerto Rico, and the Virgin Islands,

Dissemination of information about credit union operations is achieved through issuance of periodic special reports to credit union officials and Bureau staff, and through distribution of the Bureau's annual *Report of Operations*. Instructional materials for use of the officials and others are prepared and distributed by the Bureau from time to time. Noteworthy examples of this latter type are the *Supervisory Committee Manual*, *Credit Committee Handbook*, *Federal Credit Union Handbook*, and the *Accounting Manual for Federal Credit Unions*.

A special questionnaire survey, designed to ascertain the purposes for which loans were made to members during 1956, was completed during fiscal year 1957. On the basis of reports from nearly a fourth of the Federal credit unions in operation at the end of 1956, a trend was indicated toward purchase of consumer durables, particularly automobiles. Despite this trend, however, the remedial type of loan still predominated in 1956, and the majority of loans made by Federal credit unions were relatively small in amount, ranging between \$200 and \$500.

Table 1.—Social Security Administration: Funds available and obligations incurred, fiscal years 1957 and 1956¹

[In thousands; data as of June 30, 1957]

Item	Funds available ²		Obligations incurred	
	1957	1956	1957	1956
Total.....	\$1,741,948	\$1,578,038	\$1,751,994	\$1,576,272
Grants to States.....	1,614,361	1,481,157	1,624,613	1,479,736
Public assistance.....	1,575,000	1,447,000	1,586,361	1,446,116
Old-age assistance.....			993,284	922,539
Aid to the blind.....			41,361	37,618
Aid to dependent children.....	1,575,000	1,447,000	443,210	395,290
Aid to the permanently and totally disabled.....			108,506	90,669
Maternal and child health and welfare services.....	39,361	34,157	38,252	33,620
Maternal and child health services.....	16,000	11,928	15,497	11,922
Services for crippled children.....	15,000	15,000	14,835	14,803
Child welfare services.....	8,361	7,229	7,920	6,895
Administrative expenses ³	127,587	96,881	127,381	96,536
Office of the Commissioner ⁴	372	323	361	320
Bureau of Old-Age and Survivors Insurance ⁵	121,500	91,229	121,412	91,067
Bureau of Public Assistance.....	1,748	1,636	1,729	1,621
Children's Bureau ⁷	1,822	1,740	1,811	1,731
Bureau of Federal Credit Unions.....	2,145	1,953	2,068	1,797

¹ Funds available and obligations reported by administrative agencies.

² Funds made available by regular and supplemental appropriations, authorizations, transfers, allotments, recoveries, and fee collections for services rendered.

³ Excludes approximately \$11.4 million spent from 1958 appropriation for 1957 requirements.

⁴ Funds made available and obligations incurred for salaries, printing and binding, communications, traveling expenses, and reimbursement items for services rendered to other Government agencies.

⁵ Appropriations by Congress from general revenues accounted for approximately 57 percent of the administrative expenses of the Office of the Commissioner in 1956 and in 1957; balance from old-age and survivors insurance trust fund.

⁶ For administration of the old-age and survivors insurance program, which involved benefit payments of \$5,361,000,000 in 1956 and \$6,515,000,000 in 1957.

⁷ Includes expenses for investigating and reporting on matters pertaining to the welfare of children authorized by the act of 1912, as well as expenses for administration of grants to States.

Table 2.—Financing social insurance under the Social Security Act: Contributions collected and trust fund operations, fiscal years 1955–57

[In millions]

Item	1957	1956	1955
Contributions collected under—			
Federal Insurance Contributions Act ¹	² \$6,877	\$6,442	\$5,087
Federal Unemployment Tax Act ³	330	325	280
State unemployment insurance laws ⁴ &.....	1,537	1,329	1,142
Old-age and survivors insurance trust fund:			
Receipts, total.....	7,100	6,937	5,535
Net appropriations and deposits.....	6,540	6,442	5,087
Interest and profits on investments ⁵	561	495	448
Expenditures, total.....	6,665	5,485	4,436
Monthly benefits and lump-sum payments ⁷	6,515	5,361	4,333
Administration.....	150	124	103
Assets, end of year.....	23,029	22,593	21,141
Disability insurance trust fund:			
Receipts, total.....	338		
Net appropriations and deposits.....	337		
Interest.....	1		
Expenditures (administration).....	1		
Assets, end of year.....	337		
State accounts in unemployment trust fund:			
Receipts, total.....	1,790	1,520	1,333
Deposits ⁴	1,578	1,333	1,146
Interest.....	212	187	187
Withdrawals for benefit payments.....	1,514	1,287	1,760
Assets, end of year.....	8,492	8,216	7,983

¹ Contributions on earnings up to and including \$3,600 a year in 1954 and \$4,200 a year beginning Jan. 1, 1955. Contribution rate paid by employers and employees: 2 percent each through Dec. 31, 1956, 2 1/4 percent beginning Jan. 1, 1957. Corresponding rates for the self-employed: 3 percent and 3 3/4 percent. Includes deposits by States under voluntary agreements for coverage of State and local employees. Includes deductions to adjust for reimbursements to general funds of the Treasury of the estimated amount of taxes subject to refund on wages in excess of wage base.

² Contributions for old-age and survivors insurance and, beginning Jan. 1, 1957, disability insurance.

³ Before 1957, tax could be paid in quarterly installments by employers of 8 or more; beginning Jan. 31, 1957, tax payable annually on preceding year's wages by employers of 4 or more. Rate is 3 percent on first \$3,000 a year of wages paid to each employee by subject employer. Because of credit offset (up to 90 percent of amount assessed is offset by State unemployment insurance contributions paid or payable except for State experience-rating reductions), effective rate is 0.3 percent of such wages.

⁴ Contributions plus penalties and interest collected from employers and contributions from employees, reported by State agencies.

⁵ Contributions and deposits by States usually differ slightly, primarily because of time lag in making deposits.

⁶ Includes interest transferred from the railroad retirement account under the financial interchange provisions of the Railroad Retirement Act, as amended in 1951.

⁷ Represents checks issued.

Source: Compiled from *Final Statement of Receipts and Expenditures of the United States Government*, other Treasury reports, and State agency reports.

Table 3.—Old-age, survivors, and disability insurance: Estimated number of families and beneficiaries receiving benefits and average monthly benefit in current-payment status, by family group, end of June 1957 and 1956

[In thousands, except for average benefit; data corrected to Nov. 21, 1957]

Family classification of beneficiaries	June 30, 1957			June 30, 1956		
	Number of families	Number of beneficiaries	Average monthly amount per family	Number of families	Number of beneficiaries	Average monthly amount per family
Total.....	7,581.8	10,342.1	-----	6,160.2	8,374.5	-----
Retired worker families.....	5,832.3	7,710.1	-----	4,731.9	6,114.4	-----
Worker only.....	4,091.9	4,091.9	\$59.90	3,460.3	3,460.3	\$60.00
Male.....	2,271.8	2,271.8	67.70	2,148.4	2,148.4	65.60
Female.....	1,820.1	1,820.1	52.30	1,311.8	1,311.8	50.70
Worker and aged wife.....	1,630.2	3,260.4	107.80	1,182.6	2,365.2	104.80
Worker and young wife ¹	.5	1.0	101.10	.3	.6	113.30
Worker and aged dependent husband.....	12.8	25.6	92.80	10.7	21.4	88.20
Worker and 1 or more children.....	21.3	54.4	104.40	16.6	42.7	101.00
Worker, wife aged 65 or over, and 1 or more children.....	1.2	3.6	135.90	1.3	4.0	132.30
Worker, young wife, and 1 or more children.....	74.3	273.0	129.30	60.1	220.1	121.10
Survivor families.....	1,749.6	2,632.0	-----	1,428.3	2,260.1	-----
Aged widow.....	1,019.0	1,019.0	50.70	746.3	746.3	49.00
Aged dependent widower.....	1.4	1.4	47.60	1.1	1.1	48.20
Widowed mother only ¹	1.9	1.9	59.90	.8	.8	51.20
Widowed mother and 1 child.....	132.9	265.8	112.20	128.4	256.8	108.50
Widowed mother and 2 children.....	92.5	277.5	144.60	85.7	257.2	137.80
Widowed mother and 3 or more children.....	87.3	413.5	142.20	82.4	389.8	136.40
Divorced wife and 1 or more children.....	.3	.7	136.50	.3	.7	135.70
1 child only.....	238.2	238.2	49.80	217.0	217.0	48.50
2 children.....	94.8	189.5	85.60	90.0	179.9	83.80
3 children.....	34.0	102.1	109.00	31.8	95.3	105.20
4 or more children.....	21.0	94.3	116.70	20.2	89.3	112.20
1 aged dependent parent.....	24.6	24.6	51.60	22.8	22.8	50.50
2 aged dependent parents.....	1.8	3.6	98.30	1.5	2.9	95.30

¹ Benefits of children were being withheld.

Table 4.—Old-age, survivors, and disability insurance: Selected data on benefits, employers, workers, and taxable earnings, by State, for specified periods, 1954, 1956, and 1957

[In thousands, except for average taxable earnings; data corrected to Nov. 21, 1957]

State	Monthly benefits in current-payment status, end of fiscal year 1957 ¹		Benefit payments fiscal year 1957 ¹			Employers reporting taxable wages, July-September 1956 ²	Calendar year 1954		
	Number	Amount	Total	Monthly benefits	Lump-sum payments		Workers with taxable earnings ³	Amount of taxable earnings ⁴	Average per worker
Total	10,342.1	\$554,637	\$6,514,580	\$6,391,689	\$122,891	4,070	59,700	\$133,800,000	\$2,240
Alabama	152.9	6,583	76,600	75,021	1,579	59	880	1,539,000	1,740
Alaska	4.9	238	2,854	2,807	47	3	70	128,000	1,920
Arizona	49.2	2,544	29,688	29,064	624	22	320	585,000	1,820
Arkansas	102.0	4,390	49,296	48,512	784	34	490	768,000	1,570
California	808.7	45,001	533,981	524,418	9,563	338	4,940	11,437,000	2,320
Colorado	85.9	4,510	52,795	51,971	824	39	560	1,040,000	1,860
Connecticut	166.9	10,125	121,544	119,162	2,382	65	1,070	2,634,000	2,450
Delaware	23.5	1,292	15,338	15,003	335	12	180	383,000	2,150
District of Columbia	37.2	1,967	23,597	23,055	542	30	480	941,000	1,950
Florida	295.0	15,884	183,065	180,341	2,724	108	1,310	2,108,000	1,600
Georgia	160.1	6,912	80,381	78,404	1,977	77	1,210	2,022,000	1,670
Hawaii	22.1	1,074	12,561	12,415	146	11	170	355,000	2,050
Idaho	37.0	1,839	20,907	20,576	331	14	210	358,000	1,720
Illinois	609.2	34,939	414,387	405,343	9,044	236	4,140	9,727,000	2,350
Indiana	300.2	16,196	188,509	184,973	3,536	96	1,750	3,851,000	2,200
Iowa	177.7	9,170	102,713	101,144	1,569	69	900	1,781,000	1,990
Kansas	130.6	6,624	73,865	72,612	1,253	50	720	1,368,000	1,890
Kentucky	179.4	8,200	93,306	91,672	1,634	57	830	1,503,000	1,820
Louisiana	119.5	5,491	64,539	63,015	1,524	61	860	1,626,000	1,880
Maine	79.4	4,035	48,839	47,906	933	26	380	652,000	1,730
Maryland	140.8	7,486	89,208	87,149	2,059	69	1,010	2,046,000	2,020
Massachusetts	397.6	23,054	278,953	274,116	4,837	127	2,130	4,565,000	2,140
Michigan	441.1	25,735	301,814	296,003	5,811	159	2,960	7,117,000	2,400
Minnesota	199.9	10,684	121,467	119,514	1,953	73	1,050	2,092,000	1,990
Mississippi	90.2	3,612	40,025	39,234	791	34	500	779,000	1,540
Missouri	283.1	14,980	171,428	168,506	2,922	103	1,620	3,318,000	2,040
Montana	39.0	2,039	23,052	22,642	410	16	220	410,000	1,820
Nebraska	87.1	4,428	48,508	47,808	700	35	480	861,000	1,800
Nevada	10.3	570	6,750	6,586	164	7	120	185,000	1,540
New Hampshire	48.5	2,600	31,522	30,916	606	17	270	504,000	1,840
New Jersey	389.4	23,181	274,414	268,828	5,586	151	2,340	5,363,000	2,300
New Mexico	28.8	1,264	14,616	14,256	360	17	220	338,000	1,540
New York	1,116.0	64,350	768,691	753,148	15,543	502	7,550	17,238,000	2,280
North Carolina	185.0	8,124	92,204	90,242	1,962	86	1,380	2,261,000	1,630
North Dakota	28.2	1,318	13,622	13,452	170	13	150	216,000	1,420
Ohio	553.5	33,240	394,827	387,317	7,510	205	3,760	8,808,000	2,340
Oklahoma	119.8	5,762	66,004	64,927	1,077	51	770	1,374,000	1,770
Oregon	126.2	6,928	81,948	80,754	1,194	49	670	1,463,000	2,190
Pennsylvania	789.4	44,664	537,455	527,316	10,139	255	4,530	10,092,000	2,230
Puerto Rico	48.3	1,449	15,913	15,713	200	16	350	301,000	860
Rhode Island	67.3	3,840	46,326	45,450	876	21	380	771,000	2,010
South Carolina	91.7	3,877	44,848	43,721	1,127	44	630	1,056,000	1,680
South Dakota	37.1	1,814	19,304	19,069	235	16	180	286,000	1,630
Tennessee	169.8	7,467	84,730	82,994	1,736	70	1,040	1,804,000	1,740
Texas	380.5	18,059	205,927	201,554	4,373	216	2,940	5,648,000	1,920
Utah	39.2	2,058	23,786	23,371	415	16	310	568,000	1,840
Vermont	29.0	1,476	17,555	17,248	307	11	160	314,000	1,960
Virgin Islands	0.6	19	226	217	9	(⁵)	10	5,000	450
Virginia	178.7	8,367	97,793	95,750	2,043	82	1,210	2,180,000	1,810
Washington	183.4	10,185	120,904	118,954	1,950	66	930	2,038,000	2,180
West Virginia	134.0	6,541	77,760	76,540	1,220	37	590	1,081,000	1,930
Wisconsin	259.5	14,264	165,353	162,610	2,743	90	1,400	3,231,000	2,310
Wyoming	15.2	804	9,272	9,101	171	9	130	222,000	1,660
Foreign ⁶	62.7	3,374	39,610	39,269	341	-----	50	126,000	2,580
Maritime ⁷	-----	-----	-----	-----	-----	-----	130	334,000	2,510

¹ Distribution by beneficiary's State of residence estimated.² State data represent number of employers reporting taxable wages by the State of their reporting headquarters. An employer is a legal entity such as a corporation, partnership, or single ownership, for which a single tax return is filed. Excludes agricultural employers.³ State data represent workers employed in the State at some time during the year. Workers employed in more than 1 State are counted once in each of the States in which employed.⁴ State data represent taxable earnings distributed according to the State in which earned. Averages, based on unrounded estimates of workers and earnings, are rounded to nearest \$10.⁵ Fewer than 500 employers.⁶ Benefit data relate to persons in foreign countries receiving old-age and survivors insurance benefits. Employment and earnings data relate to citizens of the United States employed by American employers.⁷ Relates to employment of officers and crews of American vessels.

Table 5.—Old-age, survivors, and disability insurance: Selected data on benefits, employers, workers, and taxable earnings for specified periods, 1955-57

[In thousands, except for average monthly benefit and average taxable earnings; corrected to Nov. 21, 1957]

Item	1957	1956	1955
	Fiscal year		
Benefits in current-payment status (end of period):			
Number.....	10,242.1	8,374.5	7,563.5
Old-age.....	5,832.3	4,731.9	4,214.8
Wife's or husband's.....	1,719.0	1,255.0	1,131.3
Child's ¹	1,427.4	1,316.7	1,220.9
Widow's or widower's.....	1,020.5	747.8	689.8
Mother's.....	314.9	297.3	281.2
Parent's.....	28.1	25.7	25.6
Total monthly amount.....	\$554,637	\$439,424	\$384,025
Old-age.....	\$373,230	\$296,976	\$257,230
Wife's or husband's.....	\$58,749	\$41,968	\$37,011
Child's ¹	\$54,283	\$48,662	\$43,730
Widow's or widower's.....	\$51,707	\$36,648	\$32,150
Mother's.....	\$15,224	\$13,876	\$12,677
Parent's.....	\$1,445	\$1,293	\$1,226
Average monthly amount:			
Old-age.....	\$63.99	\$62.76	\$61.03
Wife's or husband's.....	\$34.18	\$33.44	\$32.72
Child's ¹	\$38.03	\$36.96	\$35.82
Widow's or widower's.....	\$50.67	\$49.01	\$46.61
Mother's.....	\$48.35	\$46.67	\$45.08
Parent's.....	\$51.38	\$50.31	\$47.86
Benefit payments during period:			
Monthly benefits.....	\$6,391,689	\$5,245,476	\$4,232,609
Old-age.....	\$4,340,270	\$3,531,824	\$2,802,967
Supplementary.....	\$679,289	\$531,831	\$428,847
Survivor.....	\$1,372,130	\$1,181,821	\$1,000,795
Lump-sum payments.....	\$122,891	\$115,337	\$100,539
Insured workers (midpoint of period—Jan. 1): ²			
Fully insured.....	72,500	70,900	70,700
Currently but not fully insured.....	72,200	70,100	70,300
	300	800	400
Estimated number of employers reporting taxable wages, 1st quarter of fiscal year.....	3,407	3,910	3,715
	Calendar year		
Estimated number of workers with taxable earnings.....	(³)	68,000	66,000
Estimated amount of taxable earnings.....	(⁴)	\$170,000,000	\$158,000,000
Average taxable earnings ⁵	(⁴)	\$2,500	\$2,390

¹ Data for 1957 include benefits payable to disabled persons aged 18 or over, whose disability began before age 18 and who are the children of a retired or deceased insured worker.² Estimates of insured workers have not been adjusted to reflect changes in insurance status arising from: (1) provisions that coordinate the old-age and survivors insurance and railroad retirement programs and (2) wage credits for military service. Estimates are only partially adjusted to eliminate duplicate count of persons with taxable earnings reported on more than 1 account number.³ Excludes agricultural employers.⁴ Not available.⁵ Rounded to nearest \$10.

Table 6.—Special types of public assistance under plans approved by the Social Security Administration: Number of recipients and average payment, June 1957, and total payments to recipients, by program and State, fiscal year 1957

[Includes vendor payments for medical care and cases receiving only such payments; data to Oct. 16, 1957]

State	Old-age assistance				Aid to dependent children				Aid to the blind				Aid to the permanently and totally disabled		
	Number of recipients, June	Payments to recipients		Number of recipients, June		Payments to recipients		Number of recipients, June	Payments to recipients		Number of recipients, June	Payments to recipients		Total, fiscal year, (in thousands)	
		Average payment, June	Total, fiscal year, (in thousands)	Families	Total ¹	Children	Average payment per family, June		Average payment recipient, June	Total, fiscal year, (in thousands)		Average payment, June	Total, fiscal year, (in thousands)		
Fiscal year:															
1955.....	2,548,503	\$52.30	\$1,589,811	620,290	2,239,281	1,691,579	\$86.78	\$24.04	\$620,551	103,902	236,828	\$54.93	\$147,095		
1956.....	2,523,716	54.29	1,633,533	613,720	2,250,229	1,707,629	89.27	24.35	639,476	105,796	258,279	56.72	165,183		
1957.....	2,503,823	58.66	1,723,362	647,208	2,398,693	1,831,925	96.52	26.04	700,268	108,441	283,901	59.10	188,843		
Alabama.....	105,583	43.95	47,587	20,987	82,090	63,394	41.69	10.66	9,177	1,686	707	35.90	4,881		
Alaska.....	1,578	63.77	1,153	1,348	4,594	3,380	99.43	29.18	1,539	79	707	70.56	66		
Arizona.....	14,136	55.53	9,410	5,307	20,646	15,687	104.72	26.92	6,074	810	618	64.44	618		
Arkansas.....	55,078	35.71	23,027	8,476	32,361	25,250	56.51	14.80	5,144	2,036	6,679	31.84	2,366		
California.....	293,954	74.85	236,020	53,035	187,649	145,429	137.58	38.88	82,511	13,421	91,80	14,585	2,582		
Colorado.....	52,443	82.36	55,572	6,070	23,473	18,202	114.91	29.72	7,992	322	630	68.74	3,689		
Connecticut.....	15,717	88.83	17,293	5,512	17,743	13,225	139.32	43.28	9,084	328	402	102.36	2,203		
Delaware.....	1,631	49.32	1,926	1,314	4,985	3,824	89.26	23.53	1,332	233	182	363	62.92	273	
District of Columbia.....	3,043	56.44	1,961	2,437	10,454	8,154	114.00	26.57	2,964	253	64	57.53	1,857		
Florida.....	69,013	52.30	40,853	22,580	81,105	62,289	59.14	16.46	15,621	2,540	1,624	53.40	2,818		
Georgia.....	98,490	42.85	48,828	14,701	54,123	41,421	82.35	22.37	13,880	3,499	1,949	48.11	7,061		
Hawaii.....	1,594	49.42	898	2,825	10,871	8,721	112.58	29.25	3,651	91	63	67.45	875		
Idaho.....	8,247	60.43	5,848	1,786	6,550	4,836	137.72	37.55	2,769	186	147	928	704		
Illinois.....	86,510	67.34	67,649	26,794	107,326	81,936	144.32	36.03	43,403	3,416	2,883	81.21	10,157		
Indiana.....	32,611	55.81	31,215	9,343	33,485	24,987	99.47	27.75	10,398	1,820	1,406	66.38	1,434		
Iowa.....	38,644	68.41	31,215	7,551	27,225	20,253	128.36	35.60	10,015	1,496	1,434	83.64	1,434		
Kansas.....	32,275	71.92	4,960	18,052	13,931	120.80	33.23	19.73	6,848	626	575	75.34	3,620		
Kentucky.....	58,523	38.65	26,209	19,351	70,507	53,130	71.90	19.73	15,811	3,268	3,978	37.88	637		
Louisiana.....	124,458	63.03	92,495	21,741	86,446	66,395	84.15	21.16	19,087	2,305	1,913	50.26	8,098		
Maine.....	11,706	53.26	7,325	4,634	16,051	11,750	92.06	26.58	4,769	488	341	61.54	602		
Maryland.....	9,871	50.93	5,913	6,665	27,319	21,234	100.64	24.55	7,633	474	310	56.65	384		
Massachusetts.....	86,532	86.30	12,732	42,582	31,883	138.29	41.35	20,713	2,990	1,962	4,940	104.64	13,558		
Michigan.....	68,864	63.51	51,186	20,847	73,916	54,368	129.69	36.58	29,310	1,903	2,919	83.30	2,644		
Minnesota.....	49,764	78.18	44,092	8,338	28,282	21,798	134.62	39.69	12,734	1,108	1,470	95.48	1,021		
Mississippi.....	81,198	23.67	26,196	13,895	52,035	40,733	28.18	7.53	4,194	4,808	3,937	24.60	1,207		
Missouri.....	126,645	54.55	81,630	21,344	77,774	58,266	85.18	23.38	19,110	5,114	3,594	56.89	9,279		

See footnotes at end of table, p. 78.

Table 6.—Special types of public assistance under plans approved by the Social Security Administration: Number of recipients and average payment, June 1957, and total payments to recipients, by program and State, fiscal year 1957—Continued¹

[Corrected to Oct. 16, 1957]

State	Old-age assistance			Aid to dependent children					Aid to the blind			Aid to the permanently and totally disabled			
	Number of recipients, June	Payments to recipients		Number of recipients, June			Payments to recipients			Number of recipients, June	Payments to recipients		Number of recipients, June	Payments to recipients	
		Average payment, June	Total, fiscal year (in thousands)	Fam ilies	Total	Children	Average payment per family, June	Average payment per recipient, June	Total, fiscal year (in thousands)		Average payment, June	Total, fiscal year (in thousands)		Average payment, June	Total, fiscal year (in thousands)
Montana.....	8,318	\$61.88	\$6,119	2,279	8,285	6,404	\$117.87	\$32.42	\$2,861	417	\$63.22	\$339	1,499	\$69.32	\$1,204
Nebraska.....	17,090	53.15	10,921	2,808	10,368	7,819	94.14	26.85	3,278	921	65.96	690	1,367	56.77	821
Nevada.....	2,542	67.13	1,994	655	2,205	1,684	91.16	27.08	626	120	82.10	111	327	88.57	336
New Hampshire.....	5,527	65.95	4,426	936	3,523	2,657	138.59	36.82	1,504	253	60.84	209	4,734	91.13	4,650
New Jersey.....	19,456	79.71	17,835	7,415	24,735	18,738	139.51	41.82	10,808	923	77.56	836	4,734	91.13	4,650
New Mexico.....	9,649	52.98	5,850	6,817	25,474	19,423	96.01	25.69	7,072	401	55.28	256	1,853	55.07	1,140
New York.....	91,914	89.02	97,822	57,528	216,646	161,429	145.47	38.63	96,320	4,282	95.28	4,823	38,806	90.37	42,428
North Carolina.....	51,683	35.24	21,044	21,450	83,260	63,922	68.22	17.58	15,872	4,956	44.88	2,567	15,001	39.95	6,503
North Dakota.....	7,942	82.49	7,310	1,710	6,268	4,817	129.94	35.45	2,578	119	63.87	89	1,022	90.96	1,010
Ohio.....	94,539	64.48	74,042	18,050	71,592	54,577	94.43	24.69	19,950	3,840	67.13	2,848	9,251	53.35	5,545
Oklahoma.....	94,483	66.74	74,002	16,117	54,831	41,817	140.22	38.17	15,980	1,941	81.52	314	1,880	74.66	5,203
Oregon.....	18,038	78.75	16,290	4,022	14,775	11,108	115.14	29.67	40,548	17,594	82.66	13,000	3,591	92.52	3,612
Pennsylvania.....	50,842	50.48	30,855	30,672	119,036	90,502	115.14	29.67	40,548	17,594	82.66	13,000	3,591	92.52	3,612
Puerto Rico.....	43,147	7.99	4,114	44,476	155,710	124,911	12.72	3.63	6,054	1,734	7.91	165	21,186	8.08	2,168
Rhode Island.....	7,477	69.37	6,183	3,725	13,089	9,730	119.33	33.96	5,002	139	73.53	132	1,670	78.74	1,540
South Carolina.....	36,990	37.13	16,065	8,499	33,065	25,811	54.94	14.12	5,116	1,796	41.86	864	7,940	34.77	3,169
South Dakota.....	10,071	47.35	5,669	2,865	9,702	7,408	87.75	25.91	2,845	1,900	47.83	1,110	927	48.13	486
Tennessee.....	58,036	35.69	24,781	19,088	69,251	51,923	64.51	17.78	14,614	3,007	41.00	4,488	4,194	39.78	1,571
Texas.....	224,440	44.96	118,265	23,696	97,170	73,749	71.14	17.35	18,715	6,525	49.60	3,708	1,488	39.78	1,571
Utah.....	9,090	61.94	6,740	2,830	9,970	7,418	115.51	32.79	3,854	221	70.38	182	1,786	67.26	1,442
Vermont.....	6,470	50.44	3,780	1,087	3,794	2,857	90.59	25.96	1,045	136	53.46	83	803	50.05	341
Virgin Islands.....	6,659	18.53	1,150	263	1,008	832	36.22	9.45	1,005	25	(2)	7	105	19.81	25
Virginia.....	16,098	34.26	6,383	3,857	35,043	27,313	72.44	18.31	7,492	1,279	49.78	964	5,486	42.09	2,566
Washington.....	55,606	94.15	57,721	9,573	33,222	24,650	147.47	42.49	14,586	780	116.78	954	5,380	105.13	6,427
West Virginia.....	22,258	33.36	8,698	18,122	68,718	53,272	86.79	22.89	18,016	1,443	37.77	508	8,334	37.03	3,532
Wisconsin.....	39,578	71.47	32,855	7,866	28,685	20,888	130.12	42.06	13,031	1,064	80.41	961	1,267	107.75	1,536
Wyoming.....	3,772	61.91	2,820	629	2,244	1,700	119.66	33.54	862	65	65.66	50	1,523	63.84	389

¹ Includes as recipients the children and 1 parent or other adult relative in families in which the requirements of at least 1 such adult were considered in determining the amount of assistance.

² Average payment not computed on base of less than 50 recipients.

Table 7.—Special types of public assistance under plans approved by the Social Security Administration: Federal grants to States and total expenditures and percent from Federal funds, by program and State, fiscal year 1957

[Includes vendor payments for medical care; amounts in thousands; data corrected to Oct. 31, 1957]

State	Federal grants to States ¹				Expenditures for assistance and administration								
	Total	Old-age assistance	Aid to dependent children	Aid to the permanently and totally disabled	Old-age assistance		Aid to dependent children		Aid to the blind		Aid to the permanently and totally disabled		
					Amount	Percent from Federal funds	Amount	Percent from Federal funds	Amount	Percent from Federal funds	Amount	Percent from Federal funds	
Fiscal year:													
1955.....	\$1,423,907	\$920,791	\$385,233	\$36,467	\$81,416	\$1,686,441	55.4	\$93,907	56.6	\$75,009	49.0	\$164,342	50.3
1956.....	1,446,116	922,539	395,291	37,618	90,669	1,735,436	54.0	708,289	56.0	79,110	47.8	185,237	49.4
1957.....	1,586,361	993,284	443,210	41,361	108,506	1,831,263	55.2	776,477	58.0	87,263	47.6	211,170	51.3
Alabama.....	47,865	35,905	7,695	538	3,727	49,859	71.9	9,944	79.2	736	73.3	5,232	73.2
Alaska.....	1,796	678	1,080	37	796	1,241	57.0	1,643	65.6	73	51.7	-----	-----
Arizona.....	6,025	4,149	362	37	9,670	9,670	62.1	6,317	67.4	640	57.0	-----	-----
Arkansas.....	24,121	17,331	4,122	725	1,943	23,820	73.5	5,412	80.2	1,041	69.9	2,547	75.2
California.....	172,331	121,562	44,396	6,374	2,329	251,706	48.4	96,234	47.2	15,866	40.0	-----	-----
Colorado.....	29,331	21,790	5,057	154	2,329	57,307	38.5	8,324	58.5	235	50.6	4,152	56.3
Connecticut.....	12,506	7,090	4,164	150	1,103	18,562	44.0	9,782	46.8	426	40.4	3,464	36.1
Delaware.....	1,921	636	989	109	188	989	64.6	1,364	60.8	206	52.6	315	57.4
District of Columbia.....	4,550	1,298	2,048	116	1,118	2,144	59.2	3,364	62.4	208	56.5	2,000	53.2
Florida.....	44,430	27,851	13,327	1,094	2,159	42,735	65.7	17,221	78.1	1,713	64.8	3,351	63.2
Georgia.....	52,704	35,594	10,543	1,395	5,173	51,255	69.7	14,738	72.6	2,090	67.4	7,612	67.5
Hawaii.....	3,560	568	2,432	41	520	91.3	61.3	4,119	58.6	73	56.4	957	54.5
Idaho.....	6,256	3,363	1,394	82	418	6,114	56.9	2,954	48.5	160	52.5	773	53.6
Illinois.....	68,942	38,137	23,595	1,597	5,613	72,773	53.5	46,573	63.6	3,144	50.8	11,184	46.3
Indiana.....	20,337	12,228	7,284	824	-----	32,300	55.5	11,522	53.0	1,619	50.5	-----	-----
Iowa.....	23,083	16,626	5,762	695	1,828	32,989	52.4	10,791	52.7	1,548	45.2	-----	-----
Kansas.....	20,312	14,291	3,907	286	1,828	29,195	49.5	7,386	52.7	613	46.8	3,877	46.7
Kentucky.....	34,767	19,785	12,653	1,120	650	27,438	71.7	16,775	75.8	1,571	71.1	867	70.0
Louisiana.....	78,395	56,095	15,699	1,037	5,571	97,640	57.5	21,260	72.9	2,049	50.5	9,264	60.9
Maine.....	8,601	4,762	3,235	227	377	7,714	64.0	5,032	67.9	356	63.2	665	60.1
Maryland.....	11,865	3,854	5,642	194	2,174	6,464	60.3	8,687	65.4	332	59.3	3,711	57.5
Massachusetts.....	54,057	37,966	10,205	898	4,988	93,720	41.4	23,028	45.3	2,499	35.7	14,712	35.9
Michigan.....	46,753	28,772	15,956	784	1,241	55,250	53.9	31,240	51.1	1,531	51.0	2,789	44.3
Minnesota.....	28,294	20,769	6,284	542	1,073	46,570	46.3	13,884	46.6	1,320	41.2	1,165	60.0
Mississippi.....	27,117	12,127	3,438	1,478	1,073	28,009	77.1	4,898	77.0	2,111	77.0	1,444	74.0
Missouri.....	78,511	55,398	14,668	2,073	6,342	84,847	65.5	20,458	72.4	3,905	53.0	9,879	64.5
Montana.....	6,135	3,547	1,700	196	692	6,611	55.9	3,124	55.7	384	52.1	1,340	51.9

See footnotes as end of table, p. 80.

Table 7.—Special types of public assistance under plans approved by the Social Security Administration: Federal grants to States and total expenditures and percent from Federal funds, by program and State, fiscal year 1957—Continued

State	Federal grants to States ¹				Expenditures for assistance and administration					
	Total	Old-age assistance	Aid to dependent children	Aid to the permanently and totally disabled	Aid to dependent children		Aid to the blind		Aid to the permanently and totally disabled	
					Amount	Percent from Federal funds	Amount	Percent from Federal funds	Amount	Percent from Federal funds
Nebraska.....	\$10,423	\$7,156	\$2,296	\$401	\$11,763	62.7	\$3,538	64.4	\$746	54.3
Nevada.....	1,712	1,166	489	57	2,160	54.6	755	64.2	126	47.0
New Hampshire.....	3,235	2,237	724	111	4,751	51.1	1,652	49.1	227	47.5
New Jersey.....	16,745	8,623	5,594	470	20,276	44.9	11,765	46.5	971	47.8
New Mexico.....	10,187	4,035	5,242	172	6,435	64.0	7,834	68.4	285	62.4
New York.....	117,517	43,028	52,154	2,253	110,779	40.4	113,391	47.4	5,754	39.9
North Carolina.....	36,833	16,439	13,341	1,989	22,213	73.9	17,198	78.4	2,933	67.1
North Dakota.....	5,202	3,317	1,382	53	7,803	44.8	2,776	49.6	101	51.5
Ohio.....	61,193	40,452	14,875	1,754	78,406	53.6	22,100	67.3	3,184	55.3
Oklahoma.....	55,398	40,467	11,098	3,033	76,693	53.6	16,871	66.5	1,945	46.1
Oregon.....	12,205	7,588	2,922	147	17,445	45.6	6,453	48.3	3,353	44.7
Pennsylvania.....	55,803	20,856	25,605	3,445	34,505	62.0	45,842	57.7	13,745	23.9
Puerto Rico.....	5,312	1,784	2,503	71	4,516	38.9	6,807	36.7	194	38.0
Rhode Island.....	6,697	3,173	2,698	67	6,575	48.9	5,204	52.5	140	47.7
South Carolina.....	20,016	12,469	4,396	645	17,047	72.5	5,607	73.1	926	69.7
South Dakota.....	6,377	3,860	2,074	83	6,124	67.1	3,094	67.9	123	66.4
Tennessee.....	33,230	18,925	12,018	1,080	26,893	73.3	15,613	78.1	1,570	70.2
Texas.....	109,183	83,984	15,594	2,635	121,644	68.0	19,996	73.7	3,917	67.3
Utah.....	6,917	3,803	2,216	104	7,038	55.9	4,203	53.7	191	33.4
Vermont.....	3,505	2,400	800	55	3,979	67.0	1,157	68.6	88	65.8
Virgin Islands.....	13,526	4,945	6,174	462	1,946	49.9	342	50.0	8	49.2
Virginia.....	35,801	25,330	7,570	376	7,156	71.6	8,313	76.0	689	67.4
Washington.....	23,217	6,763	13,306	391	60,576	42.4	13,803	48.7	1,011	37.4
West Virginia.....	22,886	13,583	6,516	2,757	9,094	75.2	18,474	72.4	529	72.3
Wisconsin.....	2,471	1,694	6,250	480	35,420	46.4	14,136	43.8	1,025	46.5
Wyoming.....	2,471	1,694	6,250	480	3,033	56.3	962	53.6	54	55.1

¹ Based on checks issued (excluding any amounts paid during the fiscal year for an earlier or subsequent year); may differ slightly from fiscal-year expenditures from Federal funds reported by States.

² Less than 50 percent because half of total expenditures exceeded the statutory limitation on the aggregate amount of Federal funds for all programs that can be made available for a fiscal year under legislation in effect during fiscal year 1957.

Table 8.—*Maternal and child health and welfare services: Grants to States for maternal and child health services, services for crippled children, and child welfare services under the Social Security Act, by program and State, fiscal year 1957*¹

[In thousands]

State	Maternal and child health services	Crippled children's services	Child welfare services
United States.....	\$14,913.1	\$14,835.0	\$7,920.2
Alabama.....	493.5	520.4	242.1
Alaska.....	122.4	177.9	43.9
Arizona.....	120.9		81.2
Arkansas.....	241.0	307.2	174.3
California.....	794.6	694.0	228.8
Colorado.....	265.4	167.0	91.0
Connecticut.....	203.5	217.0	79.2
Delaware.....	108.5	92.8	47.6
District of Columbia.....	215.6	151.0	33.4
Florida.....	374.3	367.4	161.8
Georgia.....	444.0	546.4	255.0
Hawaii.....	152.4	153.7	51.6
Idaho.....	111.1	105.3	34.1
Illinois.....	407.3	453.5	236.4
Indiana.....	290.8	193.0	111.9
Iowa.....	202.3	316.5	170.6
Kansas.....	166.6	172.4	128.4
Kentucky.....	340.7	520.1	253.7
Louisiana.....	362.3	371.1	199.0
Maine.....	115.1	115.6	78.0
Maryland.....	371.5	300.6	118.4
Massachusetts.....	468.4	231.7	90.9
Michigan.....	461.0	459.7	263.3
Minnesota.....	299.5	308.1	192.5
Mississippi.....	390.3	326.6	226.5
Missouri.....	313.6	220.8	194.5
Montana.....	111.1	167.0	72.2
Nebraska.....	110.3	121.1	58.8
Nevada.....	95.6	91.8	28.9
New Hampshire.....	92.5	97.3	56.0
New Jersey.....	196.6	222.4	97.0
New Mexico.....	149.7	162.8	83.7
New York.....	664.7	527.1	257.2
North Carolina.....	616.7	577.3	367.2
North Dakota.....	110.2	106.1	64.8
Ohio.....	509.9	486.9	287.0
Oklahoma.....	203.7	324.7	149.8
Oregon.....	143.0	156.3	81.0
Pennsylvania.....	623.1	620.0	367.1
Puerto Rico.....	374.1	430.1	231.5
Rhode Island.....	110.0	108.4	45.5
South Carolina.....	341.6	381.4	217.4
South Dakota.....	89.9	79.1	81.6
Tennessee.....	453.7	480.5	247.1
Texas.....	595.3	652.3	389.1
Utah.....	159.3	180.1	56.3
Vermont.....	100.3	97.3	58.5
Virgin Islands.....	86.8	86.7	34.7
Virginia.....	427.5	407.6	249.1
Washington.....	213.4	164.8	129.2
West Virginia.....	220.7	210.9	189.2
Wisconsin.....	193.0	318.3	199.0
Wyoming.....	83.7	86.9	33.1

¹ Based on checks issued less refunds.

operation. In addition, there was a significant increase in research and research training, and an intensification of effort against some of today's important health problems, such as accident prevention, chronic disease control and health of the aging, and radiological health. Finally, the year was marked by the appearance of a new strain of influenza and the planning and adoption of preparatory measures to minimize an anticipated epidemic in the United States.

HEALTH RECORD

The indices by which national health is measured showed that the health of the American people remained at a high level. The general death rate for 1956¹ was 9.4 per 1,000 population—the ninth consecutive year that the death rate has been below 10 per 1,000.

Both the infant and the maternal death rates, which have declined steadily since the end of World War II, continued to drop. The infant mortality rate was 26.0 deaths per 1,000 live births in 1956, compared with 26.4 in 1955. Since 1946 this death rate has dropped by 23 percent. The maternal mortality rate was 3.8 maternal deaths per 10,000 live births, compared with 4.7 in 1955. There has been a 76 percent decline in the maternal death rate since 1946.

The average length of life for the entire population—69.5 years—remained unchanged in 1955, the latest year for which there are published life tables for the United States. The average life expectancy was 67.3 years for white males, 73.6 for white females, 61.2 for nonwhite males, and 65.9 for nonwhite females.

The decade since 1946 has been marked by reductions in mortality from such communicable diseases as tuberculosis, syphilis, and influenza and pneumonia. The tuberculosis death rate was 8.3 per 100,000 population in 1956, compared with 9.1 in 1955 and 36.4 in 1946. The principal diseases of childhood—scarlet fever and streptococcal sore throat, diphtheria, whooping cough, and measles—which caused about 10 deaths per 100,000 population under 15 years of age in 1945, were responsible for about 2 deaths per 100,000 in 1956.

In the same period, death rates have also decreased for suicide, homicide, and accidents. No definite trend has been apparent for motor-vehicle accidents; the death rate was 23.9 per 100,000 population in 1946 and 24.3 in 1956. For all other accidents, however, the death rate dropped from 45.9 in 1946 to 32.1 in 1956, the lowest on record.

In 1956, decreases were reported in the number of cases of several reportable diseases, including infectious hepatitis, poliomyelitis, meningococcal infections, diphtheria, whooping cough, and typhoid fever. Malaria continued to decline. Small increases were reported

¹ All vital statistics are given for the calendar year.

in the number of cases of *Salmonella* infections, measles, and streptococcal infections, and larger increases for encephalitis and psittacosis, due largely to several outbreaks of these diseases.

The chronic diseases continued to take the heaviest toll of lives. Together, diseases of the heart and blood vessels and cancer accounted for more than 70 percent of all deaths in 1956. The death rate for the major heart and blood vessel diseases was 513.3 per 100,000 population in 1956, compared with 345.2 in 1900. The 1956 death rate for cancer was 146.6, the highest yet in its climb from 64.0 in 1900.

BIRTHS, MARRIAGES, AND DIVORCES

The Nation's birthrate has remained at a high level since the end of World War II. About 4,220,000 live births occurred in 1956, for a birthrate of 25.2 per 1,000 population. In 1955, there were 4,104,000 live births, and a birthrate of 25.0. Since there were 9.4 deaths per 1,000 people in 1956—or a total of about 1,600,000 deaths—the rate of natural population increase was 15.6 persons per 1,000 population, the second highest total in the last 25 years.

The number of marriages increased slightly in 1956. There were 1,569,000 marriages, for a rate of 9.4 per 1,000 population, compared with 1,531,000 marriages and a rate of 9.3 in 1955. Provisional figures for 1956 indicate that the number of divorces was about the same as in 1955, when there were 377,000 divorces, for a rate of 2.3 per 1,000 population.

INFLUENZA

Asian influenza, caused by a new strain of influenza virus, made its appearance in the United States in 1957. Believed to have started in Northern China, the disease first became known in the Western Hemisphere following a mid-April epidemic in Hong Kong. Within a few months, millions of cases were reported from the Western Pacific and the Far East, and the disease soon spread over most of the world. The first confirmed cases in the United States occurred aboard a naval vessel in Newport, Rhode Island, in June and localized outbreaks were reported during the summer, normally a season of low influenza incidence in this country.

Shortly after the outbreak in the Far East, the new virus strain was isolated by U. S. Army medical teams and shipped to this country for study. Scientists at both Army and Public Health Service laboratories confirmed the report that this was a new strain of the Type A influenza virus.

On May 22, the Public Health Service supplied samples of the strain to the six pharmaceutical manufacturers licensed to produce influenza vaccine. All six immediately began to produce experimental vaccines against the Asian virus strain, and on June 7, the

Table 9.—Federal credit unions: Number of members, amount of assets, amount of shares, and amount of loans outstanding, Dec. 31, 1935–56¹

Year	Number of operating Federal credit unions	Number of members	Assets	Shares	Loans outstanding
1935	772	119,420	\$2,372,100	\$2,228,400	\$1,834,200
1936	1,751	309,700	9,158,100	8,510,900	7,343,800
1937	2,313	483,920	19,264,700	17,649,700	15,695,300
1938	2,760	632,050	29,629,000	26,876,100	23,830,100
1939	3,182	850,770	47,810,600	43,326,900	37,673,000
1940	3,756	1,127,940	72,530,200	65,805,800	55,818,300
1941	4,228	1,408,880	106,052,400	97,208,900	69,484,700
1942	4,145	1,356,940	119,591,400	109,822,200	43,052,500
1943	3,938	1,311,620	127,329,200	117,339,100	35,376,200
1944	3,815	1,306,000	144,365,400	133,677,400	34,438,400
1945	3,757	1,216,625	153,103,120	140,613,962	35,155,414
1946	3,761	1,302,132	173,166,459	159,718,040	56,800,937
1947	3,845	1,445,915	210,375,571	192,410,043	91,372,197
1948	4,058	1,628,339	258,411,736	235,008,368	137,642,327
1949	4,495	1,819,606	316,362,504	285,000,934	186,218,022
1950	4,984	2,126,823	405,834,976	361,924,778	263,735,838
1951	5,398	2,463,898	504,714,580	457,402,124	299,755,775
1952	5,925	2,853,241	662,408,869	597,374,117	415,062,315
1953	6,578	3,255,422	854,232,007	767,571,092	573,973,529
1954	7,227	3,598,790	1,033,179,042	931,407,456	681,970,336
1955	7,806	4,032,220	1,267,427,045	1,135,164,876	863,042,049
1956	8,350	4,502,210	1,529,201,927	1,366,258,073	1,049,188,549

¹ Data for 1935–44 on membership, assets, shares, and loans outstanding are partly estimated.

Table 10.—Federal credit unions: Assets and liabilities, Dec. 31, 1956, and Dec. 31, 1955

Assets and liabilities	Amount			Percentage distribution	
	Dec. 31, 1956	Dec. 31, 1955	Change during year	Dec. 31, 1956	Dec. 31, 1955
Number of operating Federal credit unions	8,350	7,806	544		
Total assets	\$1,529,201,927	\$1,267,427,045	\$261,774,882	100.0	100.0
Loans to members	1,049,188,549	863,042,049	186,146,500	68.6	68.1
Cash	118,900,595	105,361,383	13,539,212	7.8	8.3
United States bonds	88,009,631	83,896,302	4,113,329	5.8	6.6
Savings and loan shares	228,565,099	181,956,756	46,608,343	14.9	14.4
Loans to other credit unions	31,647,416	24,019,882	7,627,534	2.1	1.9
Land and buildings	3,449,730	(¹)		.2	(¹)
Other assets	9,440,907	9,150,673	3,739,964	.6	.7
Total liabilities	1,529,201,927	1,267,427,045	261,774,882	100.0	100.0
Notes payable	34,572,441	29,098,259	5,474,182	2.3	2.3
Accounts payable and other liabilities	4,344,517	3,642,212	702,305	.3	.3
Shares	1,366,258,073	1,135,164,876	231,093,197	89.3	89.5
Regular reserve	49,668,568	39,042,931	10,625,637	3.2	3.1
Special reserve for delinquent loans	3,469,216	2,468,400	1,000,816	.2	.2
Other reserves ²	692,884		692,884	.1	
Undivided earnings	70,196,228	58,010,367	12,185,861	4.6	4.6

¹ Included in "other assets."² Reserve for contingencies and special reserve for losses.

Public Health Service

Health of The Nation

STEADY ADVANCES in health continued to be made during the past year. There was a nationwide expansion of medical research, and this research yielded significant new knowledge about health and disease. In applying the new knowledge, State and local health agencies broadened their programs and turned increasing attention to new and emerging health problems. There was an increase in health facilities of various kinds, and inroads were made into the stubborn problem of shortages of health personnel. And the health record of the American people showed new gains over old foes.

During the year, new programs were begun or established programs were expanded within the Service, as a result of legislation enacted by Congress at the close of fiscal year 1956 and the start of fiscal year 1957. Among the most important legislative measures were: a new program of Federal matching grants to aid in the construction and renovation of medical research facilities; a program of traineeships for professional nurses to qualify them for supervisory and teaching positions, and for various types of professional public health personnel; a 2-year extension of the local-State-Federal program of hospital and medical facilities construction; authorization of Federal grants for special studies of care and institutional services for the mentally ill; extension and strengthening of the State-Federal water pollution control program; authorization for the Public Health Service to conduct a continuing survey of sickness and disability in the United States; and the creation within the Public Health Service of a National Library of Medicine.

Considerable time and energy during the year was devoted to planning and organizing these new programs and to putting them into

first experimental lot was submitted to the Public Health Service's Division of Biologics Standards for testing. From these tests, it was determined that the new single-strain vaccine would give substantial protection against Asian influenza, and the manufacturers began working on large-scale production. They set a production goal of at least 60 million cubic centimeters of the vaccine by February 1958.

Asian influenza was characterized by a high attack rate—in the Far East, the attack rate was approximately 20 percent—and a low case death rate. Health experts believed that an epidemic was probable in the United States with the coming of cold weather in the fall and winter. This was based on the past epidemiology of influenza, the wide sweep of the disease through Asia, the fact that it had been "seeded" in the United States, and that the people of this country had little or no immunity against the new virus strain. Because even a mild form of the illness could disrupt community life, the Public Health Service began to develop preparatory measures to reduce the incidence of the disease and to minimize the impact of an epidemic.

On June 10, the Surgeon General established and met with an advisory committee on influenza, including representation from the American Medical Association and the Association of State and Territorial Health Officers. The group recommended that: (1) the Nation's health workers, and the population generally, should be alerted to the threat of a possible influenza epidemic; (2) epidemiological and diagnostic laboratory forces should be strengthened to develop more information about the disease and its spread; (3) the influenza vaccine should be recommended for military and civilian uses as soon as supplies became available; and (4) emergency medical and health measures should be planned to provide medical care in the event of large-scale epidemics.

These measures were put into effect immediately. In cooperation with professional and voluntary health groups, the Public Health Service undertook a program of public information and education to alert people to the probability of an epidemic and to encourage maximum use of the vaccine. The vaccine manufacturers agreed to distribute the vaccine to each State, according to its population, to assure an equitable share of the early, scarce supply. It was recommended, too, that first consideration in vaccination programs be given to those performing essential community services, including those who care for the sick, and those with chronic disease or other debilitating illness. Communities across the Nation began establishing advisory groups to carry out these recommendations.

The Public Health Service made plans to strengthen its resources for influenza research, for epidemic intelligence, and for laboratory

identification of the virus. Diagnostic materials were sent to more than 100 viral laboratories throughout the Nation, and physicians and health officials were alerted to cooperate with these laboratories in identifying cases. An Influenza Surveillance Unit was set up within the Service's Communicable Disease Center to help trace the source, location, and extent of outbreaks of the disease.

Finally, the Nation's medical and hospital organizations made plans to mobilize personnel, resources, and facilities to take care of the emergency medical care needs in epidemic situations.

For the first time in history, therefore, public health and medical officials in this country were in the position of being ahead of an impending epidemic of influenza. Considerable planning and preparatory work, including the development of a new vaccine, was done before a single case of Asian influenza occurred in the United States. This was the result of a vast cooperative effort among the Nation's official health agencies, professional and voluntary organizations, civic groups, industry, and the public. It was a dramatic example of modern public health in action.

POLIOMYELITIS

In 1956 there was a dramatic reduction in poliomyelitis incidence in the United States. In 1955, 28,985 cases of poliomyelitis were reported in this country. After the first full year of use of the new poliomyelitis vaccine, the number of cases decreased by more than 50 percent. The total number reported from 1956 was 12,146. The reduction in paralytic poliomyelitis was also striking, from 7,886 cases in 1955 to 5,241 cases in 1956.

In August 1955, Congress enacted the Poliomyelitis Vaccination Assistance Act, which authorized the Public Health Service to make grants to the States to purchase the vaccine and administer vaccination programs. This Act was extended in February 1956 to June 30, 1957. Under the Act, \$53.6 million was appropriated to buy vaccine and to get children and pregnant women inoculated. The States used over 99 percent of this fund, and about 29 million people benefited.

About 91 million cubic centimeters of vaccine were produced during the year, and by the start of the 1958 fiscal year there appeared to be enough vaccine available to protect almost the entire population under 40 years of age. The Public Health Service, in cooperation with the American Medical Association, the National Foundation for Infantile Paralysis, and State health officials, undertook a campaign of public information and promotion to urge vaccination of as many people as possible during the fall and winter months.

Funds and Personnel

There was a total of \$682.5 million available to the Public Health Service in 1957 (see table 1, page 150). Of this amount, about \$534 million was in appropriations and authorizations. The balance was made up of reimbursements for services rendered to other agencies and in unobligated balances from previous years.

About one-third of the total amount available was devoted to medical research, chiefly through research and training grants to medical, dental, and research institutions. Another third was allocated to the States in the form of grants for public health programs, and for the construction of hospital and medical facilities and of sewage treatment plants. The remainder supported the operation of Public Health Service hospitals, foreign and interstate quarantine, and other direct Service activities.

There were 23,354 full-time employees in the Public Health Service at the close of fiscal year 1957 (see table 2, page 153). This number included 1,422 members of the regular Commissioned Corps of the Service, 1,759 members of the Reserve Corps on active duty, 175 officers of the Commissioned Reserve on temporary training duty, and 19,998 full-time Civil Service employees.

National Library of Medicine

The National Library of Medicine Act (P. L. 941, 84th Congress) was signed into law by the President on August 3, 1956. In accordance with this law, the Armed Forces Medical Library—its personnel, equipment, collections, records, and funds—was transferred from the Department of Defense to the Public Health Service's National Library of Medicine.

The new Library continued the 120-year tradition of the Armed Forces Medical Library. It is one of the three largest research libraries operated by the Federal Government, and one of the largest research libraries in a special subject in the world. The Library's holdings exceed one million pieces—books, journals, theses, pamphlets, prints, and films. Material of clinical and research importance is received from every country in the world. Each year the Library acquires almost 100,000 monographs and journal pieces. Each month its loan service places over 10,000 items in the hands of medical research workers throughout the country.

During fiscal year 1957, the National Library of Medicine acquired about 12,000 books, 73,000 serial pieces, and 1,200 new serial titles. It purchased 525 rare and old items for its History of Medicine Division. Almost 23,000 titles were catalogued, and about 2,000 pictures and portraits were added to the Library's art collection. Over

125,000 volumes were circulated to users of the Library, and some 9,000 reference questions were answered and 435 bibliographies compiled. Almost 16,000 major entries were prepared for the 1956 volume of the *National Library of Medicine Catalogue*; and 111,000 items were published in its *Current List of Medical Literature*, from 1,500 journal titles. More than 1,100,000 pages were filmed in response to 69,000 photoduplication orders.

BOARD OF REGENTS

In February 1951, the President appointed a Board of Regents to advise and make recommendations to the Surgeon General on policy matters affecting the National Library of Medicine, including selection of the site of a new library building, which was authorized by the legislation. The 17-member Board includes the Surgeons General of the Public Health Service, Army, Navy, and Air Force, the Chief Medical Director of the Veterans Administration, the Assistant Director for Biological and Medical Sciences of the National Science Foundation, and the Librarian of Congress as ex officio members; and ten appointed members from leaders in medicine and related fields.

The Board of Regents held three meetings during the year. At its first meeting, the Board elected Dr. Worth B. Daniels as Chairman and Dr. Champ Lyons as Vice Chairman. Dr. Frank B. Rogers, Director of the National Library of Medicine, was appointed Secretary to the Board. At its second meeting, on April 29, 1957, the Board unanimously recommended a site for the new library building on the grounds of the National Institutes of Health in Bethesda, Maryland. After hearing additional reports on the planning for the new building at its third meeting on June 7, 1957, the Board reaffirmed its decision on the site.

Other matters brought before the Board were the Library's policies regarding interlibrary loans and the distribution of publications. In order to modernize its loan policy and improve lending services, the Library reexamined the bases for both loans and photocopying. With the approval of the Board of Regents, a unified system of interlibrary loans and photoduplication was adopted. The Board also approved adjustments in the distribution pattern of the Library's publications, so that agencies of the Federal Government would be served on a more equitable basis.

NEW BUILDING

Active planning for the new Library building was resumed in August 1956. A contract was later negotiated with an architectural firm for a preliminary study of Library requirements. In June 1957,

a second contract was let for architectural services calling for design of the building and preparation of working drawings and specifications.

Public Health Methods

The Division of Public Health Methods continued to provide staff assistance to the Surgeon General and to conduct research in the fields of public health administration, organization, needs, and resources. The new National Health Survey program was organized, and the publication of *Public Health Reports* continued.

ANALYSIS OF ILLNESS AND DISABILITY

A continuing national health survey was authorized by legislation enacted a year ago. Under this program comprehensive statistics on health and illness are being compiled for the general population. This represents the first large-scale collection of such data since 1936. By the end of the first year, the basic household interview phase of the program had progressed through a 2-month "dry run" collection of data in the field. The gathering of data for tabulation began in July 1957. Another phase of the program will consist of medical examinations of a sample of the population. Several methodological studies are already under way. The sampling, field work, and statistical processing of results from the household survey are being conducted for the Public Health Service by the Bureau of the Census.

A 16-month survey of Indian health, conducted by the Division in cooperation with other units of the Public Health Service, was completed during the year. The published report, "Health Services for American Indians," is a compendium of information and data on Indian health needs and resources, on Federal programs, and on requirements for a comprehensive health program for the Indian population. While a wide variation exists among Indian communities in different areas of the country, conditions urgently requiring attention include: tuberculosis, other communicable diseases for which specific control measures are recognized, and accidents. The report recommended: improvement and extension of medical services outside hospitals; establishment of more field health units; expansion of preventive services; additional dental services; more preventive health services for infants and children; and mental health services.

Morbidity studies were conducted during the year on the following subjects: influenza and pneumonia mortality trends in relation to epidemics of these diseases; long-term trends in illness and medical care; and illness and availability for work. At the Division's office in Hagerstown, the reliability of chronic illness data obtained in household surveys was evaluated in a special study.

Since 1951, the Division has been serving as a clearinghouse on current morbidity statistics projects. A fourth listing of the Clearinghouse's "Sources of Morbidity Data" was published during the year.

EDUCATION FOR HEALTH PROFESSIONS

A cost analysis study of Emory University's School of Medicine has been completed. This study was made to develop concepts and methods of cost analysis applicable to the problems of medical schools. Part II of the manual, "Cost Analysis for Collegiate Programs in Nursing," developed jointly with the Division of Nursing Resources, has also been completed.

At the request of the House Committee on Interstate and Foreign Commerce, the Division assisted with the preparation of a 479-page report on medical and other health professions schools. The document, published under the title "Medical School Inquiry," includes data on the capacity of medical schools, their graduates, physician requirements, and the financial aspects of medical education.

STUDIES OF HEALTH SERVICES

"Prevention of Chronic Illness"—Volume I of the series, *Chronic Illness in the United States*, published as the findings of the Commission on Chronic Illness—was edited and certain chapters written in the Division for the Commission. A document, "Guide for Community Surveys—Assessing Chronic Illness in Your Community," is being developed as a manual for organizing studies to measure chronic illness and to inventory a community's resources for medical care, rehabilitation, and other services.

A report on social service departments in hospitals in the United States, surveyed in cooperation with the American Hospital Association and the National Association of Social Workers, has been completed and published. The study presents the current patterns of organization and staffing of social service departments, summarizes the professional training, and analyzes activities reported by the departments.

CONSULTATIVE SERVICES

In the fields illustrated above, the Division of Public Health Methods gives consultation to governmental, voluntary, and professional organizations, advising on methods of evaluating and formulating programs. During the past year, assistance was provided: on a proposed reorganization of the Ministry of Health of Colombia, South America; to the Smithsonian Institution in its plan for a Hall of Health exhibit; to the Bureau of the Budget and the Veterans'

Administration on a projection of hospital bed requirements; to the Office of Defense Mobilization in the development of a policy for mobilization of professional health manpower; to the University of North Carolina, which is planning a study of factors in the choice of health careers; and on other subjects.

National Institutes of Health

Increased appropriations in fiscal year 1957 for the research programs administered by the National Institutes of Health for fiscal year 1957 brought opportunities for expansion of medical research throughout the United States. Three-quarters of the funds were awarded as grants to non-Federal institutions, supporting research projects, training activities, and construction of research facilities. The Institutes of Allergy and Infectious Diseases, Mental Health, and Dental Research received the largest relative increases. Dollar increases were largest in the programs of the Heart, Mental Health, and Cancer Institutes and in the Institute of Neurological Diseases and Blindness.

The availability of additional funds led to a greater volume of grant applications, to the awarding of more research grants and fellowships to scientific investigators, and to a doubling of the training grant expenditures over 1956 levels.

An important byproduct of the increase in funds over the past few years has been the stabilization of support for scientists working on long-term research projects. In 1957 support for NIH grantees continued for an average of 3.2 years, as compared with 2.5 years in 1955 and 1.8 years in 1951. More than half of the past year's 8,000 applications, however, proposed new rather than continued projects.

The number of research fellows rose from 1,400 to 2,100, and over 4,000 persons were trained under the training grant and traineeship programs. The first senior research fellowships were awarded in fiscal 1957, beginning a five-year program to foster additional research in the basic science departments of schools of medicine, dentistry, and public health. Training was strengthened in the preclinical and physical sciences. New training programs were inaugurated to overcome the shortage of statisticians trained in epidemiology and biometry and to experiment with methods of research instruction for medical students during their undergraduate years. A program to develop training in dental research was initiated in dental schools.

Under Title V of the Health Amendments Act of 1956 (Public Law 911), grants were authorized for projects to evaluate treatment and care of the mentally ill in all types of institutions.

Other new legislation—the Health Research Facilities Act of 1956 (Public Law 835)—authorized a 3-year program of grants to build and equip laboratories and other facilities for medical research throughout the country. A supplemental appropriation authorized the planning and construction of urgently needed laboratory and office facilities at the NIH site in Bethesda, Md.

Special emphasis was given during 1957 to the expansion of the cancer chemotherapy program and to the development and expansion of psychopharmacologic treatment methods. The Cancer Chemotherapy National Service Center completed its second year of operation as a national headquarters in the voluntary, cooperative search for a chemical cure for cancer. Establishment of the Psychopharmacology Service Center during the year stimulated research on drugs that affect psychological function. Guidelines were provided in the fall of 1956 by a national conference on the evaluation of pharmacotherapy in mental illness.

Another development of special significance was the establishment of the Center for Aging Research. Administered by the National Heart Institute, the Center was created to stimulate and coordinate cardiovascular, psychological, and related studies on gerontology conducted at NIH and other institutions.

These various developments are discussed further in sections concerning the individual NIH programs. The National Institutes of Health comprises seven Institutes and Five Divisions—the Clinical Center, the Division of Biologics Standards, the Division of Research Grants, the Division of Research Services and the Division of Business Operations.

Clinical Center

The clinical research programs of NIH achieved a gratifying degree of maturity and professional acceptance. The physical plant was brought to the stage where maximum utilization was possible. The Clinical Center departments that provide hospital care and diagnostic services for all research patients were functioning with full effectiveness despite continued shortages in technical personnel.

The most important physical changes initiated during the year were the completion of the residential facility for disturbed children, activation of a child nursing unit, and plans for a new surgical research wing.

Maximum available bed capacity was attained in 1957, marking an increase in available beds from 443 in July 1956 to 516 in July 1957. No further expansion of bed capacity is contemplated.

Inpatient admissions totaled 2,598, as compared with 2,095 in 1956. Visits of patients as ambulatory followup or outpatient research sub-

jects totaled 21,343 as against 18,575 in 1956. Although patients continued to come from all sections of the United States, approximately 75 percent were referred from the District of Columbia, Maryland, and Virginia.

Division of Biologics Standards

The importance of biologics control in the development of preventive medicine has been emphasized by the expanding range of diseases to which biological products are applicable, particularly in the field of virology. Two new vaccines have been under intensive study by the Division of Biologics Standards—the adenovirus vaccine and the Asian influenza vaccine.

After months of testing, standards relating to the safety, purity, and potency of the adenovirus vaccine—a biological product designed to prevent infections due to adenoviruses—were drawn up by DBS scientists and given preliminary approval by the Surgeons General of the Army, Navy, and Public Health Service.

With confirmation that the influenza epidemic in the Far East this spring was due to a hitherto unknown virus strain, the Division procured samples for the six licensed manufacturers so that production of a vaccine to combat the new strain (Asian, type A) could be studied. As data became available, suitable potency tests were developed in DBS laboratories; reference vaccines correlating data from laboratory, clinical, and field investigations were established; and specifications for the manufacture of vaccine containing the new strain were provided for the guidance of the pharmaceutical industry.

A new potency test for poliomyelitis vaccine was developed by scientists in DBS and industry. The test employs chicks instead of monkeys. It has been approved by the Technical Committee on Poliomyelitis Vaccine and is being used concurrently with present monkey potency tests on a trial basis. Over 97.5 million cubic centimeters of poliomyelitis vaccine were released during 1957.

More than 100 licensed blood banks throughout the country are collaborating in a study initiated by the Division to determine the causes of error in labeling blood for transfusion, and thus to reduce eventually the number of such errors.

Division of Research Grants

The Division of Research Grants, in addition to coordinating NIH grants and fellowships, initiated several new programs and expanded its support of research and research training in the basic sciences. The Health Research Facilities Act of 1956 (Public Law 835) estab-

lished the National Advisory Council on Health Research Facilities and authorized \$30 million annually for construction grants to research institutions on a matching basis.

Among other new programs initiated during the year were a Senior Research Fellowship Program, to help relieve the acute shortage of teachers and investigators in the preclinical sciences; a Postsophomore Fellowship Program, to provide research opportunities to medical students; and an Experimental Training Grant Program, to permit experimentation with research training in medical schools. The Division also intensified the coordination of research and training in epidemiology, biometry, and public health.

Progress was achieved in biophysics, biophysical chemistry, experimental pathology, and other areas of Division-sponsored grantee research. A major practical finding is that edathamil calcium disodium increases the urinary output of accumulated lead, providing a new therapeutic agent for lead poisoning in children. Of fundamental importance is the discovery of a new type of ribonucleic acid. Ribonucleic compounds represent the bedrock of all known mechanisms for transmitting individual traits from one generation to another.

Central Services

The Division of Business Operations furnishes NIH scientists with auxiliary management services. During the year, the Division developed and carried through a program of decentralizing authority to the individual Institutes. Paperwork and multiple-level reviews have been reduced, and thus action has been speeded.

The Division of Research Services provides scientific, technical, and engineering support for the Institutes. Major emphasis in 1957 was given to planning and designing additional construction authorized by Congress. This includes special facilities for the production and care of germ-free animals, a surgical wing for the Clinical Center, a permanent office building, and laboratories for the Division of Biologics Standards and for the National Institute of Dental Research. During the year, the Division established a program for translating and disseminating selected research papers and abstracts from Soviet periodicals devoted to the medical and biological sciences.

Institute of Allergy and Infectious Diseases

This Institute conducts research and training in the field of allergic and infectious diseases. Allergies alone affect some 17 million per-

sons in the United States. Acute respiratory diseases—to cite a single category of infections—are by far the most prevalent of all illnesses.

Although spectacular gains have been made against some communicable diseases, remaining problems are numerous and important. The increase in the average life span has created new problems, one of which is how to prevent illness and disability in the added years. The control of allergic and infectious disease is a significant aspect of this problem.

Research to develop more potent and less toxic protective vaccines has shown notable progress at the Institute's Rocky Mountain Laboratory, Hamilton, Mont. Working with various types of microorganisms, the scientists have found that the cell wall, when separated from the inner protoplasm of the cell, can be purified chemically; this not only leaves a concentrate that contains the elements which confer immunity but removes toxic substances responsible for some side reactions. These techniques open new opportunities for improving vaccines, including possibly one for tuberculosis.

Institute scientists extended their work with the adenoviruses, a group of viruses originally isolated from diseased adenoidal tissue. The adenoviruses have been shown to be almost as important a cause of eye infection as of respiratory disease. Continuing studies indicate that these infections are particularly prevalent among preschool children. Since a vaccine against certain types of adenoviruses in military recruits has been shown to reduce illness, the investigators are studying the advisability of developing an adenovirus vaccine for specific use in young children.

Institute clinicians made the first direct measurement of the rate at which humans produce antibodies against disease. This was done by transplanting lymph nodes—tissues involved in manufacture of protective antibodies—to a patient suffering from hypogammaglobulinemia, a rare disease characterized by extremely low levels of antibody production.

About 250 million people throughout the world have malaria and about 2½ million die from it each year. Recent cooperative studies with the World Health Organization have shown that malaria can be prevented by administering antimalarial drugs in the same manner as iodine in salt. A dietary salt-drug blend may be useful in areas where spraying is not a practical means of controlling the carrier mosquito.

GRANT-SUPPORTED RESEARCH

It has long been evident to scientists that factors other than specific immunity are involved in susceptibility or resistance to infectious diseases. Scientists from the University of California, with

the aid of a grant from the Institute, investigated psychological stress as a possible factor in infection processes. Mice subjected to such stress were shown to be more susceptible to infection than other laboratory animals.

In another of many promising studies supported by NIAID grants, research scientists at Children's Hospital in Philadelphia are developing uses for a blood fractionating machine that greatly increases potentialities for stockpiling vital plasma. Donors may give as often as once a week by this method, which returns red blood cells to the donor in a single operation.

An acute streptococcal infection protected guinea pigs against asthmatic attacks induced in normal animals by egg white aerosols during research by a grantee at Northwestern University. The reason for this interesting and possibly significant phenomenon is unknown. The grantee plans further studies of the allergic mechanisms involved and will investigate other infectious organisms and noninfectious derivatives for their value as protective agents.

Institute of Arthritis and Metabolic Diseases

More than 12 million people in the United States are afflicted with various forms of arthritis, diabetes, and other metabolic disorders. Although the ultimate means for prevention and cure are still remote, several developments toward control of these diseases are under way.

Clinical trials with more than 200 patients have proved the effectiveness of a simple treatment for the shock so often fatal to victims of severe burns. Scientists in the National Institute of Arthritis and Metabolic Diseases have found that a solution of table salt and baking soda dissolved in tap water and administered by mouth is especially valuable in an emergency. No injection, whole blood, or plasma is required.

The same scientists have developed a treatment for a type of infection which causes many late deaths among those who have been severely burned and have successfully passed through the early shock period. Although the antibiotic and sulfa drugs failed, human gamma globulin, a blood derivative, was successful in subduing this infection, which was found to be caused by bacteria known as pseudomonas. Clinical trials in progress may prove that the treatment is another life-saving advance.

A new pain-killing drug developed by chemists in NIAMD laboratories is as potent, measure for measure, as morphine and three to four times as potent as Demerol, but has less addiction liability than either. Much more potent than codeine, it has only slightly more addiction potential.

Institute clinicians have devised a method for the detection and measurement of blood loss from the intestines that is much more effective and precise than older procedures, including X-ray.

Searching for a better diagnostic test for rheumatoid arthritis, NIAMD scientists collaborated with colleagues in the National Institute of Allergy and Infectious Diseases in developing the bentonite flocculation test. Much more simple and rapid than present methods, BFT provides accurate answers in minutes rather than hours or days.

A major scientific achievement was the discovery by an NIAMD investigator and his collaborator, an Institute grantee, of the manner in which nucleic acids are synthesized. The scientists were successful in synthesizing these important substances with enzymes isolated from living cells. Nucleic acids of the body control, among other things, the ability of a cell to generate without variation identical molecules of a protein such as insulin. Nucleic acids are also believed to be responsible for the genetic transmission of inherited characteristics and defects, among which is diabetes.

GRANT-SUPPORTED RESEARCH

In a project aided by a grant from the NIAMD, the prevalence of rheumatoid arthritis, as distinguished from other forms of rheumatic disease, was determined by intensive study of a selected sample of a local population. Preliminary results indicate that 2.7 percent of those examined had rheumatoid arthritis, that the disease strikes 3 times as many women as men, that married persons are affected more often than single, and that persons who have been separated, divorced, or widowed are more often affected than those who remain married.

Growth hormone, one of the endocrine substances produced by the anterior pituitary gland, is of particular importance to the understanding of diabetes, since it acts to cancel out the effect of insulin. Growth hormone obtained from cattle has been shown to cause diabetes in dogs but to have no effect on humans. Growth hormone from monkeys, isolated by scientists at the University of California, has been found to be active in man. It is so rare, however, that not enough can be supplied for clinical experiments. Hope for a larger supply of growth hormone is high because the grantees have isolated the substance from whales.

Extensive clinical trials of a new oral antidiabetic drug, tolbutamide, have demonstrated its effectiveness in reducing the blood-sugar level in certain types of diabetes, though the manner in which the drug acts on the body is still undetermined. Scientists supported by Institute grants participated in the laboratory and clinical testing. Relatively nontoxic and safe, tolbutamide (Orinase) is on the market, available for prescription.

Cancer Institute

Cancer, the Nation's second leading cause of death, takes about 250,000 lives annually. The goal of cancer research is control through cure and prevention. Scientists of many disciplines are working toward this end in studies of the causation, diagnosis, and treatment of the disease.

Research carried out in the National Cancer Institute produced an advance that may be the first real breakthrough in treatment of cancer with drugs. Choriocarcinoma, a rare type of cancer occurring in the uterus of women after pregnancy, was apparently suppressed by the use of methotrexate. Even metastatic lesions in the lungs healed in several patients.

Promising results were obtained with a new drug, 6-azauracil, which produced temporary improvement in patients with acute leukemia, most of whom were children.

Studies with many people have indicated that routine removal of moles on the soles and palms, which has been suggested in some investigations in the past years, should not be recommended. Moles of this type occur more often than is generally believed, and identification of the rare mole that may become malignant is impossible.

A basic research observation, which may lead to a new diagnostic technique for cancer, was that the antibiotic tetracycline accumulates in tumor tissue and can be detected by a bright yellow fluorescence under ultraviolet light.

In a collaborative project with the Tissue Bank of the Naval Medical School, two clones—pure strains of cells grown from single cells—of human skin epithelium were successfully established. This achievement is a step toward the production of epithelial cells for reparative surgery required in such conditions as burns.

A single treatment with reserpine, the tranquilizing drug, produced a threefold increase in the remaining lifetime of mice in advanced stages of induced leukemia. This observation may open up a new group of possible antileukemic agents.

A new television camera tube used with a high-power microscope and an electronic oscilloscope permits study of chemical activity within live normal and cancerous mouse cells. Using ultraviolet light, the apparatus enlarges live cells 2,000 times normal size and projects the image on a TV monitor screen. Investigators can then take motion pictures of cell activities or directly observe hitherto hidden changes.

NATIONAL CHEMOTHERAPY PROGRAM

In its second year the Cancer Chemotherapy National Service Center initiated a hormone assay program to evaluate the endocrine

activity of compounds for possible use as anticancer agents, and a major screening program in the antibiotic field. It awarded training grants in clinical investigation, pharmacology, steroid biology, and biochemistry.

The pharmaceutical industry will submit annually more than 30,000 chemical compounds for screening. About 11,400 synthetic chemicals and 12,700 antibiotic culture filtrates were obtained for screening in 6 contract laboratories during 1957.

The Food and Drug Administration continued preclinical pharmacological testing of drugs. Two university laboratories will study the physiological disposition of drugs. The Chemotherapy Center simulated the establishment of a number of cooperative clinical study groups, representing some 75 medical schools and hospitals, for evaluating anticancer compounds in human patients.

GRANT-SUPPORTED RESEARCH

A grantee reported the development and successful use of a "midget" version of a billion-volt linear electron accelerator for radiation treatment of cancer patients. A 6,000,000-volt electron beam is converted into a high energy X-ray beam, which is adjustable to a pinpoint or to a spread of 400 square inches. Eighty percent of its output penetrates the body's deepest point, yet the rays are less damaging to intervening tissues than standard "softer" X-rays.

New studies with the anticancer drug Myleran were reported. Treatment of chronic leukemia produced significant remissions for periods up to 48 months in 14 out of 21 patients, with restoration of the white blood-cell count to normal.

About a year ago a grantee discovered a new virus that in 14 to 21 days caused a leukemia-like disease in almost all the mice inoculated. Previously reported viruses induced a similar disease in adult mice that had been inoculated at birth. The grantee recently developed a vaccine that rendered 80 percent of the animals immune to the new virus as long as 4 weeks after vaccination.

Quantitative determination of 17 amino acids in normal and tumor tissues of tumor-bearing mice showed significant differences in the amounts of one amino acid. Aspartic acid was present in a lower amount in tumor tissue than in other tissues. This difference may make the tumor susceptible to drug attack.

BIostatistical and Field Investigation Studies

As a possible means of curbing the sharp rise in lung cancer—particularly serious among men over 45—the Institute cosponsored a study group on smoking and health. As a result of the group's findings and other evidence, the Public Health Service issued a state-

ment calling attention to the fact that excessive cigarette smoking is one of the causative factors in lung cancer.

For 3 years NIH has collaborated with the Veterans' Administration on a followup study of more than 200,000 World War I veterans. Information compiled from replies to a questionnaire on smoking habits, from accurate medical records in veterans' hospitals, and from autopsy data made available when veterans die will provide data on the relation of smoking and various diseases, including lung cancer.

Results of a large-scale study of cytology as an aid to early detection of uterine cancer were summarized. The first examination of 108,000 women in the cervical cytology project in Memphis, Tenn., disclosed about 800 cases of cancer equally divided between intraepithelial and early invasive cervical cancer. Fully 90 percent of the intraepithelial cancers and 30 percent of the early invasive cancers were unsuspected. The case-finding rate in the second screening of 33,000 women was significantly lower than in the first screening.

To obtain additional data, NCI is operating eight cervical cytology projects and is establishing four projects to develop the use of cytology in diagnosing cancer of other sites—the lung, large intestine, urinary tract, and stomach.

Studies of environmental factors that may cause cancer include a long-range project to determine the incidence of cancer in uranium miners of the Colorado Plateau and to assess the effects of lengthy exposure to radiation from uranium.

CANCER CONTROL AND RESEARCH TRAINING

Health agencies in 47 States, 4 Territories, and the District of Columbia received grants of \$2,250,000 for support of their cancer control programs.

New training programs to increase manpower resources include research grants to institutions that select and appoint individual scientists for training; biometry and epidemiology training grants; and training of cytology technicians.

Institute of Dental Research

Oral diseases and abnormalities affect hundreds of thousands of people in this country. The degree of severity ranges from relatively minor afflictions to oral cancer and major systemic disturbances resulting from malformations and infections.

The program of the National Institute of Dental Research covers a broad area of basic and clinical research to attain more effective

control of dental caries and periodontal disease and to increase our knowledge of the causes of oral disease and its relation to general health.

Periodontal disease, an involvement of the supporting structures of the teeth, is found with increasing frequency among older people but may have its beginning earlier in life. Evidence for this is provided by recent epidemiological studies which show that children of high school age exhibit the initial stages of periodontal disease, often with a degree of severity usually considered to occur only in the later years of life. In the younger ages, girls are more severely affected than boys, but this situation is reversed beyond the teen age.

The role of inflammation in periodontal disease is being further elucidated by basic chemical studies. Investigations particularly related to various chemical aspects have shown that fluorides in the water supply do not adversely affect periodontal tissues.

Newly devised methods of isolation and identification of microbes to detect infection of the blood stream indicate that present estimates of the frequency of bacteremias following tooth extractions and periodontal treatment may be far too low. This finding emphasizes the need for better operative techniques to reduce the risk to patients with rheumatic fever and other heart disorders.

Other programs in the field of bacteriology will permit the study of oral diseases in experimental animals under germ-free conditions as well as in controlled conditions of exposure to selected microorganisms. Much progress can thus be made in discovering bacteria that are specifically implicated. Biochemical approaches are being utilized in other studies of dental caries in order to explore the role of proteins and minerals, basic enzyme reactions, and the application of heat to certain foods.

The field of clinical investigations is concerned particularly with general anesthesia, high-speed instrumentation, oral manifestations of endocrine and other systemic dysfunctions, etiology and treatment of oral and facial abnormalities, and genetic factors in oral and other diseases. The Institute's study of some 5,000 persons in Maryland is yielding important information on dental diseases and their relation to genetically determined pathologic conditions.

Histochemical, electron microscope, and X-ray studies of oral and related tissues are also contributing to a better understanding of tooth and bone formation.

During the year, the research grants program in dental health was substantially expanded. More than 90 percent of the Nation's dental schools are now receiving dental research grants from the National Institute of Dental Research. There were 265 dental research projects under way with the aid of grant funds in 1957, a fivefold in-

crease over 1956. A graduate training grant program was initiated in 15 dental schools in the various fields of clinical and basic science related to oral disease.

Heart Institute

Heart disease, which includes some 20 heart and blood vessel disorders, is the leading cause of death in the United States. Heart disease is also a major cause of disability, exacting a heavy toll in suffering and economic loss.

The National Heart Institute, with a much expanded program in 1957, is enlarging the Nation's capacity to deal with the problem. It conducts research in its own laboratories, supports research in institutions throughout the country, administers training programs to increase the skills of professional personnel in the field of cardiovascular disease, and helps develop community heart disease control programs. To stimulate research activities in the field of aging, a Center for Aging Research was established in the Institute.

Atherosclerosis, the form of hardening of the arteries that leads to heart attacks, is characterized by deposits of fatty materials in the walls of the blood vessels and is frequently associated with excesses of certain fatty substances in the blood. Hence, fuller understanding of normal and abnormal fat metabolism is a major research objective.

Fats absorbed from the intestines are transported to the tissues in the form of large molecular aggregates of fat and protein. NHI studies have shown that a lipoprotein lipase system is responsible for removal of the fat and its deposit in the tissues of the body. They have also shown that the unjoined fatty acids released from the body's fat depots by the action of a specific enzyme constitute a major resource in meeting the caloric requirements of tissues. The regulation of release and uptake of these fatty acids has been under study since it was found that interference in this process can lead to the appearance in blood of large fatty aggregates of the type most often associated with atherosclerosis.

Research in blood pressure has revealed a factor present in the plasma of patients with hypertension, but not in patients with other diseases or in normal persons. Studies are under way to determine the nature and significance of this material, which was recognized through its capacity to modify the contraction of the isolated heart.

Research on the chemistry of brain centers which control blood pressure and other automatic body functions had led to the theory that the stimulating and moderating functions are mediated by centers controlled by different chemical substances, known respectively as serotonin and norepinephrine. Drugs act on the brain centers by caus-

ing the release or preventing the action of those substances, suggesting new approaches to the central control of blood pressure. Other research indicates that serotonin may also play a role in allergic respiratory reactions.

Further progress has been made in defining the chain of events that lead from failure of the heart muscle to perform its work adequately to the eventual formation of edema (dropsy) as a result of the body's retention of excesses of salt and water. Previously, there was only inferential evidence that the last link in the chain is excessive secretion of certain hormones by the adrenal glands. This has now been demonstrated by the collection of blood directly from the adrenal veins in dogs with congestive heart failure. In another study, a substance present in normal blood, similar to digitalis in its effect on heart muscle contraction, has been isolated in pure form and its chemical structure identified.

Improvements in diagnostic and operative techniques are making possible the wider application of heart surgery, decreasing the risk, and improving results in heart disorders in which surgery has become standard treatment. Catheterization of the left side of the heart, which is reached by puncture through a bronchoscope, has proved a safe procedure. The technique, developed by the Institute, makes it possible to measure the gradients of pressure across heart valves suspected of deformity and thus to evaluate the extent of disease and, after operation, the adequacy of the corrective measure. Also, new methods have been devised to determine accurately the location of abnormal openings between heart chambers and to assess the functioning of heart valves.

The use of hypothermia has become a safe technique in heart surgery. The body is cooled to about 86 degrees so that circulation can be interrupted for six to eight minutes without damage to the brain. Resistant abnormalities in the rhythm of the heart have been virtually abolished by a novocain injection procedure devised in NHI laboratories. Other research has demonstrated that an injection of strophanthidin, a digitalis preparation, can avert heart muscle failure.

Preliminary findings of the Institute's study at Framingham, Mass., indicate that men aged 45 to 62 with any two of these three conditions—hypertension, overweight, high serum cholesterol—are about nine times as likely to develop coronary heart disease as men free of these conditions. The risk of developing coronary disease for men with hypertension is four times that of men with normal blood pressure. Men who were either greatly overweight or who had a high serum cholesterol count appeared to develop coronary disease three times as frequently as those who did not have these conditions.

GRANT-SUPPORTED RESEARCH

Significant accomplishments have been made through research grants, particularly in arteriosclerosis, hypertension, cerebral vascular disease, chronic pulmonary disease, and rheumatic fever.

A cooperative study on lipoproteins, begun in 1950, was completed during the year. This research, carried on in four institutions, involved 15,000 subjects with intensive study of about 5,000 men. It has provided information on the relation of cholesterol and fat-protein levels in the blood to the appearance of cardiovascular disease in previously well persons. Results have led to a national and international reevaluation of these measurements as indicators of the probable development of coronary disease.

Grantees in several institutions continued intensive investigations of the relation of dietary factors to the production of atherosclerosis and high serum cholesterol. A number of studies have substantiated the theory that saturated fats tend to raise blood cholesterol and that unsaturated fats tend to lower the level. Other research indicates that the cholesterol level in the blood varies from one individual to another, and may be related to age, sex, diet, physical activity, and functioning of the liver and of endocrine glands such as the thyroid and the adrenals.

In high blood pressure research, studies of several pressure-lowering drugs, used either alone or in combination, have determined more specifically the relation of their action to heart, blood vessel, and kidney function. This has led to techniques which increase the effectiveness of these drugs and minimize the undesirable side effects of prolonged administration. The number and diversity of new drugs being developed by research and proving useful in the treatment of heart and blood vessel diseases have given rise to a great need for evaluation of drug therapy, particularly in the management of hypertension. A 5-year broad-scale study initiated in 1957 represents a step toward this goal.

The manner in which group A streptococcal infections bring about rheumatic fever and heart damage is still obscure. A number of investigators are attempting to determine the mechanism of bacterial action. At two institutions, methods were established for the isolation and identification of the antigens produced by the streptococci and for study of their physical and chemical properties. Other research groups are investigating products elaborated by the microorganism, of which two—crystalline streptococcal proteinase and streptolysin O—are known to have an effect on the heart. Grant studies have shown that crystalline streptococcal proteinase may destroy heart muscle. Streptolysin O reduces its oxygen consumption, causing a reduction in the amplitude of its contraction.

Institute of Mental Health

New vigor and new measures hold promise for alleviation and eventual solution of mental illness and emotional disorders. Over a million persons are treated annually in mental hospitals, and thousands more are treated as outpatients. But the gains made last year in research and practice brought encouraging signs of progress.

There was a substantial increase in State and community mental health services. The National Institute of Mental Health met increasing requests for consultative services by: (1) providing special consultants in such fields as mental health in the schools, alcoholism, drug addiction, and industrial psychiatry; (2) conducting demonstration projects to identify school children having mental health problems, to improve mental health education, and to provide followup assistance for discharged narcotic addicts; and (3) making available technical assistance and resource personnel on specific problems.

Title V of the Health Amendments Act of 1956 (Public Law 911) authorized mental health project grants for the development of improved methods of care, treatment, and rehabilitation of the mentally ill. Institute staff participated in a survey of the need for construction of psychiatric facilities in Alaska to implement provisions of the Alaska Mental Health Act (Public Law 830).

On recommendations of the National Advisory Mental Health Council, the Institute increased its support of training for social workers, psychologists, and research workers in mental health. Pilot training projects were planned to improve methods of instruction for professional personnel who work with the mentally retarded, the aged, and juvenile delinquents. The Judge Baker Guidance Center of Boston, for example, will develop a training program in the field of juvenile delinquency. NIMH also continued its support of training for career teachers in mental health, of graduate training for mental health personnel, of improved psychiatric instruction for medical students, and of mental health courses for professional personnel in the fields of law and education.

The establishment of a joint research facility at Saint Elizabeths Hospital in Washington, D. C., provided the Institute with a hitherto unavailable research setting, that of the large mental hospital. Studies are planned of patients under combined pharmacological and psychotherapeutic regimens.

PSYCHOPHARMACOLOGY

During the year, the Institute carried on a \$1.5 million psychopharmacological program aimed at evaluation of the tranquilizing and other centrally acting drugs and broad implementation and

stimulation of basic and clinical drug research. Several activities were undertaken to provide greater understanding of the effectiveness and limitations of drugs in the treatment of mental illness, including a number of intensive laboratory and clinical studies. A Psychopharmacology Service Center was established as a clearinghouse on information relating to drug investigations and as a focal point for the administration of grants in this field. NIMH cooperated in the large scale, continuing clinical evaluation of psychopharmacological agents by the Veterans' Administration.

MENTAL HEALTH RESEARCH

In the field of clinical research, special "therapeutic communities" were organized and studied. In such communities, the patient lives in an environment geared to meet his special needs and designed to bring about a favorable change in his condition.

Family relationships as factors in the origin and remission of emotional and mental disorders were a focal interest of grant-supported projects and program development activities in the Institute. Examples are studies of young schizophrenic patients and immediate family members, of a group of hyperaggressive children and their families, of the effects of family relationships on posthospital rehabilitation, and of the adaptations of both patients and their families to mental illness.

Researchers representing various scientific disciplines contributed their skills and knowledge to an integrated effort by the Institute to obtain basic data on the psychological and physiological processes of aging and on the relation of the older person to his environment. Institute staff also cooperated in the work of the National Heart Institute's Center for Aging Research.

Scientists at NIMH and at the Public Health Service Hospital in Lexington, Ky., continued their research into the action and effects of LSD (lysergic acid diethylamide), a drug capable of inducing temporary states resembling psychoses. Studies of the drug's effect on normal individuals who volunteered for such experiments have provided important information on the enzyme systems involved in the metabolism of LSD within the human body. Moreover, they have demonstrated that the drug's metabolic end product fails to produce LSD's characteristic effects in man or animals—a finding related to the theory of enzyme disorder in the tissues of patients with certain types of psychoses.

NIMH biostatisticians began studies to provide a base for assessing the effect of the tranquilizing drugs on patients in mental institutions through analysis of long-term trends of resident population, admissions, releases, and deaths in the hospitals of certain States. Con-

tinuing collection and examination of data on characteristics of patients served by these institutions will supplement a comprehensive study on the geographic distribution of outpatient psychiatric facilities.

GRANT-SUPPORTED RESEARCH

With Institute support, numerous investigators throughout the Nation are conducting broad-scale research into mental health and mental illness. Grants for research in mental health increased in number and scope.

A new type of grant was awarded to Duke University for the establishment of a multi-disciplinary, large-scale center for research in aging. The center will be a regional resource of available scientific information on aging.

Typical of the Institute's range of extramural research are programs at Stanford University and the University of Michigan and Ypsilanti State Hospital. The Stanford investigation seeks knowledge of how information about child care and development is communicated to parents, and whether misinformation is related to the etiology of mental illness. The University of Michigan, in cooperation with the Ypsilanti State Hospital will study the physiological and psychological characteristics of schizophrenic patients.

The National Academy of Sciences and the National Research Council have been awarded a grant to investigate the effects of social and cultural variables on adjustment in disaster. Individual, family, and group adjustment will be studied intensively in two "laboratory" communities and by other techniques.

Institute of Neurological Diseases and Blindness

An estimated 20 million Americans are affected by neurological and sensory disabilities. Many cannot be productively employed or are severely limited in the types of jobs they can hold. To a great extent, the solution to this pressing problem lies in medical research.

During 1957 the National Institute of Neurological Diseases and Blindness moved ahead in such diverse areas as epilepsy, the blinding diseases, brain tumor detection, hearing research, and in such neuromuscular disorders as myasthenia gravis.

In epilepsy, good results continued in surgical investigation directed to controlling or eliminating seizures localized in the temporal lobe. Glaucoma, a serious blinding disorder which results from the increase of pressure within the eye, came under intensive study. A rich nerve supply was discovered in the area of the eye directly involved in the regulation of extraocular pressure, thus offering an important research lead for treatment and prevention.

A new research approach to the problems of deafness and hearing loss was opened up with an NINDB scientist's discovery of the olivocochlear bundle, a nerve system linking the cochlea of the inner ear with the brain. The finding supports the view that hearing is actually a two-way process in which the brain plays a "feedback" role—not, as previously believed, that the brain receives sound impulses but has no positive influence.

The early detection of brain tumors is often the key to saving a life. NINDB investigators have developed a detection technique that makes possible the precise location and definition of tumors deep within the brain. The technique, which combines the isotopic tracer method with electronic scanner and recording devices, is more than 80 percent effective in detecting tumors.

Myasthenia gravis is among the major neuromuscular disorders that involve the blockage or impeding of impulse transmission at the nerve-muscle junction. Important light on this problem may come from a fluorescence method devised for measuring minute quantities of acetylcholine, a chemical substance involved in the transmission of impulses from nerve to muscle.

An Institute scientist has developed an ingenious recording technique which should add much to our understanding of the nervous system. Using microelectrodes capable of recording electrical impulses of millionths of a volt in millionths of a second, and working with the nerve system of a squid, he has probed the synapse area of the ganglion—the infinitesimal space in which one nerve transmits impulses to another.

GRANT-SUPPORTED RESEARCH

Grantees in the Institute's extramural research program participated in a number of promising developments. One grantee has worked out a technique for diagnosing various neurological and eye disorders and for evaluating the effect of treating them with drugs. Known as electromyography of the extra-ocular muscles—the muscles that turn the eyeballs—the technique records electrical activity inside the muscles through a needle electrode. Diagnosis is made on the basis of a visualization of this activity as it appears on a television-type tube called an oscilloscope.

The past year has also seen significant developments relating to multiple sclerosis, a disease in which the central nervous system is attacked through the disintegration of the fatty sheath (myelin) covering the nerve fibers. Nutritional deficiencies were found to have an adverse effect on the regeneration of crushed nerves in animals. More specifically, the lack of vitamin B₁₂ retards remyelination. A means of growing myelin in the test tube has also been found. Thus,

it is possible to study myelin change under controlled laboratory conditions.

An Institute grantee has developed a multiple blood transfusion technique that is successful in preventing kernicterus, a form of cerebral palsy which attacks infants immediately after birth, and which is due to the blood incompatibility between mother and child known as the Rh factor. A followup study will determine the long-range effectiveness of the technique.

A large-scale investigation into the nature and causes of cerebral palsy, mental retardation, epilepsy, and allied disorders was begun by the Institute in 1957 and will continue for ten years or longer. Eleven schools are collaborating. The investigation, first of its kind, is specifically concerned with the adverse factors which bring on brain damage during the perinatal period—the time span from conception to about one month after birth.

Another long-range project will evaluate the existing treatments for cerebral stroke and shed new light on its nature and causes. Ten institutions have joined the Institute-sponsored study, coordinated by the University of Iowa.

Bureau of Medical Services

The Bureau of Medical Services operates the hospital and outpatient facilities of the Public Health Service and administers the programs of the Service that relate to care and protection of the individual. It is also responsible for foreign quarantine activities; the health program for American Indians; aid in the construction of community hospitals and health facilities; and development of the Nation's dental and nursing resources. It also gives professional supervision to members of the Service staff assigned to the health programs of other Federal agencies.

Hospitals and Outpatient Facilities

The Division of Hospitals operates the medical care program for American seamen and other legal beneficiaries of the Public Health Service. This nationwide activity began in 1798 with the Act "for the relief of sick and disabled seamen," the original legislation from which the Public Health Service has grown.

In addition to American seamen, the beneficiaries of the Public Health Service now include officers and enlisted men of the Coast Guard, officers and crew members of the Coast and Geodetic Survey, Commissioned Officers of the Public Health Service, civilian employees of the Federal Government injured in performing their work,

and several other groups. Persons with leprosy and men and women who are addicted to narcotic drugs as defined by statute are treated in special hospitals.

The Division also administers the Federal employee health program through which Federal departments at their request receive consultative assistance in establishing or improving health programs for their employees. The Division operates 23 separate health units for 45,000 employees of various Federal agencies in Washington, D. C., New York, and Denver, and the agencies reimburse the Public Health Service for this assistance.

In 1957 the Division maintained 16 hospitals, 25 outpatient clinics, and 99 outpatient offices.

Twelve of the hospitals provide general medical and surgical services; 1 is exclusively for patients with tuberculosis; 2 treat narcotic addiction and neuropsychiatric disorders; and 1 is for the care of persons with leprosy. Most of the hospitals are in major port cities, such as Boston, New York, Baltimore, New Orleans, Chicago, Detroit, San Francisco, and Seattle. In certain other places, depending upon the concentration of beneficiaries, outpatient clinics and outpatient offices have been established. Staffed by full-time personnel, the clinics provide a range of medical, dental, and allied health services. Local physicians conduct the outpatient offices in their private facilities on a part-time basis as needed.

VOLUME OF SERVICES

Admissions in all the hospitals rose 2 percent—from 48,627 in 1956 to 49,651 in 1957. The average daily census declined 1 percent, to 5,350. The number of outpatient visits was 1,098,278, an increase of 4 percent.

General Hospitals.—The general hospitals admitted 44,584 patients in 1957 compared with 43,399 in 1956. The average daily patient-load remained substantially the same at 2,759. The number of days of care per admission averaged 22.6, compared to 23.3 the previous year.

Tuberculosis.—The tuberculosis hospital at Manhattan Beach, Brooklyn, N. Y., admitted 422 patients in 1957 or 5 percent more than in 1956. The average daily census dropped 5 percent, reflecting the more rapid turnover of patients because of recent advances in chemotherapy and thoracic surgery. More patients discharged were able to return to duty in 1957 than in previous years. Since many who were discharged continue to receive chemotherapy, increasing attention was devoted to giving them follow-up care and guidance as outpatients. Cardiopulmonary function studies, including cardiac catheterization, were continued.

Rehabilitation activities were strengthened through added opportunities for instruction to patients wishing to qualify for high school equivalency diplomas granted by the University of the State of New York. The hospital continued to offer vocational evaluation and educational guidance for patients desiring to change their occupations.

Leprosy.—The hospital at Carville, La., is the only hospital in the United States devoted exclusively to the care and treatment of patients with leprosy. Patients receive complete medical care and full maintenance, including clothing. Anyone in the United States who has leprosy can be admitted. Services include not only the special medical, surgical, and dental therapy necessary to treat leprosy, but also treatment for general illnesses and injuries. Since the course of treatment for leprosy usually lasts several years, the hospital conducts social service and community participation programs with varied recreational and educational activities.

The sulfone drugs remain the "treatment of choice" at Carville. While the study of other drugs continues, workers in the field of leprosy agree that the sulfone series offers a comparatively effective form of therapy. Most sulfone-treated patients enjoy greatly improved general health. In most instances, the irreparable damage of long-standing leprosy can be avoided if treatment is started early. A stage of apparent arrest may be reached, and the patient may enjoy long periods relatively free from disease activity. The sulfone drugs work slowly; therefore, the search for a more efficient and quicker therapeutic agent continues.

Admissions to the hospital totaled 61 in 1957 compared with 59 the year before. The average daily census was 315.

Narcotic Addiction.—The hospitals in Lexington, Ky., and Fort Worth, Tex., treat narcotic addicts as defined by Federal law. They also serve mentally ill patients entitled to care as beneficiaries of the Federal Government.

In 1957 these hospitals admitted 4,584 patients, about 4 percent fewer than in 1956. There was a slight decline in the number of narcotic addicts admitted. The average daily census of addict patients was 1,390, the same as in the previous year. The fact that voluntary patients made up 87 percent of the admissions but only 44 percent of the average daily census indicates the addicts' weakened ability to control their use of narcotics and their tendency to leave the hospital before they achieve a reasonable recovery.

TRAINING AND CLINICAL INVESTIGATIONS

More than 250 physicians, dentists, pharmacists, and dietitians served internships and residencies in Public Health Service hospitals in 1957. Eight of the hospitals had approval for the postgraduate

training of physicians granted by the American Medical Association, and 8 were approved by the American Dental Association for dental internships. The American Dental Association approved a new 1-year residency program in oral surgery at the hospital on the Staten Island, N. Y.

Through affiliation with colleges and technical schools, approximately 100 undergraduate students received practical experience and hospital instruction in physical, occupational, or vocational therapy; social service; practical nursing; and medical technology. The hospital in Baltimore trained six medical record librarians. The Staten Island hospital provided the clinical nursing portion of a course for hospital corpsmen given by the Coast Guard.

In 1957, the Division supported 31 research projects conducted at its field stations and recommended transmittal of 3 proposed clinical investigations to the National Heart Institute.

MEDICARE

The Dependents' Medical Care Act, which became effective December 7, 1956, authorized care in Public Health Service hospitals and clinics for active-duty and retired members of the Federal uniformed services and their dependents, and for dependents of deceased members of these services. This program—popularly known as Medicare—completed the first 6 months of operation in June 1957. The program resulted in an increase in patient loads in Public Health Service hospitals and clinics. The number of uniformed service personnel and dependents admitted to the hospitals in June 1957 was 1,001 or 8 percent more than in June 1956; the number of outpatient visits by these beneficiaries was 24,476 or 9 percent greater.

The average number of Department of Defense beneficiaries in Public Health Service hospitals during the month of May 1957 was 164, while the number of Public Health Service beneficiaries in Army, Navy and Air Force hospitals was 76.

EVALUATION OF HOSPITAL CARE

Five of the general hospitals were visited by study groups of national experts in hospital and medical care administration from outside the Federal Government. These groups usually included an internist, surgeon, pathologist, nurse, administrator, and comptroller. They appraised the quality of care given by the hospitals, with special attention to adequacy of personnel, equipment, supplies, physical facilities, and funds.

The teams reported that improvements in buildings and equipment were needed. However, they commended the hospitals for good

service in spite of the staff shortages and inadequate plants. Their reports form the basis for planning corrective action.

FREEDMEN'S HOSPITAL

Freedmen's Hospital, Washington, D. C., is a general medical and surgical hospital with provision for treating chronic chest diseases. It serves also as a university hospital conducting programs in medical education in cooperation with the College of Medicine of Howard University, in Washington. Freedmen's Hospital operates teaching programs in nursing, dietetics, pharmacy, social service, and hospital administration. It has 320 beds for general medical and surgical patients, 50 bassinets, and 150 beds in the annex for patients who have chronic chest diseases.

The hospital admitted 13,715 patients in 1957, a substantial increase over the 11,638 in 1956. The daily average census was 361, compared with 366 the previous year. The outpatient service, consisting of 34 clinics and the emergency room, had a total of 91,022 visits, compared with 79,400 in 1956.

Nearly 50 clinical investigation projects covering a wide range of medical and health problems were in progress during the year.

The School of Nursing had 85 students, with 31 in the graduating class. The National League for Nursing reviewed the nursing education program during the year and gave approval.

The hospital provided graduate training for 42 medical residents, 18 medical interns, 4 medical externs, 2 dental interns, and 6 clinical research fellows; it also served as a training facility for junior and senior medical students. Ten dietitians completed an internship program in their field offered by the hospital and approved by the American Dietetic Association.

The hospital continued to cooperate in a teaching program leading to the master's degree in hospital administration. To qualify, students must have completed requirements of a university offering an approved course in hospital administration. The program is conducted on a preceptorship basis and meets standards acceptable to the American Hospital Association, the American College of Hospital Administrators, and the Association of University Programs in Hospital Administration. Through 1957, 13 men have been "administrative residents" at Freedmen's Hospital in this program.

The pharmacy internship program follows the pattern established by the American Hospital Association, the American Pharmaceutical Association, and the American Society of Hospital Pharmacists. Two interns completed the course in 1957. Two students from Howard University's School of Social Work were accepted for field training in medical social work.

Foreign Quarantine

In 1957 no cases of the quarantinable diseases—smallpox, yellow fever, plague, cholera, and louse-borne relapsing fever and typhus—were reported in the United States. This was the fourth year of freedom from smallpox, although the disease was epidemic in several other parts of the world and was imported by airplane travel in three places in Europe (Naples, Hamburg, London). The smallpox vaccination requirement for international travelers, administered by the Division of Foreign Quarantine, was a significant factor in keeping this nation free of the disease.

Health authorities believe that the possibility of reintroduction of yellow fever in this country is greater now than it has been for many years. The disease was known to be present in 1957 in Guatemala near the Mexican border and in British Honduras; mosquitoes that can transmit yellow fever are present in Mexico and throughout the southern part of this country. The Division of Foreign Quarantine strengthened measures against introduction of yellow fever infection in persons or monkeys arriving from infected areas, and against importation of mosquitoes on ships, planes, or land conveyances. As a first line of defense, it began an expanded program to eradicate *Aedes aegypti* (yellow fever mosquito) at southern airports, dock areas, and border entry points.

Typhus occurs in certain parts of Mexico. To help prevent typhus from appearing in this country, Mexican migratory laborers are treated with DDT on entering the United States.

With few exceptions, recent reports of human plague infection have been confined to rural areas of certain countries in Africa, South America, and Asia. The ports of Mandalay and Phanthiet in Asia were infected in the past year. Plague will remain a minor problem in international traffic only as long as sanitary requirements for ships and ports are meticulously maintained.

Cholera continued to occur in India, Burma, and Pakistan. The incidence in India was the highest since the great epidemic of 1953. In general, relapsing fever has remained a problem only in parts of Africa.

Epidemic influenza in the Orient became a matter of serious concern in April 1957 upon receipt of a report of an epidemic affecting 250,000 persons in Hong Kong. It was evident at once that introduction of the disease into this country through international air and sea traffic could not be prevented. The full resources of the Division were mobilized to minimize the impact which the disease could have through international traffic. All sources of information were used to keep apprised, on a daily basis, of the places of occurrence of influenza in relation to international travel routes. Medical officers at international

airports and seaports worked out an integrated operation with local and State health personnel of their areas to detect and report all actual or suspected cases of influenza entering this country. Complete cooperation was received from air and surface carriers, including commercial and military transport. The Air Force, Navy, Army, and all civilian health agencies immediately made available both personnel and laboratory facilities to detect or diagnose influenza.

Because the speed of modern travel enables a traveler to enter the country during the incubation period of influenza, every person arriving from an infected area was advised to go to a physician promptly in case of illness, and to inform the physician of his area of travel. Thus the occurrence of influenza in the United States was made known immediately to physicians and State health departments.

INTERNATIONAL TRAFFIC VOLUME

International traffic subject to Public Health Service requirements continued to increase. Airplanes inspected for quarantine or immigration-medical purposes increased from 56,891 in 1956 to 61,892 this year; ships inspected from 30,126 to 34,779; arriving persons subject to quarantine regulations from 46,993,370 to 52,253,263; smallpox vaccinations by quarantine officers from 485,967 to 541,891. The number of persons released subject to further medical examination at destination increased from 9,670 in 1956 to 23,173 in 1957; persons detained in isolation at ports increased from 3 to 37.

MEDICAL EXAMINATIONS

Refugee Relief Program.—The year saw the termination of the Refugee Relief Act of 1953, under which a special program of immigration-medical examinations was conducted. Altogether, from the start of the program, services were provided abroad for examination of 206,204 applicants in Austria, Belgium, Denmark, Egypt, England, France, Germany, Greece, Iran, Italy, Jordan, Kuwait, Lebanon, the Netherlands, Norway, Sweden, Turkey, and the Far East. Disease conditions excludable under the immigration law were detected in 3,796 applicants. Refugees arriving here were reexamined for the Immigration and Naturalization Service; in all, 179,552 such examinations were made, and only 21 refugees were found to have excludable conditions.

The incidence of excludable conditions among the 206,204 refugees examined abroad during the Refugee Relief Program was greater than among the 178,941 regular immigrants examined abroad in 1957. Percentages were as follows: mental conditions, 0.28 percent of refugees, 0.15 percent of regular immigrants; tuberculosis, 1.33 percent of refugees, 1.03 percent of regular immigrants; dangerous con-

tagious diseases, 0.23 percent of refugees, 0.06 percent of regular immigrants.

Hungarian Refugees.—The mass migration of Hungarian refugees starting in November 1956 taxed the medical examination facilities of the Public Health Service. Facilities were improvised to administer the required examinations for great numbers of people. The Division of Foreign Quarantine expanded its immigration-medical examination operations in Austria and provided emergency staffing for the refugee reception center at Camp Kilmer, N. J. At the peak of activity in December 1956 the Vienna and Salzburg offices together were examining about 1,500 refugees daily. More than 26,000 were examined in 7 weeks. By the end of the year 33,413 refugees had been examined on admission to the United States; refugees having conditions that usually prevent entry were admitted under parole when they had assurance of sponsorship and treatment.

Tuberculosis, and the diagnosis of cases as active or inactive, was the chief problem. The medical officer at Camp Kilmer convened a board of tuberculosis experts from the Army, State and local health departments, and the Public Health Service, to restudy cases detected by medical examiners here and in Europe. Hospitalization of 423 cases was required, but 231 of these were released to be observed as outpatients. Arrangements were made for States and localities to provide hospital beds in communities where patients' families settled.

Regular Immigration Services.—The number of aliens other than refugees examined abroad by Public Health Service officers increased from 194,736 in 1956 to 206,754 in 1957; most of them were prospective immigrants. The number examined in this country increased from 2,111,237 to 2,598,741; these were chiefly crew members and temporary visitors. A total of 5,924 aliens were certified abroad and in the United States for diseases excludable under the immigration law.

Farm Placement.—In the farm placement program of recruiting agricultural workers from Mexico, 440,332 laborers were examined, with 5,587 rejections, at 3 migratory centers in Mexico; and 457,360 examinations were made with 5,578 rejections, at 5 reception centers in California, Arizona, and Texas.

OTHER QUARANTINE ACTIVITIES

The enactment of Public Law 85-58, which became effective June 21, 1957, provided for a marked change in quarantine operations by permitting 24-hour inspection service. Overtime inspections will be performed on request, subject to reimbursement by transportation companies in most cases.

The Division issued a field directive on precautions to be taken by personnel handling importation of psittacine birds. Need for the directive had been shown by reports of psittacosis contracted by port personnel from contact with birds brought from other countries.

The Division published a statement of sanitary measures required for the travel of aliens who have tuberculosis. This is intended to prevent the spread of infection when aliens with tuberculosis are admitted for treatment, or as immigrants under special legislation.

Eight additional yellow fever vaccination centers were designated to meet the need created by increased travel. This made a total of 81 centers in health departments and private clinics, and 33 in Public Health Service facilities.

Health Services for Indians

The second full year of operation of the Indian health program by the Public Health Service was marked by a continuation of improvements in facilities and services charted at the time this program was transferred from the Bureau of Indian Affairs in July 1955. Increases in both the volume and the quality of health services were made possible by the addition of some new Indian health staff members and by plant improvements in 1957. The Division of Indian Health provided more services to greater numbers of beneficiaries than ever before.

The 1957 appropriation for Indian health activities was \$38,775,000. An additional sum of \$8.76 million was appropriated to meet critical needs for construction and major alterations.

Approximately 370,000 Indians and Alaska Natives depend upon the Public Health Service for medical, hospital, and dental care, and preventive services such as those provided for the general public by local health departments. These beneficiaries include an estimated 335,000 Indians in 24 States, and 35,000 Alaskan Indians, Aleuts, and Eskimos.

Most illnesses and fully a third of the deaths among the Indians could be prevented by modern control measures. Deaths from tuberculosis, gastro-enteric diseases, and other communicable diseases are 3 to 10 times higher than in the general population. Twenty-four percent of all Indian deaths occur among infants, compared with only 7 percent for the population as a whole. This is the major factor in the early average age at time of death among Indians—30, compared with 60 for the general population.

Many of the Indians and Alaska Natives are isolated both culturally and geographically. Most of them were born into an environment which is itself a hazard to health. In many cases their sanitary facili-

ties are crude and inadequate, or entirely lacking. Often their water is scarce, and is obtained from contaminated sources.

THERAPEUTIC SERVICES

Hospital care and other health services are provided at 56 hospitals operated by the Public Health Service and at more than 270 non-Federal hospitals through contractual arrangements. Diagnosis and ambulatory patient care are given at health centers, field health stations, and other locations totaling more than 200. Medical services also are rendered by 160 contract physicians and dentists.

For the second consecutive year, hospital admissions increased by nearly 15 percent. Admissions totaled more than 66,000 including 13,000 in contract facilities. The average daily census in the hospitals operated by the Service was 2,785—an increase of 5 percent over 1956. However, possibly as a result of earlier and more effective treatment, there was a decline in the length of stay per admission. Therapeutic and preventive services provided in hospital outpatient clinics increased 17 percent to a total of 657,474.

With these increases in medical care have come improvements in hospital operations. Specialists' consultation from outside sources was increased substantially. Professional pharmacists now supervise the dispensing and storage of drugs at 16 of the hospitals and at all 6 of the area offices which administer the program in the field. The pharmacists compounded and dispensed 107,000 prescriptions for 248,000 hospital outpatients and provided supervision of pharmaceutical services in the small hospitals and clinics.

Although the nationwide nurse shortage poses a continuing problem in recruitment, there was a net increase in nursing personnel. Medical social workers contributed to hospital operations significantly by facilitating the discharge of 250 chronically ill patients. These individuals no longer needed hospitalization, but lacked homes or relatives to care for them.

Shortages of ancillary medical, administrative, housekeeping, and maintenance personnel remained serious. Despite these shortages, hospital staffing patterns were improved. Full accreditation of the Fort Defiance and Tuba City hospitals, both in Arizona, brought to 10 the number of accredited Indian hospitals.

PREVENTIVE HEALTH SERVICES

The major challenge in Indian health continues to be the prevention of disease. Much of the effort for prevention is carried on in field health facilities which are dispersed over 250 reservations and in Indian communities. Preventive services at hospital outpatient clinics alone increased 33 percent over 1956. Notable increases in-

cluded prenatal, 36 percent; well baby, 64 percent; and immunizations, 36 percent.

The increase in public health nursing services begun in 1956 was continued in 1957 and medical social service was provided in selected contract medical facilities. Health education, which receives professional supervision in 4 of the 6 geographic areas, was expanded by increasing the professional staff from 7 to 10. The number of community workers in health education (most of whom are Indians) was increased from 12 to 24, and 4 health education aides were added.

One of the major approaches to reducing the high incidence of preventable diseases among Indians is the improvement of environmental health controls and sanitary practices. The professional sanitation staff was increased from 22 to 35, and the number of sanitarian aides (outside of Alaska) from 51 to 65.

Environmental sanitation surveys were completed for 18 water systems, 19 waste disposal systems, 21 Indian schools, and 5 other facilities. Sanitation surveys were made of 11,000 Indian homes, and 18,000 homes were sprayed in fly-control demonstrations. Indian sanitarian aides trained by the Service now work on 117 reservations inhabited by 60 percent of the Indian population. In Alaska, Eskimo aides serve 25 native villages.

Nutrition and dietetic services were expanded through employment of a dietary consultant and three public health nutritionists to begin working on nutrition problems in two selected areas, and appointment of a Consultant Committee on Nutrition Research to review critically nutrition research projects essential to the solution of some of the basic health problems.

TUBERCULOSIS CONTROL

Although tuberculosis is no longer the leading cause of death among the Indians, it is still a formidable health problem. From 1950 to 1955—the latest year for which data are available—the tuberculosis death rate for Indians was cut from 102 per 100,000 population to 46. Among Alaska Natives, the reduction was even more spectacular—from 630.1 per 100,000 to 100. There is evidence that the downward trends are continuing. Among both Indians and Alaska Natives, however, tuberculosis death rates and incidence are several times higher than in the general population. A new system for keeping full, accurate check on tuberculous patients was developed during the year, and is being instituted in the field.

The 4 tuberculosis hospitals operated by the Division, together with facilities used through contractual arrangements, are adequate for the hospitalization of all known tuberculous beneficiaries who need this care and who are willing to accept it.

Chemotherapy nurses dispense medications, visit patients, carry out tuberculin testing, and find new cases. In Alaska, this work is done under contract with the Alaska Department of Health. Contracts are in effect with several State health departments for case-finding, treatment, and followup activities. Research to find more effective means of control is conducted for the Service by Cornell University and the University of Pennsylvania's Phipps Institute.

DENTAL SERVICES

Unmet dental needs among the Indians and Alaska Natives are enormous. For the second consecutive year the Division increased its dental staff, adding 30 new positions. In 1957 the staff averaged 73 dental officers and 75 assistants and laboratory technicians. This expansion brought oral health services to additional groups of beneficiaries which had not received dental service in the past. During the year, 72,479 patients received treatment requiring 135,000 visits—an increase of 20,000 visits over 1956. Services were provided in 66 clinics, at 211 transient locations, and through contracts with 14 private dentists.

SERVICES TO MOTHERS AND CHILDREN

Adequate health care of Indian mothers and infants would go far in reducing the excessive death rates among mothers and children and reducing the sickness and handicap rates among children. In one year, disorders of pregnancy and childbirth resulted in a death rate of 6.2 per 100,000 among Indians compared with a rate of 1.5 in the general population.

Of every 1,000 Indian infants born alive in 1955, 60 did not survive the first year. By contrast, only 26 of each 1,000 infants in the general population die in the first year. The Indian infant death rate for the first day is actually less than that in the general population, and for the first week of life it is about the same. This reflects the early care that Indian babies receive in hospitals operated by the Public Health Service. However, for the period between the first and eleventh month, the Indian death rate is nearly 6 times that for the general population.

Maternal and child health services include care of mothers during pregnancy and childbirth, health supervision of infants and preschool children, treatment of the sick, and health instruction of parents. During 1957 the professional staff in this specialty was expanded, and the first full-time pediatrician was assigned in the field to provide guidance to other health personnel.

Physical examinations of children beginning school were improved both in number and quality. Specialists' examinations for glasses

and hearing aids were provided for a larger proportion of the school children who need them. These and other improvements have been achieved through closer cooperation between Indian health personnel and school personnel.

A problem that once was considered solved appeared again in 1957. Surveys among Indian school children confirmed that trachoma again is prevalent. A diagnostic and treatment program for dealing with this eye disease was organized under a leading authority on trachoma. Measures to control the disease are being taken wherever it is known to exist. A pilot project to determine the most effective methods of case finding, treatment, and followup is being established in the Phoenix area.

TRAINING OF INDIANS

Formal courses and in-service training are provided for Indians employed in the Indian health program. Practical nurses were trained by the Service in schools in Albuquerque, N. Mex., and Mount Edgecumbe, Alaska. The twenty-fifth class was graduated by the Albuquerque school in 1957. Courses for sanitarian aides were conducted at Phoenix, Ariz., and in Alaska, and dental assistants and technicians were trained at several locations. Community health workers received on-the-job training supervised by university schools of public health. More than 100 Indian and Alaska Native employees received training during 1957.

CONSTRUCTION

The appropriation for construction and major alterations of health facilities provided funds to build 3 new hospitals which the Congress authorized in Gallup, N. Mex.; Sells, Ariz.; and Kotzebue, Alaska. Funds for construction of a new hospital in Shiprock, Ariz., were appropriated in 1956.

The \$8,762,000 construction appropriation included \$1 million for new housing for health personnel, mostly at remote locations. One million dollars also was provided for major alterations to old hospitals, clinics, and related facilities.

LEGISLATION

Two laws affecting Indian health were enacted shortly after the end of the fiscal year. Public Law 85-151, approved August 16, authorized the use of funds available for construction of Indian health facilities to assist in the construction of community general hospitals to serve both Indians and others. Any construction under provisions of this law will be coordinated with the Hospital and Medical Facilities Survey and Construction program.

Public Law 85-137, approved August 14, authorized construction of sewer and water lines and domestic appurtenances for the Elko, Nev., Indian Colony. A supplemental appropriation provided \$34,000 for this work.

Health Facilities Construction Program

The Division of Hospital and Medical Facilities administers the Hospital and Medical Facilities Survey and Construction Program. The legislation of 1946 authorizing this program was amended in 1954 to put more emphasis on construction of hospitals for the chronically ill and impaired, diagnostic and treatment facilities, and rehabilitation facilities, and to include nursing homes. In 1957 the appropriation for all types of construction grants was \$123.8 million, including \$21 million for the new phase of the program.

The first hospital built with the aid of a grant under this program was opened in October 1948. By June 1957, 3,514 hospitals, health centers, and related facilities were approved for construction. Of these, 2,346 were completed and rendering community service, and 953 were under construction. The remainder were in the planning and preconstruction stages. The total cost of all projects is \$2,875 million, toward which State and local sources contributed \$1,972 million. Two dollars in State and local funds are being spent for every Federal dollar. Federal aid for these projects amounted to \$903 million.

The 3,514 projects will add 152,593 beds and 824 projects for outpatient care to the Nation's health resources. Of the beds, 121,456 are in general hospitals; 13,245 in mental hospitals; 7,118 in tuberculosis hospitals; 7,064 in chronic disease hospitals; and 3,710 in nursing homes. Facilities for outpatient care include 610 public health centers (plus 85 public health centers built in combination with general hospitals), 131 diagnostic or treatment centers, 62 rehabilitation facilities, and 21 State health laboratories.

Of the 1,111 new general hospitals, 564 are in communities that had no hospitals before the program was begun, and 271 are in communities where the only hospital was obsolete or unsuitable. Fifty-three percent of all the new facilities are located in communities of less than 5,000 population, and only 13 percent are in cities of more than 50,000.

Fifty-six percent of the new hospitals have fewer than 50 beds and only 22 percent have 100 beds or more. Among the larger projects are teaching hospitals approved for intern and residency training. Thus, in addition to meeting rural needs, the program is serving the training needs of larger institutions.

DEFICIT OF HOSPITAL BEDS

The deficit of hospital beds is still reported by the States as more than 800,000 beds, although in 11 years projects have been approved through this program which will provide 152,593 beds, and an even greater amount of hospital construction has been completed without Federal aid. The need for hospital beds is accentuated by a population increase which now exceeds 3 million annually. Also, large numbers of hospitals that have been in use for many years are becoming obsolete and in need of modernization to meet present standards.

Additional facilities for early diagnosis and treatment of ambulatory patients would reduce the demand for beds in general hospitals. The aging of the population has intensified the need for facilities for the chronically ill. People over 65 require an average of twice the number of days of hospitalization as those under 65. Many patients now in general hospitals could be cared for in chronic disease hospitals or nursing homes at less cost than is possible in the general hospital.

The amendments of 1954 were designed to help meet these needs. Under the new phase of the program alone, 344 projects were approved by June 30, 1957, including 80 nursing homes and 71 chronic-disease facilities. The total estimated cost of these 344 facilities is \$187,769,567. At the end of the fiscal year, 14 projects were completed and in use.

RESEARCH IN HOSPITAL SERVICES

Grants for research, experiments, and demonstrations relating to the effective development and utilization of hospital facilities, services, and resources were authorized by Congress in 1949. In 1956, \$1.2 million was appropriated for this type of research, and a like amount was made available in 1957. Forty grants to hospitals, health organizations, and health agencies for research in hospital services were made during the two years.

Dental Resources

Increasing shortages of dentists, combined with rising demands for dental care, accentuate the need for informed planning to train more dentists and auxiliary personnel, and for more efficient use of existing manpower. To assist in meeting these needs, the Division of Dental Resources broadened its research program. Studies of manpower requirements, supply, and distribution were expanded. Experimental educational projects and studies of the functions of dental assistants were begun. Research in prepaid dental care and patterns of treatment needs and demands was increased.

DENTAL MANPOWER

Growing deficits in dentist supply are nationwide, affecting areas formerly well supplied. A study completed by the Division in collaboration with the American Dental Association, the W. K. Kellogg Foundation, and the Western Interstate Commission for Higher Education projected manpower trends through 1975 in 11 Western States, Alaska, and Hawaii. It showed the Western supply of dental manpower, now among the Nation's best, beginning to fall behind; by 1975 shortages may be critical unless training facilities are greatly expanded.

A similar survey of the South, for the Southern Regional Education Board, was completed. Although recently its supply of dentists has gained slightly, the South is still the least well supplied section. Two further studies were begun, one of New England, and one for the Nation as a whole.

Scholarships and student aid programs may also be needed. An analysis of dental students' characteristics, finances, and practice plans, completed in cooperation with the American Dental Association, indicated that high educational costs leave most dental and dental hygiene students in debt and may impede future enrollments.

Auxiliary personnel are an important component of dental manpower. In cooperation with the American Dental Hygienists' Association, the first national survey of dental hygienists was completed and published; it evaluated supply, distribution, practice plans, job opportunities, and school facilities.

Wider use of chairside dental assistants would enable dentists to treat more patients because individual treatment time would be shortened. To find effective ways of teaching dental students to work with aides, pilot projects sponsored by the Public Health Service were undertaken by 6 dental schools. One of these included summer training for dental assistants.

PREPAID DENTAL CARE

Because of close correlation between ability to pay and demands for dental services, prepaid dental care, which lowers cost barriers, may spur demands for needed care. Both the number of plans and interest in them are growing. To fill requests from groups interested in organizing prepayment programs, a national inventory was prepared, describing organization, administration, eligibility rules, coverages, and rates of existing prepayment plans.

Since growth of prepayment makes more cost and utilization data essential, research in this field was increased. An analysis of how St. Louis Labor Health Institute members utilize clinic facilities was continued to provide workload and cost estimates for a relatively

low-income group. A similar study of dental services supplied to Public Health Service and Coast Guard families was begun. Two studies of maintenance service patterns also were started. One covers various age groups at the Group Health Association dental clinic, Washington, D. C. The other covers children enrolled in prepayment plans in California, Oregon, and Washington.

Nursing Resources

The most important new development in nursing is the growing trend toward use of scientific research techniques in solving problems associated with giving patients more and better care.

In 1957 the Division of Nursing Resources became increasingly the national center for assistance with research in nursing. The program now includes not only the development of study methods and manuals but also the training of nurses and other professional personnel for research in nursing. In addition, the Division guides the new program through which graduate nurses are preparing for teaching or nursing administration.

These activities have been added to the Division's continuing program of studies on the care of patients: analyses of how nursing time is spent in hospital assignments; job satisfaction and personnel turnover; and review of other situations which create an impression of nursing shortage or which are caused by actual shortages of personnel throughout the hospital. Through 1957, the Division had assisted with 149 studies of hospital nursing services. The participating hospitals represent 1.2 million patients annually who benefit from subsequent improved services.

RESEARCH GRANTS AND FELLOWSHIPS

The Division awarded \$529,000 in grants for research in nursing, approving 18 new projects in 1957. This program, conducted in cooperation with the National Institutes of Health, has granted more than \$1 million since its inception in 1956, for 39 research projects. To a large extent these projects explore areas of nursing care never before investigated. In addition, 81 fellowships in nursing research amounting to \$121,000 were awarded; in the two years of this program 170 fellowships totaling \$246,000 have been awarded.

TRAINEESHIPS

The Health Amendments Act of 1956 authorized the appropriation of funds for traineeships for graduate nurses wishing to obtain advanced preparation for teaching, supervision, and administration. The \$2 million appropriated was allocated to 56 institutions in 23

States which awarded 553 full-year traineeships to individual nurses, also 34 partial traineeships. Of the nurses aided, 50 percent enrolled in programs designed to prepare them to teach in schools of nursing; and 50 percent enrolled in courses in nursing administration or supervision.

STUDIES OF PATIENT CARE

Opinions expressed by 20,000 patients and personnel in 60 hospitals were analyzed to see whether satisfaction with nursing care had any relationship to the general impression of nurse shortage. The complaint expressed most frequently was that nurses could not spend enough time with their patients. Nurses felt this even more keenly than their patients. More than two-thirds of the patients were highly satisfied with their nursing care.

HOW NURSES SPEND THEIR TIME

Since World War II, hospitals have sought ways of avoiding the loss of scarce nursing skills which occurs when nurses perform non-nursing duties, which take her away from the patient. A method of studying this loss, devised by the Division in 1951, has been revised and refined and is now available for use in studying activities of the supervisor, head nurse, staff nursing personnel, and personnel of the outpatient departments. Encouraged by the Division, many hospitals have made studies of their nursing services. More than 50 hospitals found that staff nurses and practical nurses spent 76 percent of their time functioning at the level for which they had been trained; aides and orderlies spent 68 percent, and clerks 86 percent, in the duties for which they were trained. Head nurses, however, performed head-nurse functions only 50 percent of the time and spent only 23 percent of their working day with patients. Staff nurses spent only 38 percent of their time with patients. Other nursing personnel were with patients 47 percent of the time. This situation, in which professional nurses are with patients less than 25 percent of the time although functioning more than 75 percent of their time at their proper level, suggests the need for action to bring nurse and patient more frequently together. The fact that patients see nonprofessional personnel far more frequently than they see professional nurses may explain why patients believe there is a "shortage" of nurses.

In 1957 the Division trained 76 nurses in Tennessee to conduct these utilization studies and the State hospital association planned studies in 62 hospitals. A nurse consultant of the Division was assigned to Region IV for 2 months; she gave consultation to 27 agencies in 5 States and held 7 training sessions for 81 key nursing personnel on how to study nursing activities. As a result, 12 utiliza-

tion studies were conducted. In Utah, 7 hospitals studied nursing activities. Consultation on utilization of nurses was given a group of small hospitals in Missouri, and corrective action was begun.

TURNOVER OF NURSING PERSONNEL

Almost 67 percent of hospital staff nurses and 70 percent of nursing aides and orderlies change jobs each year. It costs the hospital at least \$125 each time an employee resigns—an amount which could be saved if the causes of turnover were known and could be eliminated or minimized.

The Division studied 51 hospitals which submitted turnover data and supplemented these findings by studies of job satisfaction in 18 hospitals. Administrative and supervisory nursing personnel proved to be the most stable. The practical nurse resigns least often in small hospitals where her status receives the greatest recognition. Aides seek and retain employment chiefly on a short-term basis.

The relationship of turnover to job satisfaction is very complex. Employees leave to be with husband or wife, to work nearer home or in a more modern facility, to be with friends, or to obtain conveniences such as air-conditioning. Young people change jobs more frequently than the older age group. Among staff nurses, relatively few indicate that working conditions cause dissatisfaction with their jobs. Many, however, say they leave because they do not have enough time to spend with patients.

For the most part, employees leave less often when there is good supervision, good communication between personnel at all levels, and a generally constructive atmosphere throughout the hospital. When turnover is reduced, productivity and quality of work improve; patients receive better care and are better satisfied.

Medical Services for Federal Agencies

The Public Health Service is responsible for providing medical services to certain other Federal agencies, both in this Department and in other Departments. Through the Bureau of Medical Services, medical, psychiatric, dental, nursing, and other personnel are assigned on a reimbursable basis to agencies that request assistance in operating their medical programs.

OFFICE OF VOCATIONAL REHABILITATION

Officers detailed to the Office of Vocational Rehabilitation provided professional direction and basic staff for its medical program. In-service training of medical and medically-related personnel of State rehabilitation agencies was a major activity. Two regional institutes

were conducted for State medical administrative consultants. Working relationships between State mental health programs and vocational rehabilitation agencies were strengthened; three regional conferences for this purpose were held, sponsored by the National Institute of Mental Health and universities. Assistance was provided in a training program to increase the number of specialists in physical medicine and in strengthening medical school curricula in the rehabilitation phases of medicine. The officers also assisted in administering rehabilitation facilities provisions of the 1954 amendments to the Hospital and Medical Facilities Survey and Construction Act and in helping communities plan and establish rehabilitation centers.

BUREAU OF OLD-AGE AND SURVIVORS INSURANCE, SOCIAL SECURITY ADMINISTRATION

Six medical officers were detailed to the Division of Disability Operations of this Bureau in 1957. As members of the medical staff they participated in administering the disability provisions of the Social Security Act. Their principal activities were consultation on medical policy and procedure at national and State levels; development of medical standards for the determination of permanent and total disability; training of personnel; liaison with medical groups; and medical consultation to the General Counsel of the Department.

BUREAU OF PUBLIC ASSISTANCE, SOCIAL SECURITY ADMINISTRATION

The medical officer assigned to this program serves as medical consultant on all phases of public assistance. Most of his work in 1957 was connected with plans to put into effect the new medical care provisions of the Social Security Act as amended in 1956; a new formula for matching payments to vendors of medical services was to become effective July 1, 1957. The medical officer visited 24 States for field consultation.

OFFICE OF EDUCATION

A nurse director of the Public Health Service was assigned to the Division of Vocational Education of the Office of Education in connection with the program of vocational education in practical nurse training authorized by the Health Amendments Act of 1956. Most of her work was assisting the States in developing plans to extend and improve educational programs in practical nursing.

UNITED STATES COAST GUARD, TREASURY DEPARTMENT

Ninety-one Public Health Service officers were on duty with the Coast Guard, including 32 physicians, 46 dentists, 10 nurses, a phar-

macist, a sanitary engineer, and a scientist. Medical officers were assigned to ocean vessels and to ocean weather stations; both a doctor and a dentist were assigned to the vessel engaged in the Bering Sea Patrol.

During the year, dental officers assigned to this program revised the dental requirements for all Coast Guard personnel, except enlisted men in the Reserve. Improvements were made in sanitary engineering services on Coast Guard vessels and installations.

MARITIME ADMINISTRATION, DEPARTMENT OF COMMERCE

The medical officer assigned to the Maritime Administration supervised preparation of clinical abstracts and provided professional counsel to the Office of Seamen's Services and the legal and insurance departments.

A senior surgeon and two dental officers served at the U. S. Merchant Marine Academy, Kings Point, N. Y. The medical program included administration of the academy hospital and outpatient clinic as well as care of beneficiaries. The medical officer in charge of the Public Health Service hospital on Staten Island was assigned to the hospital as consultant and was responsible for professional supervision.

FOREIGN SERVICE, DEPARTMENT OF STATE

The medical unit, directed by a Public Health Service officer, gave between 50 and 60 physical examinations a day to members of the Foreign Service. The medical director visited 24 missions in South America to inspect health and sanitary conditions and observe the medical care Foreign Service personnel were receiving in local facilities from local physicians. The associate medical director went to Africa and the Middle East to visit 33 missions for the same purpose.

BUREAU OF PRISONS, DEPARTMENT OF JUSTICE

The Public Health Service continued to provide medical care for the Federal prison system, which includes 30 institutions. Officers and employees of the Service assigned to penal hospitals and clinics not only provided medical services but supported the administrators of the institutions in developing personnel training programs and other means of rehabilitating prisoners.

About 40,000 prisoners were provided with medical care. There were 13,606 admissions to the hospitals for a total of 427,038 days; 921 major operations and 5,472 minor operations; 27 births and 44 deaths. The outpatient clinics gave 823,114 treatments and 24,058 physical examinations.

As in previous years, medical research in which prisoners volunteered for various tests was carried on in several institutions. The use of chloroquinized salt to suppress malaria was successfully demonstrated. Development of a new psychological test for use of offenders of various ages was virtually completed. Other research in progress included experiments with d-lysergic acid and a search for antidotes; study of the development of delinquent gangs; gathering of data on effects of industrial noises on hearing; study of rates of DDT in absorption and excretion; and studies of the value of orally administered attenuated poliomyelitis vaccine.

Prisoners in 20 institutions donated 8,636 pints of blood to Red Cross and local blood banks, establishing a new record.

BUREAU OF EMPLOYEES' COMPENSATION, DEPARTMENT OF LABOR

Medical care and compensation are provided Federal civilian employees for injuries in performance of duty and illness attributable to conditions of employment. Medical care is provided by Federal medical officers and hospitals where available and by about 3,000 designated private physicians in areas where Federal hospitals are not available. Hospitals, clinics and other facilities of the Public Health Service are utilized to a large extent. Medical officers of the Public Health Service administer and supervise the medical care program, serve as technical advisers in adjudication of cases, and assist in the staff educational program of the Bureau of Employees' Compensation.

In 1957 special studies were conducted, in cooperation with the Public Health Service Hospital in New Orleans, La., to find out whether there are latent or delayed effects of mustard-gas poisoning. Studies of hearing loss cases leading to development of formulas to determine disability through loss of hearing also were made.

A statistical study revealed a decline in the number of nonfatal injuries reported during the 5 years 1951 to 1955. It showed significant reductions in tuberculosis, eye disabilities, traumatic injuries of the hands, and traumatic injuries to the head and neck; no change in occurrence of hernia cases; and an increase in the number of back injury cases.

Bureau of State Services

The Bureau of State Services cooperates with States, professional organizations, and other health groups to apply public health programs which will control and prevent disease. In addition to pro-

viding financial, technical, and consultative services nationally, it administers Federal health activities in which the United States participates abroad.

Division of General Health Services

The Division of General Health Services administers grants-in-aid to the States, conducts a research program in Arctic health, coordinates the Nation's vital statistics program, provides services in public health nursing and public health education, administers a traineeship program for public health workers, and does exploratory work in new program areas.

STATE GRANTS

For the first time, grants for public health services were made available to Guam, and Alaska received authority to develop an integrated mental health program, including construction of mental health facilities within the Territory.

Federal funds amounting to \$203,013,000 were available in fiscal 1957 for grants-in-aid to States on health programs. This amount included \$123,800,000 for hospital and medical facilities construction and \$50,000,000 for waste treatment works construction. Actual payments were made as follows:

General health services.....	\$11,962,098
Venereal disease special projects.....	¹ 1,669,801
Tuberculosis control.....	4,485,949
Mental health activities.....	3,949,845
Cancer control.....	2,235,318
Heart disease control.....	1,987,983
Medical facilities survey and planning.....	383,878
Construction of community facilities.....	301,875
Hospital and medical facilities construction.....	71,503,847
Waste treatment works construction.....	843,735
Water pollution control.....	² 1,864,463
Poliomyelitis vaccine assistance.....	28,849,606

¹ Includes \$470,083 in services and supplies furnished in lieu of cash.

² Includes \$181,132 paid to interstate agencies.

In addition to the above, payments totaling \$890,912 were made for traineeships under the Public Health Traineeship Program and \$160,771 for training and demonstration projects in air pollution control.

POLIOMYELITIS VACCINE ACTIVITY

The Poliomyelitis Vaccination Assistance Act of 1955 expired at the end of fiscal 1957, at which time about \$53.2 million was expended from \$53.6 million appropriated.

The PHS continued an active surveillance program over the production, distribution, and use of poliomyelitis vaccine. In cooperation with the American Medical Association, the National Foundation for Infantile Paralysis, and State health officials, the Service urged the use of the vaccine. About 91 million cubic centimeters of polio vaccine were produced during the year, and sufficient vaccine was available to provide a full 3-dose immunization to 46 percent of the population under age 40.

ARCTIC HEALTH RESEARCH CENTER

A research project in an Alaskan Indian village sought basic information about diseases of the eye, middle ear, and respiratory tract. Initial physical examinations showed high frequency of inactive tuberculosis, widespread dental caries often neglected, many middle ear conditions, and that about 30 percent of the population had presumptive hypertension usually without evidence of cardiovascular diseases.

A food intake study on Alaskan Eskimos and Indians in their native villages pointed out wide differences in diet, with pre-school children having the most deficient diet of any age group. Exploratory studies were begun to find a possible relationship between the moderate anemia found in Alaskan natives and the fish tapeworm infection prevalent in many areas.

Using different types of construction materials for comparative study, 2 experimental houses were built in remote areas as part of the Native Village Sanitation Program.

Three additional cases of methoglobinemia, a rarity in other parts of the world, were discovered during the year in the course of nutritional studies, making a total of 15 cases to date. Intensive clinical studies of the cases led to the conclusion that some enzymatic factor, lying between reduced nucleotides and methoglobin, is missing from red cells of those with the condition. The missing component in patients' cells may be replaced by such substances as methylene blue, ascorbic acid, and riboflavin. A beginning has been made to isolate the enzyme factor from normal blood.

EMERGENCY HEALTH SERVICES

This program, discontinued at the end of fiscal year 1957, supplied leadership to develop and improve State, regional, and local plans for civil defense and natural disaster activities, including action to insure continuity of government health functions in the event of an enemy attack. The staff helped develop and participated in Operation Alert 1957.

Drought, hurricane, tornado, and flood damage was extensive during the year. Additional disaster relief assistance was needed, especially in the South and the Southwest. The Service sent supplies, equip-

ment, and reserve manpower to the stricken areas. Program guides were distributed to State and local health agencies on the sanitary aspects of mass evacuation, and the detection of chemical warfare agents in water.

PROGRAM DEVELOPMENT

In cooperation with the Children's Bureau, State and local health agencies, and others interested in migrant health problems, the Division devised a health record to be carried by migrant workers. A plan was developed to use the record on a pilot basis to learn its value as an aid in providing continuity of health services to this mobile group. A review of immunization programs for agricultural migrants indicated that more flexible immunization schedules could be followed without impairing the effectiveness of the treatment.

In the school health area, the State of Florida received staff assistance in organizing a State school health program. Major emphasis was placed on the orientation and training of health coordinators for schools.

PUBLIC HEALTH EDUCATION

Staff activity sought to learn how to get the individual to assume good health habits as well as how to achieve more effective public health programs through community action.

Some significant research studies dealt with: factors influencing participation of the public in tuberculosis case-finding programs; staff turnover and job satisfaction among hospital personnel; and identification of barriers to adequate certification of death and ways to overcome them. In an effort to improve adjustment of heart patients to their disease, an exploratory study was made in a city-county health department to determine patient reactions. These findings will be used to develop a large scale sampling study in the same area.

Preliminary action began on the problems of integrating health services in a community; developing methods to measure quality of nursing care; identification of health needs of people as they see them; personal and situational factors influencing a person's decision to take specific health actions; and cultural determinants of health behavior.

In conjunction with State and local health departments and other agencies technical assistance went into studies of the social and psychological conditions which predispose to heart disease, and the reactions of local citizens to a natural disaster.

PUBLIC HEALTH NURSING

Increased interest in the school health problem by Boards of Education is reflected in a Biennial Census of Nurses Employed for Public Health Nursing which showed a 20-percent gain in school nurses hired during the biennium. The report revealed a total of 29,396 nurses employed in all public health fields.

In cooperation with the University of Minnesota's Public Health Nursing Section, the Division set up a project to operate extension courses in public health nursing to further the academic preparation of nurses who are unable to take full-time university study.

Data analysis was completed on a field study of nursing services to individuals offered by local health departments. The study will be published under the titles: "Amount of Nursing Service Required by a Household" and "The Distribution of Nursing Services to Individuals According to Diagnostic Category."

Staff assistance was given to a school nursing study in Montgomery County, Maryland, and to work measurement studies in Seattle, Washington, and Spartanburg, South Carolina. The staff also consulted with a National Red Cross Committee on revision of its Home Nursing Handbook to make it more useful in civil defense programs.

At the request of the Iranian Government, a staff member helped to organize a program for nursing in Iran, as one segment of the country's long term health plans.

TRAINING

Stimulated by the traineeship program authorized by Title I of the Health Amendments Act of 1956, the downward trend in the number of persons receiving specialized public health training was reversed. Under this program, funds were provided for the training of 363 persons. In addition, State and local health departments increased their traineeships by 8 percent over 1956. Thus a total of 764 persons received advanced training with the aid of public funds during the 1957 academic year.

NATIONAL OFFICE OF VITAL STATISTICS

The National Office of Vital Statistics is responsible for the collection, tabulation, analysis, and publication of national data on births, deaths, marriages, divorces, communicable diseases, and for the conduct of special statistical studies in the field of health and demography. Vital statistics are essential to administrative and research activities of business, government, medicine, public health, and other aspects of our society. The Office also cooperates with the

World Health Organization and its member countries to develop comparable international statistics.

A highlight of fiscal year 1957 was the establishment of a Marriage Registration Area to improve the knowledge of marriage statistics. Pilot studies of marriage registration completeness were conducted in three States. At the request of the Bureau of the Census, estimates of births in the U. S., by months, from 1915 to 1952 were prepared for use in studying possible relationships between fertility and economic trends. To provide an estimate of future demands for poliomyelitis vaccine, a national poliomyelitis survey was made.

The development of the Model Vital Statistics Act entered its final stages, and a guide to statistics in the field of home accident prevention was developed. 1956 State legislative activity relating to vital statistics and records was summarized.

In cooperation with the National Health Survey, a study was made on the hospital utilization experiences of recently deceased residents of the Middle Atlantic States. A sample survey study to develop methods and procedures was conducted in conjunction with the National Cancer Institute and the Pennsylvania Department of Health.

Division of Special Health Services

The Division of Special Health Services acts on health maintenance problems associated with accident prevention, medical aspects of air pollution and radiological health, long term illness, heart disease, occupational health, and tuberculosis.

ACCIDENT PREVENTION

The Accident Prevention Program conducts studies and investigations, and helps develop control measures to reduce accidental injuries and deaths.

Plans were begun to extend established public health epidemiologic techniques to accidental deaths and injuries in order to develop a better understanding of basic factors involved. A group of studies was planned to learn the role of physical conditions and emotional factors involved in accident causation. Since initial first aid applied, as well as later medical care received, often determines the extent of recovery from accidental injury, studies were planned to determine the adequacy of care and ways to improve it.

At the request of the American Academy of Pediatrics and the American Public Health Association, a National Clearinghouse for Poison Control Centers was established. With the rapid expansion of local poison control centers, this PHS unit will help to spread information about new toxic products, effective methods of treatment, and to analyze trends in fatal and non-fatal accidental poisonings.

AIR POLLUTION MEDICAL PROGRAM

Fiscal 1957 saw research emphasis shifting from laboratory work on air pollution to study of its effects upon people and their communities.

In cooperation with the National Institutes of Health, action began in three major areas: (a) effects upon the respiratory system, particularly the phenomena of hypersensitivity and allergenicity; (b) effects on the cardiovascular system, especially the extent to which cardiovascular and pulmonary respiratory conditions are aggravated by air pollution; (c) eye effects, with emphasis on eye irritation. Other studies began on the relationship of air pollution variations to the incidence and progression of various diseases; air pollution by specific industries (initial studies in steel and lead storage battery industries); and effects of different kinds of air pollution.

CHRONIC DISEASE CONTROL

This year the Chronic Disease Control Program expanded its activities against diseases and crippling conditions which are among the leading causes of death and disability in the U. S. Research projects included evaluation of screening and diagnostic tests for diabetes and glaucoma; studies in the prevention of diabetes and its complications; evaluation of periodic health examinations as a vehicle for attacking the problems of older age groups; action on the relationship of chronic illness to application for social service; and appraisal of programs dealing with long term illness and health of the aged.

A significant achievement was concerned with abnormal carbohydrate metabolism in pregnancy conducted in the prenatal clinic of the Boston City Hospital, Massachusetts. Preliminary data showed that more women with abnormal CHO metabolism had large babies (9 pounds or more) than other mothers included in the study. After treatment with insulin during pregnancy, however, mothers with abnormal CHO metabolism had about the same proportion of large babies as women without this condition. As a result of these and other findings, efforts will be made to determine the relationship between the birth of a large baby and the later development of diabetes.

National data collected from more than 120,000 persons known to have been screened for diabetes showed a rate of previously undiagnosed diabetes of about seven per thousand persons tested.

Staff members worked with the State health departments of Michigan, New Jersey, New York, and Ohio, as well as the Memphis-Shelby County Health Department, Tennessee and the University of Tennessee Medical School, to develop five long range diabetes screening programs.

In an effort to demonstrate the extent to which a patient may become a more valuable member of the health team, a physician, nurse and nutritionist gave weekly group instructions to 300 patients in the Diabetic Clinic, Boston on administration of insulin, urine testing, diet instruction, and general patient care.

Plans have been initiated to augment consultation services to the States toward improving standards of care in nursing homes.

HEART DISEASE CONTROL

Because of a shortage of medical personnel in local communities, the Program assigned medical officers to 11 States requesting assistance to expand control activities. New rheumatic fever and heart disease control programs were begun in Illinois, Missouri, Wisconsin, and Colorado; epidemiological studies were initiated in North Dakota, Georgia, Connecticut, and Florida; and health units and diagnostic facilities were organized in Georgia, Tennessee, Florida, and California.

A study showing geographic variations in mortality from heart disease has helped to define the problem in this country. Further study of population groups with high and low death rates were begun. These studies may give clues on factors responsible for the disease.

Planning was begun with the Department of Commerce on a proposed nationwide survey of body weight measurements among men, for use in studies on the apparent relationship between overweight and the development of heart disease.

Coronary and control groups are undergoing study to learn the social and psychological factors which may predispose a person to develop heart disease.

New data revealed that heart disease patients detected by mass X-ray surveys, when followed by intensive medical and nursing care, have about 1 percent reduction in mortality during the three year period following participation.

Studies of mortality showed that deaths due to hypertension have dropped sharply since 1953, due possibly to increased use of hypotensive drugs.

Pilot studies are being made among Indians, and certain population groups whose diet is largely vegetarian, to learn if such factors as dietary fat intake and blood lipid concentration may be related to heart disease prevalence rates.

OCCUPATIONAL HEALTH

The Occupational Health Program promotes measures to improve the health of workers both on and off the job.

To help industry protect its workers from health hazards arising from the great number of chemicals introduced each year, an Occu-

pational Health Information Exchange was set up in the program's field headquarters in Cincinnati, Ohio. The Exchange will serve as a clearinghouse for information on the nature and extent of new disease problems in industry, total occupational health resources available, and methods for stimulating additional research on continuing industrial hazards.

Occupational health experiments with laboratory animals yielded information which may help to evaluate possible hazards to the general population from ozone-containing smog. Seven factors have been found to affect the toxicity of ozone. Youth, physical exertion, alcohol, and respiratory infection tend to exacerbate the injurious response; while intermittent exposure, premedication, and preexposure, either reduce or eliminate the injurious effects.

From long range continuing studies by the PHS on health hazards in uranium mines, it was found that radiation dosage from breathing a radon-containing atmosphere arises mainly from radon daughter products accompanying radon in the air. Engineering controls developed by the program are being applied by the uranium mining industry to keep the concentrations of radon and its daughter products within recommended limits.

Millions of workers in the U. S., especially those in small plants and business establishments, still do not have the benefit of employee health services. To determine obstacles to progress in this area, a study of managerial attitudes and evaluations was conducted for the Occupational Health Program by the University of Michigan's Institute of Social Research. Data collected in five separate communities revealed management's chief consideration in the development and expansion of employee health services is the improvement of employee-management relationships. Of secondary import is the financial benefit resulting from decreased absenteeism and lowered workmen's compensation costs. Significant also was the finding that management welcomes and seeks assistance from health department personnel in the expansion of employee health services.

A revaluation of silicosis in the Vermont granite industry was completed. Only one possible case of early silicosis has been diagnosed among workers who began their employment in the granite industry since the time when dust control measures were introduced in 1937.

RADIOLOGICAL HEALTH MEDICAL PROGRAM

A new unit, the Radiological Health Medical Branch, was set up to plan health services in connection with the exposure of the population to ionizing radiation. During the year there was increased recognition of the importance of medical and dental X-rays in the exposure to such radiation.

Consultation on the development of legislation and regulations in radiological health was given to State agencies. Of particular significance was the adoption of measures by one State banning the use of fluoroscopes as shoe-fitting devices.

A cooperative activity conducted with the Division of Sanitary Engineering Services and the Atomic Energy Commission was the Medical Liaison Officer Network set up nationally to aid in the investigation of instances of human disease and injury alleged to be related to the Continental Nuclear Weapons Tests. This group also assisted in the training of State health personnel working with ionizing radiation.

At the request of the United Nations Scientific Committee on the Biological Effects of Atomic Radiation, a study was begun on the feasibility of keeping radiation exposure records for the entire population of the United States.

TUBERCULOSIS CONTROL

Recent prevalence estimates show that there were 800,000 cases of tuberculosis in the United States in 1956, of which 250,000 were active. This represents a decline since 1952 of 30 percent in the active group and 10 percent in the inactive.

Human studies of isoniazid as a preventive of tuberculosis were begun in 1956, involving contacts of new active cases in communities throughout the country. A pilot study to evaluate isoniazid as a preventive of complications of primary tuberculosis in children includes over 2,600 children in 33 pediatric clinics.

Continuing evaluation of antimicrobial therapy confirmed the superiority of isoniazid plus PAS in treatment. Preliminary results of an uncompleted study indicated that Streptomycin plus Pyrazinamide may be as effective but more toxic. Immunization studies continue to show that most of the new tuberculosis cases appear among initially tuberculin positive members of the study population. Incidence has been greatest among those who had strong tuberculin reactions. This observation is confirmed by a recent report of tuberculosis morbidity in about 70,000 Navy recruits. These results emphasize the need to concentrate control efforts on the tuberculin positive segments of the population.

In cooperation with a Committee on the Care of the Unhospitalized Tuberculosis Patient, steps were taken to develop standards for home care of patients with tuberculosis. To help communities define their problem in this area, a "Guide for Conducting an Unhospitalized Tuberculosis Patient Study" was prepared.

A statement on the role of X-ray case-finding programs in tuberculosis control discussed modifications in X-ray case-finding activities

necessitated by changes in the control problem and by findings concerning the significance of relatively low level radiation exposure. The selective use of mass X-ray surveys was recommended.

Initial research evaluated three major social problems concerning adequate care for tuberculosis patients: legal residency, means tests, and forcible hospitalization. Statistical studies of trends in the number and use of tuberculosis hospital beds were also made. To meet one of the more significant developments in this area, a "Guide for a Tuberculosis Control Program for General Hospitals" was published.

Division of Sanitary Engineering Services

The Division of Sanitary Engineering Services helps States, industry, civic groups, and other Federal agencies identify and solve environmental health problems.

ROBERT A. TAFT SANITARY ENGINEERING CENTER

The Robert A. Taft Sanitary Engineering Center at Cincinnati, Ohio, is the Nation's largest facility devoted to sanitary engineering research. Major activities involve basic and applied research, training, and technical consultation on water supply and water pollution control, sewage and industrial wastes disposal, milk and food sanitation, radiological health, and air pollution problems.

AIR POLLUTION ENGINEERING

The National Air Sampling Network was designed to provide the basic data necessary to an understanding of the national air pollution problem. The Network was developed in cooperation with State and local authorities. One hundred ten urban and 14 nonurban stations distributed in every State and major population area participated in the program involving the collection, identification, and measurement of particulate and gaseous components of polluted air. The Sanitary Engineering Center is the headquarters of the Network.

Studies of automotive exhaust, various types of incineration, and the removal of sulfur dioxide from stack gases are being conducted in cooperation with the Bureau of Mines at their facilities.

Eleven grants were awarded to ten universities to initiate or expand curricula in air pollution engineering, under the provisions of Public Law 159. Nine traineeships were awarded to individuals for training in air pollution.

Statewide appraisals of air pollution problems were made in Connecticut, Tennessee, and Washington. City surveys were completed for Denver, Colorado, Steubenville, Ohio, and Portland, Oregon.

Major field studies were under way in the New York-New Jersey area and in Louisville, Kentucky. Considerable research support was given to California and the Los Angeles County Air Pollution Control District for the solution of smog problems.

GENERAL ENGINEERING

Eight Special Citations, the largest number annually to date, were awarded to interstate carrier companies for achieving high standards of sanitation in all travel conveyances operated during the year.

An Ad Hoc Study Group was called together to define national needs in the field of solid waste disposal. The group recommended that the Public Health Service intensify its efforts in training, research, and education of the public in proper methods of storing and disposing of solid wastes.

Special planning for sanitation involved in the construction of a nuclear powered passenger vessel, engaged in jointly with the Maritime Administration and the Atomic Energy Commission, will greatly affect construction and operation of future American flag vessels.

Because new buses offer food service and sanitary facilities, it was necessary to plan for review of bus construction and inspection of the buses, as well as bus-servicing areas and food-catering establishments.

In cooperation with the Pan American Sanitary Organization and the Pan American Union, the staff continued to develop and recommend sanitation practices to give improved health protection to travelers in Inter-American countries.

In consultation with other Federal agencies, the transportation industry, and drug companies, a new section of the Interstate Quarantine Regulation to cover shipment of etiologic agents was developed and adopted.

MILK AND FOOD SANITATION

Five representative milksheds of the Nation were used as sampling points for collecting milk in a pilot study to gather data on the levels of radioactivity in typical milk supplies. The study was conducted with the cooperation of State and local agencies and the milk industry. Information on feeding practices and water supplies for animals in the milksheds was also obtained for use in interpreting laboratory findings.

Designed to promote uniformity of State and local vending machine regulations, a guidebook entitled, "The Vending of Foods and Beverages: A Sanitation Ordinance and Code—1957 Recommendations of the Public Health Service" was developed and distributed to the States and the industry.

Reports on simultaneous studies made on dry milk at the Sanitary Engineering Center, the Universities of Wisconsin and Minnesota, and by the American Dry Milk Institute, confirmed the hypothesis that the 1957 outbreaks of food poisoning in Puerto Rico were caused by a preformed toxin, probably of bacterial origin, which was present in dry milk. The reports indicated that enterotoxigenic staphylococci will grow prolifically in concentrated milk when organisms exist at one stage prior to drying.

The milk and food staff, with the Committee on Poultry Hygiene of the American Public Health Association, developed basic principles for the official inspection of poultry for wholesomeness; and with State and local officials, engaged in poultry sanitation surveys of processing plants, and further developed a set of effective poultry sanitation ordinances.

RADIOLOGICAL HEALTH

The Service continued its offsite monitoring activities at the Atomic Energy Commission Nevada atomic weapons test-site.

Under an agreement with the Atomic Energy Commission's Division of Biology and Medicine, a 40-station nationwide air and rain-water radiation surveillance network was operated.

Program personnel, together with staff from the Division's Interstate Carrier Branch, the Atomic Energy Commission, and the Coast Guard reviewed cooperative interests on present and future problems connected with design and operation of nuclear-powered merchant ships.

WATER SUPPLY AND WATER POLLUTION CONTROL

The new Federal Water Pollution Control Act (PL 660) authorized grants to assist municipalities in the construction of needed sewage treatment plants. A total of \$50 million per year up to a \$500 million aggregate was authorized. Of the more than 1,000 applications for grants totaling over \$97.9 million, received in fiscal 1957, 446 requests involving \$37.9 million, were approved.

A hearing board, acting on a complaint of interstate pollution in the Corney Drainage System, found that oil field wastes originating in Arkansas were affecting water uses in Louisiana. Upon an order to cease and desist such interstate pollution, the 75 oil well lease operators involved corrected the situation.

Compilation of background data on the status of more than 100 interstate pollution problem areas was begun during 1957. Three conferences on interstate pollution were called by the Surgeon General.

Digests of present State water pollution control laws are being made to provide a basis for further refining the Suggested State

Water Pollution Control Act originally developed by the PHS in 1950 as a guide to States to improve their laws.

Preliminary work toward the establishment of water quality base-line data on the Nation's streams was started during the year, when 10 of the 250 sampling stations proposed for strategic location throughout the country began operating daily. Data collected will be used to show the present quality of water, the degree of pollution, and the extent of water quality improvement.

Revisions of 1955-56 data on water supply facilities were made in order to determine more adequately the location of critical facilities and their vulnerability to nuclear weapons attack. Standards are being developed to enable water utilities to reduce injury to personnel and minimize damage to facilities.

Research was extended to provide information on the ability of conventional treatment processes to cope with economic poisons, including insecticides which reach water through drainage from agricultural lands and fish killing preparations.

A nationwide study of the effectiveness of municipal water treatment plants in removing coliform organisms substantiated earlier findings that modern plants could handle extremely high loadings.

ENGINEERING RESOURCES

A survey of sanitary engineers in the Nation, conducted jointly with the National Science Foundation, was completed.

During 1957, grants for sanitary engineering and occupational health research were doubled, and there now is a backlog of approved grants awaiting the availability of funds. The grants are awarded through the Division of Research Grants.

The Commissioned Officers Student Training Extern Program for sanitary engineers was initiated this year. About 14 students were employed for the summer months.

Forty-five persons were awarded training grants for sanitary engineering courses under the provisions of PL 911, an act designed to bring more people into the health professions.

Communicable Disease Center

The control of infectious disease is the mission of the Communicable Disease Center (CDC), which is located in Atlanta, Ga., with laboratories and field stations in various parts of the United States.

In cooperation with the States, the Center develops national programs against communicable diseases through direct aid in epidemics and disasters, continuing field studies on the epidemiology of diseases, laboratory investigations, development of materials and

methods of disease control, consultations and demonstrations, and training of public health personnel. The direction of the Center's continuing program is influenced by specific needs encountered during epidemic and disaster situations.

During the past year, the Venereal Disease Control Program was transferred from the Division of Special Health Services to the Communicable Disease Center.

EPIDEMIC AND DISASTER AID

CDC supplemented State health resources in 23 epidemics involving various diseases and in 20 disasters.

REPRESENTATIVE FIELD AND LABORATORY INVESTIGATIONS

Poliomyelitis

The Center continued to maintain a poliomyelitis surveillance program. The effectiveness of the poliomyelitis vaccine was evaluated through broad epidemiological observations and laboratory studies. Regular reports on the status of the disease were compiled for national distribution.

Laboratory investigations of outbreaks of nonparalytic poliomyelitis led to a change of diagnosis from polio to polio-like disease (aseptic meningitis, etc.) in approximately 50 percent of the cases. So far, clinical investigations have failed to disclose any signs or symptoms which, in individual cases, could be used to differentiate true nonparalytic polio from other aseptic meningitis.

Respiratory Diseases

A Respiratory Disease Unit was organized to undertake studies on the influenza viruses, the adenoviruses, and other viral agents which attack the respiratory tract.

In connection with the outbreaks of Asian influenza in this country, the Center kept national health officials apprised of developments, assisted pharmaceutical houses in formulating monovalent vaccines and initiated studies on the potency and effectiveness of these products, and provided prototype viruses and diagnostic reagents to over 100 laboratories.

Venereal Diseases

Reported cases of syphilis in fiscal year 1957 rose for the second successive year; 135,543 cases in all stages were reported by State health departments. This was 7.4 percent above the number reported in the continental United States in 1956 and 11.0 percent above the number reported in 1955. Early infectious cases showed a slight decline.

The number of cases of gonorrhea reported this year was 216,476 as compared with 233,333 cases reported in 1956, a decline of 6.4 percent. Approximately 52 percent of all infectious venereal disease occurred in the 15- to 24-year age group which represents 13 percent of the total population.

Since underreporting of venereal disease morbidity continues to be a problem, several States inaugurated programs to stimulate complete reporting of cases by private physicians and to provide epidemiological services.

A new blood test for syphilis, the Rapid Plasma Reagin (RPR) method, which gives on-the-spot results, has proved highly adaptable to mass testing in situations where it is advantageous to treat reactors immediately.

Cluster testing, a newly developed case-finding technique involving serologic screening of friends and associates of known infected persons, was found to be 30 percent more effective than traditional epidemiological methods.

Viral Encephalitis

Human cases of Saint Louis encephalitis (SLE) occurred widely in the Midwest, and in recognized outbreaks in the Texas Panhandle, in the Louisville, Ky. area, and in the Missouri River Valley. Eastern equine encephalitis (EEE) was seen in a distinct small outbreak of human cases in Massachusetts. The Center continued its investigations on the ecologic interrelationships of the encephalitis viruses, their mosquito vectors and reservoirs, and the specific circumstances under which the diseases occur in man and domestic animals.

Diphtheria

In recent years, localized sharp outbreaks of diphtheria have occurred in every part of the Nation, but a disproportionately large number of cases are still seen in the South. Throughout the North and the West, older children and adults have exhibited an increasing susceptibility. To understand the overall problem better, immunity studies are being conducted on adults in parts of the South.

Rabies

Although the incidence of canine rabies is declining, the dog is still the most important vector of this disease. Reported cases in wild animals, notably foxes and skunks, are increasing and stringent control measures are needed to deal with this reservoir.

Since 1953, 175 cases of rabies in insectivorous bats have been diagnosed in 17 widely scattered States, but the significance of the disease in these creatures is not yet fully understood.

There were 10 human deaths from rabies in 1956. Methods of pre-exposure immunization for humans have been sought, since the Pasteur treatment is increasingly hazardous with repeated courses. Preliminary results of antibody studies in humans showed that a single booster inoculation of HEP (high-egg passage) Flury rabies vaccine elicited immediate and robust serum neutralization antibody responses in more than 90 percent of people who had some history of previous rabies immunization.

Psittacosis

There was a slight rise in national incidence of human psittacosis, with California, Pennsylvania, Wisconsin, and Minnesota reporting the largest number of cases. Parakeets and poultry were incriminated about equally when source of infection was known.

Typhoid Fever

Epidemiologists traced 22 cases of typhoid fever (1 fatal) disseminated to 7 States by participants at a convention held in MonArk Springs, Mo. *Salmonella typhi* phage C-2 was isolated from stools in 16 of the cases and from an asymptomatic known typhoid carrier who attended the meeting. Fluorescein dye tests showed a connection between the water supply and the sewage system.

Staphylococcus Diseases

Present methods of control are inadequate to handle infections due to antibiotic resistant strains of staphylococci among hospitalized patients. CDC has now identified some of the previously unidentified strains.

LABORATORY ACTIVITIES

The Center provided diagnostic services for State and Territorial laboratories, Federal agencies, and foreign countries by identifying 40,000 troublesome isolates. When satisfactory diagnostic reagents are not available commercially, CDC produces limited numbers and amounts for internal use and for State laboratories.

In a large proportion of specimens from cases clinically diagnosed as poliomyelitis which failed to yield polio virus, other agents, particularly of the ECHO, Cocksackie, and Buffalo groups, and a number of unknowns were recovered. Contracts for diagnostic services on these agents have been established with 34 laboratories, principally in academic institutions.

Experiments with attenuated Type 1 and Type 3 polio viruses suggest that these strains are promising candidates for a live virus vaccine.

Laboratories of the Communicable Disease Center sought to extend the application of fluorescent antibody techniques to rapid identification of a wide variety of bacteria and parasites, thus enabling early treatment and control.

VECTOR CONTROL PROBLEMS

Insect resistance to one or more of the insecticides normally used for their control is the most serious single problem confronting organized vector programs throughout the world. Forty insect species of public health importance are now known to be resistant. CDC developed a testing kit, using standardized materials, for evaluating resistance of adult mosquitoes to DDT and dieldrin and determined resistance baselines for two species of mosquitoes.

No clinical or laboratory evidence of abnormalities resulted from intensive and prolonged occupational exposure of 40 men to DDT, although 26 of them had absorbed approximately 200 times the normal dietary intake of the insecticide for intervals as long as 6.5 years.

Studies continued on composting of municipal refuse and garbage as a disposal method which precludes feeding and breeding of disease-bearing insects and other vermin.

TRAINING

More than 8,200 persons from a variety of organizations in this country and from abroad received training in epidemiology, environmental control of communicable diseases, laboratory diagnostic methods, civil defense, disaster aid, and other subjects offered by CDC.

Division of Dental Public Health

The Division of Dental Health directs studies on the magnitude of the dental problem in the United States and on the development of procedures which may be applied by States and communities to reduce the size of the problem.

FLUORIDATION

An additional 165 communities with a total population of over 4½ million began fluoridating their public water supplies as a means of reducing tooth decay. This advance brought the national total to 1,522 communities providing fluoridated water to 31,664,474 people. Also, a natural fluoride census showed an additional 1,900 places, serving about 7 million, had at least one source of water with 0.7 ppm. or more fluoride.

A highlight of the year was the finding that the compound fluor-spar could be used in the fluoridation of public water supplies. The

new method will provide people with fluoridated water at less than one-third the present cost. Studies of topical fluoride agents as caries preventives were continued.

OTHER SERVICES

Two pilot studies were initiated to investigate dental problems of long-term illness patients and develop ways of extending dental care services to them. Montefiore Hospital and the Beth Abraham Nursing Home in New York City provided sites to study the technical aspects, while administrative and community organizational problems are being studied in the Kansas City area.

A study in two cities was made to determine the dental health status of children five years after termination of care, in which their dental needs were met on an incremental basis. Analysis of the data should indicate the extent of lasting benefits to a community which adopts such a school dental program.

Two other long-range studies involving children were the changing level of dental care required to meet the needs of those residing in a community adding fluorides to its water supply; and the extent of the dental care problem in a group using an optimum fluoride concentration water supply for the past 10-12 years.

Consultation occurred with dental directors and representatives of Federal and State public assistance programs to stimulate action whereby dental care may be given to public assistance recipients under recent legislation.

Division of International Health

The Division of International Health provides program and policy guidance on international health activities.

During the year, the Division developed health policies affecting U. S. participation in the World Health Organization, the Pan American Sanitary Organization, and the South Pacific Commission. These policies included the issuance and acceptance of a U. S. Government invitation to the World Health Organization to celebrate in Minneapolis, Minnesota, the Tenth Anniversary of the founding of the Organization. The anniversary meetings will be held on May 26 and 27, 1958, and will be followed by sessions of the World Health Assembly through June 14, 1958.

Preparatory action began on U. S. and USSR agreements to exchange reciprocal missions in public health administration during the later half of 1957. Public health institutions in each country will be visited by both exchange groups.

Under the international epidemiology program of the Division, studies were completed on health conditions and facilities in Cambodia, Laos, South Vietnam, North Vietnam, and Afghanistan, making a total of seven studies made since the program began in 1956.

Between 40 and 50 countries annually request assistance of the United States Government in the field of health, requiring consultative assistance from about 500 American health technicians. Since long-term projects are now well established in many countries, the tendency was to request Division assistance to evaluate program accomplishments as guideposts for future expansion. This was especially true of countries which are expanding limited demonstrations into nationwide control programs—such as India's malaria control program and the tuberculosis control program of the Philippines.

This Division is responsible for arranging programs for foreign health and medical personnel selected for training in the United States to fit them for specific positions of responsibility in their own national health services. Training programs were planned for 438 such persons from 44 countries. Also, the Division arranged technical visits for 127 trainees from 62 countries at Public Health Service field stations and health and medical facilities in the Washington area. At the request of the Philippine Government, the Division developed a new type of training program, wherein groups of health and medical workers were trained as a team to work together in the Philippine health department. The team approach was also used in the field of medical education when deans from six Philippine medical schools came to observe together medical education methods in the United States.

Table 1.—Statement of appropriations, authorizations, obligations, and balances, fiscal year 1957

[In thousands]

Appropriations	Funds available for obligation				Total funds available	Amounts obligated	Balances
	Appropriations and authorizations	Net transfers between appropriations	Repayments for services	Prior year unobligated balances			
Total.....	\$534, 234	-\$4, 045	\$20, 932	\$122, 644	\$682, 516	\$548, 566	\$133, 950
Appropriations, PHS.....	534, 165	-4, 045	20, 932	122, 518	673, 570	541, 099	132, 471
Control of tuberculosis.....	6, 660	-----	-----	-----	6, 660	6, 575	85
Control of venereal diseases.....	4, 195	-----	-----	-----	4, 195	4, 153	42
Assistance to States, general.....	17, 591	-----	172	-----	17, 763	17, 599	164
Control of communicable diseases.....	5, 750	-----	353	-----	6, 103	6, 094	9
Disease and sanitation investigations and control, Alaska.....	1, 170	-----	22	-----	1, 192	1, 189	3
Sanitary engineering activities.....	9, 000	-----	701	-----	9, 701	9, 502	199
Foreign quarantine service.....	3, 315	-----	32	-----	3, 347	3, 335	12
Hospitals and medical care.....	40, 195	-----	3, 429	-----	43, 624	43, 162	1 462

See footnotes at end of table.

Table 1.—Statement of appropriations, authorizations, obligations, and balances, fiscal year 1957—Continued

Appropriations	Funds available for obligation				Total funds available	Amounts obligated	Balances
	Appropriations and authorizations	Net transfers between appropriations	Repayments for services	Prior year unobligated balances			
Salaries and expenses, hospital construction services	\$1,381				\$1,381	\$1,337	\$44
Indian health activities	38,775		\$555	² —\$678	38,652	38,411	241
Construction of Indian health facilities	8,762			3,641	12,403	877	³ 11,526
Grants for hospital construction (1957-58)	125,000				125,000	38,899	⁴ 86,101
Grants for hospital construction (1956-57)				76,551	76,551	76,253	298
Grants for hospital construction (1955-57)				2,067	2,067	2,062	5
Grants for hospital construction (1948-55)		⁵ —\$1,064		1,064		—100	100
Surveys and planning for hospital construction				1,558	1,558	384	³ 1,174
Patients' benefit fund, Public Health Service hospitals	24			20	44	24	³ 20
Operating expenses, National Institutes of Health	12,122		15,321		27,443	27,322	121
Salaries, expenses, and grants, National Cancer Institute	48,432				48,432	42,556	5,876
Mental health activities	35,197		43		35,240	30,317	4,923
Salaries, expenses, and grants, National Heart Institute	33,396				33,396	32,392	1,004
Dental health activities	6,026				6,026	5,949	77
Buildings and facilities, Cincinnati, Ohio				105	105	74	³ 31
Arthritis and metabolic disease activities	15,885		237		16,122	16,087	35
Microbiology activities	13,299		49		13,348	13,320	28
Neurology and blindness activities	18,650				18,650	17,361	1,289
Gorgas Memorial Laboratory Operations, National Library of Medicine	147				147	147	
Construction of library facilities		1,004			1,004	988	16
Grants for waste treatment works construction	350				350	332	³ 18
Grants to States for poliomyelitis vaccination	50,000				50,000	37,621	³ 12,379
Construction of Biologics Standards Laboratory Building		⁵ —4,000		33,396	29,396	28,850	546
Construction of surgical facilities				3,500	3,500	157	³ 3,343
Construction of Dental Research Building	1,630				1,630	74	³ 1,556
Grants for construction of health research facilities	200				200	71	³ 129
Construction of animal quarters	30,000				30,000	30,000	
General office building	1,371				1,371	1,183	³ 188
Construction of research facilities	300				300	171	³ 129
Retired pay of commissioned officers (annual)				1,288	1,288	1,087	³ 201
Retired pay of commissioned officers (no year)	1,450				1,450	1,384	6
Salaries and expenses	3,892	—6	18	6	3,931	3,900	31
Appropriations, special project funds made available by other agencies					8,751	7,415	1,336
Salaries and expenses, Bureau of Prisons (transfer to HEW, PHS)					1,563	1,561	2
American Sections, International Commissions, State (transfer to HEW, PHS)					76	75	1
Refugee Relief, Executive (transfer to HEW, PHS)					315	306	9

See footnotes at end of table.

Table 1.—Statement of appropriations, authorizations, obligations, and balances, fiscal year 1957—Continued

Appropriations	Funds available for obligation				Total funds available	Amounts obligated	Balances
	Appropriations and authorizations	Net transfers between appropriations	Repayments for services	Prior year unobligated balances			
Operations, Federal Civil Defense Administration (transfer to HEW, PHS).....					\$ 187	\$186	\$1
Operating expenses, Atomic Energy Commission (transfer to HEW, PHS).....					15	14	¹ 1
Plant acquisition and construction, Atomic Energy Commission (transfer to HEW, PHS).....					12	4	¹ 8
Research and development, Navy (transfer to HEW, PHS).....					20	12	¹ 8
Research and development, Army (transfer to HEW, PHS).....					6	5	¹ 1
Army, industrial fund (transfer to HEW, PHS).....					13	13	
Farm labor supply revolving fund, Bureau of Employment Security (transfer to HEW, PHS).....					481	347	¹ 134
Technical Assistance to American Republics and Non-Self-Governing Territories of the Western Hemisphere, Executive (transfer to HEW).....					-1	-1	
Technical Assistance, U. S. Dollars Advanced from Foreign Governments, I. C. A. (transfer to HEW).....					1		¹ 1
Administrative expenses, Section 411, Mutual Security Act, Executive (transfer to HEW).....					83	81	2
Technical cooperation, general executive (transfer to HEW) (no year).....					1,504	910	¹ 594
Technical cooperation, general executive (transfer to HEW) (annual).....					2,647	2,226	421
Defense support, Asia, Executive (transfer to HEW).....					267	163	104
Educational exchange fund payments by Finland, World War I debt, Department of State (transfer to HEW).....					2	2	
Government and relief in occupied areas, Army (transfer to HEW).....					8	8	
Salaries and expenses, civil defense functions of Federal agencies, Federal Civil Defense Administration (transfer to HEW).....					1,552	1,503	49
Gift funds donated for general and specific purposes.....	\$68.6			\$126.0	194.6	51.9	¹ 142.7
Public Health Service unconditional gift fund.....	17.6			89.0	106.6	1.3	¹ 105.3
Public Health Service conditional gift fund.....	51.0			37.0	88.0	50.6	¹ 37.4

¹ \$1 available for obligation in subsequent years.² Liquidation of contract authorizations obligated in 1956 fiscal year.³ Available for obligation in subsequent years.⁴ \$86,083 available for obligation in subsequent years.⁵ Rescinded.

Table 2.—Commissioned officers and civil service personnel as of June 30, 1957

	Full-time				Part-time (civilian)				
	Grand total full-time	Commis-sioned officers	Civilian			Total part-time	When actually employed	Without compen-sation	Other
			Total	Washington metropolitan area	States				
Public Health Service.....	23,354	13,356	19,998	7,970	10,671	1,357	3,387	2,429	323
Office of the Surgeon General.....	587	68	519	489	30		11	3	5
Immediate Office of the Surgeon General.....	25	7	18	18			2	2	
Division of Finance.....	120		120	120					
Division of Administrative Services.....	125	7	118	93	25		1		1
Division of Personnel.....	164	25	139	139			5	2	3
Division of Public Health Methods.....	81	2	79	75	4		3	1	1
Offices other than divisions (Health Emergency Planning, Information, Executive).....	52	7	45	44	1				
Details to other agencies.....	20	20							
Bureau of Medical Services.....	12,627	1,507	11,120	1,264	8,572	1,284	610	365	208
Office of the Chief.....	21	3	18	18					
Division of Administrative Management.....	106	2	104						
Division of Dental Resources.....	32	8	24	24			21	21	
Division of Foreign Quarantine.....	536	46	490	21	404	65	35	14	11
Division of Hospital and Medical Facilities.....	90	12	78	78			1	1	
Division of Hospitals.....	6,058	924	5,134	151	4,964	19	298	194	14
Freedmen's Hospital.....	777		777	777			65	38	90
Division of Indian Health.....	4,630	307	4,323	55	3,069	1,199	184	94	27
Division of Nursing Resources.....	45	13	32	24	8		3	3	78
Details to other agencies.....	332	192	140	12	127	1			3
Bureau of State Services.....	3,666	1,068	2,598	851	1,687	60	2,515	115	29
Office of the Chief.....	104	6	98						
Communicable Disease Center.....	1,109	271	838	97	832	4	14	2	11
Division of Dental Public Health.....	45	17	28	28			76	32	2
Division of General Health Services.....	386	50	336	269	15	52	7	5	2
Division of International Health.....	76	11	65	65			2,334	27	2
Division of Sanitary Engineering Services.....	673	229	444	136	308		2	1	1
Division of Special Health Services.....	490	118	372	248	120	4	45	30	11
							37	24	8

See footnotes at end of table.

Table 2.—*Commissioned officers and civil service personnel as of June 30, 1957—Continued*

	Full-time					Part-time (civilian)				
	Grand total full-time	Commis- sioned officers	Civilian				Total part- time	When actually employed	Without compen- sation	Other
			Total	Washington metropol- itan area	States	Outside United States				
Regional Offices.....	597	180	417	6	411					
Details to other agencies.....	186	186								
National Institutes of Health.....	6,269	713	5,556	5,170	373	13	241	145	18	78
Office of the Director.....	41	6	35	35			4	2	1	1
National Cancer Institute.....	923	147	776	642	134		22	9	1	12
National Heart Institute.....	428	98	330	279	51		26	10		16
National Institute of Allergy and Infectious Dis- eases.....	465	74	391	241	150		5	3	1	1
National Institute of Arthritis and Metabolic Diseases.....	391	76	315	315			24	19	4	1
National Institute of Dental Research.....	118	36	82	82			14	12	1	1
National Institute of Mental Health.....	454	73	381	345	36		30	17	2	11
National Institute of Neurological Diseases and Blindness.....	217	29	188	175		13	20	17	1	2
Clinical Center.....	1,445	120	1,325	1,325			60	34	6	20
Division of Biologics Standards.....	174	20	154	153			2	1	1	
Division of Business Operations.....	627	1	626	626	1		3	1		2
Division of Research Grants.....	208	10	198	198			28	19		9
Division of Research Services.....	774	19	755	754	1		3	1		2
Details to other agencies.....	4	4								
National Library of Medicine.....	205		205	196	9		10	7		3

¹ Includes 1,422 Regular Corps officers, 1,759 Active Reserve officers, and 175 Commissioned Reserve officers on temporary training duty.

² Excludes those part-time employees not in pay status during the month of June 1957.

³ Includes 2,292 collaborating epidemiologists and special agents.

Table 3.—Research grants and awards, fiscal year 1957

Program	Research grants		Research fellowships				Training grants		Traineeships		Other grants		Total	
	Num-ber	Amount	Full-time		Part-time		Num-ber	Amount	Num-ber	Amount	Num-ber	Amount	Num-ber	Amount
			Num-ber	Amount	Num-ber	Amount								
Total.....	6,242	\$82,517,308	1,186	\$4,786,006	974	\$627,600	1,211	\$27,629,179	415	\$1,841,707	223	\$31,972,113	10,251	\$149,373,913
Allergy and infectious diseases.....	774	8,114,811	32	116,756	-----	-----	136	1,627,322	53	222,310	-----	-----	806	8,231,567
Arthritis and metabolic diseases.....	772	8,221,928	71	290,695	-----	-----	177	3,911,070	188	729,530	-----	-----	1,032	10,371,255
Cancer.....	1,165	18,790,481	285	918,594	128	81,216	-----	-----	-----	-----	-----	-----	1,943	24,430,891
Cancer field investigations.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	114	1,972,208	114	1,972,208
Dental.....	274	2,692,462	75	342,611	239	154,440	20	500,000	-----	-----	618	3,683,513	618	3,683,513
Heart.....	1,390	18,343,770	319	1,318,577	14	9,504	185	4,026,114	98	393,382	2,006	24,091,347	2,006	24,091,347
Mental health.....	484	7,405,815	175	630,038	-----	-----	444	12,094,964	-----	-----	1,103	20,120,817	1,103	20,120,817
Neurological diseases and blindness.....	674	9,344,725	94	372,801	190	127,008	149	2,990,709	76	496,485	1,183	13,340,728	1,183	13,340,728
General (Division of Research Grants).....	653	7,992,083	135	766,934	403	255,432	8	500,000	-----	-----	1,199	9,514,449	1,199	9,514,449
Construction of research facilities.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	109	29,999,905	109	29,999,905
Air pollution.....	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	24	516,999	24	516,999
Hospital facilities research.....	32	1,094,234	-----	-----	-----	-----	-----	-----	-----	-----	32	1,094,234	32	1,094,234
Graduate nurse training.....	-----	-----	-----	-----	-----	-----	92	2,000,000	-----	-----	-----	-----	92	2,000,000

¹ Includes 24 grants totaling \$528,911 in the field of nursing research.

Table 4.—Payments to States, fiscal year 1957

[In thousands]

State	Veneral disease special projects	Tuberculosis control	General health	Mental health	Cancer control	Heart disease control	Water pollution control	Polio-myelitis vaccination assistance	Medical facilities survey and planning	Hospital and medical facilities construction	Waste treatment works construction	Community facilities construction
Total ¹	\$1,670	\$4,485	\$11,962	\$3,930	\$2,235	\$1,988	\$1,683	\$28,850	\$384	\$71,504	\$844	\$302
Alabama	38	108	330	83	52	54	39	916	1	3,467		
Arizona	22	66	93	25	16	4	18	224		699	60	
Arkansas	44	82	227	16	34	31	30	641	2	958		
California	18	274	670	264	142	112	77	1,459	22	3,155		30
Colorado	6	36	123	35	24	25	21	139	11	904		
Connecticut	7	46	109	47	26	24	32	94	1	1,185		
Delaware	4	16	20	21	4	12	22	47	1	31		
District of Columbia	43	40	41	26	10	16	10	79		198		
Florida	138	81	255	80	47	47	35	433	13	1,647		
Georgia	140	110	346	96	56	62	37	879		2,986		
Idaho	5	16	72	26	13	17	16	152	5	689		
Illinois	69	233	497	201	116	86	41	830	26	1,298	65	124
Indiana		87	265	32	51	51	42	810	16	823		3
Iowa		42	156	64	32	26	18	791	18	825	4	
Kansas	7	36	151	46	27	31	25	189	5	1,631		111
Kentucky	69	130	292	80	49	38	37	740	4	1,111	43	
Louisiana	60	267	75	44	44	44	36	701		2,265	96	
Maine		26	86	22	12	9	20	182	1	690		
Maryland	13	89	157	59	32	34	34	498		998	136	34
Massachusetts		117	294	112	68	55	52	267	18	898		
Michigan	61	140	401	130	82	72	57	793	45	3,615	24	
Minnesota		50	235	74	33	28	28	184	15	2,477		
Mississippi	57	80	296	65	45	53	35	1,065		1,746		
Missouri	55	114	284	97	59	52	39	1,001	16	2,808	92	
Montana	2	20	66	26	13	16	10	122		276		
Nebraska	23	23	112	31	23	20		196		996		
Nevada	2	13	37	26	2	9		34	2	292		
New Hampshire		9	47	26				44		347		
New Jersey	43	126	281	118	66	52	50	299	16	691	18	
New Mexico	26	33	92	26	15	19	18	206	14	744		
New York	121	402	852	353	205	138	107	976	27	3,345		
North Carolina	125	104	416	93	64	51	50	1,569	12	3,084		
North Dakota		24	84	26	15	18	17	53	3	755		
Ohio	50	190	508	198	105	82	63	1,468		1,107		
Oklahoma	16	61	195	55	35	35	23	617	2	2,008	54	

Oregon.....	35	128	37	19	16	22	402	3	805	36
Pennsylvania.....	278	683	256	141	115	85	2,207	25	1,500	---
Rhode Island.....	25	53	26	11	16	27	39	---	823	---
South Carolina.....	73	247	63	37	46	34	551	10	1,665	15
South Dakota.....	13	81	22	15	5	17	73	2	1,792	---
Tennessee.....	88	331	90	47	59	42	816	1	1,743	---
Texas.....	131	642	207	109	104	38	2,599	7	3,731	---
Utah.....	5	85	26	15	18	10	74	1	3,460	---
Vermont.....	17	42	26	8	14	17	62	---	251	---
Virginia.....	38	287	89	48	8	39	404	---	2,217	---
Washington.....	3	163	58	33	33	27	487	25	2,173	137
West Virginia.....	6	181	52	31	26	30	384	1	1,566	---
Wisconsin.....	---	243	86	49	30	41	180	4-2	1,397	64
Wyoming.....	1	45	20	8	8	14	74	---	224	---
Alaska ¹	---	54	26	---	12	13	116	3	172	---
Hawaii.....	---	41	26	7	15	19	122	1	402	---
Puerto Rico.....	---	294	66	40	31	31	1,297	---	2,294	---
Virgin Islands.....	23	---	---	---	---	5	9	---	---	---
Canal Zone.....	6	5	20	---	---	---	17	---	---	---
Guam.....	---	---	---	---	---	---	23	---	---	---
American Samoa.....	---	---	---	---	---	---	16	---	---	---

¹ Additional amounts of \$891 were paid under Title I, P. L. 911, for the public health traineeship program and of \$160 under P. L. 159 for training and demonstration projects in air pollution control.

² Includes \$470 in services and supplies furnished in lieu of cash.

³ Excludes \$181 paid to Water Pollution Interstate Agencies: Interstate Commission on the Delaware River Basin, \$31; Interstate Commission on the Potomac River

Basin, \$18; Interstate Sanitation Commission, \$47; New England Interstate Water Pollution Control Commission, \$15; Ohio River Valley Water Sanitation Commission, \$70.

⁴ Represents a partial refund by State of payment made in fiscal year 1955.

⁵ An additional payment of \$638 was made to Alaska for disease and sanitation investigation and control activities.

For the purpose of this report, the term "Public Health Service" is used to include the Bureau of Health Statistics, the Bureau of Laboratories, the Bureau of Quarantine, the Bureau of Tropical Diseases, the Bureau of Venereal Diseases, the Bureau of Communicable Diseases, the Bureau of Hygiene, the Bureau of Nutrition, the Bureau of Physical Education, the Bureau of Mental Hygiene, the Bureau of Child Health, the Bureau of Maternal and Child Health, the Bureau of Geriatrics, the Bureau of Dermatology, the Bureau of Ophthalmology, the Bureau of Otorhinolaryngology, the Bureau of Radiology, the Bureau of Pathology, the Bureau of Bacteriology, the Bureau of Virology, the Bureau of Parasitology, the Bureau of Entomology, the Bureau of Plant Pathology, the Bureau of Animal Pathology, the Bureau of Fish Pathology, the Bureau of Poultry Pathology, the Bureau of Swine Pathology, the Bureau of Cattle Pathology, the Bureau of Horse Pathology, the Bureau of Sheep Pathology, the Bureau of Goat Pathology, the Bureau of Rabbit Pathology, the Bureau of Dog Pathology, the Bureau of Cat Pathology, the Bureau of Monkey Pathology, the Bureau of Pig Pathology, the Bureau of Bird Pathology, the Bureau of Reptile Pathology, the Bureau of Amphibian Pathology, the Bureau of Invertebrate Pathology, the Bureau of Microbiology, the Bureau of Immunology, the Bureau of Allergy, the Bureau of Dermatology, the Bureau of Ophthalmology, the Bureau of Otorhinolaryngology, the Bureau of Radiology, the Bureau of Pathology, the Bureau of Bacteriology, the Bureau of Virology, the Bureau of Parasitology, the Bureau of Entomology, the Bureau of Plant Pathology, the Bureau of Animal Pathology, the Bureau of Fish Pathology, the Bureau of Poultry Pathology, the Bureau of Swine Pathology, the Bureau of Cattle Pathology, the Bureau of Horse Pathology, the Bureau of Sheep Pathology, the Bureau of Goat Pathology, the Bureau of Rabbit Pathology, the Bureau of Dog Pathology, the Bureau of Cat Pathology, the Bureau of Monkey Pathology, the Bureau of Pig Pathology, the Bureau of Bird Pathology, the Bureau of Reptile Pathology, the Bureau of Amphibian Pathology, the Bureau of Invertebrate Pathology, the Bureau of Microbiology, the Bureau of Immunology, the Bureau of Allergy.

The Public Health Service is a part of the Department of Health, Education and Welfare. It is the principal agency for the control and prevention of disease, the promotion of health, and the improvement of the environment. It is also responsible for the collection and dissemination of health statistics, the regulation of food and drugs, and the control of infectious diseases. The Public Health Service is organized into several bureaus, each of which is responsible for a specific area of public health. The Bureau of Health Statistics is responsible for the collection and dissemination of health statistics. The Bureau of Laboratories is responsible for the diagnosis and control of infectious diseases. The Bureau of Quarantine is responsible for the control of infectious diseases at ports of entry. The Bureau of Tropical Diseases is responsible for the control of tropical diseases. The Bureau of Venereal Diseases is responsible for the control of venereal diseases. The Bureau of Communicable Diseases is responsible for the control of communicable diseases. The Bureau of Hygiene is responsible for the control of hygiene. The Bureau of Nutrition is responsible for the control of nutrition. The Bureau of Physical Education is responsible for the control of physical education. The Bureau of Mental Hygiene is responsible for the control of mental hygiene. The Bureau of Child Health is responsible for the control of child health. The Bureau of Maternal and Child Health is responsible for the control of maternal and child health. The Bureau of Geriatrics is responsible for the control of geriatrics. The Bureau of Dermatology is responsible for the control of dermatology. The Bureau of Ophthalmology is responsible for the control of ophthalmology. The Bureau of Otorhinolaryngology is responsible for the control of otorhinolaryngology. The Bureau of Radiology is responsible for the control of radiology. The Bureau of Pathology is responsible for the control of pathology. The Bureau of Bacteriology is responsible for the control of bacteriology. The Bureau of Virology is responsible for the control of virology. The Bureau of Parasitology is responsible for the control of parasitology. The Bureau of Entomology is responsible for the control of entomology. The Bureau of Plant Pathology is responsible for the control of plant pathology. The Bureau of Animal Pathology is responsible for the control of animal pathology. The Bureau of Fish Pathology is responsible for the control of fish pathology. The Bureau of Poultry Pathology is responsible for the control of poultry pathology. The Bureau of Swine Pathology is responsible for the control of swine pathology. The Bureau of Cattle Pathology is responsible for the control of cattle pathology. The Bureau of Horse Pathology is responsible for the control of horse pathology. The Bureau of Sheep Pathology is responsible for the control of sheep pathology. The Bureau of Goat Pathology is responsible for the control of goat pathology. The Bureau of Rabbit Pathology is responsible for the control of rabbit pathology. The Bureau of Dog Pathology is responsible for the control of dog pathology. The Bureau of Cat Pathology is responsible for the control of cat pathology. The Bureau of Monkey Pathology is responsible for the control of monkey pathology. The Bureau of Pig Pathology is responsible for the control of pig pathology. The Bureau of Bird Pathology is responsible for the control of bird pathology. The Bureau of Reptile Pathology is responsible for the control of reptile pathology. The Bureau of Amphibian Pathology is responsible for the control of amphibian pathology. The Bureau of Invertebrate Pathology is responsible for the control of invertebrate pathology. The Bureau of Microbiology is responsible for the control of microbiology. The Bureau of Immunology is responsible for the control of immunology. The Bureau of Allergy is responsible for the control of allergy.

Office of Education

Introduction

FISCAL YEAR 1957 was one of healthy growth and activity in American education. Men and women in every phase of life—cultural, social, economic, and industrial—recognized the need for more education. Many demands were made on school officials at all levels. For example, progress in medicine, in dentistry, in industrial arts means changes in educational programs preparing doctors, dentists, and industrial artists. Population growth and mobility, changing occupational patterns, and technological advances mean changes in educational patterns as well as increased facilities. As the spotlight focused on the schools, educators went to work to solve their problems.

A few facts will indicate the size of these problems.

Schools and colleges in the United States enrolled 41,366,000 students in the 1956-57 school year, an all time peak and an increase of 1,567,300 over enrollment in 1955-56 (see table 1). Public and non-public elementary schools—kindergarten through grade 8—enrolled 29,711,000 children, an increase of 1,196,800; secondary schools—grades 9 through 12—enrolled 7,820,000, an increase of 72,900; colleges and universities, 3,244,000, an increase of 248,000. In all other types of schools—private commercial, day and evening, nurse training schools not affiliated with colleges and universities—enrollment increased from 541,400 to 591,000.

In the fall of 1956, 94 percent of all children in the 5- to 13-year-old age group were in school, and 88.2 percent of those in the 14- to 17-year-old group as compared to 80.1 percent 10 years ago.

Of the total enrollment, 5,133,000 pupils were in private elementary and secondary schools, an increase of 5 percent over the preceding

year. In recent years enrollment in private schools has increased more rapidly than in public schools.

The classroom shortage in public elementary and secondary schools, which had been accumulating over a period of years, continued in 1957.

In the school year 1956-57 public elementary and secondary school enrollment exceeded normal capacity by about 2.3 million children. Of this number about 840,000 pupils were on half-day schedules, and the others were in overcrowded classrooms or in makeshift facilities not designed for school work. The number in excess of normal capacity represents the number of pupils that cannot be accommodated without double sessions in the instruction rooms of the publicly owned school plant in use, according to State standards of normal capacity.

Pupils were housed in 1,087,000 instructional rooms, which was 49,000 or 4.7 percent more than the number available in 1955-56. State departments of education reported that in 1956-57 an additional 159,000 instruction rooms were needed in the continental United States, 80,000 of them to accommodate the 2.3 million pupils in excess of normal capacity and 79,000 to replace those in unsatisfactory conditions. A total of 69,200 instruction rooms in public schools were scheduled for completion during the year.

The shortage of qualified elementary and secondary teachers in public and nonpublic schools was a little less severe than it was a year ago—120,700 as compared to 141,300 in 1955-56 (see table 2). Of the total 1.2 million teachers in the public school system in the fall of 1956, 89,400 or 1 in every 13 were emergency teachers—that is they did not meet the State's standards for the lowest teaching certificate. State departments reported that full-time teachers holding emergency certificates constituted 7.5 percent of the total teaching staff in public elementary and secondary schools as compared with 6.8 percent the year before. The increase in the proportion of emergency teachers was caused in part by the adoption of higher certification requirements in some States.

Turnover among teachers was high—about 7.5 percent of the qualified teachers. Turnover, as used here, included those who died and those who left the classroom because of death, retirement, marriage, or to work in another field. It does not include teachers who moved from one teaching job to another.

The Office estimates that when public and nonpublic schools open in the fall of 1957, there will be a shortage of 135,000 qualified elementary and high school teachers—55,000 teachers will be needed to meet the enrollment increase; 12,600 to make up the difference between the 94,000 leaving the profession and the 81,400 new teachers who completed their college training in 1956-57; and 67,400 to replace the

emergency teachers employed last year (22,000 of last year's 89,400 emergency teachers will have become qualified before school opens). In 1956-57 the shortage of qualified teachers was met by the employment of emergency teachers and further overcrowding of classrooms.

The National Education Association reports that in 1956-57 more than half of all teachers were women in elementary grades, and 40.1 percent of all teachers were in rural districts; that in general the level of preparation was higher in urban districts than in rural, in secondary schools than in elementary, and among men than women. Only a few teachers were paid less than \$2,000 a year or more than \$7,000; the average was \$4,220.

The cost of education was high. For education in public elementary and secondary schools, including capital outlay, the country spent about \$12 billion. Expenditures per pupil in average daily attendance averaged \$400 for the school year 1956-57. Office of Education reports indicate that about 56 percent of public school funds were provided from local property taxes; 40 percent from State taxes on incomes, sales, and other forms of business activity; and the other 4 percent from the Federal Government.

The growth of education in the States and local communities led to increasing demands for leadership and to increasing requests for service and information from the Office of Education—information on such subjects as curriculum organization, efficient operation and administration, and on methods of expanding educational opportunities at all levels and to persons of varying degrees of ability. With a 65 percent increase in funds and under recently enacted legislation, the Office of Education was able to expand its professional staff and services and to initiate new programs in cooperative research. These services and programs as well as the new programs of grants for library service in rural areas and the extension of vocational education are discussed in more detail in the following pages.

LEGISLATION

Although the number of congressional enactments affecting education was small, the number and variety of bills introduced and considered during the year reflected national interest in education. Bills introduced included proposals for general scholarships and fellowships, veterans' educational benefits, graduate and undergraduate traineeships in specialized fields, assistance for State studies of education beyond the high school, general aid for school construction, aid for federally affected areas, vocational training in the fishing industry, and programs in the fine arts.

A number of proposals for general Federal aid to the States for school construction were made. During the 84th and 85th Con-

gresses the Administration's legislative program included recommendations for the enactment of such legislation. A general school construction aid bill failed to pass the House of Representatives on July 15, 1956. The President, in his State of the Union Message on January 10, 1957, and in a special message to the Congress on the status of education, January 28, 1957, again requested the enactment of such legislation. A general school construction aid bill again was reported to the House in 1957 and debated, but failed to pass.

Among the measures enacted by the Congress during fiscal year 1957, ten in the second session of the 84th Congress are of direct interest to education. They are briefly summarized below.

Public Law 752, approved July 20, 1956, amends the Agricultural Act of 1949, as amended, by further extending the Special School Milk Program to nonprofit nursery schools, child-care centers, settlement houses, summer camps, and similar nonprofit institutions devoted to the care and training of children, whether or not such institutions are caring for underprivileged children on a "public welfare or charitable basis."

Public Law 813, approved July 26, 1956, authorizes appropriations for allotments to the States to assist them in providing for a committee for education beyond the high school and authorizes appropriations for the expenses of the President's Committee on Education Beyond the High School.

Public Law 880 (Social Security Amendments of 1956), approved August 1, 1956, amends the Social Security Act in three ways which concern education. Title II, Section 218 (a) (6), is amended so that employees of State and local governments who desire to come under Old-Age and Survivors Insurance (OASI) may be considered as a separate group for purposes of coverage—at the option of the State and provided that all new employees do come under OASI. The amendment affects Florida, Georgia, New York, North Dakota, Pennsylvania, Tennessee, Wisconsin, and the Territory of Hawaii.

Title II, Section 218 (d) (6), is further amended to permit affected States (Nevada, New Mexico, Oklahoma, Pennsylvania, Texas, Washington, and the Territory of Hawaii) to cover under OASI nonprofessional school employees who are under a teachers' retirement system, and permits them to do so without a referendum and without covering the professional employees who are in a system. Title III, Section 406 (a), is amended by removing the requirement that, in order to receive aid, a needy child between the ages of 16 and 18 be in attendance in a school.

Public Law 881 (Servicemen's and Veterans' Survivor Benefits Act), approved August 1, 1956, provides, among other things, for a continuing—until age 21—dependence and indemnity compensation

for an orphan child who reaches age 18 and is pursuing a course of instruction in an approved educational institution. The bill also provides that, when there is a widow with a child who has attained age 18, when social security survivor benefits are terminated, the child shall be provided with a supplemental veterans administration benefit of \$35 per month while pursuing a course of instruction in an approved educational institution.

Public Law 896, approved August 1, 1956, extends to the Territory of Guam benefits provided under other Federal statutes, including assistance to vocational education, to schools in federally affected areas, and for library services.

Public Law 911, approved August 2, 1956, amends the Vocational Education Act of 1946 to authorize grants not to exceed \$5 million for the fiscal year ending June 30, 1957, and for each of the next 4 fiscal years to States with State plans for extending and improving practical nurse training.

Public Law 922, approved August 2, 1956, amends the act to promote the education of the blind (Act of March 3, 1879, as amended), so as to authorize wider distribution of instructional materials and to increase the amount authorized to be appropriated for this purpose from \$250,000 to \$400,000.

Public Law 949, approved August 3, 1956, extends until June 30, 1958, the programs under Public Laws 815 and 874 of the 81st Congress, as amended, which provide for Federal financial assistance in constructing and operating schools in areas affected by Federal activities; and makes certain technical changes in the provisions of these laws.

Public Law 1020, approved August 7, 1956, amends and extends the National Housing Act, increasing the amount of college housing loans authorized to be outstanding at any one time, from \$500 million to \$750 million.

Public Law 1027, approved August 8, 1956, amends the Vocational Education Act by authorizing the appropriation of \$375,000 for vocational education in the fishery trades and industry, and distributive occupations therein, to be administered by the United States Commissioner of Education in consultation with the Secretary of the Interior. The Secretary of the Interior is authorized to make grants to public and nonprofit private universities and colleges to promote the education and training of professionally trained persons needed in commercial fishing, and an appropriation not to exceed \$550,000 for each fiscal year is authorized for this purpose.

During the year the Office of Education continued to develop its services in the collection and interchange of information in the field of school law. A principal objective is to develop and maintain a

clearinghouse of information on the status of, and trends in, school law developments in the States and to service the requests of State and local school officials and organized groups on such developments. Two basic reports on the provisions of State school law governing special education of exceptional children and early elementary education were compiled and published. General information on State and Federal educational legislation was also collected and made available to the public.

Organization and Administration of Education

STATE SCHOOL ADMINISTRATION

Through the development and distribution of information on various aspects of State school administration and through consultive services to State departments of education, legislative committees, special committees, and other agencies, the Office of Education continued to assist States in their efforts to achieve more effective programs of State school administration.

During the year, the Office published as a handbook the results of the financial accounting study completed in fiscal 1956. Entitled, *Financial Accounting for Local and State School Systems*, the handbook was officially approved by leading national educational associations who cooperated in its development as the basic guide for financial accounting for local and State school systems throughout the country. By the end of the fiscal year a number of States had already started to incorporate the handbook's recommendations into their accounting systems. This handbook is the second in a basic educational records and reports series aimed at laying the groundwork for comparable educational information among States and communities. With such groundwork established, it will be possible to have available adequate and reliable educational information for local, State, and national spheres of activity.

The year saw the substantial beginning of a project on property accounting for local and State school systems. Aimed at standardizing the meanings of basic items of information and terminology relating to school lands, buildings, and equipment, the project is being conducted in cooperation with the American Association of School Administrators, the Association of School Business Officials of the United States and Canada, the Council of Chief State School Officers, the National Council on Schoolhouse Construction, and the National School Boards Association. Hundreds of representatives of the cooperating associations from all parts of the country will participate, through national and regional conferences, in the production of the third handbook in the series. In this way, the handbook will reflect the needs and wishes of a broad representative sample of its prospec-

tive users with respect to the kinds and the meanings of basic information about school property that should be available.

LOCAL SCHOOL ADMINISTRATION

Efforts to secure more soundly organized local school districts continued with marked success in some States but with many others either attempting to launch new districting programs or to improve the effectiveness of those already in operation. To assist the States with this widespread problem, the Office of Education completed a study dealing with the conditions which facilitate and those which hinder progress. To help local communities engaged in redistricting activities, Office specialists developed a manual of planning procedures which is scheduled for publication in fiscal year 1958.

Another problem directly related to sound district organization is that of determining the nature and scope of services beyond regular classroom instruction and activities a school system can provide at reasonable cost. These are the administrative, supervisory, and other systemwide services needed to provide good conditions for teaching and learning in the classroom and for overall efficiency of the school system. In fiscal year 1957 a special Office project was initiated dealing with this problem.

During the year the Office cooperated with State and national organizations engaged in serving local boards of education and completed a study of State statutory provisions governing membership on local school boards.

SCHOOL FINANCE

The Office continued its services to States and local communities which have problems in supporting schools. Throughout the Nation there was continued difficulty in securing reasonably adequate tax revenues for schools. During the past year the financing problems were intensified by increases in enrollments, public demands for additional services, and rising costs which required greater expenditures. To aid the schools in solving such problems the Office published studies reporting and interpreting information on status, trends, and developments in school finance and school business management.

The Office also gave consideration to the requirements of State legislatures and State departments of education in developing improved plans for financing the schools. Among such new plans are those which propose (1) enactments of foundation programs for supporting schools, (2) allocations of State funds for public 2-year colleges, (3) authorizations of local nonproperty taxes as additional sources of school revenue, (4) appropriations of State funds to help

local school districts construct additional classrooms, and (5) the easing of restrictions on the creation of debt to permit local districts to borrow funds for the construction of new school buildings.

SCHOOLHOUSING

Since 1950 the schoolhousing program has become big business. During the first 7 years of the decade a total of \$13½ billion was spent to provide schoolhousing for an enrollment increase of 7½ million public elementary and secondary students, for rehousing those who moved to new localities, and for replacement of some old buildings. This total expenditure represented an average capital outlay investment of approximately \$36,000 per classroom with related facilities. The number of children born each year continued to increase; building deterioration, pupil mobility, and other factors helped create new housing demands. The recent nationwide school facilities survey gave impetus to the drive for adequate schoolhousing and provided the States with preliminary data for long-range school-plant programs.

In 1957 the Office of Education provided leadership and encouragement to help expand and improve State department of education services and guidance for local school-plant programs. Various State departments established new or expanded existing school-plant service units. Some States increased State financial assistance for local school-plant construction. Office specialists in school housing participated in numerous State or regional conferences or workshops organized to provide data on the development and maintenance of efficient and economical school-plant programs.

Providing adequate schoolhousing for modern educational programs requires careful functional planning and designing with specific attention to space and facility arrangements best adapted to the program to be offered. The schoolhousing specialists cooperated with various national organizations in developing planning criteria and assisted State department of education and local school officials through publications, conferences, and advice in developing techniques and procedures for studying program needs and for developing plant layouts best adapted to facilitate the educational program. They also assisted in establishing criteria and procedures for local cooperative planning.

Substantial progress was made in developing essential criteria to be used in manufacturing and selecting the school furniture and equipment needed in carrying out effective educational programs. Data on pupil body measurements were being used extensively as guides for architectural and other designers of buildings and particularly for designers of school furniture and equipment. The present

trend in planning school buildings is to develop school facility arrangements, furniture, and equipment which are adapted to the ages and sizes of pupils using them and to the learning activities of the pupils. Such features as working heights and spacing, the needs of left-handed pupils, and the dimensional spacing and heights desirable for certain types of physically handicapped children are all considered. Designers and manufacturers are making extensive use of such data, and during the year they requested the advice and services of the Office in applying them to new design problems.

The completed school plant must be maintained ready for use. The Office provided guidance to the States and local districts in developing maintenance, modernization, rehabilitation, and custodial improvement programs. A 1956 school-plant insurance study stimulated several State, many local district, and some college graduate student studies on school building insurance. Many State and city school officials established custodial training programs along lines suggested by the Office to improve school custodial services.

Schoolhousing specialists serve in a liaison capacity between the field of building and equipment technology and school officials. The Office is constantly engaged in various studies in cooperation with technological organizations having a bearing on school-plant construction and efficiency. One study under way is to establish new standards for school lighting to replace those developed in 1948; and another to establish a standard pattern for measuring of floor areas in school buildings. These measurements are to serve as bases for computing and comparing school building space allotments and unit costs.

Services to Local Schools

ELEMENTARY EDUCATION

In recent years the States have intensified their efforts to provide adequately for the education of young children in the public schools. They have expanded services, widened age ranges, increased their requirements for teacher certification, and made an effort to extend educational opportunity to all groups at varying levels of ability. Greater activity at the State and local level has led to greater need for Office of Education information and services. The activities described below will give an indication of the type of services the Office rendered to elementary education in 1957.

During the year specialists in elementary education completed a number of studies: 1) On improved methods of reporting to parents on pupils' progress; 2) on teacher recruitment and retention, showing what State groups have done in the recruitment and selection of teachers and what some schools have done to promote teacher profes-

sional development; 3) on conservation practices in elementary schools; and 4) on the status of physical education in elementary schools in the United States.

The Office continued its efforts to improve educational opportunities for children of migrant agricultural workers. Through representation on the Working Group of the President's Committee on Migratory Labor, the Office cooperated with other agencies and Departments in studying the relation of education to the problems of transportation, housing, and health—problems which the Committee dealt with during the year. The Office initiated a study to make a census of migrant children attending school; it will be completed in 1958. The Office also organized and participated in two regional conferences on the education of migrant children, one in Kalamazoo, Mich., for the North Central States, the other in Santa Fe, N. Mex., for the Southwest States. Throughout the year staff specialists consulted with private and public agencies working on migrant education projects, such as the planning of summer schools for migrant children, teacher education workshops for teachers of migrant children, and preparation of printed materials on the education of migrant children.

Significant proposals for elementary education resulted from two conferences held in the Office of Education. About 60 persons from 50 large cities attended a conference for supervisors of elementary education in large cities. One proposal was that children and parents be invited to participate along with professional educators in developing good programs of instruction and that schools should help children become selective in what they learn through greater emphasis on critical and creative thinking and problem solving.

A second conference was concerned with the role of special teachers of art, music, and physical education in the elementary school. Specialists in these fields and in general elementary education attended.

SECONDARY EDUCATION

In general, the school year 1956-57 reflected increased emphasis by educators and citizens on improving the quality of curriculum content and instruction in secondary schools and at the same time on devising methods of school organization and teaching appropriate to the individual differences of adolescent youth.

Specialists for mathematics and science continued to devote attention to the completion of basic studies of the quantitative and qualitative status of mathematics and science instruction. A pilot study of the qualifications and teaching loads of mathematics and science teachers was conducted in three States. The study pattern developed was adopted by other States working to improve their programs.

The 1954 study of mathematics and science offerings and enrollments was repeated, and analytical comparisons were made. Results show continued increase in the availability of courses in high school and increase in enrollments.

Staff specialists, in cooperation with those of other Government agencies, reviewed studies of the growing national need for foreign language competence in Government, business, industry, and education. A conference attended by school administrators, supervisors, teachers, and teacher-educators was held which identified problems and the need for modernizing and extending foreign language instruction to more pupils for longer sequences of time.

A study of research findings, administrative and organization patterns, and instructional materials for developmental and remedial reading programs in junior high schools was completed. Another study was released which analyzed the various types of cooperative school-community work experience education programs in secondary schools. Suggestions useful to school administrators in initiating and conducting such programs were made.

ADULT EDUCATION

During the year the Office of Education, through one of its staff members, worked with the Adult Education Association in establishing the National Commission on Literacy. The Commission will help develop a national awareness of the problem of adult illiteracy and the importance and urgency of solving the problem. It will also give leadership in attacking the problem.

With the National Education Association the Office developed a cooperative program making the consideration of adult education a part of American Education Week. Heretofore, emphasis during this annual national observance has been on the education of children and youth. From now on educational leaders plan to emphasize lifelong learning as one of the major areas of American education as a means of making adult education an integral part of the regular educational programs.

Another phase of the Office of Education's effort to promote national concern for adult education was the development of an adult education exhibit for the use of teachers, lay leaders of community groups, and others interested in adult education.

Underlying all the Office's plans and activities in adult education are its regular and basic studies in the various areas of adult education. During the year, work was begun on the collection and interpretation of adult education statistics; on studies of activities in State departments of education and local school systems relating to adult education; and on education for the aging.

For the first time questions on the extent to which people participate in adult education activities will be asked in the current population survey of the Bureau of the Census. This survey, planned for October, will cover a sample of 35,000 households in 330 subdivisions of the country and will yield a national estimate of the number of adults who have pursued some educational activity during the past year. Office specialists in adult education, in cooperation with the adult Education Association and the Fund for Adult Education, made the arrangements with the Census and obtained the cooperation of several voluntary agencies in planning the questions and the preliminary instructions for Census enumerators. It is hoped that the experience from the inclusion of these questions in the October Population Survey will be sufficiently satisfactory to warrant the inclusion of similar questions in the 1960 Census.

EXCEPTIONAL CHILDREN

Children whose physical, mental, or emotional qualities differ significantly from the average or normal are called exceptional children. Public interest in the education of exceptional children in the United States continued to mount in 1957. It was focused primarily on children with mental retardation, speech and hearing impairment, and blindness. This interest was evident at Federal, State, and local levels.

In recent years there have been many developments in the education of the mentally retarded. One of national significance is the program of cooperative research in this field which was launched by the Office of Education during the year (See Cooperative research). For the first year in a new program, the variety and coverage of areas for study was extensive. Research projects initiated included studies on trainable and educable children, age groups ranging from pre-school to adolescence, day-school and residential-school programs, and urban and rural population.

National interest in developing and improving standards for supervisors and teachers to work with the various types of exceptional children also continued. One of the deterrents to the development of educational programs for handicapped or gifted children has been the shortage of specially prepared and trained teachers for them. For a number of years the Office has given leadership to a nationwide study on this problem, and during fiscal 1957 completed three of the study reports: one on the preparation of teachers of mentally retarded, one on teachers of socially maladjusted children, and the third on speech correctionists.

Plans for the education of blind children in this country seem to be changing somewhat. On the basis of preliminary figures collected by the American Printing House for the Blind, an increased

number of blind children were being educated in day schools in 1957. The ratio of enrollments in residential schools to day schools was about 6 to 4. Together with this shift in philosophy and practice, some changes were made in the Federal act to promote the education of the blind (Public Law 922, 84th Cong., 2d sess.).

AUDIOVISUAL EDUCATION

The Office continued to provide services relating to the audiovisual materials of the Federal Government, including cataloging new films for Library of Congress catalog cards, administering the Government's contract covering the sale of films, and preparing a supplement to the 1955 catalog, "United States Government Films for Public Educational Use." Work was started on the compilation of a catalog of Government maps available for educational use.

As part of its program to strengthen State and local educational resources, the Office prepared directories of audiovisual employees in the Federal Government, State departments of education, and large city school systems; and made a study of audiovisual education in State departments of education. This study showed that the States, while differing in individual practices, were providing a number of services affecting the classroom use of audiovisual instructional materials—through curriculum development, school accreditation, teacher certification, publications, and workshops as well as through the production and distribution of audiovisual materials.

RADIO-TELEVISION SERVICES

The nationwide development of radio and television in education was indicated by the increase in the number of program offerings on commercial and noncommercial stations cooperating with educational institutions, in the large number of courses for credit offered over television, and in the number of stations. Program offerings over noncommercial TV stations increased to a general average of 56 hours a week, and commercial stations made sharp increases in institutional cultural programs. The number of courses for credit increased, particularly where experimental use on a noncredit basis justified the offering. The number of educational radio stations increased from 176 in 1956 to 193 in 1957, and educational television stations from 26 in 1956 to 29 on the air in 1957 and 11 in the construction or planning stages.

Closed-circuit television in schools and on college campuses also showed the results of successful experimentation over the past year. Large cities, such as Los Angeles, Atlanta, Chicago, and New York, maintained closed-circuit as well as open-circuit broadcasting. Smaller cities like Evanston, Ill., Hagerstown, Md., Wichita, Kans.,

and San Jose, Calif., carried on teaching experiments demonstrating the educational possibilities of television.

During the year the Office cooperated with educational institutions and with the Department of Defense, Department of State, the Treasury Department, Department of Commerce, the United States Information Agency, the National Science Foundation, and other Government agencies in planning and producing programs. Staff specialists advised on educational projects in many parts of the United States, under various State auspices, the Commonwealth of Puerto Rico, and a number of foreign countries just starting television.

GUIDANCE AND STUDENT PERSONNEL

During the year the Office prepared and distributed pamphlets, circulars, and leaflets on various occupations for the use of school guidance and student personnel workers. Major publications dealt with such areas as certification requirements for guidance workers including school psychologists, summer and academic year offerings at colleges and universities in the preparation of guidance and student personnel workers, and retention in high schools in large cities. Staff members continued research in evaluation of guidance and student personnel services, characteristics of students and educational programs in schools having low student dropout rates, guidance practices in 260 local schools, and guidance procedures for the selection of students in vocational education.

The Office also carried on a number of activities in cooperation with other agencies and groups, both private and governmental. In one of these—the Stay-in-School Campaign—the Office cooperated with the Departments of Labor and Defense in preparing and distributing press and radio releases and a handbook for the use of communities in urging high school youth to stay in school. A study on the transition from school to work prepared to aid schools, civic clubs, PTA's, and employers in assisting youth as they move from education to employment was the outgrowth of discussions with a subcommittee of the Inter-Departmental Committee on Children and Youth. A study of the retention of students in high schools grew out of a 6-year planning and research program involving 22 large city school systems. A study of careers in atomic energy was made, with technical assistance from the Atomic Energy Commission.

Staff specialists also cooperated with other governmental and professional groups concerned with guidance and personnel.

Vocational Education

One of the functions of the Office of Education is to administer the grant-in-aid funds for vocational education of less than college grade made available under provisions of the Smith-Hughes and

George-Barden and supplementary acts and to assist States in the promotion and improvement of such education.

To carry out the provisions of these acts the Congress appropriated slightly more than \$38 million in matching funds for allotment by the Office to the States in 1957, an increase of about \$5 million over the 1956 total. In 1956 State and local expenditures for vocational education amounted to \$142,705,208. That year more than 65 percent of the high schools in the country offered training in one or more of the vocational programs—agriculture, distributive occupations, home economics, trade and industry, practical nurse education—and approximately 3,500,000 youths and adults were enrolled.

The Federal grant included \$2 million for the extension and improvement of practical nurse training, under legislation enacted by the 84th Congress (Public Law 911), amending the George-Barden Act.

The action of the Congress in providing special funds for practical nurse training stimulated the States to extend such training. By the close of the year 47 States and Territories were participating in the program. The Office assisted the States through intraregional conferences in working out program plans for the growth and development of practical nurse training. Five such conferences were conducted during the year by three professional nurse-educators who had joined the staff to assist with the program.

Policies for the administration of the practical nurse training program under the provisions of Public Law 911 covering the most important points were developed and distributed to the States early in the year. By the end of the fiscal year a full statement of policies for the administration of the program for training practical nurses had been completed.

The 84th Congress also enacted legislation (Public Law 896) entitling Guam to participate in the vocational education program. Other legislation (Public Law 1027) was designed to promote vocational education in the fishery trades and industry and distributive occupations therein. No funds were appropriated for the fiscal year 1957 under either of these acts.

The changing economic and social conditions affecting farming, industry, distribution, and family living emphasize the importance of continual appraisal of vocational programs and adjustments to them to meet the needs of workers, as well as the demand for workers. States report that training is needed for many new industries and for old industries employing new production methods. New and higher skills are needed by workers to meet the job requirements of the present and the future. To help the States improve their program, the Office conducted 17 regional conferences for State personnel in vocational education. Special emphasis was given to

adapting instruction to changing conditions, keeping abreast of technical improvements, meeting the need for preservice and in-service training of teachers and supervisors, providing new areas of training, and developing leadership in vocational education, adult education, and action research.

In carrying out studies and plans for improving the program in specific areas, the Office brought together groups of persons with experience in successful programs or with experience in the areas under consideration. Representative of these were:

(1) A conference on various phases of the practical nurse training program in which 20 persons participated to advise the staff on significant steps in the preparation of plans for programs of practical nursing; to develop criteria for evaluating progress; and to identify studies needed.

(2) A group of 17 home economists who reexamined the program of home economics for adults, considered the development and improvement of these programs, and assisted in preparing basic content materials for a much needed bulletin in this field.

(3) A conference on implications for trade and industrial education of technological change in industry, in which vocational educators from 16 States participated. Special contributions were made by representatives from industry, Government, and other groups concerned with the training of technicians.

To assist the States in developing various phases of the program for which there was an expressed need, the Office rendered service in the following ways: 1) Conducted a second national conference for the development of leadership in trade and industrial education for new and potential State supervisors, with 59 industrial educators from 38 States participating.

2) Organized and conducted, in cooperation with representatives of the textile industry, a series of textile fiber clinics to bring to State and local leaders in distributive education information on recent developments and on sources of teaching materials.

3) Held the first regional conference on farm mechanics for teachers of vocational agriculture, with 11 States participating, to develop functional programs in farm mechanics instruction in keeping with modern mechanized agriculture.

4) Conducted workshops on farm mechanics in a number of States for State staffs in agricultural education.

5) Cosponsored, with a university which offers teacher training in home economics, the first of a series of workshops on improvement in home economics teaching—emphasizing social, economic, and scientific developments as they affect home and family life.

Several projects were undertaken during the year. They included a preliminary investigation into the study and research needed in

vocational education in secondary schools; a study of the importance of business education as a field of training and as a potential source of workers; the development of curriculum materials for quantity food preparation in hotels and restaurants; and management training needs of small business establishments and the contribution that distributive education in secondary schools can make to such training.

The Office reviewed programs in the several States and assisted the States in appraising their administrative practices and at the same time program specialists assisted the States in further developing their programs.

Office specialists participated in teacher-training workshops and in meetings of State supervisory and teacher-training staffs on the improvement of instruction; assisted in State-conducted studies of vocational education; served on committees concerned with curriculum improvement; worked with State staffs and teacher-training institutions on research projects; helped in the preparation of resource materials for use in universities and local school systems; and participated in many of the annual State conventions of vocational educators.

The revision of the *Statement of Policies for the Administration of Vocational Education* (Bulletin No. 1), begun in fiscal year 1956, neared completion by the close of the fiscal year. In this task there has been wide participation by State directors of vocational education, with the final work to be done by a special committee composed of chief State school officers and State directors, working with members of the staff of the Office of Education and the Office of the General Counsel.

Higher Education

The following projects are representative of Office research and consultative services to higher education during fiscal year 1957.

COST OF GOING TO COLLEGE

During the year, the Office completed a study (reported in Bulletin 1957, No. 9, 91 p.) of what a year in college costs undergraduate students and the major source of student budgets. Based on the experience of 15,325 students in 110 colleges in 41 States during the school year 1956-57, the study reports that the estimated cost of attending undergraduate college per school year averaged \$1,500 for publicly controlled colleges and \$2,000 for private and related institutions.

These costs were double those undergraduate students paid in 1940. The family of the average student provided from its current income 41 percent of the student's budget; he earned 26 percent of it; received 20 percent from trust funds and other forms of long-time

family savings; and received the remaining 13 percent from scholarships, loan funds, veterans' benefits, and miscellaneous resources.

STATEWIDE PLANNING AND COORDINATION OF HIGHER EDUCATION

The Office published a roundup on what each of the 48 States is doing in the field of statewide planning and coordination of higher education. The Office provided consultive services on the topic to State executive and legislative councils and to boards of regents in 8 States: Colorado, Florida, Louisiana, Michigan, New Mexico, Nevada, Tennessee, and Wisconsin. Staff specialists also contributed to improved State planning and coordination in higher education through work with the President's Committee on Education Beyond the High School, and through service to the Southern, Western, and New England regional compacts of States for developing higher education.

COLLEGE STUDENT RETENTION AND WITHDRAWAL

During the year, the Office completed a 4-year study of the extent and causes of the retention and withdrawal of college students. It was based on the experience of 13,700 students who first enrolled in college in the fall of 1950. The students attended 147 representative institutions in 46 States and the District of Columbia. The study shows that 40 percent of the freshmen who entered college in 1950 remained to graduate 4 years later and that an additional 20 percent were ultimately graduated. The holding power of colleges indicated by these figures represents a significant improvement over those shown by a study done in 1937.

Among freshmen general dissatisfaction with the instructional and counseling program ranked highest among causes for withdrawal. Academic failure ranked second. For sophomores, juniors, and seniors, personal financial problems ranked highest. The greatest number of dropouts were in the freshman year.

COLLEGE AND UNIVERSITY FACILITIES SURVEY

Preliminary reports from a college and university facilities survey now underway indicate that during the last 5 years the country has spent \$2 billion for new buildings and expects to spend \$4 billion for this purpose during the next 5 years. Approximately 62 percent of new construction in the last 5 years was for publicly supported institutions and 38 percent for private colleges and universities.

Publicly controlled institutions got 56 percent of their construction funds from local, State, and Federal taxes; 31 percent from bond issues; and 13 percent from other sources. During the same period, privately supported institutions got 56 percent of their construction funds from gifts, 20 percent from bond issues and other borrowings,

10 percent from current institutional funds, 8 percent from endowment, 4.5 percent from governmental appropriations, and 1.5 percent from other sources.

SURVEY OF ORGANIZED OCCUPATIONAL CURRICULUMS

The Office of Education, in cooperation with the American Society for Engineering Education, has published detailed statistics on engineering enrollments and degrees since 1949. In 1957, following a request from the President's Committee on Scientists and Engineers, the joint enterprise was extended to cover organized occupational curriculums (both engineering and nonengineering) of less than 4 years' duration in technical institutes, junior colleges, and other higher educational institutes.

Questionnaires covering curriculums of less than 4 years' duration for the academic year 1956-57 were sent to all recognized institutions of higher education. Returns from 95 percent of them show that 639 institutions enrolled 92,430 students in nonengineering curriculums, and 60,242 in engineering-related curriculums; and graduated 23,441 students from nonengineering curriculums and 10,737 from engineering-related curriculums. Publication of complete data early in fiscal year 1958 will make available for the first time information on the extent and type of training at the technician and semiprofessional level.

COLLEGE STAFFING STUDY

There were 301,582 faculty members in American colleges and universities in the fall of 1955. According to Office of Education estimates, college student enrollments will increase from 3,244,000 in 1956-57 to 6,676,000 by 1970-71. Thus, about double the number of present college teachers will be required if the present teacher-student ratio is to be maintained. The already difficult staffing problems are expected to become more serious.

In consideration of these facts the Office, in May 1957, sponsored a conference of representative leaders in higher education to advise on (1) how colleges and universities are now meeting the teacher shortage, and (2) the ability of the American graduate school to prepare a sufficient number of suitably qualified college faculty members to meet the demand. Initial steps were taken in fiscal 1957 on an Office study of these problems.

INSTITUTIONAL FINANCIAL AID TO STUDENTS

Specialists in higher education completed a nationwide survey of institutional financial assistance—excluding student aid grants of the States, corporations and other business firms, labor unions, and other organizations—to undergraduate and graduate students. Although

1,560 colleges and universities reported some type of student aid, 190 others reported that they had no form of financial aid for their students. Preliminary data showed that in the school year 1955-56 institutional aid to undergraduates totaled \$141,985,153, of which 45.9 percent was for employment, 45.2 percent was for scholarships, and 8.9 percent was for loans. Institutional financial aid for graduate students totaled \$64,928,950, of which 54.0 percent was for assistantships, 28.3 percent for fellowships, 10.0 percent for employment, and 7.7 percent for loans.

As a byproduct of its student aid study, the Office completed two directories listing the institutional student aid resources separately for undergraduate and graduate students. These directories will be published early in fiscal year 1958. The Office plans to distribute copies of the directories to all secondary schools and to all institutions of higher education in the United States.

COLLEGE HOUSING PROGRAM

During fiscal 1957, the staff of the Office was requested by the Community Facilities Administration to review and report on the second largest number of loan applications for college housing since the inception of the program. These applications totaled 315, three-fourths of which were from private colleges and 67 percent from institutions with enrollments under 1,000 students. The total amount requested in 1957 by the 315 applicants was \$403,991,000, as contrasted with \$413,250,000 requested by 386 applicants in fiscal 1956.

Amendments to the Housing Act, enacted by the 85th Congress, 1st Session, will increase the college loan fund from \$750 million to \$925 million. The interest rate, now at 2.78 percent, will be about 3 percent for fiscal 1958.

ADMINISTRATION OF GRANTS

For the year ending June 30, 1956, the Office administered a total of \$5,051,500 to land-grant colleges and universities under the Morrill-Nelson and Bankhead-Jones Acts. Office responsibility in this program is to certify that each State and Territory is entitled to receive its share of the annual appropriation and the amount it is entitled to receive. The amounts allotted to the States, Territories, and the Commonwealth of Puerto Rico are shown in table 3.

International Education

Throughout 1957 the Office continued to shape its program to meet the growing interest in international education. As the public becomes increasingly aware of the importance of education to mutual

understanding of the cultures of the world and thus to world peace, there are increasing demands on the Office. In 1957 the Office received many requests for service from Federal, national, and international agencies and from American and foreign educators.

RESEARCH AND STUDIES

President Eisenhower, in a commencement address at Baylor University, Waco, Texas, in 1956, proposed that colleges and universities in the United States cooperate in the development of higher education in countries with inadequate educational facilities. Since that time several appraisals have been made of the status of American higher education abroad; among them was the Office study, *American Cooperation With Higher Education Abroad*, published in 1957. It is a summary of governmental and nongovernmental programs.

In addition to its regular studies of comparative and international education, the Office introduced two new series of publications in 1957: A series of yearbooks on education around the world, and a series of bibliographies. The first yearbook was released under the title *Education for Better Living: The Role of the School in Community Improvement*. It is a survey of what schools are doing in 16 nations and colonial areas to improve community living conditions. The first of the annual series of bibliographies, *Bibliography: 1956 Publications in Comparative and International Education*, was issued as an aid to American professors and leaders in comparative and international education in the United States and abroad.

In 1957 work was begun on three studies which will be published in 1958: (1) Educational developments in Japan since the war, based on a field study by a specialist in Far Eastern education, (2) the educational organizations, institutions, and programs in Brazil, based on a field study by a specialist in Latin American education, and (3) the functions and organizations of ministries of education, to be published as the second yearbook on education around the world. Officials of other United States Government agencies, particularly those with overseas posts, cooperated with Office specialists in planning the study of ministries of education and in securing data for it.

FAR EAST UNIT

A Far East unit was established in the Office in 1957 to handle the increasing workload relating to education in Asian countries. The unit was organized after staff specialists had conferred with representatives of the Government and educators outside the Office on the direction educational research on the Far East should take to serve the needs of the Government and the profession.

EVALUATION OF FOREIGN CREDENTIALS

The number of foreign nationals studying in the United States has risen steadily since World War II, to at least 40,000 in 1957. The increase in foreign students studying in the United States and of United States students studying abroad adds to the work of the staff members who evaluate foreign study for the use of educational institutions, State certification offices, boards of licensure, civil service commissions, and personnel offices in making decisions on the equivalence of specific foreign study to study in the United States.

In 1957, two trends were evident in requests for evaluation: A higher proportion of the requests were from governmental boards of licensure, probably reflecting a larger number of mature persons coming here with the intention of practicing a profession; and a larger number of requests were for information about the status of foreign universities from government agencies with responsibility for United States citizens studying in higher institutions overseas.

EDUCATIONAL CLEARINGHOUSE

The Office provided the Department of State with 183 statistical tabulations on government-sponsored grantees entering and leaving this country during the year, a service it has given annually since 1952. The statistical studies include such information as numbers and types of grantees by country of destination or origin, State of origin or destination, fields of specialization, age groupings, and veterans' status.

During the year, the Office prepared records giving the name, address, category, specialty, occupation, and institution of placement of every foreign grantee entering this country between 1952 and 1955.

INTERNATIONAL CONFERENCES

The Office coordinated the preparation of educational reports required for United States participation in international organizations. These reports dealt with decisions of governments on education and provided background data for technical groups at international conferences.

For example, a report on the training of primary (elementary) teacher training staffs was prepared for the Twentieth Annual International Conference on Public Education at Geneva; and in response to requests from UNESCO, materials were assembled on special education in the United States for the Belgian Ministry of Education and on vocational and technical education for the Netherlands Ministry of Education.

On the recommendation of the United States delegations to the International Conference on Public Education, sponsored by UNESCO and the International Bureau of Education, the Office of Education,

in cooperation with the United States Information Agency, prepared an exhibit for display in the Palais Wilson in Geneva from July 1957 to June 1958. The exhibit is on school construction, the major subject of the 1957 conference.

EDUCATIONAL MATERIALS LABORATORY

The Educational Materials Laboratory has been in operation since 1953 for the use of foreign visitors, United States educators, and other persons interested in improved educational materials. In 1957 the Laboratory had a collection of approximately 6,000 items including textbooks supplied by the American publishers and materials developed by United States education missions in foreign countries.

During 1957 the Laboratory served other government agencies; educators from other countries, most of whom were brought to the United States by the International Cooperation Administration and the International Educational Exchange Service of the Department of State; American educators going abroad under the technical assistance program of ICA or to administer American sponsored schools in other countries; and a number of ICA missions overseas. A majority of the ICA requests were for assistance in obtaining materials in American educational specialties and for technical advice on establishment of education materials centers in several missions.

Service to American schools continued to be a major part of the Laboratory's activities. In 1957, 1,166 individual requests were received from 47 States, 2 Territories, the District of Columbia, and Guam. Most of them were for assistance in planning courses and in locating materials from other countries. A series of "Teaching Aids for Developing International Understanding," which include annotated lists of teaching materials, was initiated for use by American teachers. Thirteen such lists were compiled.

TEACHER EXCHANGE PROGRAM

The continued exchange of American and foreign teachers results in an effective interpretation of educational systems and cultures to participating groups in the United States and abroad. To further this aim the Office cooperates with the IES, Department of State, in recruiting American teachers for overseas assignments and matching American and foreign teachers for interchange of positions. During the year 25 new teaching opportunities overseas were announced.

In 1957 the Office placed 502 American and foreign teachers, including 71 American teachers for summer seminars in France, Germany, and Italy; 104 Americans for teaching assignments abroad and 15 foreign teachers for similar assignments in the United States; and 156 American and 156 foreign teachers who exchanged positions.

TEACHER EDUCATION PROGRAM

The teacher education program in which foreign teachers are brought to the United States for a 6-month study of American education has reached into many American communities. The 303 teachers from 43 countries here under this program during the past year visited more than 6,000 schools and homes in 1,100 communities and met over a million people. They appeared on radio and television programs and were the subject of newspaper articles in at least 37 States. Study programs were arranged for them in 12 university training centers in elementary, secondary, and vocational education, English, and American civilization.

The following countries participated for the first time during the past year: Chile, Colombia, Ecuador, Fiji Islands, Honduras, Jordan, Laos, Malta, Turkey.

The second teacher development workshop was held at the University of Puerto Rico for 32 educators from countries of the Caribbean area. The 30-day program in elementary and secondary education was conducted in Spanish. This program is also carried on in cooperation with IES, Department of State.

TECHNICAL TRAINING PROGRAM

During the year the Office assisted the International Cooperation Administration by arranging training programs for 540 participants from newly developing countries. The participants received their academic training in 130 educational institutions in a wide variety of subjects such as elementary, secondary, and vocational education; engineering; and physics; and supplementary training in different types of commercial and industrial installations. As part of their training the participants visited unions, PTA's, civic groups, granges, and hundreds of other organizations.

TECHNICAL COOPERATION PROGRAM

The Office continued to work with the ICA in the development of technical cooperation programs in 37 newly developing countries. Eighty-seven specialists were selected for appointment by ICA to serve in educational programs of these countries where approximately 300 educators, exclusive of college contract employees, are helping to improve educational conditions.

The Office also furnished essential technical support on special educational problems of these educators in the countries where they work, participated in international conferences, and consulted with education officials of many other countries on professional matters of common concern.

NONPROGRAM VISITORS

The Office also serves large numbers of foreign visitors who are not participants in any one of the three programs for which funds have

been transferred to the Office. Some of these "nonprogram" visitors make appointments directly with staff members in all divisions of the Office. A number of visitors are referred by other Government agencies, educational organizations, and foreign embassies for assistance in educational matters. It is estimated that during the year 350 non-program foreign educators received educational services from the Office. These activities are a traditional service of the Office.

Research and Statistical Services

COOPERATIVE RESEARCH

In 1957 the Office launched the cooperative research program, which is authorized under Public Law 531, 83d Congress. The act authorizes the United States Commissioner of Education to "enter into contracts or jointly financed cooperative arrangements with universities and colleges and State educational agencies for the conduct of research, surveys, and demonstrations in the field of education." An appropriation of \$1,020,190 was made for the support of such research during fiscal year 1957.

Proposals under the program are received by the Office from institutions of higher education and State departments of education. All such proposals are submitted to the Research Advisory Committee for their review and recommendations. This Committee ordinarily meets three times each year, in October, January, and May.

The Committee evaluates the proposed projects on the basis of the following criteria: (1) Significance of the project for education throughout the Nation; (2) soundness of technical design of the study; (3) personnel and facilities available to carry out the project; and (4) economic efficiency (economy of the proposed procedures and expected value of findings in relation to Federal cost). Projects considered outstanding are recommended by the Committee to the Commissioner of Education. When projects are approved by the Commissioner, contracts are negotiated for their support. Although a substantial amount of the necessary financial support is provided by the Federal Government, the cooperating institution or agency also contributes to the total cost of the project.

By the end of fiscal year 1957 the Office had received 324 applications for the support of research proposals representing requests for Federal funds of more than \$15 million. Of these, the Research Advisory Committee had reviewed 316 proposals and had recommended 108 of the projects for final approval.

Since two-thirds of the total amount of Federal funds appropriated was designated for research in the education of mentally retarded children, more proposals were received dealing with this subject than with any other. At the end of the fiscal year a total of 72 projects had

been initiated and were receiving financial support under the Cooperative Research Program. These projects received current-year support of approximately \$1 million. Most of the projects will require an additional year or more for completion. Of the 72 projects initiated, 42 deal with the mentally retarded. Of the 30 projects in areas other than the mentally retarded, 10 deal with staffing the Nation's schools and colleges, 6 with the retention and continuation of students in school, 3 with the development of special abilities, 3 with educational aspects of juvenile delinquency, and 8 with other aspects of education. The projects are being carried on in 30 different institutions of higher education and in 6 State departments of education.

STATISTICAL SERVICES

During fiscal year 1957 the research and statistical staff was increased from 26 to 68 persons. As a result, the traditional basic statistical surveys of school systems and institutions have been strengthened, studies of new areas of educational statistics have been initiated, and a new section (the Reference, Estimates, and Projections Section) has been established. The new section will systematize and expand the program of educational estimates and projections in order to provide current data urgently needed for policy-making purposes. Study has already begun for projections of enrollment at elementary, secondary, and higher education levels; the number of high school graduates; and the number of degrees conferred by institutions of higher education.

During the year improvements were made in survey techniques, such as sampling procedures, coverage of surveys, forms design, methods of data collection, and analysis and interpretation of data. Improvements were also made in the collection of data through visits of staff members to State departments of education. Staff time in the field was shortened through the employment of local clerks or the preparation of photocopies of State records.

NEW SURVEYS

During the year work was begun on a number of new surveys which will be reported in fiscal 1958. The major studies are described briefly in the following paragraphs.

Survey of Beginning Teachers.—This study is focused primarily on the economic status of beginning teachers, their degree of satisfaction with various aspects of their job, and their commitment to teaching as a career. It is based on a scientifically selected sample in two stages—the first, a sample of school districts which were requested to submit lists of beginning teachers, and the second, a sample of these beginning teachers, to whom a detailed questionnaire was mailed.

Suburban City School Systems.—Because virtually all of the increase since 1950 in the civilian population of the United States has taken place in the 168 standard metropolitan areas it has become imperative that information about the large and increasing number of suburban school systems within these areas be collected and made available. Consequently the current biennial survey of city school systems was expanded in coverage and content.

The expanded survey will contain information on about 475 suburban cities, all located in standard metropolitan areas, including personnel and financial matters, the qualifications of their teachers, salary practices, specialized curriculum offerings, and class size.

County-Unit School Systems.—The county-unit school system, which is rapidly becoming a significant type of school organization, has not been systematically studied prior to the present survey. This survey of "complete" county units, that is, those counties which operate single school systems, represents an extension of the coverage of the *Biennial Survey of Education*.

Rural County School Systems.—This year the Office began to develop a program of rural school statistics designed to provide data similar to those published for city schools. A questionnaire identical with that which went to cities has been sent to about 1,200 counties which had been identified as having "rural" characteristics. Through the program the Office expects to provide valuable information for persons interested in improving the educational opportunities of rural children.

Highway Safety.—In cooperation with the National Commission on Safety Education of the National Education Association, the Office has requested all institutions of higher education to report the courses or activities they provide for training people in the field of highway safety. The results will be analyzed by specialists of the National Education Association and this Office, and will be published as a classified directory which should prove useful to students, counselors, employers, safety councils, and insurance groups.

Enrollment by Scientific Subject Field.—This survey was instituted in response to urgent requests from organizations and institutions concerned with the present and future supply of scientific manpower. A pretest was conducted in which 600 institutions of higher education were requested to report enrollments of junior-year students, by major field of science.

Other Surveys.—Two other fields of study which deserve mention, although they were in the drawing-board stage at year end, are a statistical study of adult education activities and a survey of teacher turnover, the primary purpose of which is to obtain a reliable estimate, on an annual basis, of the number of teachers leaving the profession.

Assistance to Schools in Federally Affected Areas

Fiscal year 1957 was the seventh year of continuous operation of the program for Federal assistance to schools in areas affected by Federal activity. Like the preceding years the seventh year showed a growth in the number of participating districts.

Federal payments to federally affected districts (P. L. 874, as amended) to aid in meeting current operating expenses for the year amounted to \$113 million. These payments were made on behalf of some 1,200,000 federally connected pupils claimed by school districts which had a total attendance of over 7.6 million pupils. The school districts receiving these funds provided free public education to approximately one-fifth of the Nation's public school enrollment. The number of participating districts in fiscal year 1957 amounted to approximately 3,400, an increase of about 500 in the number of eligible districts over the previous year. This increase in eligible districts was the largest since 1952, the second year of the program, when 600 new districts were found to be eligible.

From the beginning of the program in 1950 to the end of fiscal 1958, school construction projects approved numbered 3,705 for which Federal funds amounting to \$712 million had been allocated (Public Law 815, as amended). Local school districts which have received school construction aid under this program have added \$303 million in their own funds to these projects and in addition have provided sites and off-site improvements not included as a part of the approved project. The school construction work thus far initiated under this program is more than \$1 billion, and the classroom accommodations provided by the approved projects will be sufficient to house some 950,000 pupils.

One of the principal causes of the continued extension of the school construction program is the substantial program of military housing which has been authorized by the Congress under title VIII of the National Housing Act. This program, popularly known as the Capehart housing program, authorizes the Federal Government to issue mortgages sufficient to provide funds for some 150,000 family housing units on military installations. The program has been amended twice since its original enactment with the effect that the number of housing units to be approved under it has been enlarged and the date for final commitment of mortgages has been extended until June 30, 1959. Since the children who will live in these family housing units will need school facilities on or near the military installations, the Congress has provided for continued Federal assistance under Public Law 815 for school construction.

Since the amendments to the Capehart housing program extend the time for the approval and construction of the housing units, a 1-year extension of Public Law 815 to accommodate these new housing units, was recommended by the Department and adopted by the Congress. This extension will enable school districts to make claims for Federal assistance in school membership through fiscal year 1959.

In extending Public Law 815 for one additional year the Congress indicated its intention "to make a thorough study of the entire Federal impact problem in order to develop a program which will operate efficiently and economically without periodical extension and piecemeal changes"; and to this end directed the Department to present its recommendations early in the next session of the Congress.

Library Service

PUBLIC LIBRARIES

In 1871, the Commissioner of Education said in his Annual Report:

"Public libraries are at once an important means and a valuable index of education. . . . Year by year this office should be able to present the growth of this valuable auxiliary to all forms of culture."

In 1957 the Office revised and enlarged its regular program of activities in the public library field. A public library specialist was appointed to the staff, with the special responsibilities for planning and conducting research and other studies to meet the increasing demands for objective data and trends. Added to the work in this area has been the coordinating of library services with adult education and services to the aging at the national and State levels.

Further evidence of the growing awareness of the important role which public libraries play in the educational life of the Nation can be found in the enactment of the Library Services Act (Public Law 597, 84th Cong.) signed by the President on June 19, 1956. This legislation provides for a 5-year program of Federal assistance to the States and Territories in extending public library services to those rural areas which have either no libraries or inadequate libraries.

Regulations were drafted and reviewed at a series of four regional conferences with heads of State library administrative agencies charged with the responsibility of carrying out State plans for the improvement and extension of rural public library service.

Thirty-five States and Hawaii submitted plans and qualified for their Federal allotments of \$40,000 each under the \$2,050,000 appropriation for fiscal 1957. These States not only matched the Federal allotment of \$1,440,000, but overmatched it by \$2,941,259; although they were required to put up only \$1,282,861, they put up a total of \$4,224,120. The percentages of total funds budgeted in State plans

by categories of expenditures were: Salaries and wages, 40.6; books and materials, 36.8; equipment, 10.6; and all other operating, 12.

Under the impetus of the Library Services Act a number of States have enacted new legislation and increased their appropriations for public libraries to meet the requirements of the act. Other States appropriated emergency funds so that they could immediately qualify. One State created a new library extension agency and appropriated funds to match the Federal allotment. The reports in the periodicals issued by the State agencies speak enthusiastically of the helpful effect of the Library Services Act on the library programs in the respective States.

EDUCATION FOR LIBRARIANSHIP

To meet requests for information pertinent to the widespread shortage of trained librarians throughout the United States, the Office has endeavored to maintain for the past 5 years a current list of higher educational institutions which offer courses in library science. The number of such institutions has increased during this period from about 400 in 1951-52 to nearly 600 in 1956-57.

PUBLIC SCHOOL LIBRARIES

A comprehensive statistical survey of public school libraries for 1953-54, the first since 1947-48, was completed during the year. By appropriate adjustments for the use of sampling and for nonresponse, it was possible to derive figures for the Nation as a whole. The calculations showed that 128,831 schools were involved. The number of librarians employed in 1953-54 was 30,753, of whom 15,971 were professionally trained and 14,782 had little or no professional training. The number of volumes in the school libraries at the close of 1953-54 was 102,915,052, of which 9,609,949 were added during the year. The total annual library expenditure, excluding salaries, was \$25,222,207, of which \$16,066,277 was spent for books and pamphlets and \$2,199,352 for periodicals and newspapers.

Advisory Committees

In carrying out its activities the Office had the cooperation of advisory committees, professional associations and groups, State departments of education, and educators and laymen. Among the advisory committees working with the Office during the year were Office of Education Research Advisory Committee, the National Committee on the Study of the Qualification and Preparation of Teachers of Exceptional Children, the National Advisory Committee for the Exchange of Teachers, the Advisory Committee of National Organ-

izations, and the Advisory Committee on the Library Services Program.

The cooperation of these committees provides a vital link in the continuity which the Office seeks to maintain in citizen-educator teamwork.

To provide a direct means of communication with and between organizations and associations the Office launched a new publication, Education Fact Sheet, and put out seven issues during the year. The publication carries brief items on the activities of the Office, national organizations interested in education, and the States and communities.

The President's Committee on Education Beyond the High School

The First Interim Report of the President's Committee on Education Beyond the High School was submitted to the President on November 16, 1956. The report, which included the Committee's preliminary conclusions, was intended to promote discussion among as many educators and laymen as possible. About 25,000 copies of the report were distributed.

Following the submission of the First Interim Report, the Committee organized itself into subcommittees for the purpose of preparing the Second Report to the President. This report will contain recommendations on the need for teachers and for student assistance, the problems of financing and of providing a diversity of educational opportunity beyond high school, and the relationships of the Federal Government to education beyond the high school.

In addition to making its own studies, the Committee sponsored five regional conferences during April and May 1957. The conferences, held in Boston, New York, Louisville, Saint Louis, and San Francisco, were attended by 1,400 laymen and educators who considered problems of post-high-school education as they related to the region. The staff developed a source book of statistical information and salient facts on post-high-school education for the use of conference participants. Each of the conferences submitted a report of its proceedings to the President's Committee.

The second report will be submitted to the President in fiscal 1958, and copies will be distributed to 120,000 educators and laymen throughout the country.

Major Publications Off the Press in Fiscal Year 1957

- Accredited Higher Institutions, 1956
Administration of Public Laws 874 and 815, 6th Annual Report of the Commissioner of Education, June 30, 1956
Adventuring in Research to Improve School Practices in Homemaking Programs
American Cooperation with Higher Education Abroad
Austrian Teachers and Their Education Since 1945
Directors and Supervisors of Special Education in Local School Systems
A Directory of 3,300 16mm Film Libraries
Education for Better Living, 1957 Yearbook on Education Around the World
Education Directory, 1956-57 (Parts 1, 2, 3, 4)
Education for National Survival, A Handbook for Schools
Education in Taiwan
Engineering Enrollments and Degrees, 1956
Extraclass Activities in Aviation, Photography, and Radio for Secondary School Pupils
Fall 1956 Enrollment, Teachers, and Schoolhousing in Full-Time Public Elementary and Secondary Schools
Federal Funds for Education, 1954-55 and 1955-56
Financial Accounting for Local and State School Systems
Home Economics in Colleges and Universities, Planning Space and Equipment
National Stay-in-School Campaign, Handbook for Communities
Opening Enrollment in Higher Educational Institutions, Fall 1956
Planning and Conducting a Program of Instruction in Vocational Agriculture for Young Farmers
Progress of Public Education in the United States of America, 1956-57
Pupil Transportation Responsibilities and Services of State Departments of Education
Research in Industrial Education, Summaries of Studies, 1930-55
Resident and Extension Enrollment in Institutions of Higher Education, Nov. 1955
School District Reorganization Policies and Procedures
School Property Insurance, Experiences at State Level
The Secondary School Plant, An Approach for Planning Functional Facilities
Statistics of City School Systems; Staff, Pupils, and Finances, 1953-54
Statistics of Higher Education: Faculty, Students, and Degrees, 1953-54
Statistics of Higher Education: Receipts, Expenditures, and Property, 1953-54
Statistics of Land-Grant Colleges and Universities, Year Ended June 30, 1955
Statistics of State School Systems: Organization, Staff, Pupils, and Finance, 1953-54
Summaries of Studies in Agricultural Education (Supplements 9 and 10)
Summary of Federal Funds for Education
Teachers of Children Who Are Blind
Teachers of Children Who Are Mentally Retarded
Teachers of Children Who Are Partially Seeing
Teaching about the United Nations in United States Educational Institutions
Trends in Significant Facts on School Finance, 1929-30 to 1953-54
Work Experience Education Programs in American Secondary Schools
Higher Education (9 issues, September through May)
School Life (9 issues, October through June)

Table 1.—Enrollment in the continental United States, 1955-56 and 1956-57

[Office of Education estimates]

School	Year	
	1955-56	1956-57
Kindergarten through grade 8:		
Public school systems, regular full-time.....	24,588,000	25,283,000
Nonpublic schools, regular full-time.....	3,768,000	4,267,000
Federal schools for Indians.....	32,200	26,000
Federal schools under Public Law 874.....	16,000	19,000
Other.....	110,000	116,000
Total kindergarten through grade 8.....	28,514,200	29,711,000
Grades 9-12:		
Public school systems, regular full-time.....	6,860,000	6,876,000
Private and parochial schools, regular full-time.....	823,200	866,000
Federal schools for Indians.....	9,800	11,000
Federal schools under Public Law 874.....	900	1,000
Other.....	53,200	66,000
Total grades 9-12.....	7,747,100	7,820,000
Total elementary and secondary.....	36,261,300	37,531,000
Higher education:		
Universities, colleges, professional schools, including junior colleges and normal schools.....	2,996,000	3,244,000
	2,996,000	3,244,000
Other schools:		
Private commercial schools, day and evening.....	450,000	500,000
Nurse training schools, not affiliated with colleges and universities.....	91,400	91,000
Total other schools.....	541,400	591,000
Grand total.....	39,798,700	41,366,000

Table 2.—Supply and demand for elementary and secondary public and nonpublic school teachers, 1956-57

Item	Elementary and secondary
<i>Supply</i>	
Total teachers, 1955-56 ¹	1,266,000
Less emergency teachers, 1955-56.....	77,600
Total qualified teachers, 1955-56.....	1,188,400
Less 7.5 percent turnover of qualified teachers.....	89,100
Qualified teachers returning for 1956-57.....	1,099,300
Emergency teachers qualifying for 1956-57.....	20,000
New supply of qualified teachers (81.6 percent of elementary and 62.9 percent of high school teachers trained in 1955-56).....	76,100
Total qualified supply, 1956-57.....	1,195,400
<i>Demand</i>	
Total teachers, 1955-56 ¹	1,266,000
Teachers needed to meet increase in enrollment in 1956-57.....	50,100
Total demand, 1956-57.....	1,316,100
Shortage of qualified supply.....	120,700

¹ The number of elementary and secondary school teachers in the public school system, in the fall of 1955, was 1,135,930 (Office of Education Circular No. 467, Revised). To this must be added the number in nonpublic schools (private and parochial), in model and practice schools, in colleges and universities, in residential schools for exceptional children, and in schools operated under Federal auspices. The number in Catholic private and parochial schools in 1955-56 was 114,000 (estimated by National Catholic Welfare Conference, Dept. of Education). The number in the other types of schools is estimated as 16,250.

Table 3.—Grants¹ to States: Office of Education, fiscal year 1957

States, Territories, and possessions	Total	Colleges for agriculture and mechanic arts	Library services	Cooperative vocational education	Maintenance and operation of schools (Public Law 874)	School construction (Public Law 815)
1	2	3	4	5	6	7
Total	\$204,336,577	\$5,051,500	\$1,440,000	\$37,582,036	² \$93,194,675	\$67,068,366
Alabama.....	4,440,916	100,541	40,000	1,023,505	2,403,230	873,640
Arizona.....	2,312,158	77,477	40,000	197,420	1,343,063	654,198
Arkansas.....	2,337,833	89,048	40,000	759,496	725,618	723,671
California.....	33,748,271	175,599	40,000	1,873,650	16,107,775	15,551,247
Colorado.....	4,428,815	83,218	40,000	324,396	2,380,448	1,600,753
Connecticut.....	2,175,268	90,023	40,000	347,696	1,103,323	594,226
Delaware.....	407,328	73,173	-----	170,186	113,919	50,050
District of Columbia.....	79,961	-----	-----	79,961	-----	-----
Florida.....	5,429,497	97,644	-----	602,112	2,717,369	2,012,372
Georgia.....	6,118,713	104,360	40,000	1,123,236	3,091,693	1,759,424
Idaho.....	867,535	75,872	-----	210,327	538,165	43,171
Illinois.....	4,521,467	156,905	40,000	1,690,318	1,990,787	643,457
Indiana.....	1,928,961	109,245	-----	963,073	661,799	194,844
Iowa.....	1,315,854	96,146	40,000	844,810	276,918	57,980
Kansas.....	4,198,327	89,006	-----	574,038	2,871,295	663,988
Kentucky.....	2,268,184	99,375	40,000	1,029,962	766,318	332,529
Louisiana.....	1,827,217	96,769	40,000	724,292	659,970	306,186
Maine.....	1,107,971	79,115	-----	202,875	689,238	136,743
Maryland.....	9,674,701	93,372	-----	453,365	4,199,910	4,928,054
Massachusetts.....	3,049,749	116,789	40,000	720,724	1,604,452	567,784
Michigan.....	7,008,278	133,559	40,000	1,344,240	399,902	5,090,577
Minnesota.....	1,594,176	99,751	40,000	918,835	83,204	452,386
Mississippi.....	1,780,390	91,735	40,000	967,241	553,065	128,349
Missouri.....	3,717,508	109,448	40,000	1,663,406	1,243,468	1,261,186
Montana.....	1,263,528	75,896	40,000	210,270	374,668	562,604
Nebraska.....	1,970,096	83,222	40,000	427,369	866,250	553,255
Nevada.....	944,319	71,597	-----	160,628	585,810	126,284
New Hampshire.....	732,599	75,319	40,000	149,790	403,871	63,619
New Jersey.....	3,215,614	118,233	40,000	740,906	1,471,328	845,147
New Mexico.....	4,552,144	76,795	40,000	217,207	1,791,937	2,426,205
New York.....	6,526,311	217,934	40,000	2,405,413	1,954,331	1,908,633
North Carolina.....	3,053,848	110,518	40,000	1,441,575	961,914	499,841
North Dakota.....	577,236	76,181	40,000	280,375	151,013	29,667
Ohio.....	6,296,978	149,269	40,000	1,686,442	2,921,747	1,499,520
Oklahoma.....	7,391,471	92,279	40,000	681,177	3,905,274	2,672,741
Oregon.....	1,733,154	85,176	40,000	390,110	681,904	535,964
Pennsylvania.....	3,904,622	174,720	-----	2,059,943	1,245,487	424,472
Rhode Island.....	1,475,735	77,899	-----	136,282	941,121	323,433
South Carolina.....	3,152,164	91,118	40,000	734,059	1,605,891	681,096
South Dakota.....	1,821,457	76,511	40,000	277,504	951,741	475,701
Tennessee.....	3,293,230	102,835	40,000	1,074,226	1,199,033	877,136
Texas.....	12,348,662	146,921	40,000	1,878,287	6,565,589	3,717,865
Utah.....	1,973,903	76,871	-----	181,265	1,020,735	695,032
Vermont.....	330,302	73,768	40,000	167,670	48,864	-----
Virginia.....	14,284,826	103,104	40,000	975,508	7,655,804	5,510,410
Washington.....	6,633,305	93,731	-----	580,427	3,762,991	2,196,156
West Virginia.....	938,918	90,606	40,000	617,951	144,026	46,935
Wisconsin.....	1,623,066	104,260	40,000	954,778	278,331	245,697
Wyoming.....	688,791	72,898	-----	176,475	281,666	157,752
Alaska.....	3,478,734	71,283	-----	18,937	3,153,264	235,250
Guam.....	287,160	-----	-----	-----	287,160	-----
Hawaii.....	2,889,362	74,986	40,000	182,334	1,457,996	1,134,606
Puerto Rico.....	595,964	50,000	-----	545,964	-----	-----
Virgin Islands.....	20,000	-----	-----	20,000	-----	-----

¹ On the basis of checks issued.² Totals do not include payments made to the Air Force, \$989,619; Navy, \$649,661; Veterans' Administration, \$2,649.

Food and Drug Administration

THE ORIGINAL Federal Food and Drugs Act went into effect on January 1, 1907. Nationwide commemoration during the whole year 1956 of the passage of that law immeasurably increased public understanding of the importance of food and drug control in our very complex modern life. A host of new and increasingly difficult problems must be faced today and in the years ahead. New developments will continue to serve the public health, but will not decrease the need for watchful protection under our food and drug laws.

The public wants more and more convenient food—greater and greater diversification—improved nutrition—better packaging. To meet these demands industry scientists must employ a wide variety of substances in food which they did not previously contain. In the development of these newer foodstuffs there is opportunity for serious error. Both industry and regulatory scientists must be ever on the alert to prevent changes from reacting in any way to the detriment of the consumer. They must also prevent public misunderstandings fostered by uninformed statements questioning the safety of the food now on the market. While no food known to be injurious is on the market today, authority is needed to insure the safety of products containing new chemical additives.

Also, in the field of new drugs, there must be constant watchfulness lest products that save lives and ease the pain of the suffering do not in turn take their toll when administered over the years to patients who may develop adverse reactions.

The fiscal year 1957 was a fruitful one for the Food and Drug Administration. In the first year of the expansion program recommended by the Citizens Advisory Committee at the end of fiscal year 1955, there was an increase of 15 percent in appropriations over those of the previous year. This increase permitted a return to the size

of the enforcement staff of 1951, the previous high. The inspection staff in 1956 numbered 250; in 1957 it was increased to 300. Despite the nationwide shortage of professional young people of the caliber FDA needs to train for its work, the budgeted positions for 1957 were filled with promising personnel.

The Department requested and Congress approved for the 1958 fiscal year an increase of 19 percent over the 1957 appropriation for expansion of current activities, in addition to certain specialized expenses not in previous budgets, including replacement and modernization of equipment and a new field district headquarters.

The 1958 increase was requested to permit added attention to new drugs, and to more basic scientific research, including pharmacological studies on pesticides and chemical additives, nutritional studies on processed foods, bacteriological studies on precooked and frozen foods, reappraisal of some official testing methods for drugs, and studies of new cosmetic ingredients. It also included more attention to food standards, and an increase in the number of establishments to be inspected and samples to be collected for examination.

The Citizens Advisory Committee recommendations concerning management and operations have received careful study and been acted upon in many ways. An internal reorganization led to the establishment of five Bureaus, with the Office of the Commissioner maintaining direct supervision over administrative management, relations with States, trade, industry, and consumer groups, and matters relating to new laws and regulations. The scientific divisions were grouped into the Bureau of Physical and Biological Sciences. The other Bureaus are Enforcement, Field Administration, Medicine, and Program Planning and Appraisal.

A carefully planned survey was begun in 1957 in an attempt to measure, by statistically sound methods, the potential workload of the Food and Drug Administration. This will be of value in calculating manpower requirements and other aspects of budgetary planning and in directing enforcement activities.

The Citizens Advisory Committee also recommended increased attention to medical quackery and economic cheats, and more educational activities to inform consumers and industry of FDA programs, objectives, and opportunities to further public protection. At the end of the year, more defendants were serving jail sentences for false curative claims than at any time in FDA history—four of them after prolonged litigation.

Statutory authority to issue public warning against activities involving imminent danger to health was invoked by poster warnings against an ineffective cancer treatment. Education of the public as to facts and fallacies concerning food and nutrition was likewise

stressed in an attempt to offset organized promotion of food supplements as medicines to cure or prevent serious disease conditions.

Those fanatically swayed by cultist teachings—and prejudiced against recognized medical treatment—have been encouraged by every means known to specialists in mass psychology to protest Government persecution of their “leaders” or “masters.” Through mass meetings under the guise of “scientific lectures,” radio, T. V., circulars, “religious” publications, and even barnside signs, the public has been encouraged to write to congressmen and the President, demanding investigations of FDA actions. Countersuits were threatened, and subsequently filed, against the Secretary of Health, Education, and Welfare, and the Commissioner of Food and Drugs. The Federal judge who sentenced a “health food” lecturer and the United States attorney who prosecuted him were sued when the defendant was required to serve his jail sentence.

Food, Drug, and Cosmetic Act

DISASTER AND DEFENSE ACTIVITIES

Although natural disasters—hurricanes, floods, tornados—occurred repeatedly throughout the year, the major damage to foods and drugs was to unharvested crops and retail stocks. Alert State and local officials, assisted where needed by FDA inspectors, prevented consumption of polluted supplies. In some cases the inspectors reported “Nothing left to salvage.”

An explosion on a Brooklyn pier in December damaged 27 food and cosmetic processing and warehousing firms nearby. Approximately 235 tons of merchandise was damaged by polluted water, excessive heat, and flying debris, including glass. FDA inspectors, working with city health officers, checked the damage and supervised destruction.

In the same month fire in a storage grain elevator in South Chicago required the diversion of thousands of carloads of water- and fire-damaged grain to animal feed and industrial use. Other major losses included 2,700 tons of canned citrus juice and 200 tons of frozen fish flooded with polluted water when freighters were rammed at sea. FDA inspectors maintained surveillance over disposal of the damaged food.

The three FDA civil defense programs conducted under a delegation from the Federal Civil Defense Administration were continued. Training of State and local food and drug officials in the problems of radiological, biological, and chemical contamination of foods and drugs was expanded to include segments of the food industry. The food test program was continued by exposing various types of staple

foods to atomic explosion. Some progress was made in studying the vulnerability of packaged foods to bacteriological attack and decontamination to permit safe use of foods so exposed. Each of these FDA programs was terminated at the close of the fiscal year, since no funds were appropriated to continue the work in fiscal year 1958.

ON THE FOOD FRONT

Potential Health Hazards

Deleterious ingredients.—In cooperation with the United States Department of Agriculture and the National Milk Producers Federation (which reaches some half million farmers) an intensive program has been undertaken to eliminate antibiotic and pesticide residues from the milk supply. Changes in the regulations to provide better label warnings to farmers are discussed under New Regulations.

Full-time surveillance of the use of pesticidal chemicals to meet crop problems in major growing areas began when the official tolerances for pesticides on raw agricultural commodities became fully effective in July 1956. When misuse of the pesticides that would lead to excessive residues was encountered, the growers were warned through citations that crops so treated could not be shipped interstate.

Growers, in general, have responded to the educational program of State and Federal food control groups, agricultural agencies, and pesticide distributors urging them to comply rigidly with schedules recommended by experts. When pests are threatening their crops, however, farmers occasionally use a wide variety of insecticides without regard for recommended practices. An FDA inspector found that a lettuce farmer had used chlordane, endrin, dieldrin, DDT, toxaphene, malathion, cryolite, and rotenone on his crop and still had 11 days to go before harvest!

Thirty-two seizures were made to remove from the market foods contaminated with chemicals. Twenty-one contained pesticidal residues not permitted by formally established tolerances. Eighteen involved carloads of grain containing grain treated for seed use with mercurial compounds. A carload of celery was seized in two cities. The shipper had applied parathion in an amount 5 times the recommended maximum within 15 days of harvest. Another seizure involved frozen spinach which contained a DDT residue in excess of that permitted on fresh spinach.

Other foods seized because of potential danger to health were four shipments of imitation vanilla flavor containing coumarin, four of shell pecans dyed with uncertified coal-tar colors, ice cream cones containing boric acid, and two carloads of wheat contaminated by residues of lead pigments previously transported in the car. After the

first load was seized, the car was reloaded without cleaning and the second load also became contaminated with lead and was seized.

Vessels transporting green coffee in burlap bags have also carried ore concentrates and poisonous insecticides. Improper cargo handling or disasters at sea have resulted in large lots of coffee becoming seriously contaminated, with detentions required.

Prosecutions were filed in 1957 against three bean warehouses and responsible officers, based on the reckless use of poisonous rodenticides which contaminated about 5,000 tons of stored beans the previous year. There was only one recall of a dangerous food—grape jelly containing slivers of glass, possibly from a broken thermometer.

Food Poisoning.—FDA investigated 22 staphylococcus outbreaks affecting 950 individuals. Insanitary handling during the preparation of the foods for serving and inadequate refrigeration continue to be the most important contributing factors. Inadequate processing in home-canned foods was responsible for 7 botulism outbreaks with 6 fatalities among the 13 persons affected. In 3 separate outbreaks, affecting over 700 persons, boiled turkey was implicated. Three persons became ill after eating frozen dinners, defrosted at some stage after production. This points to the dangers of inadequate refrigeration during the transportation and marketing of "heat and serve" frozen foods. Defective hermetically sealed containers were suspected in 4 outbreaks; where the investigations revealed additional leaking containers the lots were removed from the market.

Two ranchers lost valuable farm stock after feeding them commercially prepared wafers. The wafers were found to contain excessive urea and both lots were seized.

To Keep Food Clean

Food seized for filth or decomposition totaled 5,675 tons—83 percent of the total volume seized. Of 533 actions against unfit foods, 249 involved merchandise that became unfit in storage after interstate shipment. An additional 4,162 tons of unfit food were voluntarily destroyed or converted to nonfood use by their owners after their attention was called by inspectors to unsatisfactory lots.

Written notices of violative conditions, followed by laboratory reports on unfit foods sampled, bring them forcefully to the attention of top management and often result in voluntary correction.

Clean raw materials have been emphasized in educational programs carried on with the assistance of industry and agricultural groups and State and local food and drug officials. Wheat and corn, cream, grape, and fish programs were all aimed toward elimination of unfit materials for processing.

FDA personnel have worked with industry on better laboratory procedures, and have helped plan and further improvement pro-

grams. State and local officials and agricultural groups can bring the clean raw materials message to the individual producer much more directly and effectively than can FDA.

Under lower tolerance levels of rodent and insect contamination in carload lots of wheat, which went into effect in July 1956, 44 carloads were seized, in comparison with 11 in fiscal year 1956, and 12 in the 6 months the program was in effect in fiscal year 1955. Since the annual shipment of wheat approximates 500,000 carloads it is evident that the industry as a whole is benefiting from the intensive educational work in which various organizations have participated.

In the dairy field "drip milk" collection became a regulatory problem that ended when 39 producers abandoned the practice after citations to hearings and the principal user reportedly went out of business for lack of supplies. Drip milk is the residue draining from cans while they are inverted on conveyors after dumping and enroute to can washes. This milk contained excessive sediment. FDA inspectors followed trucks carrying drip milk to a separator and thence to a creamery where it was seized before it was used for butter.

Table 1.—Actions on foods during the fiscal year 1957

Projects	Seizures	Criminal prosecutions instituted	Injunction petitions
Total.....	672	77	8
Beverages and beverage materials.....	6		
Bakery, ready to eat cereal, and macaroni products.....	14	15	
Cereals and grain products:			
Human use.....	111	9	1
Animal use.....	5	3	
Chocolates, sugars, and related products.....	22	4	
Dairy products:			
Butter and churning cream.....	15	1	
Cheese and other dairy products.....	5	6	
Eggs and egg products.....	8	2	
Flavors, spices, and condiments.....	31	2	
Fruits and fruit products.....	27	1	
Meat products and poultry.....	21	3	1
Nuts and nut products.....	72		
Oils, fats, and oleomargarine.....	10		1
Seafood.....	108	13	3
Vegetables and vegetable products.....	72	7	1
Miscellaneous foods (mixed lots).....	11	1	
Warehoused foods.....	109	9	1
Food for special dietary uses ¹	24		
Violative serving of oleomargarine.....		1	
Food adjuncts.....	1		

¹ Includes vitamin products intended as food supplements.

The poultry program advanced in 1957 with agreements with respect to inspection and disposition of unfit poultry, following discussions for a number of years with other Federal agencies concerned with the fitness of poultry. Among the factors agreed upon were the necessity for antemortem inspection and for immediate evisceration after slaughter. The agreement culminated in an FDA manual to

assure uniformity of action, intended primarily to provide guidelines for enforcement and public health officials.

Slow but progressive improvement was encountered during poultry plant inspections and market sampling; fewer seizures were required.

Surreptitious dealings in incubator reject eggs—suitable only for tanning use—are still encountered. A State fine was levied against a manufacturer receiving night deliveries by trucks from three other States of incubator rejects ranging from 5-day clears to fully developed embryos. Federal seizures were made of substantial quantities of rejects in his possession. Two shippers of decomposed frozen eggs were fined in Federal courts.

The courts were requested to enjoin five firms from shipping popcorn, poultry, pickles, vegetable oils, and dried beans that had been processed or stored under insanitary conditions. At the end of the year temporary restraining orders were in effect in those cases where a final court hearing was pending. Two defendants prosecuted for contempt of a November 1955 injunction prohibiting shipment of poultry prepared under insanitary conditions were fined \$500 each.

Sixty-two criminal prosecution cases charging the shipment of filthy or decomposed foods or insanitary operations were instituted during the year. The highest number of cases involved perishable products—bakery items and seafood—which are distributed so rapidly that it is often impossible to protect the public by seizure actions. Next in number were warehouses and their operators, who were charged with holding food under insanitary conditions.

Two and a half million pounds of chocolate stored on a railway pier after import was so seriously attacked by insects that salvage under bond was required, with 33½ tons being lost by surface trimming. A car used to transport a load of flour harbored rodents which resulted in a 20-ton loss.

One of the most severe food penalties of the year was 18 months in jail and a \$2,000 fine levied against a producer of filthy mushroom salt, on a second-offense charge. He lost his appeals.

Pocketbook Protection

Limitations of manpower in recent years have required restriction of work against abuses affecting the consumer's pocketbook. With the increase in the 1957 appropriation, more attention was turned to this field. One of the leading projects was against substandard oysters that contained excess water, often deliberate, through improper drainage or extensive soaking. Thirty-one shipments packed by 22 firms, were seized. Injunction cases were filed against three firms and one enjoined in the previous fiscal year was fined \$7,500 and its president sentenced to 90 days in jail for criminal contempt.

Other items seized for excess water were frozen fish containing as much as 2 pounds of ice in a 15-pound carton, low-fat butter, and diluted orange juice.

Eight lots of misbranded olive oil blends were seized for substitutions of cheaper oils in the blends. Labeling practices were improved in one production area after a number of blenders were cited to hearings. Other foods seized for debasement or misbranding included canned vegetables failing to meet official standards, country sorghum containing corn sirup, coffee adulterated with spent grounds and cereal, and cocoa with cottonseed meal or excess shell.

Seafood Inspection Service

Two seafood canneries operated under FDA seafood inspection, a service furnished on a fee basis for processors who voluntarily apply for it and meet Government requirements for sanitation and controls. They packed 849,797 pounds of shrimp and 20,918 cases of oysters. The service became inactive at the end of the fiscal year, since no firms applied for continuation of inspection. When seafood inspection began in 1934, 90 percent of the canned shrimp packers operated under it and learned how to pack wholesome shrimp.

PRODUCTS OF SPECIAL DIETARY SIGNIFICANCE

In June FDA District Chiefs throughout the country launched an educational campaign designed to warn consumers against false and misleading claims made in the privacy of homes by house-to-house food supplement peddlers. Their principal sales "pitch" is misinformation about nutrition, presented by "scare" methods.

In October a jury convicted a "nutrition expert" and his firm for the promotion of "natural" vitamin supplements through misbranding claims in collateral literature to be used by house-to-house salesmen. An appellate court upheld the Government's charges that the following claims were false and misleading: (1) That nearly everyone in this country is suffering from malnutrition or may be endangered by it. (2) That United States soils are so depleted that they no longer produce nutritive food. (3) That refining and processing of foods destroy their nutritive value. (4) That practically all of mankind's illnesses and diseases stem from improper nutrition. (5) That the defendant's products would treat, cure, or prevent all of the diseases of mankind. Among the "deficiency diseases" in the sales literature were diabetes, polio, tuberculosis, and cancer.

In a 20-page opinion the court stated that prospective purchasers "are more likely than not to be persons who are pathetically eager to find some single cure-all for the diseases with which they are afflicted, or who are susceptible to luridly painted scare literature as to the prospect of being disease-ridden unless they consistently partake of

the vaunted drug product." The firm was fined \$6,000 and its head was sentenced to a year in jail; his appeal of the conviction was lost and the Supreme Court refused to review the case.

Also convicted during the year were a number of house-to-house salesmen of a food supplement, who made exaggerated curative claims that numerous friends and relatives had recovered from a wide variety of serious disease conditions after they began taking this food supplement regularly.

The sentence in May 1956 of a pioneer "health food" lecturer who had been found guilty by a jury the previous year of misbranding his wares was appealed. In 1957 he lost his appeal and is now serving his year and a day jail sentence, with strong protests by followers.

Twenty-six shipments were seized because they contained less vitamins than declared on their labels. Three shipments of "low-sodium" foods were seized because they contained more sodium than labeled. A manufacturer of foods designed to provide carefully calculated amounts of sodium and vitamins for use in hospital diets was fined in a case originating in complaints from hospital dietitians. Samples revealed sodium ranging as high as 426 times the amount claimed on the label and vitamin shortages as high as 94 percent. Another firm fined for vitamin deficiency in its product had misplaced decimals in a manufacturing formula.

DRUGS AND DEVICES

The pilot study on the reporting of adverse reactions to drugs, inaugurated in 1955 in cooperation with various medical, pharmacy, and hospital groups, was extended for another year. Fifteen hospitals throughout the country report monthly to FDA all cases encountered, to test the feasibility of a large-scale system of voluntary reporting to assist in the evaluation of the safety of new drugs after they are released.

Salicylates have caused a number of deaths through careless use that might have been avoided by warnings of their potential hazards. Under a program initiated in April 1957, special attention is being given to the labeling of salicylates during FDA inspections of drug manufacturing plants and through special surveys of stocks of aspirin and other salicylates in wholesale drug houses.

Problems in determining what levels of cobalt may be safely offered for use in self-medication, what amounts may be offered under medical supervision, and at what levels cobalt-containing drugs must be regarded as new drugs were resolved by the publication of a policy statement in the October 27, 1956, Federal Register.

Another policy statement, published in the Federal Register of February 12, 1957, warned that stem-type and wing-type intracervical

and intrauterine pessaries are dangerous, serve no useful purpose, and are misbranded under any form of labeling. Subsequent investigations indicated that manufacturers and distributors of these devices have discontinued them.

Recalls.—Four manufacturers recalled 29 batches of digitoxin tablets having only 57 to 81.5 percent of the declared potency when FDA found subpotent stocks. The other three manufacturers recalled seven batches from more than 30 firms. Also at FDA's suggestion, six manufacturers recalled digitalis tablets containing only 55 to 75 percent of their labeled potency.

Another recall involved a batch of obstetrical posterior pituitary extract with practically zero potency. Twelve other recalls were based on defects that might have injured patients, such as non-sterility, fever-producing impurities, lost potency, and, in two cases, decomposition that caused bottles to explode on dealers' shelves.

Some vials of 40 mg. tablets of a drug used for high blood pressure were labeled as 20 mg.; the manufacturer's sales staff visited 27,000 wholesale and retail druggists searching for the misbranded tablets. Other mix-ups requiring recalls included a central nervous stimulant labeled as a tranquilizer, an epinephrine preparation labeled as an injectable liver preparation, turpentine labeled as castor oil, dextrose in saline labeled as invert sugar in saline, and "digestive tablets" that were actually desoxyephedrine.

Two recalls involved products containing female sex hormones. One was a batch of vitamins probably contaminated from equipment that had been used for the estrogenic material; a small but definite amount of contamination was found. In the second there was deliberate addition of estradiol to a hair treatment by a firm unaware of the dangerous nature of the preparation until warned by FDA.

Illegal Sales

Of 114 drug prosecution cases filed, 100 were based on violative sales of prescription drugs. FDA investigations began after complaints were received from law-enforcement officials, physicians, social workers, and families of persons being injured by the drugs.

In the 105 cases terminated in 1957, 145 individuals were convicted on their own pleas or by the courts. In about 10 percent of the cases the defendants were persons with no professional training who sold the drugs at truck stops, general stores, or through peddling. Seven individuals, some of them previous offenders, were sentenced to serve jail sentences ranging from 2 months to a year. On others, suspended jail sentences, probation periods, and fines were imposed.

Adulterated and Misbranded Drugs and Devices

After a 6-week trial in the Federal court at Pittsburgh a jury in November 1956 sustained the seizure of approximately one-half million red and black pills destined for national distribution in the treatment of cancer. At the trial the Government presented the testimony of about 80 witnesses, mostly physicians and scientists. Included were some of the country's top medical and pharmacological authorities specializing in the field of cancer detection and therapy.

By revealing the complete medical histories of the claimed cancer cures which the appellant presented at the trial and those described in the seized labeling, the Government showed that the so-called cures fall in the following categories: (1) The patient never had cancer, or (2) The patient was cured or adequately treated before going to the clinic, or (3) The "cured" patient died of cancer or still has it.

In 1953 the Texas clinic was enjoined from further shipments of the drugs misbranded as an effective treatment for cancer. In denying a motion for a new trial, the court in the Pittsburgh case said that the "medications have again been weighed and found wanting." The Pennsylvania clinic is now under a temporary restraining order to prevent further distribution pending hearing in the fall of 1957 on the Government's complaint for a permanent injunction. In January 1957 a "Public Beware" warning poster was distributed to post offices and other public buildings by the Food and Drug Administration under section 705 (b) of the act, which provides for publicity to be given in matters involving imminent danger to health and gross deception of the consumer. The poster warned the public that the treatment was worthless for internal cancer and emphasized that cancer can be cured only by surgery or radiation. In an editorial at the time the posters went on display a leading metropolitan paper said, in part:

The Government has taken its drastic action to protect the American people. The so-called cure is expensive; its price is now to be advertised in every post office. Its price in bitter disappointment can be almost unbearable. And in plain words the poster says that death may be the price of neglecting proper treatment "because of the lure of a painless cure."

Previous reports have outlined the injunction and contempt litigation based on persistent attempts to traffic in "orgone" devices for the cure of cancer and other serious conditions, and the fine and jail sentences imposed in May 1956. After the Supreme Court declined a review in February 1957, the district court refused arguments to set aside or reduce the penalties of 2 years in jail for the promoter and 1 for his distributor.

Another treatment for cancer, and nostrum for diseases in general, under the guise of a blood and kidney remedy, brought a conspiracy trial, injunction of the individuals and firms manufacturing and distributing the drug, prosecution of the manufacturer for criminal contempt of the injunction, and jail sentences suspended on condition that they not manufacture, possess, or sell any remedy for the treatment of animal or human disease.

Other drug injunctions granted during the year were against a naturopath who distributed from his clinic herbs with excessive therapeutic claims; a manufacturer restrained from false and misleading claims for an ulcer "remedy"; a distributor of homeopathic remedies seriously misrepresented by collateral literature; and a distributor of "vim and vigor" proprietary remedies with promotion especially designed for the aging.

Ten seizures were made of a vine and root imported without a new-drug application and promoted with claims that it was an effective aphrodisiac. Agents used reprints of a sensational magazine article entitled "The Vine That Makes You Virile." Licensed drug channels did not handle the product.

The total of 122 seizure actions against drugs (excluding vitamin preparations) was fairly evenly divided between inherent defects and misbranding.

Ten other shipments were seized because they had no effective new-drug applications. About half of them consist of untried products that may be dangerous and/or promoted with unfounded claims. The others were purchased by small distributors from recognized manufacturers and repackaged under their own names without filing new-drug applications.

Included in misbranded devices seized were a number of low-grade uranium items bearing claims for arthritis and other ills. Other devices seized were stretching harnesses, electronic condensators, oscillators, and massagers.

Six veterinary preparations were seized for false and misleading claims and violation of certification and new-drug requirements.

New Drugs

During the fiscal year 530 new-drug applications, including 85 for veterinary use, were received. On the condition of the submission of final printed labeling 334 for human use and 59 for veterinary use were permitted to become effective. Fourteen hundred supplemental applications for human and 596 for veterinary drugs became fully or conditionally effective. Revised new-drug regulations, effective August 24, 1956, required a period of readjustment for both industry and FDA.

Among the new products considered during the year were tranquilizing agents alone and in combinations with relaxants, an antihistamine, and an estrogen; several products with delayed or prolonged action because of slow disintegration in the intestinal tract; two new antibiotics, two iron preparations, an anticoagulant; two progesterone-like steroids for menstrual disorders; an estrogen with prolonged action; a new androgenic steroid; two sulfonamides; two antihistamines; a volatile general antidiuretic; and two narcotic analgesics. Many distributors' supplements went into effect for parenteral noncrystalline vitamin B₁₂ products prepared by new processes. When the first application of a drug used orally in the treatment of diabetes mellitus was permitted to go into effect, a release was issued explaining the limitations of its uses.

COSMETICS AND COLORS

There were no court cases based on violation of cosmetic requirements. A prosecution case was filed against a firm for making color mixtures from an uncertified batch of coal-tar color.

CERTIFICATION SERVICES

Coal-tar colors.—All coal-tar colors used in foods, drugs, and cosmetics (except hair dyes) must be from batches certified as harmless by FDA. In 1957, 5,146 batches, representing 5,346,613 pounds, were certified, and 24 batches, representing 14,755 pounds, rejected.

Insulin.—The act provides for predistribution testing and certification of all batches of insulin marketed. Examination of 388 samples resulted in the certification of 322 batches of insulin and 64 batches of materials for use in making insulin-containing drugs.

Antibiotics.—The predistribution testing and certification of certain antibiotics is also provided by amendments to the act. Examinations were made of 16,654 batches of penicillin, chlortetracycline, bacitracin, chloramphenicol, dihydrostreptomycin, streptomycin, tetracycline, neomycin, nystatin, erythromycin, novobiocin, polymyxin, oleandomycin, and oxytetracycline during the fiscal year. The last 7 antibiotics are not included in the certification amendments, but are tested when they are mixed with those requiring certification. Forty-three batches were rejected for failing to meet the following standards: Potency (27), sterility (9), and moisture (7). In addition, manufacturers withdrew their requests for certification of 19 batches because they failed to meet sterility and other standards.

Enforcement of Other Acts

A total of 105,728,289 pounds of tea was examined under the Tea Importation Act, in contrast with totals of approximately 104 million in the fiscal year 1956 and 97 million in 1955. Rejections for failure to measure up to the standards set by the United States Board of Tea Experts totaled 205,082 pounds, or 0.19 percent. Six rejections were appealed to the United States Board of Tea Appeals, which upheld the decision of the FDA examiner in four cases, and in one portion of one other. The appeal was sustained in the other portion of this case and in the remaining case.

Three caustic poisons were seized for failure to bear the labeling required to warn users of their potential danger if misused; all were bowl cleaners. No permits were issued for importations of milk from Canada. No legal actions were instituted under the Filled Milk Act.

New Court Interpretations

The Supreme Court did not review any cases under the Federal Food, Drug, and Cosmetic Act during the fiscal year 1957, but it denied six petitions for certiorari. Four were appeals from convictions where jail sentences were at stake, discussed in earlier sections of this report. The other two were appeals from decisions of the Court of Appeals for the Fifth and Seventh Circuits upholding the constitutionality of the Durham-Humphrey amendment which prohibits the dispensing of dangerous drugs without prescription.

A seizure contest in which some of the tomato paste seized was released while the rest was condemned by order of an appellate court was discussed in the 1956 report. Following this decision the claimant filed a motion that the Government pay all storage charges for the libeled material, not only for the period between seizure and adjudication, but also for the time between sampling and seizure. The district court permitted this motion and the Government has appealed.

The Court of Appeals for the Ninth Circuit upheld the district court's decision, reported last year, that he did not have the power to order restitution in an injunction proceeding.

The Court of Appeals for the Second Circuit affirmed the district court's decision, also reported last year, in a suit under the Tort Claims Act seeking to recover damages involving importations of tomato puree that were later seized. The district court had dismissed the suit on the grounds that the Tort Claims Act exempts the Government from suit for the performance of discretionary powers.

Defendants in a drug case filed a motion to dismiss the prosecution against the partnership on the grounds that the partnership was not a legal entity. The district court accepted the motion, basing his ruling on a divided Supreme Court decision in a case unrelated to the Food, Drug, and Cosmetic Act.

The United States Court of Appeals for the Second Circuit affirmed the order of the Secretary delisting three colors from the list of coal-tar colors eligible for certification for use in foods. The order was based on evidence that these could no longer be regarded as harmless. Just after the close of the year, the United States Court of Appeals for the Fifth Circuit set aside the Secretary's order delisting one of these colors (FD&C Red No. 32) and held that the Food and Drug Administration has authority to establish tolerances for colors. Since these two opinions appear to be in direct conflict, the Government filed a petition requesting the entire Fifth Circuit to rehear the case, which the court denied. It will be recommended that the appeal be carried to the Supreme Court.

Changes in the Law and Regulations

The only change in the Food, Drug, and Cosmetic Act in the 1st session of the 85th Congress was Public Law 250, amending section 304 (d). It permits under certain conditions the reexportation of seized articles imported into the United States, if the violation did not occur after import, if the articles are not dangerous to health, and if the importer was not aware that the goods were violative.

Nine bills were before the House, presenting six new procedures for dealing with chemical food additives. The Department submitted its recommendations for a bill on April 8 but had not yet testified at hearings which were in progress before the 1st session adjourned.

Each of the bills would provide that the promoter of a new food additive, before commercial marketing, test it to establish the safety of the proposed use and submit the results of the tests to the Government. Most of the proposals would exempt uses already approved by the Food and Drug Administration or, in the case of meats, by the Meat Inspection Branch of the Department of Agriculture. Each bill would exempt from its coverage chemical uses generally recognized as safe by appropriate experts. Principal areas of disagreement are whether the criteria of acceptance be based entirely on safety or be enlarged to include usefulness to the consumer, functional value, or necessity of use, in case of poisonous or deleterious chemicals, and what type of appeal procedures should be provided.

Several bills were introduced to curb abuses occurring from indiscriminate use of barbiturates and amphetamine. They define who may engage in the production and distribution of these drugs, and require such firms to maintain complete records of their handling of these compounds, which would permit improper sales to be detected by simple audit. The proposed law would grant Federal jurisdiction over the sale of such drugs regardless of their origin. It would also make unauthorized possession of these drugs an illegal act.

Another bill introduced is intended to regulate the labeling of hazardous articles intended for household use. This bill, which would repeal the Federal Caustic Poison Act, would require the labeling to bear, among other things, warning statements concerning the article, instructions for safe handling and storage, and instructions for first aid in the event of injury where appropriate. Such legislation would be beneficial because the numerous articles commonly found in the cleaning department of the modern home bear little resemblance to the few in use 30 years ago when the present Federal Caustic Poison Act was passed to protect against accidental injury from such substances.

A bill introduced toward the end of the session would authorize color certification on the basis that a color must be harmless under conditions of use specified in FDA regulations.

Numerous other bills introduced have not yet received as much attention as those outlined above.

REGULATIONS

Coal-Tar Colors.—Appellant court decisions on the November 1955 order removing FD&C Red No. 32 and FD&C Orange No. 1 and No. 2 from eligibility for certification for food use are discussed under New Court Interpretations. Continued pharmacological evaluation of the safety of other colors on the FD&C list resulted in proposals in January 1957 that four additional colors, FD&C Yellow No. 1, No. 2, No. 3, and No. 4, be removed from the list certifiable for internal use and added to the list of colors for external drug and cosmetic use only.

Drugs.—The revised new-drug regulations outlined in the 1956 report were published in final form on July 25, 1956. A portion of the regulations dealing with investigational drugs was revised on April 20, 1957, to remove the requirements that shippers of new radioactive drugs obtain signed statements from investigators when the consignee has been licensed by the Atomic Energy Commission.

During the fiscal year, 879 amendments and 41 new monographs were added to the antibiotics regulations.

The third market milk survey to determine the presence and extent of antibiotics in milk was reported in 1956. It was obvious that some farmers were not heeding the required labeling warning on antibiotics for mastitis therapy to withhold milk from food use for 3 days after

the last treatment. New regulations were issued in 1957 aimed at improving procedures following such therapy. One provided for the warning to be placed on the immediate container of the drug, rather than in accompanying literature. Provision was made for shortening the number of withholding hours after the last treatment in case the person requesting certification of the antibiotic presents to FDA convincing evidence that it will not be retained in the milk after the proposed time. These regulations were published on April 30, to become effective in 90 days. Another regulation concerning antibiotics in intramammary mastitis preparations limits the penicillin content to 100,000 units as a maximum dose. It was published on May 14, also to become effective in 90 days.

Foods Standards.—Standards of identity were established for canned figs and for grated American cheese food. Standards of fill of container for canned tuna fish were made effective August 13, 1957; standards of identity will become effective February 13, 1958, except for two labeling provisions which were stayed pending a hearing.

Standards of identity were promulgated for ricotta cheese and part-skim ricotta cheese. Importers filed objections on the grounds that the name ricotta was not properly applied to cheese made from cow's milk. The order was stayed and a hearing may be required.

Industry proposals and suggested alternate proposals were published for frozen concentrated orange juice and several related products, and also for frozen lemonade concentrate.

On the basis of a hearing held the previous year on an identity standard for partially creamed cottage cheese it was concluded that evidence in the record of the hearing failed to establish that the standard would promote honesty and fair dealing in the interest of consumers.

A hearing was held on an objection to the prune juice order, since it did permit honey as an optional ingredient. No ruling had been made on the hearing record at the close of the year.

Vitamins.—Available information with respect to riboflavin requirements when hearings were held in 1940 on the minimum daily requirements for vitamins and minerals under section 403 (j), was based on observations relating to cure of deficiency. Later studies have made it apparent that the original estimates were too high. On June 1, 1957, the regulation was amended to lower the adult minimum daily requirement for riboflavin and establish minimum daily requirements for niacin.

Pesticide Chemicals.—On July 22, 1956, the Pesticide Chemicals Amendment became fully effective. During the year, 46 petitions for tolerances or exemptions were received, of which 9 were incomplete. Of the 37 accepted and some awaiting processing, 30 petitions resulted in the establishment of permanent tolerances, 5 in permanent

exemptions, and 4 in temporary tolerances. Since the amendment was enacted in 1954, over 1,450 tolerances or exemptions have been established for 87 pesticide chemicals.

During the year it was discovered that certain organic phosphate pesticides possessed more than additive toxicity to test animals when administered together. This led to extensive investigation of the effect from feeding combinations of this class of pesticides. Greater than additive effect or potentiation has been observed with only a few combinations. Because of these findings FDA announced that in considering a petition for a tolerance or tolerances it will require experimental evidence showing the toxicity of the compound when fed to test animals with each of the other organic phosphate pesticides which has a tolerance at that time.

Recent studies have revealed that certain pesticides when present in the food or when sprayed on cows will appear in the milk, for which there is no tolerance. The National Academy of Sciences has been requested to select a committee to make recommendations on a petition requesting a tolerance for a pesticide in milk.

Scientific Investigations

Reorganization of the scientific Divisions into the Bureau of Biological and Physical Sciences—to strengthen FDA's scientific research activities—was mentioned in the introductory chapter. Evaluation of the safety of foods, drugs, and cosmetics offered to the public in this constantly changing period and the development and improvement of testing methods form the solid foundation of enlightened enforcement activities.

A major survey planned and reviewed by FDA scientists and carried on through inspection personnel throughout the country was concerned with the incidence of severe reactions to antibiotics from 1953 to early in 1957. It covered nearly one third of the beds available in the general hospitals of this country and the observations of more than 1,600 physicians. The survey indicated that the great bulk of reported life-threatening reactions to antibiotics followed penicillin injection and that severe reactions to this drug have increased in frequency as more people have been treated with it.

Other antibiotic studies included evaluation of the safety and efficacy of new antibiotics, laboratory and clinical results obtained by various combinations of antibiotics with each other and with other substances, and the development and improvement of assay methods.

Another major survey, initiated in fiscal year 1957 and still under study, concerned the contamination of our foodstuffs resulting from the increasing applications of atomic energy, both civilian and military. While the resultant rise in radioactive background probably

will not be significant by present concepts, a base line was needed for later orientation. To establish this, approximately 2,000 samples of staple canned food preserved prior to the explosion of the first atom bomb, were collected during the year, with the help of other Government agencies, industry, and consumers. The British and New Zealand Governments and the U. S. Antarctic Programs furnished samples left in the Antarctic in 1908-1913 and 1940. All of the samples are being ashed, analyzed for their potassium content for correction of normal residual radioactivity, then analyzed for basic radioactivity. A continuing survey will produce samples that may be checked against this authentic, pre-1945 data to check any increase in radioactive content.

Pharmacological studies are in progress to study the safety of ingredients used to furnish depot injections of drugs; the toxicity of combinations of two or more organic phosphates, beyond their cumulative effects; neurological effects of chlorinated insecticides; and harmful effects of certain coal-tar colors included in the diet of experimental animals; from the beginning of this study, 15 of the 19 coal-tar food colors have been tested, most of them quite extensively; 3 have been delisted, and 4 are under delisting proceedings.

The preclinical pharmacology of a number of chemical compounds suggested as having some value in the treatment of cancer, has been under study in cooperation with the Cancer Chemotherapeutic Center of the National Institutes of Health. In addition to observation of the effects of these compounds on various systems and their acute and subacute toxicity, some observations have been made on the nature of their biological activity.

Developing and adapting analytical methods to determine trace levels of toxic chemicals used or proposed for use in food production and processing demanded a very considerable part of the resources of FDA's food chemists. Investigations were made into ways pesticides were entering the food supply, including whether and in what form aldrin, dieldrin, and endrin may be stored in the fat of cows fed with forage treated with these pesticides. Evaluation of the residue consequences of pesticides proposed for tolerances is continuing.

Indication that some preparations of cobalamin or B₁₂ for injection were not made from pure crystalline material according to U. S. P. standards led to the development of methods for regulatory action against impure preparations. The half million pernicious anemia patients who receive these injections will thus receive added protection.

A veterinary study involved implantation or injection of chickens with diethylstilbestrol preparations. To determine the presence of estrogenic activity added by the drug, 1,500 chickens were treated, slaughtered, and edible tissues collected for bio-assay.

During the year FDA drug chemists devised methods for the analysis of tablets of aspirin, phenacetin, and caffeine together and in admixture with other drugs which reduced analysis time from 1 to 2 days to 1 to 1½ hours. *In-vitro* procedures were also devised for "sustained release" dosage forms for various drugs. Infrared spectrophotometric methods were devised for belladonna alkaloids and for glyceryl trinitrate preparations. Studies are in progress with the Committees of Revision of the U. S. P. and N. F. to devise and revise official test methods for diethylstilbestrol, ergot alkaloids, curare alkaloids, *Rauwolfia serpentina*, reserpine, and digitoxin.

A sensitive gas chromatographic procedure was developed for the determination of nail lacquer solvents. An overall procedure for the analysis of lipsticks was completed by means of partition chromatography. Some of the difficulties in analyzing shampoos containing alkyl sulfates were resolved through the use of ion-exchange resins.

Microbiological research was concerned with problems of detection, prevention and control of food poisoning, and with studies relating to the sanitary quality of foods.

Enforcement Statistics

The 20,241 establishment inspections conducted by FDA were divided into 16,645 for foods, 3,058 for drugs and devices, 388 for cosmetics and colors, and 150 for miscellaneous products such as tea and caustic poisons. Of 18,831 domestic samples collected, 11,742 represented foods, 6,890 drugs and devices, 123 cosmetics and colors, and 76 miscellaneous. Import samples collected totaled 9,042.

In the 182 criminal actions terminated (or terminated for some defendants) in the Federal courts during 1957, the fines paid or assessed in cases pending on appeal, totaled \$152,233.92. The heaviest fine in a single case was \$7,500. In 59 actions the fines were \$1,000 or more. Jail sentences were imposed in 35 cases involving 37 individual defendants. The sentences ranged from 1 month to 3½ years, and averaged 9 months. Twelve individuals were required to serve the imposed sentences, and for 25 individuals they were suspended, on condition that violative practices be discontinued. Records of actions terminated in the Federal courts were published in 1,280 notices of judgment.

Table 2.—Number of samples on which criminal prosecutions and seizures were based and number of court actions instituted during the fiscal year 1957

Item	Total		Criminal prosecutions instituted		Seizures accomplished		Injunctions requested
	Violative samples ¹	Actions	Violative samples	Actions	Violative samples	Actions	
Total.....	1,970	1,014	784	192	1,186	809	13
Foods.....	1,202	757	221	77	981	672	8
Drugs and devices.....	759	253	558	114	201	134	5
Cosmetics and colors.....	5	1	5	1			
Caustic poisons.....	4	3			4	3	

¹ The number of samples on which the actions are based always exceeds the number of actions; in seizures a variety of articles may be contained in a single shipment, while in criminal actions each sample usually represents a single shipment which forms one count of the action.

Table 3.—Import inspections and detentions during the fiscal year 1957

Item	Total	Inspected and refused entry	Inspected and released
Total.....	29,140	4,974	24,166
Foods.....	26,049	2,890	23,159
Drugs and devices.....	2,981	2,059	922
Cosmetics, colors, and miscellaneous.....	110	25	85

This is a study of the effect of the use of the word "doctor" on the part of the patient.

The study was conducted in a hospital where the patients were asked to write down the word "doctor" on a piece of paper and then to write down the word "nurse" on another piece of paper. The results of the study showed that the patients who wrote down the word "doctor" were more likely to follow the instructions of the doctor than the patients who wrote down the word "nurse".

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Office of Vocational Rehabilitation

Research·Demonstration Projects and Increased Community Interest Are Shaping Rehabilitation

FOR THE SECOND consecutive year, a new record was set in 1957¹ in the number of handicapped persons prepared for employment and placed in jobs through the program of vocational rehabilitation.

The total of 71,607 rehabilitations during the period was 8 percent more than that during 1956, and 23.5 percent more than in 1955. It included 70,940 persons rehabilitated through the State and Territorial agencies and 667 who entered employment after receiving services provided by other public agencies or voluntary community groups that received partial support from Federal funds.

The increasing total of rehabilitations each year since enactment of Public Law 565, in August 1954, is evidence of the renewed vigor and increasing strength of the State-Federal partnership that is attacking the problems of disability. But another measure of progress is the emerging importance of elements of the program that were inaugurated or given greater impetus by the provisions of that legislation. The growth of these elements is significant, because it indicates trends that are giving shape to enlarged services to the disabled.

One element is the sustained interest of State agencies, along with other public organizations and community groups, in the development of new local rehabilitation facilities and services and in improving existing ones. Another is the enlarged facilities for teaching and instruction in rehabilitation subjects and for training persons in rehabilitation work, made possible by grants to educational institutions through provisions of the new legislation.

¹ Unless otherwise indicated, all subsequent references to 1957 will be to the fiscal year, that is, to the period between July 1, 1956, and June 30, 1957.

Another element—and perhaps the most significant to the future of the program—is the increasing variety and broadening scope of research and demonstration projects in vocational rehabilitation, conducted by public and nonprofit organizations over the country, with the aid of Federal grants made by the Office of Vocational Rehabilitation under provisions of Public Law 565. In the 48 projects that were initiated during 1957, there was captured an increasing amount of the imagination that talented individuals, using the resources of able institutions and organizations, can bring to bear on the problems of disability and on new ways to administer and to improve the vocational rehabilitation program.

REHABILITATIONS IN 1957

In the new record of 70,940 handicapped persons established in employment by the State vocational rehabilitation agencies in 1957, the major type of disability continued to be orthopedic impairments—amputations or other crippling conditions. About 39 percent (about 28,000) of the rehabilitants had this type of handicap, and, of these, about three-fifths were injured in accidents, and about one-fifth were handicapped by poliomyelitis, osteomyelitis, or arthritis.

Referrals came from many sources, but the largest proportion (about 33 percent) was from physicians, health agencies, or hospitals. Another 14 percent were referred by public welfare agencies, and 8 percent by State employment service offices. About 12 percent applied for services on their own initiative.

Half of the rehabilitants of 1957 had dependents, and about 65 percent were men. The average age at the time of disablement was 26, but the average age at the time the rehabilitation process was started was 36.

The occupations in which rehabilitants were placed in 1957 included nearly all types of work. The proportions employed in the major occupational groups remain similar to those in recent years—skilled and semiskilled workers, 26 percent; clerical and sales, 19 percent; service workers, 18 percent; family workers and housewives, 12 percent; professional, semiprofessional and managerial, 9 percent; agriculture, 9 percent; and unskilled, 7 percent.

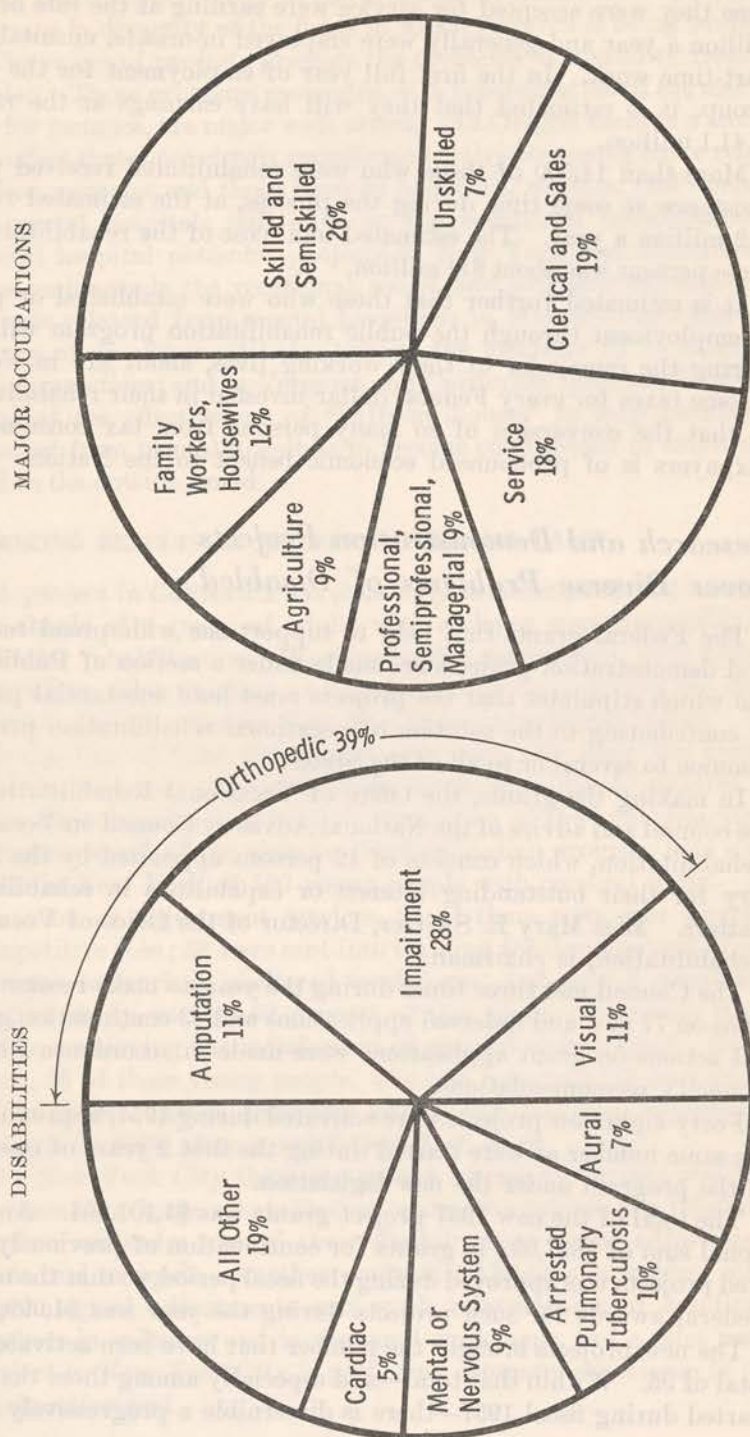
ECONOMIC VALUE OF THE PROGRAM

The extent to which the public vocational rehabilitation program can improve the economic status of handicapped persons, increase the Nation's productive potential, and relieve some of the dependency upon public assistance was strikingly shown in 1957.

About 52,200 of the 70,940 handicapped persons prepared for and placed in employment during the fiscal year were unemployed when their rehabilitation began. The group that had been working at the

Chart 1.—DISABILITIES AND MAJOR OCCUPATIONAL GROUPS

Percent of rehabilitants, by types of disability at acceptance and by major occupational group at closure, fiscal year 1957



time they were accepted for service were earning at the rate of \$20.7 million a year and generally were employed in unsafe, unsuitable, or part-time work. In the first full year of employment for the entire group, it is estimated that they will have earnings at the rate of \$141.1 million.

More than 14,000 of those who were rehabilitated received public assistance at some time during the process, at the estimated rate of \$12 million a year. The estimated total cost of the rehabilitation of these persons was about \$11 million.

It is estimated further that those who were established or placed in employment through the public rehabilitation program will pay, during the remainder of their working lives, about \$10 in Federal income taxes for every Federal dollar invested in their rehabilitation, so that the conversion of so many persons from tax consumers to taxpayers is of pronounced economic benefit to the Nation.

Research and Demonstration Projects Cover Diverse Problems of Disabled

The Federal grants that help to support the widespread research and demonstration projects are made under a section of Public Law 565 which stipulates that the projects must hold substantial promise of contributing to the solution of vocational rehabilitation problems common to several or to all of the States.

In making the grants, the Office of Vocational Rehabilitation has the counsel and advice of the National Advisory Council on Vocational Rehabilitation, which consists of 12 persons appointed by the Secretary for their outstanding interest or capabilities in rehabilitation matters. Miss Mary E. Switzer, Director of the Office of Vocational Rehabilitation, is chairman.

The Council met three times during the year, to make recommendations on 77 new and deferred applications and 43 continuation grants. All actions on grant applications were made in accordance with the Council's recommendations.

Forty-eight new projects were activated during 1957, approximately the same number as were started during the first 2 years of operation of the program under the new legislation.

The total of the new 1957 project grants was \$1,101,964. An additional sum of \$897,092 in grants for continuation of previously initiated projects was approved during the fiscal period, so that the total of Federal awards for such projects during the year was \$1,999,056.

The new projects brought the number that have been activated to a total of 95. Within that total—and especially among those that were started during fiscal 1957—there is discernible a progressively awak-

ening nationwide interest in the problems of disability and a marked increase in diversity of the fields in which research is being projected.

The range of projects presents the problems of disability from new angles. Those problems associated with rehabilitation of the mentally ill, for instance, are under wide attack. In Oregon there is a study of the effect that more closely coordinated activities among State rehabilitation agencies and those devoted to health, welfare, and operation of mental hospitals will have on the vocational rehabilitation of mental hospital patients; projects in New York and Massachusetts have under study the vocational, social, and economic adjustments of persons released from mental hospitals; in Massachusetts there is a survey of employer attitudes toward the mentally ill in relation to hiring practices; and in Vermont and California there are demonstrations of the effectiveness of "halfway houses" to help persons discharged from mental hospitals to become conditioned to employment and to the outside world.

STRIKING RESULTS IN EPILEPSY, CEREBRAL PALSY

A project in California has strikingly demonstrated that more than two-thirds of a group of adults with epilepsy were reasonably good risks for rehabilitation. Working under supervision, with necessary counseling, these workers averaged \$1.55 an hour during the demonstration period, whereas they had been unemployed before. Their average loss of time from work was only one hour for every 91 days worked, and only half of the losses were due to seizures.

Another tangible and realistic evaluation of the humanitarian and economic worth of the vocational rehabilitation program is in a study made in New York of 100 young people with cerebral palsy. After provision of adjustment services, 24 of them were sent directly to competitive jobs; 38 were sent into training for development of skills; 30 went to work in sheltered workshops; and only 8 remained for further study, so that 92 percent of this group of severely disabled are now enjoying the satisfaction of gainful employment. Furthermore, 36 of these young people, who had been earning an average of \$27 a month before receiving adjustment services, increased that average to \$109 after a brief period of work.

In New York City there is a survey among all current and former patients of a large rehabilitation center to evaluate the relationship of their attitudes toward their disabilities to social adjustments at home and at work. Another study in Oklahoma is looking into the psychological adjustments and work relationships of handicapped workers in industry and in sheltered workshops, and a pilot research project in New York City is gathering company experience in hiring the handicapped.

STUDIES ON MANY FRONTS

There is further diversity in projects, such as the one in California that has the objective of determining the extent to which a community workshop can rehabilitate hemiplegics whose employment potentiality has heretofore been considered low. Another in New York is demonstrating to employers the abilities of the handicapped to operate complex industrial machinery, and a Cleveland project is exploring the extent to which adjustment to blindness can be accelerated by raising the hearing efficiency of newly blinded persons.

There are projects to improve program administration. In Seattle there is a study of different methods of administrative organization in a rehabilitation agency office; factors relating to the selection, training, functions, and responsibilities of rehabilitation counselors are under study in Iowa, Illinois, and Arkansas; and a Florida university is demonstrating a concept of an organizational plan for a university for a comprehensive rehabilitation program.

Other projects relate to new or improved services for those with speech disorders, for young people with neuro-muscular disorders, for the blind, the deaf, and for others. In the last month of the year the Office made public announcement that in fiscal 1958 it would initiate a program of grants for selected demonstration projects to put to practical use the new knowledge gained in research and thus accelerate vocational rehabilitation services for severely disabled persons—the mentally retarded, cerebral palsied, persons with emotional problems, epileptics, the homebound disabled, the blind and visually handicapped, the chronically ill, and older disabled workers—and to provide such services in areas where they are not available as widely as necessary.

Projects under research and demonstration grant provisions were initiated in 15 States and the District of Columbia during 1955 and 1956. The 48 projects initiated in fiscal 1957 extended the geographical range of the projects to 28 States and the District of Columbia, thus approaching more closely the basic purpose of these activities—the inclusion of more abilities, talents, and resources for research in the continuing battle against disability and its causes—and massive, widespread demonstration of the results to the employers of the Nation.

Community Interest Reflected in Growth of Rehabilitation Facilities

One of the most gratifying aspects of the expanding vocational rehabilitation program is the concurrent interest of States and communities in establishing and operating localized rehabilitation

facilities, in many of which there is increasing emphasis on vocational aspects.

This increasing local interest can be attributed in considerable measure to the growing belief that services to the handicapped and disabled are most effective and successful when they can be performed in their own communities. Consequently, rapid strides are being made in all States to establish rehabilitation centers, most of which will provide comprehensive medical services. But there is also recognition of the need for vocationally oriented centers, and more and more States are operating, or have under serious contemplation, the establishment of centers which will place special emphasis on the rehabilitation problems of handicapped persons.

Among the States that have established comprehensive rehabilitation centers with heavy vocational orientation, the most widely known continues to be the Woodrow Wilson center, at Fishersville, Virginia. The State of Pennsylvania has under construction a new center of similar type, to accommodate 300 persons. West Virginia opened a smaller center of the same type during the year, and Iowa substantially expanded its center in Des Moines, which was established in 1952.

FEDERAL AID TO CONSTRUCTION

The construction of local rehabilitation centers has been stimulated greatly by the Medical Facilities Survey and Construction Act, which was passed in 1954 to amend the Hill-Burton hospital construction legislation, by including rehabilitation and other facilities.

Under this Act, the Office of Vocational Rehabilitation and the Public Health Service during fiscal 1957 jointly approved 20 projects in 17 States for construction of rehabilitation centers. Virtually all of these accent heavily the medical aspects of rehabilitation. They brought to a total of 62 the construction projects that have been approved under the new legislation. Their cost will exceed \$48 million, of which the Federal share will be approximately \$10 million, and the projects will place rehabilitation facilities in 23 States that had none before the 1954 legislation.

Of the 62 projects, 18 are in medical schools or teaching hospitals, 12 are in specialized hospitals, 10 in general hospitals, and 22 are community type centers.

FEDERAL AID TO FACILITIES

Rehabilitation centers and other facilities may be aided in their operations through Federal grants authorized by Public Law 565. During 1957, the Office made a total of 94 such grants to specialized facilities, usually for the purpose of strengthening their activities with new equipment or additional staff.

The sum of \$1,225,046 in Federal funds was allotted to these projects, matched by expenditures of at least half as much in State or local funds, making a total of more than \$1,837,569 for these purposes.

NEW AIDS FOR CENTER PLANNING

The resurgent interest in construction of rehabilitation centers brought an insistent demand for a consensus of current thought on the planning and operation of centers.

In cooperation with the Office, the Conference on Rehabilitation Centers conducted a week-long Institute on Rehabilitation Center Planning in February. Out of the Institute there came 30 papers prepared by persons qualified by ability and experience to explain current trends in all phases of rehabilitation center operations.

Efforts were made during the year to make sharper definitions of the needs of State rehabilitation agencies for services that can be provided by rehabilitation centers. Studies have been made of the working relationships among State agencies and rehabilitation centers for the purpose of increasing utilization. A study made in cooperation with the States' Vocational Rehabilitation Council pointed up the sharp need for more vocationally oriented centers to complement the medically oriented centers now in operation or under construction, as well as the need for increased services in the psychological and social aspects of the program.

The increasing number of rehabilitation centers under many auspices has given rise to increasing demands among professional groups in the field, by insurance companies, State agencies, and other public groups for increased recognition through some form of accreditation.

Qualified staff for rehabilitation centers remains in very short supply, though it is being remedied somewhat by training grants under Public Law 565. During the year a second training course for rehabilitation center administrators was completed, making a total of 19 persons who have received intensive training for this work.

SHELTERED WORKSHOPS

A considerable expansion of community interest in rehabilitation is reflected in growing recognition that sheltered workshops are a basic part of the vocational rehabilitation program. Their services are essential to the rehabilitation of many severely disabled persons, as an interim step for those who cannot be absorbed readily in the labor market, or during such times as suitable competitive work opportunities are not available.

The dearth of sheltered workshops that has existed for many years is being alleviated by the actions of many State rehabilitation

agencies in putting more of their resources into expansion of space, facilities, and content of workshop programs.

In 1957, the sum of \$465,746 was awarded in Federal expansion grant funds for 77 workshop projects in 35 States. In addition, 10 States used a total of \$231,469 in basic support funds for 24 workshop projects, including 10 for the blind; and 9 States were awarded a total of \$114,741 in extension and improvement grants for 12 workshop projects, including 4 for the blind.

A deeper understanding of the functions and place of sheltered workshops in the vocational rehabilitation program, and of the services they offer, was provided during the year by issuance of a book of 15 chapters, each prepared by an authority in the field, and edited by the Office of Vocational Rehabilitation. The book is obtainable from the Government Printing Office under the title "Workshops for the Disabled—A Vocational Rehabilitation Resource."

During the year, the ground was laid for a resurgence of interest in the sheltered workshop field, through expansion of activities of the National Association of Sheltered Workshops and Homebound Programs. An intensive membership program is proposed, under revised standards, and a plan for an Institute on workshops was formulated, in which the Office will participate.

Program of Training Is Augmenting Supply of Professional Personnel

The program of grants for the expansion and improvement of the professional preparation of personnel in all fields concerned with rehabilitation of the disabled continued its progress in 1957.

With the long-range objective of assuring a supply of trained, highly qualified personnel for the expanding State vocational rehabilitation agencies, rehabilitation centers, workshops offering sheltered employment situations, hospitals, and other agencies operating rehabilitation programs, about 200 grants were made to educational institutions, totaling slightly over \$3 million. Nearly 90 percent of the total appropriated for training is granted for long-term training; the rest was for short-term training.

Grants were made to 112 colleges and universities to assist them in expanding or strengthening their instructional resources in the fields of medicine, nursing, occupational therapy, physical therapy, social work, rehabilitation counseling, prosthetics education, and other fields closely concerned with rehabilitation. Traineeship grants were made to educational institutions for scholarship assistance to about 650 full-time students engaged in obtaining basic or advanced professional training in the fields in which serious personnel shortages exist.

During the year 10 medical schools received grants for training projects directed toward the teaching of rehabilitation principles and practices to graduate and undergraduate medical students, an effort which holds promise of materially affecting medical practice of the future in terms of preventing and treating disabling conditions and improving patient care. In addition, 101 physicians received stipends to permit them to undertake residency training in the medical specialty of physical medicine and rehabilitation in 25 teaching hospitals.

To meet urgent needs for trained vocational rehabilitation counselors for the State agencies and developing rehabilitation centers and workshops, 30 colleges and universities have established graduate curricula with OVR financial assistance, and traineeships have been awarded to more than 350 rehabilitation counseling students. In view of the fact that OVR trainees constitute only 60 percent of the total enrollment of these curricula, additional graduates can be expected to be available for employment.

In an attempt to make a partial appraisal of the effects of grants for rehabilitation counselor training programs, a followup study of those who had received traineeships in 1955 and 1956 was conducted early in the year, with the specific purpose of ascertaining the extent to which graduates had secured employment in rehabilitation agencies. Included in the questionnaire group were 92 trainees, of whom 88 percent responded. Reports indicated that 89 percent of the trainees who had completed the training program and had not left the labor market were employed, 72 percent of them working in State vocational rehabilitation agencies or in other rehabilitation programs.

In addition to support of long-term training, OVR helped to finance over 80 short-term courses on various aspects of rehabilitation, which are designed to improve the knowledge and skills of personnel already engaged in rehabilitation services. These courses reached over 2,000 individuals.

A major training effort has been in the field of prosthetics education, in which a series of courses has been held at two universities for the training of physicians, occupational therapists, physical therapists, and prosthetists in the techniques of limb manufacture, fitting, and training of the amputee in the use of the prosthetic device. Such courses have reached about 600 during the year, thereby enabling them to return to their home communities better equipped to deal with problems of persons who have sustained upper extremity or above-the-knee amputations.

Still other short courses were held on techniques of work simplification for disabled homemakers, geriatric rehabilitation, and teaching of esophageal speech.

OVR's continuing interest in raising the level of State agency staff has prompted the devotion of considerable staff time and funds to con-

ducting orientation courses for newly employed counselors, seminars in administration of executive personnel, advanced courses in counseling and placement of the blind, courses on administrative and clinical problems faced by State medical consultants, and training conferences designed to improve rehabilitation of psychiatric patients. Advanced planning has been initiated for the stimulation and financing of organized, comprehensive staff development programs in State agencies.

Services to Blind Persons

Along with the general increase in the vigor of programs directed at meeting the problems of disability, there were several major aspects of progress in the provision of rehabilitation services to blind people.

The most immediately productive were the increases in the number of blind people rehabilitated to self-support and, particularly, in the area of operating vending stands. The number brought to successful rehabilitation during the year increased to 4,005 from 3,765 in 1956.

In the program of vending stand operations by blind people, the number of stands increased from 1,727 to 1,830; the number of operators from 1,804 to 1,924; gross sales from \$25,850,000 to \$28,939,000; total earnings of operators and their blind assistants from \$5,057,000 to \$5,624,000, and the average net income to operators from \$2,532 to \$2,654.

To acquaint business establishments of all kinds with the value of vending stands in their buildings, the Office issued a brochure consisting of testimonials from operators of businesses of varied types. This has been used widely in effecting the increase in the number of vending stands.

A further step to increase the number of vending stands on Federal property was taken during the year when preferential regulations for blind people in such operations were negotiated by the Departments of Agriculture and Interior and by the Government of the District of Columbia. These are in accordance with amendments of 1954 to the Randolph-Sheppard Act. The addition of the three units of government covered virtually all agencies with considerable Federal property under their control. Such regulations had been issued previously by Departments of Health, Education, and Welfare; Treasury; Defense; Commerce; and Post Office; and General Services Administration; Atomic Energy Commission; and Tennessee Valley Authority.

The State agencies also took steps to continue the increases in the number of blind people served and in improving the services. In many States new staff was added and trained. New facilities were opened and others were improved as a general characteristic of program improvement. At the same time there was considerable evidence of

greater use of facilities, of raising the standards of service, and of higher goals. To contribute to the improvement of standards in rehabilitation facilities for the blind, recommendations formulated during a seminar in which many of the Nation's outstanding experts on such facilities participated were published and made available throughout the country.

In the expansion efforts of most States, the officials of the Office of Vocational Rehabilitation provided advice and technical assistance.

A program for expansion of the use of newly developed optical aids for persons with extremely poor vision was actively launched by the OVR during the year.

In furtherance of this, the Industrial Home for the Blind (Brooklyn) cooperated with OVR in conducting three intensive training courses for State directors and their consulting ophthalmologists. Demonstrations of methods used in the few existing optical aids clinics were given to encourage establishment of such clinics in various parts of the country. At the end of the year, nine States had established or were planning establishment of the clinics.

In recent years an upward trend in the sale and use of pianos has increased employment opportunities for qualified piano tuner technicians and has pointed up an urgent need for instructors of piano tuning.

To help to meet these needs, and to raise and maintain the standards of the profession for qualified blind persons, a 6-week training course for instructors was conducted cooperatively by the Office and Roosevelt University for the third year. Eight trainees from seven States attended the 1957 course and are now employed as instructors in schools teaching piano tuning to blind persons.

Agriculture and related occupations as a source of employment for blind persons has, until recently, been undeveloped in rehabilitation programs. Many blind persons, particularly those in rural communities, have interests in and aptitude for farm work. The Division of Services to the Blind during fiscal 1957 intensified its consultative services for States that needed guidance in formulating programs for the training and establishment of blind persons in agriculture and related pursuits.

Six States received such services, which were provided with full consideration of their geographical location and the living conditions, interests, and aptitudes of the trainees.

One of the most difficult problems in the rehabilitation of blind persons is placing them in competitive employment. The usual techniques for placing handicapped persons are not always adequate or appropriate for blind persons. Consequently, special training for counselors in placement of the blind is a necessity. To meet this need,

four special courses were conducted during the fiscal year under auspices of the Division of Services to the Blind, attended by 44 counselors from 30 States and Alaska.

Mental Illness

The growing nationwide interest in the problems of mental illness was reflected in the vocational rehabilitation program during 1957 by a marked acceleration among State agencies in their staffing and operational patterns for expansion of services to the mentally ill.

An increasing number of State agencies have taken advantage of funds that are available to them under Public Law 565 for extending and improving this segment of their operations. Thirty-one States now have specialized counselors who work only in this field. Several States have instituted vocational training facilities in their mental hospitals. One State agency is operating two "half-way" houses where patients discharged from mental hospitals are given opportunity to learn a trade or to sharpen old skills, at the same time learning to live again as members of the community.

In the continuing efforts to strengthen working relationships among professional personnel working in the field of mental health, three conferences were held during the year for mental health personnel at the State level, and for staff from mental hospitals and State agencies. These workshops, cosponsored by the Office of Vocational Rehabilitation, the National Institute of Mental Health, and a university in each region, have resulted not only in stronger programs and an increased number of rehabilitations but have served to stimulate interest in initiating several research and demonstration projects in the field of mental illness. In several States the workshops were followed by short-term training conferences at State universities for the benefit of counselors who work with the mentally ill.

Staff from the Office provided a variety of consultative services to State agencies during the year and participated in State and regional conferences on the subject of mental illness and the emotional problems of the physically handicapped, as well as in several national conferences of large voluntary organizations devoted to mental health.

Program Expenditures Indicate Growth and Activity Throughout the Nation

The total of Federal expenditures for vocational rehabilitation in 1957 came to \$41,988,872.

This sum was matched by State and other public and private non-profit groups in the approximate amount of \$24 million, so that the

total expenditure in the nationwide vocational rehabilitation program amounted to approximately \$66 million.

The bulk of the Federal expenditures was in grants to States and Territories in support of their basic programs. These grants amounted to \$34,847,954, almost \$5 million more than in the previous period. The States' contribution to basic funds was \$21,227,432, about 17 per cent more than in the previous year.

The Federal expenditures included \$1,999,046 for research and demonstration projects, which was matched by an estimated \$900,000 from the States and other sources; and \$2,938,076 for training grants, which was matched by about \$1 million from sources other than Federal.

Federal grants to States for extension and improvement of their rehabilitation services amounted to \$1,206,356 during the period. This sum was matched by \$402,119 in State and other funds.

The authority in Public Law 565 for grants to States and other public and private nonprofit agencies, for planning, preparing, and activating substantial expansions of their programs was to expire on June 30, 1956, but the Congress extended this authority for one more year. Federal grants for expansion purposes totaled \$997,440 during fiscal 1957 and were matched by almost \$500,000 in State and other funds.

These expansion grants totaled 149, in 51 States, during the period. Public and private nonprofit organizations received a total of \$907,674 for 143 projects developed in cooperation with State agencies. The remaining six were State projects. Fifteen projects totaling \$120,209 were for expansion of services to the blind.

STIMULATING EMPLOYMENT FOR THE HANDICAPPED

An increasing number of large business organizations are responding to the efforts of the Office and State agencies, in cooperation with the President's Committee on Employment of the Physically Handicapped, to widen employment opportunities for the disabled.

An outstanding example of a nationwide business organization's development of a firm policy for utilizing the abilities of the handicapped is that of Sears, Roebuck and Co.

Through participation in activities of the President's Committee, company officials became interested in the State rehabilitation programs as a source of workers in many departments of their stores. Company officers made visits to several rehabilitation centers in the eastern part of the country, and, after viewing the training courses and investigating the performance records of persons who had been rehabilitated, instituted a company program for the hiring of handicapped persons in all of their installations, a program that has proved eminently satisfactory.

Another large company that has instituted a similar program is Kaiser Aluminum and Chemical Corporation, which requested consultative services from the Federal Office, the U. S. Employment Service, and the West Virginia rehabilitation and employment services during the year, for appropriate methods of finding and hiring handicapped workers for a new plant in that State.

A developing nationwide opportunity for employment of the handicapped is in a telephone answering service being prepared for operation in about a thousand communities, to be supported by merchandisers and manufacturers, to supply information about their products. It has been indicated that handicapped persons will be given preference for this employment.

The aircraft and airline industries, as a whole, continued their long-time policy of giving handicapped persons equal opportunity to compete for jobs, and during the year a number of trade associations recommended such policies to their constituent members.

NEW PROGRAMS STARTED

Each State and Territory participating in the State-Federal partnership in vocational rehabilitation is required, under Public Law 565, to have a Plan of Operation that bears the approval of the Office. Those States that have separate agencies for the blind are required to have two Plans, one for the general agency and another for the blind agency. The Plans set out the organization, major policies, and procedures that will govern the operations.

Approval of a Plan for the Virgin Islands during the year brought the total of approved plans to 89 for the vocational rehabilitation programs operating in each of the States, Alaska, Hawaii, Puerto Rico, the Virgin Islands, and the District of Columbia. Following the passage of Public Law 896, in 1956, which extended the full benefits of the Vocational Rehabilitation Act to Guam, officials of that Territory began preparatory work for establishment of a vocational rehabilitation program there.

A new Plan for vocational rehabilitation of the blind in Nevada, to be administered in the State's Department of Welfare under a 1957 law, was submitted before the close of the year.

In Massachusetts and South Carolina the vocational rehabilitation agencies which had been in the State boards of vocational education were set up as independent agencies during the year.

By the end of 1957, 44 State agencies had Plan provisions for the establishment of rehabilitation facilities, and 38 had provisions for establishment of sheltered workshops. Also by that time, State agency-managed business enterprise programs for the blind, or for all types of the severely handicapped, were authorized by Plan provisions in 44 States.

PROGRAM DEVELOPMENT

The growth of State rehabilitation programs since enactment of Public Law 565 has brought into sharp focus the needs of State agencies for expansion of their operations and staffs, in keeping with increased demands for rehabilitation services and for the executive development of administrators.

The Office, in response to this indicated need for executive training, with consultation from a Committee on Administration of the States' Vocational Rehabilitation Council, contracted during the fiscal year with Harbridge House, Inc., a private agency specializing in executive training, to develop and conduct a series of training courses for State administrators. The first seminar on administration was held in June 1957, under cosponsorship of Boston University. Four others are planned for 1958.

Several State agencies requested consultative services from the Federal Office during the year in readjusting their programs for expanded services. Such a study was undertaken in Ohio, on request of the State Board of Education. A final report to the Board presented a comprehensive appraisal of the State's rehabilitation agency and suggested steps for a more effective program. A special study of the Minnesota Division of Vocational Rehabilitation was completed in September 1956, with recommendations for strengthening its operations. Studies of the programs in New Jersey, Oregon, Kentucky, Washington, and West Virginia were made during the year, consisting primarily of consultation on specific phases of management, organization, and administration.

The Office, in cooperation with the States' Vocational Rehabilitation Council during the fiscal year, participated in a study of salaries paid to rehabilitation workers. The study was sponsored by the Bulova Watch Company Foundation, Inc., and makes available for the first time a comparison of salaries paid to people who are trained for rehabilitation work with those paid to workers in other occupations and professions.

The status of vocational rehabilitation as a State activity was elevated by several actions during the year. Massachusetts and South Carolina established independent commissions for administering their programs. The legislatures of Idaho, Utah, and Wyoming enacted self-contained rehabilitation legislation. New positions of Assistant Commissioners for rehabilitation were established in the New York and Minnesota agencies.

STATE STAFF IMPROVEMENT

The year marked a decade of the annual Guidance, Training and Placement Workshop, sponsored by the Office, for the formulation

and improvement of standards of casework performance among State supervisory and consultative personnel.

From year to year, Workshop committees gather information and develop reports on various phases of rehabilitation practice and present them to the annual Workshop meeting for discussion and recommendation.

In the 1957 Workshop, its committees, assisted by outstanding special consultants in rehabilitation, presented reports on utilization of rehabilitation facilities, counselor service, development of small business enterprises for the severely handicapped, and job-finding methods. Seventy-seven workers from 63 State agencies participated.

The 1957 Workshop gave final approval to a Handbook and Guide, which was developed for the use of rehabilitation counselors in expanding employment opportunities for the handicapped, and in techniques of job-finding.

CASH DISABILITY BENEFITS BROADEN PROGRAM

In addition to the 1954 "disability freeze" amendment to the social security law, which was designed to protect the rights of disabled workers who are covered by that law, other amendments enacted during 1956 further broadened the scope of the rehabilitation program.

One provision of the 1956 legislation became effective July 1, 1957, authorizing payment of cash benefits to disabled workers who are 50 years of age or more. Another provision, effective January 1, 1957, directed payments of cash benefits to disabled and dependent children of retired or deceased workers entitled to old-age benefits, provided the disability existed before the age of 18.

Both amendments necessitated very close working relationships with the Bureau of Old-Age and Survivors Insurance.

A basic requirement of these amendments is that persons receiving such benefits must have disablements to the extent that they cannot engage in substantial gainful employment. Under arrangements existing in 47 States or Territories during fiscal 1957, State rehabilitation agencies make determinations of disability in these applicants, to find whether they are disabled within the definition of disability as prescribed by law and to assess their capacities for rehabilitation, to the end that the maximum number may, through rehabilitation services, be returned to gainful employment.

During 1957, the State agencies made approximately 155,000 disability determinations, screened 154,000 applicants for rehabilitation potential, and accepted almost 19,000 for further consideration of rehabilitation services.

STATE-FEDERAL RELATIONSHIP

The practices of State rehabilitation agencies in placing handicapped persons continued under study during the fiscal year. The Office and the United States Employment Service initiated a series of joint studies of cooperative State agency relationships, with the aim of improving placement practices. Two such studies were conducted in 1957, one in Florida and another in Maryland, as demonstrations to encourage the adoption of improved practices in those States.

The Florida study was particularly effective, as it brought much closer relationships between the staffs of the rehabilitation and employment services. A description of the Florida study was being prepared late in the fiscal year for publication in a Fall issue of the Employment Security Review of the Department of Labor.

The sum of these experiences in placing day-to-day operations under observation and study is providing increased understanding of the placement problems of these State agencies, a knowledge which in turn will be shared by other States.

COOPERATION WITH PUBLIC ASSISTANCE

For several years there has been increasing emphasis on rehabilitation services aimed toward restoration to employment of disabled persons whose major support came from public assistance funds.

In 1957 the number of rehabilitations of those who had been dependent to some extent upon public assistance prior to their rehabilitation was 14,000. This contrasts with 11,355 in 1953. The emphasis on this phase of the nationwide program reached the point in 1957 whereby cooperative projects for the rehabilitation of recipients of public assistance were conducted among the rehabilitation and public assistance agencies of 10 States, over and above the basic and usual services offered in their rehabilitation programs. Some of the closer working relationships that have developed among State agencies through this cooperation have been of such demonstrable value as to be continued in some States' basic programs.

Under the 1956 amendments to the Social Security Act, the States have even greater opportunity to increase the number of rehabilitations within this category. They provide ways for further strengthening of cooperative relationships among State rehabilitation agencies and those concerned with public assistance, all aimed toward the helping of needy persons to achieve the greatest degree of independence.

A Committee of the States' Council on Vocational Rehabilitation studied the possibilities for cooperative services under the amendments, during the fiscal year, and, after consultation with the Office

of Vocational Rehabilitation and the Bureau of Public Assistance, made recommendations to the Council, designed to give impetus to State agency actions under the new legislation. The recommendations have been adopted.

INFORMATIONAL ACTIVITIES

As required by Public Law 565, the Office continued its dissemination of information about vocational rehabilitation, and at an accelerated pace. Numerous speeches were made by the Director and other members of the staff to a variety of audiences, and several appearances were made on television and radio programs. A number of press releases were issued reporting various accomplishments, undertakings, and events.

A variety of special reports, radio announcements, and other informational materials were issued during the fiscal year. One publication of general circulation was completely rewritten and three others were substantially revised. In addition, assistance was given on various professional publications mentioned elsewhere.

In its continuing effort to help the State rehabilitation agencies establish and maintain sound public information programs, the staff of the Division of Publications and Reports conducted one tri-regional and three bi-regional public information institutes for State staffs. Sixty-one employees from 45 agencies in 34 States participated in the institutes, which were held in New Orleans, Salt Lake City, Chicago, and Washington.

In each of the institutes, considerable emphasis was placed upon the joint informational responsibilities inherent in new provisions of the Social Security Act, involving cash disability and disability "freeze" determinations of rehabilitation potentialities of applicants for benefits under the old-age and survivors insurance program. Consequently, personnel from that Bureau participated as part of the faculty.

Additional faculty work was done by various State informational representatives and by personnel from the Veterans Administration, the President's Committee on Employment of the Physically Handicapped, and the National Rehabilitation Association, though the bulk of the teaching load was carried by Office staff.

INTERNATIONAL ACTIVITIES

A reflection of the worldwide interest in the vocational rehabilitation program of the United States is in the increasing number of trainees and visitors from other countries for whom the Office plans and supervises training in rehabilitation activities.

During 1957 more than 160 persons—50 percent more than during the previous fiscal period—came from 50 countries for long-term

training or short-term observation. The programs arranged for them were conducted with cooperation of the United Nations and its specialized agencies, the International Cooperation Administration of the Department of State, other Federal departments, educational institutions, and rehabilitation facilities.

A highlight of the year was a program planned for a team of 10 professional persons from Mexico, composed of physicians, an orthopedic surgeon, a physical therapist, and specialists in the psycho-social phases of rehabilitation. Their program emphasized the "team" approach to rehabilitation of the individual, relationships among public and voluntary agencies, and methods of coordinating services and resources to achieve the rehabilitation goal.

There also was evidence of increasing interest of industrialists, engineers, and other professional persons from foreign countries, in the problems of the disabled and in methods of rehabilitating them.

In the interests of worldwide rehabilitation, the United Nations and nongovernmental affiliates aided or sponsored rehabilitation facilities or demonstration projects in 17 countries, designed to spread further the available knowledge that is helping the disabled to health and independence. The United Nations also devoted the second issue of its "International Social Service Review" to rehabilitation activities throughout the world.

Recruitment activities were carried on to find rehabilitation specialists and workers in related fields for service in Brazil, Indonesia, Mexico, and France.

Through its membership on the Interdepartmental Committee on International Social Policy, the Office was active during the year in support of the meeting of the Social Commission of the Economic and Social Council under the United Nations.

Table 1.—Number of referrals and cases, by agency, fiscal year 1957

Agency ¹	Referrals				Cases				
	During fiscal year			Re- main- ing at end of year ³	During fiscal year				Re- main- ing at end of year ⁶
	Total	Ac- cepted for serv- ices	Not ac- cepted for serv- ices ²		Total active load (re- ceiv- ing serv- ices)	Closed from active load			
						Reha- bili- tated	After rehabili- tation plan initiated ⁴	Before rehabili- tation plan initiated ⁵	
United States, total.....	320,025	104,125	101,656	114,244	238,592	70,940	7,230	15,833	144,589
Alabama.....	7,734	2,983	920	3,831	7,447	2,070	181	262	4,934
Alaska.....	613	125	69	419	270	81	7	3	179
Arizona:									
General.....	1,909	647	587	675	1,195	413	45	45	692
Blind.....	113	44	41	28	118	26	14	5	73
Arkansas.....	5,134	1,864	2,044	1,226	3,765	1,501	120	129	2,015
California.....	19,060	3,787	10,252	5,021	8,706	1,567	507	1,078	5,554
Colorado:									
General.....	2,498	1,103	647	748	2,007	653	181	84	1,089
Blind.....	229	66	16	147	165	43	1	3	118
Connecticut:									
General.....	2,769	1,560	586	623	3,756	966	287	167	2,336
Blind.....	192	63	94	35	158	50	18	1	89
Delaware:									
General.....	1,297	612	487	198	1,213	485	7	52	669
Blind.....	53	30	16	7	57	17	9	2	29
District of Columbia.....	2,681	656	1,581	444	1,506	340	156	159	851
Florida:									
General.....	8,495	2,800	2,977	2,718	6,188	1,854	251	517	3,566
Blind.....	3,199	377	1,623	1,199	852	260	42	22	528
Georgia.....	19,355	6,296	5,231	7,828	11,875	5,326	258	713	5,578
Hawaii:									
General.....	1,011	270	526	215	610	202	41	11	356
Blind.....	35	15	11	9	77	13	3	2	59
Idaho:									
General.....	1,538	275	630	633	599	165	24	14	396
Blind.....	31	12	2	17	34	8	4	0	22
Illinois.....	15,478	6,557	4,678	4,243	13,549	4,207	320	1,615	7,407
Indiana:									
General.....	2,600	1,445	524	631	4,111	1,138	88	349	2,536
Blind.....	238	88	85	65	255	43	14	35	163
Iowa:									
General.....	5,372	1,584	1,438	2,350	3,710	1,065	122	200	2,323
Blind.....	194	48	75	71	97	12	0	0	85
Kansas:									
General.....	3,234	855	824	1,555	2,093	576	60	118	1,339
Blind.....	323	78	65	180	190	49	10	2	129
Kentucky.....	6,006	1,543	2,557	1,906	3,127	871	64	380	1,812
Louisiana:									
General.....	4,734	2,480	1,110	1,144	6,157	1,602	87	349	4,119
Blind.....	663	153	142	368	543	110	12	19	402
Maine:									
General.....	2,615	454	1,106	1,055	1,137	228	25	100	784
Blind.....	163	29	69	65	86	19	7	1	59
Maryland.....	4,666	1,813	1,153	1,700	4,633	1,218	142	440	2,833
Massachusetts:									
General.....	4,149	1,654	1,082	1,413	3,401	965	76	184	2,176
Blind.....	327	126	35	166	327	62	5	12	248
Michigan:									
General.....	9,850	4,145	2,017	3,688	9,221	3,255	384	125	5,457
Blind.....	336	169	84	83	402	100	41	42	219
Minnesota:									
General.....	6,031	1,522	1,929	2,580	4,388	967	141	119	3,161
Blind.....	688	140	277	271	381	78	13	20	270
Mississippi:									
General.....	2,834	1,099	934	801	2,750	912	58	250	1,530
Blind.....	841	343	357	141	905	272	42	33	558
Missouri:									
General.....	4,533	1,717	1,203	1,613	3,468	1,297	56	126	1,989
Blind.....	674	163	232	279	504	123	18	14	349
Montana:									
General.....	1,784	510	582	692	1,176	400	15	30	731
Blind.....	366	24	236	106	54	21	2	2	29
Nebraska:									
General.....	1,427	847	168	412	2,052	615	43	33	1,361
Blind.....	183	60	56	67	141	57	2	2	80

See footnotes at end of table.

Table 1.—Number of referrals and cases, by agency, fiscal year 1957—Con.

Agency ¹	Referrals				Cases				
	During fiscal year			Re- main- ing at end of year ³	During fiscal year				Re- main- ing at end of year ⁶
	Total	Ac- cepted for serv- ices	Not ac- cepted for serv- ices ²		Total active load (re- ceiv- ing serv- ices)	Closed from active load			
						Reha- bili- tated	After rehabili- tation plan initi- ated ⁴	Before rehabili- tation plan initi- ated ⁵	
Nevada.....	519	75	329	115	189	54	13	4	118
New Hampshire:									
General.....	583	267	173	143	530	103	53	17	357
Blind.....	48	27	11	10	84	15	6	12	51
New Jersey:									
General.....	5,159	1,435	1,839	1,885	2,992	781	146	317	1,748
Blind.....	736	102	137	497	410	96	14	3	297
New Mexico:									
General.....	1,430	294	662	474	604	285	26	10	283
Blind.....	183	32	26	125	91	18	13	2	58
New York:									
General.....	18,013	6,132	6,681	5,200	13,496	4,485	498	1,220	7,293
Blind.....	1,022	346	252	424	803	218	34	71	480
North Carolina:									
General.....	8,230	4,207	2,366	1,657	9,795	2,930	218	452	6,195
Blind.....	1,326	507	520	299	1,478	368	25	95	990
North Dakota.....	1,498	417	336	745	938	274	14	17	633
Ohio:									
General.....	5,821	1,726	1,556	2,539	3,780	1,250	85	213	2,232
Blind.....	472	199	111	162	662	128	43	30	461
Oklahoma.....	5,088	2,501	1,590	997	7,038	1,396	101	713	4,828
Oregon:									
General.....	5,538	1,044	1,905	2,589	2,718	650	97	314	1,657
Blind.....	171	54	54	63	155	43	2	3	107
Pennsylvania:									
General.....	25,300	9,869	7,412	8,079	18,999	5,794	706	1,173	11,326
Blind.....	5,235	339	2,943	1,953	1,079	230	76	143	630
Puerto Rico.....	6,553	1,470	1,108	3,975	3,357	868	53	193	2,243
Rhode Island:									
General.....	1,756	802	354	600	1,253	436	36	14	767
Blind.....	44	41	0	3	188	28	3	6	151
South Carolina:									
General.....	6,233	1,936	1,413	2,884	4,822	1,529	66	222	3,005
Blind.....	389	157	151	81	284	94	7	25	158
South Dakota:									
General.....	892	200	169	523	825	171	4	37	613
Blind.....	194	30	84	80	67	17	1	0	49
Tennessee:									
General.....	6,252	2,476	1,487	2,289	4,994	2,028	129	208	2,629
Blind.....	1,011	257	184	570	680	171	12	14	483
Texas:									
General.....	10,401	2,678	2,543	5,180	8,947	2,106	101	511	6,229
Blind.....	1,099	371	488	240	810	334	19	21	436
Utah.....	1,165	466	233	466	1,197	347	35	15	800
Vermont:									
General.....	1,009	269	244	496	662	171	29	45	417
Blind.....	60	30	20	10	70	19	4	7	40
Virginia:									
General.....	12,793	3,510	5,307	3,976	7,369	2,271	109	797	4,192
Blind.....	539	138	191	210	258	80	18	10	150
Virgin Islands.....	37	3	0	34	3	0	0	0	3
Washington:									
General.....	4,827	1,397	1,849	1,581	3,538	1,007	145	259	2,127
Blind.....	215	70	86	59	163	37	9	13	104
West Virginia.....	12,879	3,061	3,274	6,544	8,335	2,171	71	663	5,430
Wisconsin:									
General.....	5,567	1,690	1,612	2,265	4,796	1,377	173	76	3,170
Blind.....	158	67	43	48	178	57	9	6	106
Wyoming.....	1,265	202	555	508	499	201	24	13	261

¹ In States with 2 agencies, the State division of vocational rehabilitation is designated as "general," and the agency under the State commission or other agency for the blind is designated as "blind."

² Services declined, services not needed, individual not eligible, individual needing services other than vocational rehabilitation, referred to other agencies, migratory shifting of the individual, etc.

³ Eligibility for rehabilitation not yet determined.

⁴ Closed after rehabilitation plan was initiated; received rehabilitation service but never reached the point of employment because of personal factors, illness, aggravated disability, etc.

⁵ Closed prior to initiation of rehabilitation plan because of indifference of individual, probable increase in degree of disability, loss of contact, etc.

⁶ In process of rehabilitation on June 30, 1957.

Table 2.—Vocational rehabilitation grants, 1957, State divisions of vocational rehabilitation

State or Territory	Support grants	Extension and improvement grants	Expansion grants ¹	Total
Total.....	\$30,466,162	\$1,043,793	\$887,220	\$32,397,175
Alabama.....	1,271,534	26,885	20,022	1,318,441
Arizona.....	240,190	8,689	5,855	260,734
Arkansas.....	866,735	15,862	5,892	888,489
California.....	2,071,732	115,541	79,239	2,266,512
Colorado.....	213,665	8,091	16,581	238,337
Connecticut.....	322,827	15,895	13,390	352,112
Delaware.....	145,000	5,000	3,648	153,648
Florida.....	783,558	30,606	22,493	836,657
Georgia.....	1,883,882	32,104	23,528	1,939,514
Idaho.....	73,896	—	2,858	76,754
Illinois.....	1,516,896	36,120	55,420	1,608,436
Indiana.....	414,551	24,980	14,960	454,491
Iowa.....	530,257	21,993	14,850	567,100
Kansas.....	261,967	14,072	9,842	285,881
Kentucky.....	358,306	26,642	13,376	398,324
Louisiana.....	900,537	—	12,000	912,537
Maine.....	181,748	8,024	3,964	193,736
Maryland.....	389,062	—	17,025	406,087
Massachusetts.....	532,013	43,872	33,399	609,284
Michigan.....	1,124,720	64,155	55,362	1,244,237
Minnesota.....	641,854	22,428	3,200	667,482
Mississippi.....	342,245	—	10,085	352,330
Missouri.....	529,522	18,563	23,255	571,340
Montana.....	143,922	5,612	—	149,534
Nebraska.....	173,073	7,275	12,598	192,946
Nevada.....	30,603	5,000	—	35,603
New Hampshire.....	64,779	5,000	4,200	73,979
New Jersey.....	683,102	15,700	25,863	724,665
New Mexico.....	132,822	2,925	16,519	152,266
New York.....	1,945,851	89,272	36,270	2,071,393
North Carolina.....	896,509	37,991	25,117	959,617
North Dakota.....	224,696	2,630	—	227,326
Ohio.....	494,820	27,523	24,981	547,324
Oklahoma.....	707,599	17,322	5,427	730,348
Oregon.....	374,292	11,877	9,974	396,143
Pennsylvania.....	2,419,991	68,550	87,152	2,575,693
Rhode Island.....	193,595	7,492	5,049	206,136
South Carolina.....	587,891	12,000	9,100	608,991
South Dakota.....	112,700	4,800	3,260	120,760
Tennessee.....	667,782	21,000	18,560	707,342
Texas.....	819,364	46,701	45,021	911,086
Utah.....	200,538	6,925	3,731	211,194
Vermont.....	132,576	5,000	—	137,576
Virginia.....	948,201	31,731	26,922	1,006,854
Washington.....	500,371	—	15,315	515,686
West Virginia.....	768,014	17,750	9,515	795,279
Wisconsin.....	700,206	29,320	22,071	751,597
Wyoming.....	93,824	—	—	93,824
Alaska.....	101,938	5,000	1,000	107,938
Hawaii.....	150,635	3,000	1,721	155,356
Puerto Rico.....	344,465	16,875	10,740	372,080
Virgin Islands.....	6,682	—	—	6,682
District of Columbia.....	242,624	—	6,870	249,494

¹ Includes grants to nonprofit agencies for projects developed in cooperation with State divisions of vocational rehabilitation.

Table 3.—Vocational rehabilitation grants, 1957, State commissions or agencies for the blind

State or Territory	Support grants	Extension and improvement grants	Expansion grants ¹	Total
Total.....	\$4,381,792	\$162,563	\$110,220	\$4,654,575
Arizona.....	27,542			27,542
Colorado.....	70,464	3,433		73,897
Connecticut.....	40,564	3,877		44,441
Delaware.....	38,218			38,218
Florida.....	329,414			329,414
Idaho.....	11,012			11,012
Indiana.....	54,875	1,500		56,375
Iowa.....	22,615	1,875		24,490
Kansas.....	92,866	4,192		97,058
Louisiana.....	117,185			117,185
Maine.....	45,444			45,444
Massachusetts.....	89,195	600		89,795
Michigan.....	110,925			110,925
Minnesota.....	163,663		15,000	178,663
Mississippi.....	220,527			220,527
Missouri.....	197,600		6,100	203,700
Montana.....	29,987			29,987
Nebraska.....	64,068	4,897		68,965
New Hampshire.....	24,063			24,063
New Jersey.....	145,304			145,304
New Mexico.....	29,014		4,000	33,014
New York.....	327,834	53,683	42,206	423,723
North Carolina.....	535,672			535,672
Ohio.....	196,512	7,500	28,565	232,577
Oregon.....	47,222	2,920		50,142
Pennsylvania.....	560,260	30,385		590,645
Rhode Island.....	35,387			35,387
South Carolina.....	45,219			45,219
South Dakota.....	33,020	1,200		34,220
Tennessee.....	201,830		3,265	205,095
Texas.....	213,689	23,250	10,600	247,539
Vermont.....	27,787			27,787
Virginia.....	61,462			61,462
Washington.....	74,006	17,820		91,826
Wisconsin.....	69,484	3,431		72,915
Hawaii.....	27,863	2,000	484	30,347

¹ Includes grants to nonprofit agencies for projects developed in cooperation with State commissions or agencies for the blind.

Saint Elizabeths Hospital

IN THE PAST YEAR many improvements have been made in the treatment of patients as well as in the areas of education and research. That this has occurred in the face of continuing problems of shortage of staff and overcrowding of patients is a tribute to every employee in the hospital. Only through dedicated purpose and a confident belief in the integrity of the hospital administration and its function could such a magnificent job have been done by the overworked staff—both administrative and medical.

In the area of physical facilities there have also been many changes—all of which have had to be programmed and planned by the staff as a part of their daily responsibilities. As our physical plant is composed of buildings up to one hundred years old, the problems of continuing maintenance are very complex and time consuming as well as expensive.

In the hospital treatment program, continued interest has centered in the further development of ataractic (tranquilizing) drug therapy and in the use of the "climate" of the hospital as a treatment tool with special interest in more permissive attitudes on the part of all supervisory personnel. All of these have been stimulating changes, and the vim and vigor thus developed has resulted in increased morale of staff and improved treatment of patients.

The development of new drugs—both ataractic and stimulating—goes on apace. At the close of the year more than 2,000 patients in the hospital were under treatment by ataractic drugs.

As a part of the problem of overcrowding of patients, hospital operation is much complicated by the continuing increase in the average age of our patients. Aging produces a need for more and more nursing services as patients become more feeble and debilitated.

A self-evaluation study of the hospital operation unit by unit,

done with care, indicates that more than a 50-percent increase in staff is needed to enable us to give adequate treatment to patients, provide modern psychiatric hospital education to trainees, and carry on a small amount of good research. The budget request for only a 10-percent increase was not approved by Congress last year.

The hospital continues to have many visitors representing psychiatry and allied disciplines from many foreign countries as well as from America.

An extensive program in education in psychiatry and the related disciplines was carried out during the year. Training was continued in psychiatry, psychology, social work, medicine, surgery, pathology, occupational therapy, nursing, and clinical pastoral work. Students from the three local medical schools received a part of their clinical training in psychiatry at the hospital. Inservice training was also carried out in many areas.

Research was of necessity limited by shortage of staff and what research was completed was largely clinical in nature.

The hospital operation received a severe blow with the death on May 4 of the First Assistant Physician, Dr. Jay L. Hoffman. His untimely death leaves a void which is difficult to fill.

Division of Medical Services

CLINICAL BRANCHES

Three clinical branches carry the responsibility for general care and treatment. A Medical and Surgical Branch takes primary responsibility for the acute medical and surgical treatment of all patients and emergency attention to employees. The hospital will miss the excellent services through retirement during the year of Dr. Watson W. Eldridge, who served for more than 30 years as the Director of this Branch.

As in previous years, the shortage of staff constituted the greatest operational problem. Second in importance was the overcrowding of patients. In addition, two other major factors enter into the staff shortage problem. The first of these is a direct result of the use of ataractic drug therapy which produced a return to reality in many long-term care patients, without improvement to the point where they could be released from the hospital. With their improved reality contacts, these patients began to seek normal diversions in activity programs, which obviously should be provided. This, together with the increased time required to give patients their new medications, results in additional shortage of nursing services.

In the second place, the average age of patients in the hospital is gradually increasing in line with increased normal age incidence in

the general population. Also, more patients in the upper age groups are being admitted. The burden of these increased nursing service demands has required a reduction in nursing service for the younger patient with good prognosis, and this of course tends to reduce the percentage of recoveries in this latter group. With an increase in staff to an adequate level there would seem to be little doubt that the number of discharges would also increase.

New admissions showed an increase over the previous year of 288 patients—1,327 to 1,615. Readmissions constituted 25 percent of this total and is considered average. One thousand fourteen patients were discharged during the year—130 more than the previous year.

A policy of increasing permissiveness resulted in more privileges being given to patients. At the end of the year 278 patients enjoyed city privileges, 428 were on visit, and approximately 1,800 patients enjoyed privileges of the hospital grounds. Several buildings were changed from locked to open-type units during the year. An overall reduction in accidents and injuries was noted. No prefrontal lobotomies were performed during the year, very few patients were treated with electro-shock therapy, and one patient committed suicide.

An interesting therapeutic development was the organization of patient ward committees and an overall patients' congress which permitted greater participation in the operation of the hospital by patients than ever before. Patients received this change with great enthusiasm and cooperative understanding.

The pressure for additional maximum security type facilities increased during the year. This situation will not be entirely corrected until the completion of the new security building now under construction and approximately 25 percent completed.

All forms of therapy are used in the hospital which give hope of improvement for the patients. Continuing emphasis is placed on group therapy methods, particularly in view of staff shortages. New approaches to rehabilitation of more patients through cooperative efforts with the local departments of rehabilitation, welfare, and health are under consideration for the coming year.

PSYCHOTHERAPY BRANCH

Here the services to the patients include individual psychotherapy, group psychotherapy, psychodrama, dance therapy and art therapy. Art therapy was carried out through the services of volunteers, which is a rather unique and unusual arrangement.

PSYCHOLOGY BRANCH

In April 1957 the Psychology Branch celebrated 50 years of psychological services at the hospital. An interesting scientific program was presented in addition to an exhibit of psychological apparatus used in 1907. During the year the Psychology Branch was approved by the American Psychological Association for professional psychological training. A new psychological research laboratory was instituted during the year, and 94 patients participated in a beginning research program.

LABORATORY BRANCH

Laboratory function was improved during the year by the addition of new equipment. Staff shortages are in evidence in this Branch, and pathologists and technicians are difficult to obtain. Two hundred and ninety-six autopsies were completed, representing 60 percent of hospital deaths. This Branch will be again handicapped through the resignation in the near future of Dr. Franklin Martin, the able director.

NURSING BRANCH

Hospital staff shortages are probably felt most acutely in the Nursing Branch. This is unfortunate for it is here that the staff has a most important personal contact with the patient 24 hours of each day. The graduate nurse has assumed some of the service formerly performed by the physician, and this has meant that a nursing assistant has had to assume some of the responsibilities of the graduate nurse. Steps have been taken to improve the qualifications of the nursing assistant through inservice education and training, and this in turn has thrown more work on the Nursing Education Unit. It is unfortunate that our graduate nurses have so much of their time consumed in the giving of medicines, including the ataractic drugs, so that they have no time left to exercise and apply their skills in psychiatric nursing. This is a tragedy which can only be relieved through the addition of nursing staff to overcome present shortages.

Sixteen schools of nursing are affiliated with Saint Elizabeths Hospital in the training of student nurses, and a postgraduate course in psychiatric nursing is offered once each year to graduates of approved schools of practical nursing.

OCCUPATIONAL THERAPY

Occupational therapists continue in scarce supply, and this has resulted in some reduction in service during the year. There has also been some shift in emphasis from the administration of occupational therapy in shops to a plan which takes this therapy directly to the

patient in his own nursing unit. This serves to bring the patient into therapy more quickly than in the previous plan. Emphasis has continued to be placed on industrial therapy for the long-term care patient as well as for patients who will soon leave the hospital for jobs in the community. A successful trial was made during the year of assignment of patients to the several offices in the Department of Health, Education, and Welfare as clerks, typists, or stenographers, and this plan has been quite successful. It has served as a stepping stone to patients for rehabilitation and return to a self-supporting job.

SOCIAL SERVICE

The workload of this Branch was sharply increased during the year through the improvement of patients on ataractic drug therapy. Special attention was given to the increasing number of teen-age patients admitted to the hospital. A shortage of Social Service staff results in a lack of service to patients who are ready to leave the hospital. This is obviously poor economy.

CHAPLAIN SERVICES BRANCH

The new Saint Elizabeths Chapel fulfilled a great need and has been used to the fullest extent during the year. The many patients who have improved through ataractic drug therapy have enjoyed their return to religious participation in the chapel. Unfortunately, details of purchasing requirements have delayed the procurement of a suitable organ. Many services by the several faith groups are conducted on the various wards in the different buildings for those patients who are unable to come to the chapel.

LIBRARY BRANCH

A medical library for the use of the staff and a general library for the use of patients continued to give needed services during the year. Approximately 1,000 volumes were added to the Medical Library, bringing the total up to about 18,600.

The Patients' Circulating Library continues its very active services with one paid librarian and approximately 15 participating patients. At present there are more than 54,000 books in this library, and new accessions being received—largely through gifts—each year.

SPECIAL SERVICES

Through social activities and recreation programs, this Branch served more than 3,000 patients each week, even though the staff was limited to five individuals. Attention to patients' music needs re-

sulted in the organization of a chorus, a symphonet, a Protestant choir, and a dance band. Sports programs carried out included soft ball, volley ball, touch football, ping-pong, tennis, and gymnasium activity.

VOLUNTEER SERVICES

The total hours of contributed volunteer service increased approximately 100 percent during the year. Over 16,600 hours of volunteer service was contributed by an average of 332 persons per month. The Director is the only paid staff person in this program. Volunteer services assist materially in keeping the two-way street open between the hospital and the community.

MEDICAL RECORDS BRANCH

The Medical Records Section was reorganized during the year into a Branch and transferred to the Division of Medical Services from the Division of Administration. A qualified Medical Record Librarian was appointed as Director, and organizational studies have been carried on during the year, looking to further improvements in function. Close cooperation is maintained with the Statistical Unit, and plans are going forward for improvement in the form and content of patients' records.

Division of Administration

BUSINESS MANAGEMENT BRANCH

Special attention was directed during the year to the problems concerning improved management procedures. A statistical section was instituted which will assist in meeting long felt needs. Difficulty is still being experienced in recruitment of various types of professional staff, most of whom can secure higher salaries in non-Governmental positions. Special attention was given to the improvement of diets and the serving of food with welcome physical improvements being made in several kitchens.

MAINTENANCE AND INDUSTRIAL BRANCH

The planning and construction of new buildings as well as the continuing problems of general maintenance of hospital grounds and buildings constitutes the major assignment to this Branch. Here, too, there are acute staff shortages, and it is virtually impossible for the Branch to carry out its responsibilities with the limited staff available. Principal contract projects are the construction of the new maximum security building, the renovation and extension of street lighting, the rewiring of old buildings, the installation of coal-

handling equipment, and the extension of electrical facilities in food-serving areas.

Needs of the Hospital

In conclusion, it should be emphasized that the major need of the hospital is increased personnel, both medical and administrative. Until this is forthcoming every effort will be made to use existing personnel to the greatest advantage. The new security building now under construction will adequately meet a long-felt need. Additional space for the Medical Library and for medical records is now in the planning stage. This applies also to a new continuous treatment (CT-9) patient building with a cafeteria which would serve present buildings CT-7 and 8.

The hospital staff looks forward with eagerness to the new Clinical Research Center in the William A. White Building which will get under way during the coming year under the combined auspices of the hospital and the National Institute of Mental Health.

Table 1.—Movement of patient population, fiscal year 1957

	Total	Male			Female		
		White	Colored	Total	White	Colored	Total
Total number under care and treatment, fiscal year 1957.....	8,987	2,600	1,845	4,445	2,697	1,845	4,542
Remaining on rolls June 30, 1956.....	7,372	2,178	1,502	3,680	2,169	1,523	3,692
Admitted during year.....	1,615	422	343	765	528	322	850
Total discharged and died.....	1,521	436	306	742	490	289	779
Discharged.....	1,014	285	209	494	322	198	520
Discharged as:							
Recovered.....	114	28	32	60	31	23	54
Social recovery.....	367	70	72	142	126	99	225
Improved.....	376	127	64	191	124	61	185
Unimproved.....	101	32	24	56	36	9	45
Worse.....	0						
No mental disorder.....	56	28	17	45	5	6	11
Unknown.....	0						
Died.....	507	151	97	248	168	91	259
Remaining on rolls, June 30, 1957.....	7,466	2,164	1,539	3,703	2,207	1,556	3,763
Change in sex and color.....	0	+6	+1	+7	+2	-9	-7
Adjusted on rolls, June 30, 1957.....	7,466	2,170	1,540	3,710	2,209	1,547	3,756
On visit and elopement.....	463	95	62	157	172	134	306
In hospital.....	7,003	2,075	1,478	3,553	2,037	1,413	3,450

Table 2.—Consolidated statement of movement of patients, by classification, fiscal year 1957

	Reimbursable patients								Nonreimbursable patients																			
	Total	Subtotal	Bureau of Indian Affairs	D. C. residents	D. C. voluntary	U. S. Soldiers' Home	Veterans' Administration	Other	Subtotal	Army	Bureau of Employees Compensation	Immigration and Naturalization Service	Bureau of National Homes	Canadian Insane	Canal Zone	Coast Guard	D. C. nonresidents	Federal reservations	Foreign Service	Interned aliens	Marine Corps	Navy	D. C. prisoners	D. C. prisoners (sex psychopaths)	Military prisoners	U. S. prisoners	U. S. Public Health Service	Virgin Islands
On rolls, June 30, 1956.....	7,372	5,986	69	5,376	108	47	385	1	1,386	238	1	2	3	56	16	16	224	10	6	4	21	93	328	22	28	122	47	149
Admitted to June 30, 1957.....	1,615	1,388	1	1,162	179	33	12	1	227	1	1	1	1	2	1	1	41	15	6	6	4	3	143	12	7	7	7	7
Separated fiscal year 1957.....	1,521	1,152	1	927	130	28	66	1	369	12	1	1	1	1	1	1	205	17	8	8	3	3	83	2	23	6	7	7
Deaths.....	507	466	1	430	6	9	20	1	41	10	0	1	1	1	1	1	9	0	0	0	3	3	4	0	3	6	4	3
Discharges.....	1,014	686	0	497	124	19	46	1	328	2	1	1	1	0	0	0	106	17	8	8	0	0	79	2	20	0	0	3
On rolls, June 30, 1957.....	7,466	6,222	69	5,611	157	52	331	2	1,244	226	1	2	3	57	16	15	60	8	4	4	21	90	388	32	28	106	41	142
Changes in class.....	0	-189	---	-225	-3	---	+39	---	+189	---	---	---	---	---	---	---	+195	---	+1	---	---	---	-7	---	---	---	---	---
Adjusted on rolls, June 30, 1957.....	7,466	6,033	69	5,386	154	52	370	2	1,433	226	1	2	3	57	16	15	255	8	5	4	21	90	381	32	28	106	41	142
On visit and elopement, June 30, 1957.....	463	415	1	372	23	---	19	---	48	---	---	---	---	---	---	---	22	1	2	---	---	3	15	5	---	---	---	---
In hospital, June 30, 1957.....	7,003	5,618	68	5,014	131	52	351	2	1,385	226	1	2	3	57	16	15	233	7	3	4	21	87	366	27	28	106	41	142
Total treated, fiscal year 1957.....	8,987	7,374	70	6,538	287	80	397	2	1,613	238	2	2	3	58	16	16	265	25	12	4	21	93	471	34	28	129	47	149

American Printing House for the Blind

AS THE OFFICIAL schoolbook printery for the blind in the United States, one of the principal functions of the American Printing House for the Blind, in Louisville, Kentucky, is the provision of special educational books and supplies for the blind school children throughout the country through the Federal Act "To Promote the Education of the Blind." This act, originally passed in 1879, authorizes an annual appropriation to the Printing House for this purpose. Allocations of books and materials are made on a per capita basis. Only those pupils may be registered whose vision comes within the accepted definition of blindness as follows: "Central visual acuity of 20/200 or less in the better eye with correcting glasses, or a peripheral field so contracted that the widest diameter of such field subtends an angular distance no greater than 20 degrees."

The Printing House maintains large catalogs of Braille books, Talking Books, recorded tapes, Braille music publications, large-type texts, and tangible apparatus. A rich collection of educational material is thereby provided for the kindergarten through the high school grades. A total of 6,459 blind pupils was enrolled in the residential schools for the blind and 4,724 in public schools—a total of 11,183 blind pupils being served by the Printing House—for the fiscal year ending June 30, 1957.

During the 1957 fiscal year, Braille books, educational periodicals, and music made up approximately 56 percent of the materials required by the schools; Braille slates, Braillewriters, maps, and other mechanical devices about 19 percent; Talking Books about 41½ percent; recorded educational tapes about 2 percent; and large-type books about 17½ percent. Approximately 2 percent was used for miscellaneous items.

American Printing House for the Blind

Year	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	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Gallaudet College

GALLAUDET COLLEGE is devoted to the education of deaf persons who because of their handicap would have difficulty in schools and colleges for hearing students. The college, located in Washington, D. C., is the world's only college for the deaf. It was accredited last May by the Middle States Association of Colleges and Secondary Schools. In addition to education, it conducts research into the educational problems of deafness. It consists of the Kendall School and the college proper.

KENDALL SCHOOL

Primary and secondary schooling is provided for deaf children in the Kendall School, which also serves as a laboratory school for teachers training in the college. The oral method of instruction is used for all pupils except those who make no progress under it. Enrollment last year was 75, of which 63 came from the District of Columbia.

GALLAUDET COLLEGE

The college, established in 1864 by act of Congress, offers the associate's degree after 2 years of study, and a bachelor's degree in the liberal arts and sciences. The Preparatory Department provides the senior year of high school for students who are unable to obtain it in the State schools for the deaf. The Graduate Department of Education offers a master's degree and a professional diploma in the education of the deaf to students with normal hearing, and offers a four-week training course to vocational counselors who wish to acquire a deeper understanding of deaf persons. Total enrollment in the college last year was 324 with students from 42 States, Hawaii, the District of Columbia, and 7 foreign countries.

Gallaudet College

Gallaudet College is devoted to the education of deaf persons who because of their handicap would have difficulty in schools and colleges for hearing students. The college, located in Washington, D. C., is the world's only college for the deaf. It was acknowledged last May by the Middle States Association of Colleges and Secondary Schools, in addition to education, it conducts research into the educational problems of deafness. It consists of the Kendall School and the college proper.

KENDALL SCHOOL

Primary and secondary schooling is provided for deaf children in the Kendall School, which also serves as a laboratory school for teachers training in the college. The oral method of instruction is used for all pupils except those who make no progress under it. Enrollment last year was 76 of which 65 came from the District of Columbia.

GALLAUDET COLLEGE

The college, established in 1884 by act of Congress, offers the associate's degree after 2 years of study, and a bachelor's degree in the liberal arts and sciences. The Preparatory Department provides the senior year of high school for students who are unable to obtain it in the State schools for the deaf. The Graduate Department of Education offers a master's degree and a professional diploma in the education of the deaf to students with normal hearing, and offers a four-week training course to vocational counselors who wish to acquire a deeper understanding of deaf persons. Total enrollment in the college last year was 324 with students from 22 States, Hawaii, the District of Columbia, and 7 foreign countries.

Howard University

HOWARD UNIVERSITY, located in the District of Columbia, was chartered by act of Congress on March 2, 1867. The university offers programs of higher education on the undergraduate, graduate, and professional levels. Undergraduate students are registered in the college of liberal arts; graduate students seeking the master's and doctor of philosophy degrees are registered in the graduate school; professional students are registered in the colleges of medicine, dentistry, pharmacy, and the schools of engineering and architecture, music, social work, law, and religion. (The school of religion receives no support from Federal funds.)

The educational program of Howard University is conducted in keeping with the democratic purposes of the land-grant colleges and State universities with the low tuition fees and living costs which characterize these State institutions and with an educational program resting upon and permeated by the content and spirit of a general or liberal education. The university admits students of both sexes, from every race, creed, and national origin, but it accepts and undertakes to discharge a special responsibility for the admission and training of Negro students.

ENROLLMENT OF STUDENTS

During the school year 1956-57, the university served a total of 5,787 students as follows: 4,604 during the regular academic year and 1,183 in the summer session of 1956. The net total enrollment, excluding all duplicates was 5,020, distributed in the ten schools and colleges as follows: liberal arts, 2,297; graduate school, 490; engineering and architecture, 679; music, 290; medicine, 297; dentistry, 527; pharmacy, 140; law, 100; social work, 150; and religion, 50. This enrollment included a larger body of Negro professional students than

all other universities of public support in all the Southern States combined.

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

Of a total of 4,604 students enrolled during the regular school year, 4,115 or 89.4 percent came from 40 States and the District of Columbia, while 489 students, or 10.6 percent, came from outside the continental United States including 43 foreign countries and 4 possessions of the United States.

The 4,115 students who came from the United States were distributed as follows: New England States, 81; Middle Atlantic States, 628; East North Central States, 204; West North Central, 69; South Atlantic States, 2,530; East South Central States, 297; West South Central States, 268; Mountain States, 6; and Pacific States, 32.

The 489 students from outside the continental United States came from 43 foreign countries, including 9 countries in Africa, 8 countries in Asia, 12 countries in Europe, 7 countries in Central America, 5 countries in South America, and 13 island countries in the British and Netherlands West Indies.

VETERANS

There were 821 veterans enrolled at Howard University during the school year 1956-57. These veterans were distributed among the 10 schools and colleges as follows: 363 in liberal arts, 153 in engineering and architecture, 18 in music, 46 in pharmacy, 54 in dentistry, 46 in law, 51 in medicine, 7 in religion, 15 in social work, and 68 in graduate school.

ARMY AND AIR FORCE ROTC

Army ROTC.—Two hundred and eighty-five students were enrolled in Army ROTC during the school year 1956-57, of whom 216 were in the first and second year courses.

Air Force ROTC.—A total of 287 students was enrolled in Air Force ROTC. Two hundred and forty-two of these were in the first and second year courses.

THE FACULTY

There were 528 teachers serving the university during the year 1956-57. Of this number, there were 295 full-time teachers and 233 part-time teachers. The full-time equivalent of the teaching staff was 348.6. Of this number 307 were teaching in the ranks of instructor and above as follows: 69 professors, 68 associate professors, 73 assistant professors, and 97 instructors.

From the beginning of the university's work in 1867, the Founders invited to the faculties of the university learned and able men and

women, on the basis of their ability and character as individuals and without discrimination as to sex, race, creed, color, or national origin. It was a major purpose of the Founders to employ Negro teachers, among others, on every faculty. Today the Negro members of the professional faculties of Howard University constitute together a group of professional teachers larger by far than all the Negroes so employed in all other American universities combined. The existence of this group of Negro university teachers at Howard University has been a standing inspiration to the Negro people for more than three-quarters of a century, and membership on one of these faculties has been the first employment of many of the outstanding Negroes in the public life of America. From them came the founder and operator of the first blood plasma bank in the world, the first Negro governor of an American possession, the first Negro in the Secretariat of the United Nations (Nobel Prize Winner), the first Negro member of the bench of the United States Court of Appeals, and the first Negro Cultural Attaché in the diplomatic service of the United States to a major European nation.

THE BUILDING PROGRAM

In 1956-57 the following new buildings were completed and occupied: the School of Law Building, the Biology Building, and the Administration Building. The occupancy of the Administration Building permits the university for the first time to bring together all the offices involved in university-wide administration.

Near the end of the school year 1956-57, work was completed on a new building for the preclinical branches of medicine. This structure constitutes an extension of the previously existing building provided for the College of Medicine. The old building is now being remodeled. The new building has five stories and a basement. It contains the classrooms required for teaching the preclinical branches of medicine, in addition to laboratories and the service spaces related to them. It is designed to provide for 200 preclinical medical students and 200 preclinical dental students and dental hygienists and to render service to 60 pharmacy students.

In January 1957 work was begun on a new men's dormitory. The new dormitory will provide for 304 students and is expected to be completed in time for occupancy for the opening of the fall term in 1958.

GRADUATES

During the year 1956-57, there were 560 graduates, compared with 554 graduates during the year 1955-56. These 560 graduates came from 31 States, the District of Columbia, the Virgin Islands, Puerto

Rico, and the following foreign countries: Egypt, Liberia, Nigeria, Sierra Leone, China, India, Barbados, Bermuda, Grenada, Jamaica, Trinidad, Cuba, Spanish Honduras, Albania, Germany, Latvia, Poland, Brazil, and British Guiana.

These 560 graduates were distributed among the 10 schools and colleges as follows: liberal arts, 237; engineering and architecture, 41; music, 22; graduate school, 60; social work, 28; medicine, 72; dentistry, 51; dental hygiene, 8; pharmacy, 17; law, 19; and religion, 5. The university also awarded three honorary degrees.

Since its establishment in 1867, Howard University has graduated 19,823 persons. By far the large majority of these graduates have been Negroes. Among their number is a larger body of graduates in medicine, dentistry, pharmacy, engineering, music, law, and social work than the entire output of Negro professional graduates in all universities and colleges of public support in the entire group of Southern States. These graduates are at work in 43 States and 27 foreign countries. In every population center in the United States they constitute the largest and most diversified group of trained Negro public servants related to any single institution in the world.

The largest number of graduates have entered the field of teaching, primarily in the Southern States. Two thousand eight hundred and seventy-three have entered the practice of medicine; 2,365 have entered the practice of dentistry and dental hygiene; 2,325 have entered the practice of law; 768 have entered the ministry; 824 have entered the field of pharmacy; 583 have gone into engineering and architecture; and 357 have entered the field of social work.

SERVICE IN FOREIGN COUNTRIES

In recent years, teachers from Howard University have served in Burma, Brazil, Egypt, Ethiopia, Germany, India, Israel, Iraq, Italy, British Guiana, and Japan. Fulbright scholars from the university have worked in Egypt, Ghana, Iraq, Japan, Norway, Sweden, Denmark, Italy, France, Greece, England, and India.

The responsible leaders in Government and the friends of America again and again have acknowledged their services as being of the greatest value to their country and to the cause of democracy in the world.

The most recent testimony from the Government affects work done by the Head of our Department of Architecture in British Guiana. "Dr. Mackey has made a magnificent contribution which transcends his outstanding technical competence. Dr. Mackey has established a relationship with the people of the country based on trust and mutual respect which creates an environment that is uniquely receptive to the ideas he has to convey."

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