

plications for regular PHS research grants, administered by the National Institutes of Health extramural programs. Technical advice and scientific opinions are also obtained from competent scientists and bodies within the host countries. Such groups are used to the maximum extent possible to assist in the planning and organization of projects within each country. Close coordination with the health and medical research programs of the World Health Organization and the Agency for International Development is also maintained. No project will be supported contrary to the wishes of the host country's organization responsible for the overall planning and coordination of research.

Developments during the past year

During the past year NIH began to experience the impact of its decision to extend the research opportunities available under its special foreign currency program to researchers at U.S. academic institutions. The arrangements incidental to designing collaborative research projects have been found to be somewhat complex, particularly when conducted by correspondence and frequently much time is involved.

There are now a sufficient number of interested scientists with projects in various stages of planning that the lag period caused by the aforementioned delays is essentially past, and for the first time NIH is receiving increasing numbers of applications for review. Likewise, PHS study sections are receiving essentially their first experience with review of such applications which in the past have been primarily intramural projects submitted through other NIH channels. This has generated much interest in the program on the part of the study sections, where despite some problems, the program has been received well. An interesting and fruitful development is the number of inquiries received from U.S. investigators seeking a means of maintaining a research association with young men they have trained who have returned to their homelands and are struggling to implant the concept of clinical investigation within the established hierarchy of indigenous academic systems. This is an extremely promising aspect of this program in terms of future contributions to biomedical research from these countries. At the present time India and Israel are the countries in which there is the greatest interest in this program and for the interim, hold the greatest potential for expanded investigations in the biomedical sciences under this program.

B. BUREAU OF STATE SERVICES—COMMUNITY HEALTH

The special foreign currency program of the Bureau of State Services is aimed at extending and improving practical means of solving health problems, utilizing the efforts of well-qualified scientists of other nations as well as our own.

The community health program has developed and will continue to develop a variety of collaborative agreements designed to parallel and complement domestic studies. Thirty agreements are now being supported in Egypt, India, Israel, Poland, and Yugoslavia. These research projects include dental studies, investigations of rheumatic fever and heart disease, studies of the health effects of insecticides and of neurological problems such as mongolism, and research into communicable diseases: tuberculosis, rabies, hepatitis, leptospirosis, trichinosis, encephalitis, salmonellosis, and arboviruses.

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Research agreements are being negotiated with Israel on mongolism, insecticides, chronic renal disease and viruses in water, with India on population control, rheumatic fever, oral cancer, and fluoridation of water, and with Poland on mycobacteria.

Developments during the past year

In fiscal year 1965, seven new agreements were made, six with Israel and one with Egypt. Other agreements are awaiting approval: four in India, four in Israel, and one in Poland.

C. BUREAU OF STATE SERVICES—ENVIRONMENTAL HEALTH

The environmental health program proposes to utilize skills and talents as well as unusual resources which exist in other countries to develop and improve methods for the prevention and control of environmental health hazards. Continued economic growth in many of these countries during recent years has been accompanied by serious environmental health problems. These have, at the same time, created research opportunities for studies of value to the country in which they will be performed and to the United States.

Studies have been developed on the health effects of airborne particulate matters, body transport and disposal of toxic chemicals and radioactive constituents of uranium ore, effects of heat on cardiopulmonary and other physiological function, respiratory tract diseases of workers in textile industries and the evaluation of isoniazid as a prophylaxis against progressive massive fibrosis. Projects being proposed include research on waste disposal, mathematical models on air pollution problems and health effects of industrial exposures.

Developments during the past year

Projects have been consummated in Poland, Yugoslavia, and Israel. Negotiating teams are working with scientists in India and projects of mutual interest have been drafted. Additional proposals from Poland, Yugoslavia, and Israel are in process.

D. NATIONAL CENTER FOR HEALTH STATISTICS

The international studies supported by the National Center for Health Statistics under the special foreign currency program are directed toward extending practical knowledge on how to measure various aspects of human populations as related to health and demography. Current projects in Egypt, India, and Pakistan are concerned with several problems of measuring population change, birth rates, and death rates by means of various types of survey mechanisms and theoretical models of population. In India and Egypt, comparative studies of physical growth and development are being carried on. In Yugoslavia, a study of methods for measuring medical care utilization is nearing completion in collaboration with projects in England and the United States testing identical methods. Another study in Yugoslavia is continuing on the problems of measuring several factors in infant mortality. Also, in Yugoslavia, a study is being initiated on the health impact of transition from rural agricultural to urban industrial in a population with special reference to mental health as related to conditions in industry. In Poland, a study of chronic respiratory disease epidemiology with special reference to air pollution is being started with a view to improving the technology of measurement and

obtaining further data on the problem. An incidental accomplishment of all these studies is the increase in research capability and resources they stimulate.

Developments during the past year.

None of the projects sponsored by the National Center for Health Statistics have reached completion. However, two studies have progressed far enough to produce quite definite and substantial results.

In Pakistan, the population growth estimation study has clearly demonstrated the feasibility and value of a method for measuring population growth and vital rates in the absence of effective birth and death registration in the country as a whole. The Government of Pakistan is using the preliminary results to revise their economic plans which were based on a lower estimate of growth than shown in the study. The Government of Thailand has adopted the methods developed by the Pakistan study and instituted their own study of Thai population growth with apparent success. These methods have direct application to all the developing countries, all of whom lack reliable information on their population growth and change from year to year. The method is also applicable to special problem areas of the more advanced countries and makes a substantial contribution to methods for studying demographic change.

In Yugoslavia, a study to develop methods for measuring the use of medical care resources by the population and appraise the feasibility of the methods for producing data susceptible of comparison between several countries has demonstrated its success. The study has been carried out in collaboration with the University of Manchester, England, the University of Vermont, and the Johns Hopkins University. Surveys were made in one area in the United States, one in England, and one in Yugoslavia using identical procedures developed through the collaborative effort. Despite intercountry differences in social structure and organization, in the methods of furnishing medical care, and in actual health problems, the study has demonstrated that there are remarkable similarities in which the people of the three countries seek and view medical care. Direct comparisons can be made successfully and the validation parts of the research indicate that reliable information is being obtained in each country. The success of this study has prompted the World Health Organization staff to plan for utilizing the methods in a number of countries. The demonstration has prompted efforts in Yugoslavia, England, and the United States to apply the methodology to larger scale studies of medical care in problem areas.

Not the least accomplishment of the entire program is the demonstrated fact that research capability is being created and that the scientists engaged link themselves to American technology and research. This builds not only appreciation but admiration for the American point of view and extends research resources on problems with which American science is deeply concerned.

E. BUREAU OF MEDICAL SERVICES

The special foreign currency program of the Bureau of Medical Services is intended to supplement and complement the primary missions of the Bureau. Therefore, this program will be utilized to support research and training projects in a broad range of medical prob-

The Division of Hospitals has been negotiating with Indian and Pakistani investigators to establish projects which will involve the study of anemias, malnutrition, leprosy, and cataracts.

A clinical training program has been proposed whereby selected medical scientists from the United States will be sent abroad to study the diagnosis, treatment, and control of communicable and other diseases which are a potential public health menace in this country. Diseases of particular importance are smallpox, cholera, leprosy, malaria, plague, and trachoma. Scientists, receiving such training, will be better able to teach students, physicians, and other health personnel about these worldwide public health problems. Hopefully, this program will direct the clinical and research interests of some of the participants into public health.

Developments during the past year

In fiscal year 1965, an agreement was made with Pakistan involving a study of the prevalence and etiology of severe anemias in that country. The agreement was suspended in fiscal year 1966 due to the departure of the principal investigator from his country.

F. NATIONAL LIBRARY OF MEDICINE

In 1963, the Surgeon General of the Public Health Service delegated the National Library of Medicine authorities "(To act) as the principal resource within the Public Health Service for the improvement of the international exchange of published biomedical information through extramural support for the translation of foreign journals, monographs, critical reviews, announcement services, handbooks, data compendia, abstracts, indexes, etc., and the distribution of these translated materials to the American biomedical community."

The National Library of Medicine carries out these communication activities under its special foreign currency program in Poland, Israel, and Yugoslavia.

In previous years the special foreign currency program has been primarily concerned with the translation of foreign biomedical literature and the provision of the resulting English language publications to the U.S. scientific community. The library has now broadened the scope of its program to include specialized abstract and digest activities, preparation of histories of medicine and critical reviews. Translation activities are executed through a contractual arrangement involving the National Science Foundation and corresponding governmental entities in the host country, and these activities include the translation and publication of 10 biomedical Polish journals, three Yugoslav journals, selected serials and monographs, and Polish and Yugoslav directories of research. The library also is supporting specialized abstracting activities in the drug information field and in oral research.

The preparation and publication of critical reviews and histories of medicine are supported also by the library through a grant mechanism to foreign scholars and their institution or university.

Developments during the past year

During the past year, the library has broadened its scope of activities to include specialized abstracting and digest activities, preparations of histories of medicine, and critical reviews.

The library is supporting, in Israel, the scholarly translation of "History of Physicians" ("Ibn Abi Usaybi'ah"), a medieval Arabic

work of prime historical importance which has not been translated in its entirety into a western language.

Critical reviews have been programed in select areas of science by outstanding scientists.

Two positive steps have been taken in response to U.S. needs in the drug information field. These are two exploratory projects, one at the request of the Surgeon General, the drug digest project, and the other in cooperation with the Food and Drug Administration, the drug toxicity abstracts project.

The drug digest project has been initiated with a group of researchers, professors, and practitioners in Israel on a 1-year trial basis, to (1) to make important research on drugs published in foreign languages more readily available to U.S. scientists, and (2) to explore the effectiveness of packaging this information in the form of digests.

The drug toxicity abstracts project in Israel is a cooperative effort between the National Library of Medicine and the Food and Drug Administration (FDA) for the preparation of abstracts from 25 foreign journals in the drug field not now covered by the Food and Drug Administration in its *MLB Journal of Literature Abstracts* or by any other major abstract service.

There is presently no comprehensive abstract service covering the world's scientific literature in oral health, and dental science and practice. The library has responded to this need by programing for the preparation of abstracts in these fields under its special foreign currency program in Israel. This effort of the library is coupled with support by the National Institute of Dental Research, the Division of Dental Health, and American Dental Association. Thus, several elements of the Public Health Service are working cooperatively with a U.S. professional scientific organization to improve basic scientific communication. This represents an interesting cooperative effort which may well serve as a model for similar activities in other subject matter fields. This experiment has led to the establishment of a new *Oral Research Abstracts Journal* appearing in 1966.

Financing

Summaries of estimated obligations, by country, and PHS components are as follows:

Country	1964 actual	1965 actual	1966 estimate		
			Total	Medical research	Scientific communi- cations
Total.....	\$5,564,061	\$4,878,419	\$7,226,217	\$6,523,217	\$703,000
India.....	182,263	438,647	2,193,000	2,193,000	-----
Israel.....	1,008,870	1,099,310	1,490,500	1,130,500	360,000
Pakistan.....	1,016,615	1,171,480	400,000	400,000	-----
Poland.....	797,753	640,879	1,371,000	1,071,000	300,000
United Arab Republic (Egypt).....	384,230	751,085	1,099,717	1,069,717	-----
Yugoslavia.....	614,553	173,450	669,000	626,000	43,000
Brazil.....	² -13,115	² -1,136	-----	-----	-----
Burma.....	478,787	4,724	3,000	3,000	-----
Ceylon.....	-----	-----	-----	-----	-----
Tunisia.....	-----	-----	-----	-----	-----

¹ Portion for scientific communications: \$565,880 in 1964; \$616,042 in 1965.

² Credit due to change in rate of exchange.

Public Health Service components	1965 actual	1966 estimate
National Institutes of Health.....	\$3,162,329	\$2,201,967
Community health.....	687,666	2,923,250
Environmental health.....	107,774	838,000
National Library of Medicine.....	616,042	703,000
National Center for Health Statistics.....	304,586	550,000
Bureau of Medical Services.....	23	10,000
Total.....	4,878,419	7,226,217

Method of distribution

See "Application procedure" below.

Matching requirements

None.

Who may receive Federal aid

Scientists and scientific organizations of selected foreign countries. (See "Application procedure" below.)

Application procedure

A research proposal developed by a scientist or scientists within the foreign country is submitted to the Public Health Service. The proposal is forwarded to the appropriate bureau for technical review. In many cases, Bureau and host country scientists meet, either here or abroad, to review the research proposal.

After the technical review has been completed, an agreement is drawn up outlining all the features of the proposal. The agreement is then returned to the foreign country scientist through diplomatic channels. When the agreement has been signed by all concerned in the foreign country, it is returned to the cooperating PHS bureau for approval. Upon approval, copies of the agreement are furnished to all interested parties in this country and abroad; and the research is begun.

Legal basis

The PHS special foreign currency program is operated under authority granted under section 104(k) of Public Law 83-480, Agricultural Trade Development and Assistance Act of 1954, as amended; Executive Order 10900 (26 F.R. 143); and designation by the Director of the Budget in a letter to the Secretary of the Treasury, September 1, 1960.

Additional information may be obtained from the Surgeon General, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C.

NIH grants for international research and training by area, country, and program, fiscal year 1965

Area and country	Total	Inter- national postdoctoral fellowships	PHS fellows abroad	Training grants and direct traineeships	Visiting scientists	Research grants	Research contracts
		(A)	(B)	(C)	(D)	(E)	(F)
Total, all countries	\$17,861,343	\$1,199,445	\$2,400,341	\$764,110	\$1,172,219	\$11,466,768	\$858,460
Western Hemisphere, total	4,188,049	237,049	118,191	315,997	46,225	3,286,783	183,804
Canada	1,760,386		98,217	250,047	10,278	1,392,594	9,250
Latin America, total	2,427,663	237,049	19,974	65,950	35,947	1,894,189	174,554
Argentina	337,268	20,714			21,937	294,617	
Brazil	314,518	4,365	6,820		9,479	298,854	
Chile	209,592	52,062				157,530	
Colombia	121,737	32,831	7,354			81,502	
Costa Rica	43,477	10,372				23,550	9,555
El Salvador	35,120	8,509				24,611	
Jamaica	48,530					26,010	22,520
Mexico	522,656	34,691	5,800	65,950	4,531	269,205	142,479
Peru	471,026	44,683				424,343	
Uruguay	153,310	19,050				139,250	
Venezuela	167,429	7,712				159,717	
West Europe, total	7,825,432	525,293	2,049,285	354,904	561,621	3,961,138	373,191
Austria	67,832	18,267	6,995		975	41,595	
Belgium	169,368	19,310	11,960		10,627	126,942	
Denmark	321,896	35,432	42,551	13,928		125,852	106,633
Finland	196,843	38,270			7,291	151,282	
France	796,048	44,504	196,226	19,091	19,603	491,819	34,800
Germany, Federal Republic of	387,869	53,847	164,020	26,500	83,541	59,961	
Greece	116,037	12,173			2,794	101,076	
Iceland	41,545					41,545	
Ireland	70,024	31,943	6,661		600	30,820	
Italy	610,469	50,983	79,735	9,797	89,104	328,812	52,038
Netherlands	340,286	8,449	63,608	27,250	15,204	131,175	94,600
Norway	241,980	54,556	7,109			130,995	49,320
Portugal	13,526				5,426	8,106	
Spain	78,239	25,593			14,623	38,023	
Sweden	1,444,225	62,831	355,094	79,100	46,020	901,130	
Switzerland	307,702	11,943	170,838		41,120	143,861	
Turkey	14,617				14,617		
United Kingdom	2,476,351	45,621	944,488	179,238	207,307	1,063,897	35,800
Yugoslavia	70,545	13,021			2,764	54,760	

NIH grants for international research and training by area, country, and program, fiscal year 1965—Continued

Area and country	Total	Inter- national postdoctoral fellowships (A)	PHS fellows abroad (B)	Training grants and direct traineeships (C)	Visiting scientists (D)	Research grants (E)	Research contracts (F)
Total, all countries—Continued							
East Europe, total	106,357	54,944	6,164		45,249		
Czechoslovakia	18,848		6,164		12,684		
Hungary	12,326				12,326		
Poland	75,183	54,944			20,239		
Africa, total	406,485	43,562	22,325		20,059	320,539	
Egypt	6,825		6,825				
Ghana	7,284	7,284					
Kenya	14,561					14,561	
Liberia	37,916					37,916	
Nigeria	31,950					31,950	
Senegal	6,000		6,000				
South Africa, Republic of	292,449	36,278			20,059	236,112	
Uganda	9,500		9,500				
Middle East, total	1,319,910	54,645	117,835		64,990	1,082,440	
Israel	1,118,333	54,645	117,835		48,860	896,993	
Lebanon	201,577				16,130	185,447	

Southeast Asia and Far East, total	2,684,754	283,952	86,541	19,567	431,007	1,798,646	65,041
Australia	778,981	53,955	65,100		71,020	569,056	19,850
India	108,561	22,447			48,783	37,381	
Indonesia	10,310				10,310		
Iran	46,759				10,059	36,700	
Iraq	10,250				10,250		
Japan	1,362,152	53,122	21,441	19,567	236,181	986,650	45,191
Korea	32,910				12,164	20,746	
Malaysia	17,581					17,581	
New Zealand	117,936	49,434				68,502	
Philippines	49,791	25,871			12,000	11,920	
Taiwan	116,249	58,929			20,290	37,630	
Thailand	33,274	20,194				13,080	
Stateless	3,088				3,088		
International organizations, total	1,327,288			73,642		1,017,222	236,424
Institute of Nutrition of Central and South America	551,048			55,642		361,496	133,910
Pan American Health Organization	218,028					177,209	40,819
World Health Organization	385,695					341,000	44,695
Other	172,517			18,000		137,517	17,000

Number of NIH grants for international research and training by areas, country, and program, fiscal year 1965

Area and country	Total	Inter- national postdoctoral fellowships (A)	PHS fellows abroad (B)	Training grants and direct traineeships (C)	Visiting scientists (D)	Research grants (E)	Research contracts (F)
Total, all countries	1,499	166	314	41	156	801	21
Western Hemisphere, total	266	35	19	7	7	194	4
Canada	96		16	6	3	70	1
Latin America, total	170	35	3	1	4	124	3
Argentina	29	4			2	23	
Brazil	34	1	1		1	31	
Chile	18	8				10	
Colombia	10	4	1			5	
Costa Rica	4	1				2	1
El Salvador	3	1				2	
Jamaica	4					3	1
Mexico	30	5	1	1	1	21	1
Peru	23	8				15	
Uruguay	7	2				5	
Venezuela	8	1				7	
Western Europe, total	777	74	265	31	76	320	11
Austria	12	2	1		1	8	
Belgium	23	5	3		2	13	
Denmark	32	4	5	2		19	2
Finland	20	5			2	13	
France	68	6	24	3	3	31	1
Germany, Federal Republic of	52	7	23	3	10	9	
Greece	11	2			1	8	
Iceland	2					2	
Ireland	9	4	1		1	3	
Italy	59	8	9	1	10	29	2
Netherlands	32	1	9	2	2	16	2
Norway	25	7	1			16	1
Portugal	2				1	1	
Spain	13	5			2	6	
Sweden	109	8	37	6	6	52	
Switzerland	37	2	19		4	12	
Turkey	1				1		

United Kingdom	260	6	133	14	29	75	3
Yugoslavia	10	2			1	7	
Eastern Europe, total	13	7	1		5		
Czechoslovakia	2		1		1		
Hungary	2				2		
Poland	9	7			2		
Africa, total	28	5	3		2	18	
Egypt	1		1				
Ghana	1	1					
Kenya	1					1	
Liberia	2					2	
Nigeria	1					1	
Senegal	1		1				
South Africa, Republic of	20	4			2	14	
Uganda	1		1				
Middle East, total	105	8	15		10	72	
Israel	90	8	15		9	58	
Lebanon	15				1	14	
Southeast Asia and Far East, total	284	37	11	1	55	178	2
Australia	56	5	8		8	34	1
India	15	3			8	4	
Indonesia	1				1		
Iran	3				1	2	
Iraq	1						
Japan	156	7	3	1	32	112	1
Korea	3				1		
Malaysia	2				1		
New Zealand	15	6				9	
Philippines	9	6			1	3	
Taiwan	16	8			2	6	
Thailand	7	3				4	
Stateless	1				1		
International organizations, total	25			2		19	4
Institute of Nutrition of Central and South America	10			1		8	1
Pan American Health Organization	4					3	1
World Health Organization	4					3	1
Other	7			1		5	1

Source: Office of International Research, Program Analysis Section, Jan. 4, 1966.

MEDICAL LIBRARIES

GRANTS FOR IMPROVING AND EXPANDING THE BASIC RESOURCES OF MEDICAL LIBRARIES AND RELATED INSTRUMENTALITIES

Purpose

The Medical Library Assistance Act of 1965 authorizes a program of grants to improve and expand the resources of public and private nonprofit medical libraries and related instrumentalities. Funds from these grants may be employed for but are not limited to the following uses: (1) Acquisition of books, journals, photographs, motion picture and other films, and other similar materials; (2) cataloging, binding, and other services and procedures for processing library resource materials for use by those who are served by the library or related instrumentality; and (3) acquisition of duplication devices, facsimile equipment, film projectors, recording equipment, and other equipment to facilitate the use of the resources of the library or related instrumentality by those who are served by it; and (4) introduction of new technologies in medical librarianship.

Financing

The Medical Library Assistance Act authorizes the appropriation of \$3 million per year for 5 years beginning with fiscal year 1966.

Method of distribution

Applications are reviewed for eligibility and adequacy of plan for utilization of funds granted. Advice is sought from panels of non-Federal experts.

Matching requirements

There are no specific matching requirements. Grants made under this section may not exceed certain limits as set forth in the Medical Library Assistance Act.

Who may receive Federal aid

Grants may be made to public or private nonprofit institutions on behalf of their medical libraries and related scientific communication instrumentalities.

Application procedure

Application must be made on forms prescribed by the National Library of Medicine.

Developments during the past year

Planning activities have been carried out to develop this program.

Legal basis

Public Law 89-291 (adds sec. 397 to the Public Health Service Act).

Additional information may be obtained from the Associate Director for Extramural Programs, National Library of Medicine, Department of Health, Education, and Welfare, Bethesda, Md.

GRANTS FOR ESTABLISHMENT OF REGIONAL MEDICAL LIBRARIES

Purpose

The purpose of this program of grants is to assist in the development of a national system of regional medical libraries, each of which

would have facilities of sufficient depth and scope to supplement the services of other medical libraries within the region served by it. The uses for which grants made under this program may be employed include, but are not limited to, the following: (1) Acquisition of books, journals, and other similar materials; (2) cataloging, binding, and other procedures for processing library resource materials for use by those who are served by the library; (3) acquisition of duplicating devices and other equipment to facilitate the use of the resources of the library by those who are served by it; (4) acquisition of mechanisms and employment of personnel for the speedy transmission of materials from the regional library to local libraries in the geographic area served by the regional library; and (5) construction, renovation, rehabilitation, or expansion of physical plant considered necessary by such library to carry out its proper functions as a regional library.

Financing

The Medical Library Assistance Act authorizes the appropriation of \$2.5 million per year beginning with fiscal year 1966.

Method of distribution

The Surgeon General, in awarding grants under this program, must give priority to medical libraries having the greatest potential of fulfilling the needs for regional medical libraries. In determining the priority to be assigned to any medical library, he will consider the need of such library, as determined by the levels of research, teaching, and medical activities of the library in relation to other existing library and medical communication services in the region; the adequacy of the library (in terms of collections, personnel, equipment, and other facilities) as a basis for a regional medical library; and the size and nature of the population to be served in the region in which the library is located.

Matching requirements

There are no specific matching requirements. Grants made under this program for basic resource materials may not exceed 50 percent of a library's average annual operating budget.

Who may receive Federal aid

Public and nonprofit institutions may apply on behalf of those medical libraries agreeing to modify and increase their library resources so as to be able to provide supportive services to other libraries in the region, as well as to individual users of library services; to provide free loan service to qualified users; and to make available photoduplicated or facsimile copies of biomedical materials which qualified requesters may retain.

Application procedure

Application must be made on forms prescribed by the National Library of Medicine.

Developments during the past year

Planning activities have been carried out to develop this program.

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Legal basis

Public Law 89-291 (adds sec. 398 to Public Health Service Act).

Additional information may be obtained from the Associate Director for Extramural Programs, National Library of Medicine, Department of Health, Education, and Welfare, Bethesda, Md.

MEDICAL LIBRARY CONSTRUCTION GRANTS

Purpose

The Medical Library Assistance Act of 1965, Public Law 291 of the 89th Congress, authorized a program of grants to assist in the construction of new or the rehabilitation of existing medical library facilities.

Financing

The Medical Library Assistance Act authorizes the appropriation of \$10 million per year for 4 years beginning with fiscal year 1967.

Method of distribution

The Surgeon General may make awards for those applications recommended for approval by the National Medical Libraries Assistance Board. The Board of Regents of the National Library of Medicine constitutes and serves as the National Medical Libraries Assistance Board.

Matching requirements

Grants made under this program may not exceed 75 percent of the necessary cost of construction of the facility.

Who may receive Federal aid

These grants may be made to public or private nonprofit agencies or institutions.

Application procedure

Applications for construction grants are made on forms prescribed by the National Library of Medicine.

Developments during the past year

Planning activities have been carried out to develop the program.

Legal basis

Public Law 89-291 (adds sec. 393 to the Public Health Service Act).

Additional information may be obtained from the Associate Director for Extramural Programs, National Library of Medicine, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

MENTAL HEALTH

Purpose

The purpose of this grant is to assist the States in establishing, maintaining, and expanding community mental health services in an effort to improve the mental health of the people of the United States and to prevent and curtail the need for hospital care of the mentally ill. Annual appropriation acts, beginning with fiscal year 1948, have included in the appropriation for mental health activities

an amount for State grants. In its action on the 1963 and 1964 appropriations the Congress provided \$4.2 million each year to be used to assist States in the development of plans for comprehensive mental health programs. Grants are made to the mental health authority of each State; at present there are 36 States in which the mental health grant program is administered by an agency other than the State health department.

Financing

The current legislation under section 314(c), as amended, of the Public Health Service Act, authorizes an annual appropriation of \$50 million for each fiscal year from 1962 through 1966. This authorization includes formula grants to States for community mental health services, general health, the chronically ill and aged, radiological health, dental health, and home health services; and training grants to schools of public health and for certain direct operations (such as training and demonstrations) of the Public Health Service in carrying out the purposes of the program. The following table shows for selected years the authorizations, appropriations, and expenditures under the mental health grant program:

Fiscal year	Authori- zation	Appropri- ation	Expenditures	
			Federal ¹	State and local
1948	\$30,000,000	\$3,000,000	\$1,653,454	\$2,398,042
1953	30,000,000	3,100,000	3,049,736	10,136,368
1962	50,000,000	6,750,000	6,633,836	87,189,231
1963	50,000,000	² 10,950,000	6,306,465	90,713,537
1964	50,000,000	² 10,950,000	³ 10,371,243	106,559,006
1965	50,000,000	6,750,000	6,684,781	⁴ 119,950,163
1966	50,000,000	6,750,000	(⁵)	(⁵)

¹ Obligations.

² Of this amount, \$4,200,000 is comprehensive mental health planning.

³ Of this amount, \$3,539,906 is comprehensive mental health planning.

⁴ Provisional.

⁵ Not available.

Methods of distribution

Mental health grant funds are allotted among the States by a formula which, as provided by law, takes into consideration the population, financial need, and extent of the mental health problem in the various States.

Allotments are administratively adjusted to insure that each State receives a minimum grant based on the amount of the total appropriation. In 1948 the minimum grant was \$10,000; from 1949 through 1951, the minimum was \$20,000; 1952 and 1953, \$19,200; 1954 and 1955, \$17,700; 1956, \$19,000; 1957, 1958, and 1959, \$25,000; 1960 and 1961, \$40,000; 1962, \$65,000; 1963 \$115,000; 1964, \$115,000; 1965 and 1966, \$65,000.

Matching requirements

The expenditure of mental health grants must be matched by expenditures of an equal amount of State and local funds.

Who may receive Federal aid

Formula grant funds are allocated to the 50 States, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

Application procedure

Mental health authorities, as designated by the States, are eligible to receive formula grants upon submission and approval of a State plan for their use. The State plan, the equivalent of a grant application, is submitted to the PHS regional health director, who is authorized to give final approval.

Developments during the past year

Funds made available for comprehensive planning of State mental health programs for fiscal years 1963 and 1964 could be expended in fiscal years 1964 and 1965. This was planned as a 2-year program. Additional funds were not requested.

Legal basis

Section 314(d) of the Public Health Service Act as amended (42 U.S.C. 246(d)) cites the basic allotment factors of population, financial need, and extent of the mental health problems. Section 18, Public Law 896, 84th Congress, approved August 1, 1956, extends the mental health grant to Guam. Sections 51.1(c), 51.1(i), and 51.2(d) of the Public Health Service regulations (42 CFR) define these factors and section 51.3(d) prescribes the range of percentage distribution for each factor. Section 51.9(a) prescribes the matching ratio.

Additional information may be obtained from the Chief, Office of Field Operations, Office of the Director, National Institute of Mental Health, Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

MENTAL RETARDATION FACILITIES CONSTRUCTION

In October 1961, a presidential panel of outstanding consultants was appointed for the purpose of developing a national plan to combat mental retardation. The report of the panel, "A Proposed Program for National Action To Combat Mental Retardation" was submitted to the President in October 1962. The report outlined the size and scope of the problem in this country and provided a blueprint for a comprehensive program for action in this area. Particular attention was given to the lack of adequate facilities, the absence of a coordinated program of services for the retarded, and the limited research resources being devoted to mental retardation.

To assist the States and communities in providing adequate facilities and services, including research facilities, for the mentally retarded, Congress enacted the Mental Retardation Facilities Construction Act (Public Law 88-164) on October 31, 1963. This act, among other things, authorizes (a) project grants for the construction of mental retardation research centers; (b) project grants to assist in the construction of clinical facilities for the mentally retarded, associated with a college or university; and (c) formula grants for the construction of community facilities for the care of the mentally retarded.

The three mental retardation programs authorized by Public Law 88-164 are described in the succeeding pages.

A. MENTAL RETARDATION RESEARCH CENTER CONSTRUCTION

Purpose

Project grants are authorized to assist in the construction of centers for research on mental retardation and related aspects of human development, whether biological, medical, social, or behavioral.

Financing

Fiscal year	Authori- zation	Appropri- ation	Expenditures	
			Federal ¹	Matching
1964.....	\$8,000,000	\$6,000,000	None	
1965.....	8,000,000	8,000,000	\$13,740,000	\$5,957,651
1966.....	6,000,000	6,000,000	(²)	

¹ Obligations.

² Not available.

Methods of distribution

Funds for construction of mental retardation research centers are distributed in response to grant applications from eligible public and private nonprofit institutions which the Surgeon General determines are competent to engage in the type of research for which the facility is to be constructed and can provide the assurances outlined in the act, as follows: (1) use of the facility for the purposes for which it was constructed for not less than 20 years after completion and (2) that sufficient funds will be available to meet the non-Federal share of the cost of construction and for the effective use of the facility. The review of applications and the administration of this program are shared by the National Institute of Child Health and Human Development and the Division of Research Facilities and Resources. Grants are awarded by the Surgeon General.

Matching requirements

The total amount of the grants with respect to any project for the construction of a facility under this program may not exceed 75 percent of the necessary cost of construction of the center as determined by the Surgeon General.

Who may receive Federal aid

Universities and other public and private nonprofit institutions which the Surgeon General determines to be competent to engage in the type of research for which the facility is to be constructed may apply for funds under this program.

Application procedure

The application (PHS Form 4687) must be executed by an official or officials legally authorized by the applying agencies, corporations, or associations to make on their behalf such application and to provide the required assurances outlined in the program regulations.

The application includes detailed information on the proposed research program and construction plans for the facility, in addition to plans for budgeting, staffing, and managing the center. Informa-

tion on the research program includes a description of the need for such research, and the effectiveness of the proposed facilities in expanding the Nation's capacity for research and related purposes in the field of mental retardation and related aspects of human development and advancing scientific knowledge pertaining to mental retardation and related aspects of human development.

The application is received by the Division of Research Grants, assigned an official number, entered into the electronic computer data system, duplicated and forwarded to the Division of Research Facilities and Resources and the National Institute of Child Health and Human Development. It is then evaluated and reviewed jointly by the National Advisory Child Health and Human Development Council and the National Advisory Council for Health Research Facilities and Resources.

Developments during the past year

None.

Legal basis

Part A of title I of the Mental Retardation Facilities and Community Mental Health Centers Construction Act of 1963 (Public Law 88-164), an amendatory addition on part D to title VII of the Public Health Service Act (Public Law 410, 1944).

Additional information may be obtained from the Chief, Division of Research Facilities and Resources, and the Director, National Institute of Child Health and Human Development, National Institutes of Health, Public Health Service, Department of Health, Education and Welfare, Bethesda, Md., 20014.

B. UNIVERSITY-AFFILIATED CLINICAL FACILITY CONSTRUCTION

Purpose

Project grants are authorized to be used in the construction of facilities which will include, as nearly as practicable, a full range of clinical services, both inpatient and outpatient, for the mentally retarded, and which will (1) aid in demonstrating the provision of specialized services for diagnosis and treatment, education, training, or care of the mentally retarded; and (2) aid in the clinical training of physicians and other specialized personnel needed for such work or for research in mental retardation.

Financing

	Authoriza- tion	Appropriation	Federal ex- penditures ¹
Fiscal year:			
1964.....	\$5,000,000	² \$5,000,000	None
1965.....	7,500,000	² 7,500,000	\$7,223,310
1966.....	10,000,000	² 10,000,000	(*)

¹ Obligations.

² Available until expended.

* Not available.

Method of distribution

Funds for construction of college or university-affiliated clinical facilities for the mentally retarded are granted on the basis of applications approved by the Secretary of Health, Education, and Welfare.

Matching requirements

The amount granted to an applicant institution may not exceed 75 percent of the necessary cost of construction of the proposed project.

Who may receive Federal aid

Public and nonprofit agencies sponsoring facilities which are owned by or affiliated with a university or college may apply for grants under this program.

Application procedure

Applications should be submitted to the Division of Research Grants, National Institutes of Health, U.S. Public Health Service, Bethesda, Md., 20014. Application forms and other pertinent material may be obtained from the Division of Hospital and Medical Facilities, Bureau of State Services, Public Health Service, which is responsible for administering the program.

Developments during the past year

A total of 10 projects have been approved, for which over \$16 million have been funded.

Legal basis

Title I, part B of the Mental Retardation Facilities Construction Act of 1963 (Public Law 88-164) (42 U.S.C. 2661-2665).

Additional information may be obtained from the Chief, Division of Hospital and Medical Facilities, Public Health Service, Department of Health, Education, and Welfare, 7915 Eastern Avenue, Silver Spring, Md., 20910.

C. CONSTRUCTION OF FACILITIES FOR MENTALLY RETARDED

Purpose

The purpose of this formula grant program is to assist in the construction of public and other nonprofit facilities for the mentally retarded. These facilities may provide diagnostic, treatment, education, training, or custodial care services, as well as facilities for training specialists.

Financing

Funds unobligated in the fiscal year for which appropriated remain available for the next fiscal year.

	Authoriza- tion	Appropria- tion	Federal ex- penditures
Fiscal year:			
1965.....	\$10,000,000	\$10,000,000	(1)
1966.....	12,500,000	12,500,000	(1)

¹ Not available.

Method of distribution

Allotments to the States from the annual appropriation for mental retardation facility construction are made as follows: Two-thirds on the basis of the population of each State weighted by State financial need and one-third on the basis of the extent of the need for mental retardation facilities, for which State population under age 21 is used.

The act provides for a minimum allotment of \$100,000 to any State or territory, other than the Virgin Islands, American Samoa, and Guam.

Matching requirements

The rate of Federal participation is established by the State administering agency each fiscal year and applies to all projects approved during such fiscal year. In adopting the rate of Federal participation the following alternatives are available to the State agency:

(a) A uniform rate for all projects which may be an amount not less than $33\frac{1}{3}$ percent nor more than either $66\frac{2}{3}$ percent or the State's Federal percentage, whichever is the lower.

(b) A variable rate between areas of the State within the range of $33\frac{1}{3}$ and $66\frac{2}{3}$ percent based upon economic status of areas, and other relevant factors as established in the approved State plan.

Who may receive aid

Private nonprofit organizations, State, and other public agencies are eligible to receive a grant for the construction of mental retardation facilities, providing that the proposed project meets a community need as determined by the administering State agency and is included in the State plan. Projects may consist of the construction of completely new facilities or the remodeling or expansion of existing facilities.

Application procedure

The sponsor (or owner) at the local level should consult with the State agency responsible for administering the mental retardation facility program within his State.

The State agency will advise the applicant of the eligibility of the proposed project and the possibility of receiving a grant under this program. If the project is of sufficiently high priority and in line for consideration, the State agency will make available the application forms, PHS-62-1 through PHS-62-8, that must be filed and other material pertinent to the proposed project. All application documents including plans and specifications must be reviewed and approved by the State agency. The agency, in turn, transmits the documents, along with its approval and recommendations, to the regional office of the Public Health Service for final approval.

Developments during the past year

The initial State plans are in the process of development and approval. Twenty-two plans have already been approved.

Legal basis

Title I, part C, of the Mental Retardation Facilities Construction Act of 1963 (Public Law 88-164) (42 U.S.C. 2671-2677).

Additional information may be obtained from the Chief, Division of Hospital and Medical Facilities, Public Health Service, Department of Health, Education, and Welfare, 7915 Eastern Avenue, Silver Spring, Md., 20910.

MENTAL RETARDATION

IMPLEMENTATION PROJECT GRANTS

Purpose

The objective of this program is to extend the grant program begun under Public Law 88-156, which was to assist the States (including the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa) to plan for and take other steps leading to comprehensive State and community action to combat mental retardation. The current program would, therefore, enable the States to carry out planning and to begin implementing their comprehensive plans to combat mental retardation.

Financing

The sum of \$2.75 million was appropriated for this program for the fiscal year ending June 30, 1966, to be available for that year and the next 2 fiscal years (through June 30, 1968). This \$2.75 million is authorized for the fiscal year ending June 30, 1967, to be available for that year and the next fiscal year (through June 30, 1968).

Method of distribution

The funds appropriated in fiscal year 1966 are earmarked on the basis of population with adjustment to insure that no eligible jurisdiction has less than \$35,000.

Matching requirements

Each State which receives a grant will need to spend on mental retardation planning and implementation during the grant period and from sources other than this grant at least \$1 for every \$3 of expenditures from this grant.

Who may receive Federal aid

A single State agency (which may be an interdepartmental agency) is designated by the Governor as the sole agency for carrying out the purposes of this grant program in each State.

Application procedure

The basic steps in processing an application are as follows:

- (1) The designated State agency submits a grant application, (PHS 4744-1) to the appropriate Public Health Service regional health director.
- (2) The application is reviewed on an interagency basis in the regional office and in the Mental Retardation Branch of the Division of Chronic Diseases by a committee made up of representatives from interested DHEW agencies and the Departments of Labor and Interior. This committee then makes recommendations to the Chief, Division of Chronic Diseases.
- (3) Final determination concerning each project is made by the Chief, Division of Chronic Diseases.

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Development during the past year

Basic planning grants of \$30,000 each were allocated and awarded to all the eligible jurisdictions (except American Samoa which did not apply) under Public Law 88-156. Supplemental planning funds, totaling \$579,998, were awarded to a total of 35 eligible jurisdictions for a variety of extended planning projects. The majority of States are well along in their planning, and are discovering areas of concern that will require considerable coordination of activities. Each State is in process or has completed a publication covering the year of planning.

Legal basis

Title XVII of the Social Security Act, as amended (Public Law 89-97).

Additional information may be obtained from the Chief, Division of Chronic Diseases, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

MENTAL RETARDATION

PROJECT GRANTS

Projects for community services

Purpose

Grants are made available to stimulate the development, expansion, or improvement of community service activities which identify and deal with the problems of mental retardation. The activities may involve the preventive, diagnostic, treatment, and habilitative aspects of mental retardation and may include services to patients, population screening programs, demonstration of techniques to health personnel, the establishment of referral procedures, etc.

Financing

Fiscal year	Appropriation	Federal expenditures ¹
1965.....	\$700,000	\$399,403
1966.....	4,500,000	(²)

¹ Obligations.
² Not available.

Method of distribution

Financial grants are made available on the recommendation of a review committee of outside consultants and approval of a grant application by the Surgeon General or his designee.

Matching requirements

None.

Who may receive Federal aid

Any State or local public agency or any nonprofit private agency, institution, or organization in the United States (including District of Columbia, Guam, Puerto Rico, and the Virgin Islands) is eligible to apply for community service grants.

Application procedure

The grant application form is PHS 4744-1. The deadline for receipt of completed applications is March 15, July 15, and November 1, for review by non-Federal review panel meetings in May, September, and January, respectively. New applications, from national agencies are submitted directly to the Office of Grants Management, Bureau of State Services. Other applications (including those submitted by local affiliates of national agencies) are transmitted through the appropriate State health officer and regional health director to the Office of Grants Management.

Developments during the past year

In the past year 11 official and voluntary agencies as well as medical and allied professional training institutions in 10 States received \$446,000 in grants to implement varied programs establishing or improving community health services for persons affected by mental retardation.

Legal basis

The 1966 Appropriation Act, Public Law 89-156.

Additional information may be obtained from the Chief, Division of Chronic Diseases, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

MENTAL RETARDATION

PROJECT GRANTS FOR TRAINING

Purpose

Grants are made available for training physicians and allied health personnel for community services in the detection, diagnosis, treatment, and habilitation of mentally retarded individuals. Eligible training programs include regular academic programs, short courses, institutes, seminars, etc., or special demonstrations of better methods of manpower utilization and new teaching techniques. Grants are made (1) to institutions for program expansion or improvement, curriculum enrichment, and trainee stipends; and (2) to individuals to receive traineeships for specialized experience.

Financing

Mental retardation training grants are part of the total funds authorized by the annual appropriation act for chronic diseases control; and, therefore, there are no statutory limitations on the amount authorized for appropriation. The amount programed for training activities is determined by administrative decision. In fiscal year 1966 approximately \$2.5 million has been programed for these activities.

Method of distribution

Mental retardation training project funds are awarded upon approval of grant applications by the Surgeon General or his designee (Chief, Division of Chronic Diseases).

Matching requirements

None.

Who may receive Federal aid

Any State or local public agency or any nonprofit private agency, institution, or organization in the United States including District of

Columbia, Guam, Puerto Rico, and the Virgin Islands, is eligible to apply for a training grant. To be considered for a training grant, the institution must have an accredited or acceptable program.

Individual traineeships are available to allied health personnel for specialized training and to physicians with clinical experience for additional training in the mental retardation field.

Application procedure

New applications (PHS form 4744-1) for service training grants by academic institutions and national agencies are submitted to the Office of Grants Management, Bureau of State Services. Individual traineeships are submitted directly to the Mental Retardation Branch.

Developments during the past year

Efforts to increase the number of medical and allied personnel with the specialized skills necessary to provide community health services nationally were enhanced by eight individual traineeships amounting to \$59,000.

A total of 12 institutional grants were made for training involving \$256,000.

Legal basis

The 1966 Appropriation Act, Public Law 89-156.

Additional information may be obtained from the Chief, Division of Chronic Diseases, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

MIGRANT HEALTH

Purpose

Public Law 89-109 was enacted on August 5, 1965, to extend section 310 of the Public Health Service Act through June 30, 1968. This law permits funds to be made available for migrant health project grants to assist in improving health conditions and in planning, developing, expanding, and improving health services for domestic agricultural workers and their families. More specifically, funds are to be available to pay part of the cost of the following: (1) Setting up and operating family health service clinics; and (2) developing other types of special projects to improve health services and conditions, including the provision of necessary in-patient hospital care.

Financing

The law authorizes appropriations not to exceed \$7 million for the fiscal year ending June 30, 1966, \$8 million for the fiscal year ending June 30, 1967, and \$9 million for the fiscal year ending June 30, 1968. Authority for this program expires on June 30, 1968.

	Authoriza- tion ¹	Appropria- tion ¹	Federal ex- penditures ²
Fiscal year:			
1963.....	\$3,000,000	\$750,000	\$750,000
1964.....	3,000,000	1,500,000	1,499,941
1965.....	3,000,000	2,500,000	2,336,370
1966.....	7,000,000	3,000,000	(3)

¹ Authorization is for a total of \$7,000,000 including direct operations. Amounts shown under "Appropriation" are for grants only.

² Obligations.

³ Not available.

Method of distribution

Assistance is in the form of a financial grant. Funds are available upon approval of a grant application by the Surgeon General or his designee, after review and recommendation by a national review committee.

Matching requirements

No fixed matching ratio. Grantee pays "a part" of the cost which varies from project to project depending upon the relationship between the magnitude of the problem and other available resources.

Who may receive Federal aid

State and local health departments and other public agencies, or nonprofit private agencies, institutions, or organizations in the United States (including the District of Columbia, Guam, Puerto Rico, and the Virgin Islands) are eligible to apply for grants under this program.

Application procedure

Applications (PHS form 4744-1) from national or regional agencies may be submitted directly to the Office of Grants Management, Bureau of State Services (Community Health). All other applications (including those submitted by local affiliates of national agencies) are to be transmitted through the State health agency of the State in which the applicant is located. Application forms may be obtained from State health departments, regional offices of the Public Service, the Division of Community Health Services, or the Office of Grants Management, Bureau of State Services (Community Health).

Developments during the past year

Up to December 31, 1965, the Public Health Service has assisted 69 projects serving from one to a dozen or more counties in 33 States and Puerto Rico. The projects varied in the nature and scope of their services. They provided medical treatment for illness or injury, immunizations, case finding and treatment of communicable diseases, pre- and post-natal care, and other preventive and curative services. Family health service clinics to provide medical care have been scheduled at night in or near farm labor camps; nurses, sanitarians, and health educators have been employed; dental services are being provided; and efforts are being implemented to tie the services of one project area to those of others in the same migratory stream.

Legal basis

Section 310 of the Public Health Service Act, as amended by Public Law 89-109 (42 U.S.C. 242(h)).

Additional information may be obtained from the Chief, Division of Community Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

NATIONAL HEART INSTITUTE GRADUATE CLINICAL TRAINING GRANT PROGRAM*Purpose*

Graduate clinical training grants are awarded to nonprofit institutions to provide advanced clinical training in disciplines relating to cardiovascular disease. These grants are intended to establish and

extend specialized clinical cardiovascular training programs in order to increase the number of facilities providing scholarly training and instruction in these areas, particularly in regard to methods and techniques that have resulted from research advancements. The program is aimed at meeting national personnel shortages by increasing the number of individuals having special competence in matters relating to diagnosis, prevention, and treatment of cardiovascular disease.

This training grant program is directed primarily toward advanced training of physicians at the postresidency level and is not intended to support routine clinical residency training. Although the primary aim of this program is to increase the number of well-trained physicians with specialized clinical skills relevant to cardiovascular disease, it is anticipated that many of these training programs will include some involvement with advancements in related research areas and disciplines.

Financing

This is a new program, financed from funds appropriated for graduate training grants. No specific amount of this appropriation has been earmarked for clinical training.

Method of distribution

In addition to administrative review by NHI staff, training grant applications undergo dual review by advisory bodies composed primarily of non-Federal scientists. The first review, to determine scientific merit, is by a training committee; the second, by the National Advisory Heart Council. The Council advises on program development as well as recommending to the Surgeon General, from a broad policy standpoint, those applications which in their judgment should be approved, disapproved, or deferred for further consideration.

The primary factors considered in the evaluation of clinical training grant applications are the significance and relevance of the proposed training program; adequacy of the leadership, faculty, and facilities; and the training record of the program director, institution, and department concerned.

Stipends and allowance to individual trainees under this program conform to present PHS guidelines governing trainee stipends. The amount of the overall training grant to the training institution depends upon the applicant's request and justification and the availability of Federal funds.

Matching requirements

None.

Who may receive Federal aid

Only public and other nonprofit institutions are eligible for training grants. Applications for clinical training grants will be accepted from institutions that have fully accredited residency training programs in the specialty fields pertinent to the proposed training program. Trainee stipend support can be provided only to individuals who are U.S. citizens or who have been admitted to the United States for permanent residence.

Application procedure

Applications for training grants are made on PHS form 2499, submitted to the Division of Research Grants, National Institutes of Health. The following deadlines have been established for receipt of applications.

October 1 for review by March Council.

February 1 for review by June Council.

June 1 for review by November Council.

Developments during the past year

Program inaugurated during fiscal year 1966.

Legal basis

Public Health Service Act, 412 (g).

NATIONAL LIBRARY OF MEDICINE PUBLICATIONS

Purpose

The publications and translations activities of the National Library of Medicine facilitate the utilization of recorded information by research scientists and health practitioners through the conduct of programs that provide support for—

(a) The preparation and/or publication of critical reviews, handbooks, abstracts, indices, bibliographies, and similar publications important to the national health effort; and

(b) The translation of biomedical literature.

Support may be through either a grant or contract mechanism.

Financing

Fiscal year	Appropriation	Federal expenditures ¹
1962	\$412,000	\$389,000
1963	427,000	405,000
1964	580,000	551,000
1965	525,000	498,000
1966	545,000	(2)

¹ Obligations (estimated).

² Not available.

Method of distribution

Grant proposals are evaluated by committees of non-Federal experts and by the Board of Regents of the National Library of Medicine before awards are made by the Surgeon General. The criteria used are—

1. The importance of and need for the proposed publication, its relationship to existing literature, the validity of the investigator's approach.

2. Competence of the investigator.

3. The availability of suitable resources for executing the project.

4. The adequacy and appropriateness of the budget in relation to the project.

Matching requirements

None.

Who may receive Federal aid

Funds may be made available to public or private nonprofit universities, colleges, professional schools, and other nonprofit institutions on behalf of a named investigator. Under certain circumstances awards can be made to individual scientists.

Application procedure

Applications for grants are made on PHS form 398 (rev. 1-65), and must be executed by an official authorized to sign for the applicant's institution. Applications are submitted to the Division of Research Grants, NIH.

Developments during the past year

Major developmental efforts during the past year have been devoted to evaluation, planning, and programing.

Legal basis

Section 301 (h) of the Public Health Service Act and section 399 of the Medical Library Assistance Act.

Additional information may be obtained from the Chief, Publications and Translations Division, National Library of Medicine, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

NATIONAL LIBRARY OF MEDICINE—TRAINING

Purpose

The purpose of these awards is to contribute to improvements in the public health by increasing the number of highly skilled individuals engaged in careers in the health information specialties. A training grant provides funds to an institution to help defray the costs of training while the direct traineeship provides funds directly to individual trainees to enable them to undertake special training at institutions of their choice.

Training grants and direct traineeships are utilized to assist in the training or retraining of medical librarians and other health information specialists either in nondegree or postbaccalaureate-degree programs and for training in the history of the life sciences.

Financing

Funds have been appropriated as follows:

Fiscal year:

1965-----	\$65,000
1966-----	65,000

Method of distribution

Training grant applications are evaluated by groups of eminent authorities in the fields concerned by criteria which include the qualifications and record of the training program director, the record and resources of the institution, and the merits of the proposed training program.

Direct traineeship applications are evaluated by one or more groups, primarily of non-Federal consultants, who evaluate applications on the basis of the applicant's professional and academic history, his let-

ters of reference, the sponsor's and institution's qualifications, and the merits of the proposed training program.

Training grants and direct traineeships are awarded by the Surgeon General.

Matching requirements

None.

Who may receive Federal aid

Public and private nonprofit institutions may be awarded training grants. Direct traineeship awards are made to qualified individuals.

Application procedure

See Research Training and Traineeships, National Institutes of Health.

Developments during the past year

Planning and programing activities have been carried out to develop the training program.

Legal basis

Public Law 78-410, section 301 and Public Law 89-291.

Additional information may be obtained from the Chief, Research and Training Division, Extramural Programs, National Library of Medicine, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

NATIONAL PRIMATE RESEARCH CENTER PROGRAM

Purpose

To provide a series of facilities in the United States to meet a recognized need for large-scale research studies on nonhuman primates.

Research on the nervous system, basic mechanisms of behavior, reproductive biology, and studies in infectious diseases such as yellow fever, malaria, tuberculosis, and poliomyelitis had previously demonstrated the uniqueness of nonhuman primates as a laboratory species. Initiated by the National Heart Institute in 1959, the responsibility for administering the program was transferred to the Division of Research Facilities and resources at the time of its organization in 1962.

Financing

The centers are financed by Public Health Service grants awarded to universities or foundations which serve as host institutions and are responsible for the centers' operations and administration. Each award provided two grants: a construction grant (which in some instances included land purchase) and an operations grant. The operations grant is a commitment of funds at established levels up to 7 years in advance. It provides for overall scientific and management review at the fourth or fifth year, at which time recommendations for future commitments up to 7 years are made. During interim periods, additional operating funds may be sought by the submission of supplemental applications which are subject to scientific review procedures. In addition, discrete project grants and/or contracts may be applied for by the scientific staff.

	Appropriation	Obligations
Fiscal year:		
1960.....	\$2,000,000	\$1,017,000
1961.....	7,000,000	6,881,000
1962.....	9,000,000	9,495,000
1963.....	6,000,000	4,444,000
1964.....	5,700,000	6,191,000
1965.....	7,000,000	7,000,000
1966.....	7,000,000	7,000,000

¹ Includes funds for construction.

Methods of distribution

"Regionality" included obvious implications of geography as well as scientific interests, and both factors were taken into consideration in establishment of the centers. Twenty-seven applications representative of major universities throughout the Nation were reviewed by initial review groups and by the National Advisory Heart Council to make the selection of the seven awards. The first award was made in 1960 and the remaining six by 1962.

The names and locations of the centers are as follows:

- Oregon Regional Primate Research Center, Portland, Oreg.
- Wisconsin Regional Primate Research Center, Madison, Wis.
- Regional Primate Research Center, University of Washington, Seattle, Wash.
- Delta Regional Primate Research Center, Covington, La.
- Yerkes Regional Primate Research Center, Atlanta, Ga.
- New England Regional Primate Research Center, Boston, Mass.
- National Center for Primate Biology, University of California, Davis, Calif.

Matching requirements

None.

Who may receive Federal aid

No further applications for primate research centers are being considered at this time.

Application procedure

No new applications for primate research centers are being considered. General authority for nonmatching construction funds (including land purchase) was rescinded June 30, 1962.

Applications for the use of centers as a visiting scientist or collaborator with core staff scientists is made directly with the individual center administration. All applications for project grants to be carried out in a center must have the approval of the center administration prior to submission.

Developments during the past year

Three of the centers have either completed or will have completed construction of facilities during fiscal year 1965. These are: Yerkes, New England, and the National Center for Private Biology. All centers have ongoing developing scientific programs with over 400 scientific papers published to date.

Legal basis

Construction grants were awarded under section 493 (a) of the Public Health Service Act (42 U.S.C. 289c) prior to amendment by Public Law 87-395.

The operations grants come under authority of section 301 of the Public Health Service Act, as amended, and in accordance with the provisions of title 42, part 52, Code of Federal Regulations.

Additional information may be obtained from the Animal Resources Branch, Division of Research Facilities and Resources, National Institutes of Health, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

NEUROLOGICAL AND SENSORY DISEASE SERVICE PROGRAM

Purpose

The neurological and sensory disease service program grants are made available to stimulate the development, expansion, or improvement or community service activities which identify and deal with problems of neurological, visual, and communicative disorders, such as epilepsy, mental retardation, glaucoma, hearing disability, et cetera. The activities may involve the preventive, diagnostic, treatment, and rehabilitative aspects of these disorders and may include services to patients, population screening program, demonstration of techniques to health personnel, the establishment of referral procedures, et cetera.

Financing

Fiscal year	Authoriza- tion	Appropria- tion	Federal ex- penditures ¹
1962	\$1,000,000	\$1,000,000	\$854,804
1963	2,600,000	2,600,000	2,397,928
1964	2,950,000	2,950,000	2,936,213
1965	2,750,000	2,750,000	2,744,338
1966	2,750,000	2,750,000	(²)

¹ Obligations.

² Excludes mental retardation.

³ Of this amount approximately \$1,275,000 has been reserved for training activities.

⁴ Not available.

Method of distribution

Financial grants are made available on the recommendation of a review committee of outside consultants and approval of a grant application by the Surgeon General or his designee.

Matching requirements

None.

Who may receive Federal aid

Any State or local public agency or any nonprofit private agency, institution, or organization in the United States (including District of Columbia, Guam, Puerto Rico, and the Virgin Islands) is eligible to apply for community service grants.

Application procedures

The deadline for receipt of completed application (PHS form 4744-1) is March 1, August 1, and December 1, for review by non-

Federal review panels meeting in May-June, September-October, and January-February.

Community service grant applications from national agencies are submitted directly to the Office of Grants Management.

All other community service grant applications (including those submitted by local affiliates of national agencies) are transmitted through the appropriate State health officer and regional health director to the Office of Grants Management.

Developments during the past year

In fiscal year 1965, 89 official and voluntary agencies and medical and allied professional training institutions in 36 States, the District of Columbia, and the Virgin Islands received \$2,355,061 in grants to implement varied programs to establish or improve community health services and to expand training resources for the care of persons affected by neurological and sensory disorders.

Legal basis

The annual HEW appropriation act.

Additional information may be obtained from the Chief, Neurological and Sensory Disease Service Program, Division of Chronic Diseases, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

NEUROLOGICAL AND SENSORY DISEASE SERVICE TRAINING

Purpose

Grants are made available for training physicians and allied medical personnel for community services in the detection, diagnosis, treatment, and management of individuals with neurological disorders. Grants are made (1) to institutions for program expansion, improvement, or curriculum enrichment; (2) for trainee stipends to attend short-term institutes and seminars; and (3) to individuals to receive traineeships for specialized experience. Training programs eligible for support include regular academic programs, short courses, institutes, seminars, etc., or special demonstrations of better methods of manpower utilization and new teaching techniques and may be directed to any level of training, except residency training.

Financing

Neurological and sensory disease training grants are part of the total funds authorized by the annual appropriation act for neurological and sensory disease control, and there are no statutory limitations on the amount authorized for appropriation. (See "Neurological and sensory disease service program.") The amount reserved for training activities is determined by administrative decision. In fiscal year 1966 approximately \$1,275,000 has been reserved for these activities.

Method of distribution

Neurological and sensory disease training project funds are awarded upon approval of a grant application by the Surgeon General or his designee.

Matching requirements

None.

Who may receive Federal aid

Any State or local public agency or any nonprofit private agency, institution, or organization in the United States (including the District of Columbia, Guam, Puerto Rico, and the Virgin Islands) is eligible to apply for a training grant. To be considered for a training grant, the institution must have an accredited or acceptable program.

Individual traineeships are available to allied medical personnel for specialized training and to physicians for additional training in neurological and sensory diseases.

Application procedure

Applications for training grants (PHS form 4744-1) are submitted through the regional health director to the Office of Grants Management, Bureau of State Services.

Applications for individual traineeships should be submitted directly to the neurological and sensory disease service program at least 6 months prior to the proposed beginning date of training.

Developments during the past year

Efforts to increase the number of medical and allied personnel with the specialized skills necessary to provide community health services nationally were enhanced by approximately 89 individual traineeships amounting to \$366,837.

A total of 38 institutional grants were made primarily for training involving approximately \$911,182.

Legal basis

The annual HEW appropriation act.

Additional information may be obtained from the Chief, Neurological and Sensory Disease Service Program, Division of Chronic Diseases, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

NURSING

CONSTRUCTION GRANTS TO SCHOOLS

Purpose

Construction grants to schools of nursing are available for new facilities to expand the training capacity of existing schools, for the construction of new schools, and for the replacement or rehabilitation of existing facilities which are so obsolete as to require curtailment of enrollment or quality of training.

Financing

	Authorization	Appropriation
Fiscal year:		
1966.....	\$5,000,000, collegiate schools of nursing; \$10,000,000, associate degree and diploma schools of nursing.	\$15,000,000
1967.....	\$10,000,000, collegiate schools of nursing; \$15,000,000, associate degree and diploma schools of nursing.	-----

Method of distribution

The National Advisory Council on Nurse Training will consider applications and make recommendations to the Surgeon General who will grant awards on the basis of—

- (1) The relative effectiveness of the proposed facilities in expanding first-year enrollments.
- (2) Equitable geographical distribution of training opportunities.
- (3) The relative unavailability of nurses in the area as compared with other areas of the Nation.
- (4) The relative need for replacement or rehabilitation of facilities to prevent curtailment of enrollment or deterioration of the quality of training.
- (5) The relative size of such curtailment and its effect on the geographical distribution of training opportunities.
- (6) The relative quality of the training programs the schools can provide in the new or altered facilities.
- (7) The relationship to existing local, State, or regional plans for nurse training facilities.

Matching requirements

The applicant institution must contribute an amount equal to at least $33\frac{1}{3}$ percent of the total construction costs of new facilities and of existing facilities, which provide a substantial increase in enrollment, and at least 50 percent of the total costs of other new construction and of replacement or rehabilitation of existing facilities.

Who may receive Federal aid

To participate in the program a diploma, collegiate or associate degree program in a public or nonprofit private institution must be accredited. New schools must have reasonable assurance of being accredited, (1) when construction is completed, or (2) if later, then prior to the beginning of the first academic year following the normal graduation date of the first entering class in such school.

Application procedure

- (1) Schools wishing to participate should submit a letter of intent to the Division of Nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.
- (2) Applications are forwarded following receipt of letter of intent.
- (3) Preapplication consultation by the staff of the Division of Nursing is encouraged.

Applications (PHS forms 4687-1 and 4687-5) are submitted to the Division of Research Grants, NIH. Initial review, including site visits, is by Division of Nursing staff and the Review Committee for Construction of Nurse Training Facilities. Final review is by the National Advisory Council on Nurse Training which recommends action to the Surgeon General.

Developments during the past year

Accreditation requirements changed for new schools by Public Law 89-290, section 5(b).

Legal basis

Construction grants to schools of nursing are authorized under section 801 of the Nurse Training Act of 1964, Public Law 88-581 (title VIII, Public Health Service Act, as amended, 42 U.S.C. 296-298).

Additional information may be obtained from Chief, Division of Nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

NURSING

DIPLOMA SCHOOLS

Purpose

The Nurse Training Act of 1964 authorizes a program of grants to accredited public and nonprofit private diploma schools of nursing to help defray a portion of the cost of training students whose enrollment in such schools can be reasonably attributable to this act. The purpose of such grants is to prevent further attrition of these schools and to promote their development.

Financing

	Authoriza- tion	Appropri- ation	Federal ex- penditures ¹
Fiscal year:			
1965.....	\$4,000,000	\$4,000,000	\$788,150
1966.....	7,000,000	2,500,000	(²)

¹ Obligations.

² Not available.

Method of distribution

Grants will be paid to accredited public and nonprofit private diploma schools of nursing on a formula basis. For each fiscal year of the program each school is entitled to an amount equal to the product of \$250 and the sum of (1) the number of students enrolled in the school on a full-time basis who during that year received a loan of \$100 or more under this legislation and (2) the number by which the full-time enrollment in the school exceeds the average of the enrollment totals during the 3 fiscal years ending June 30, 1962, 1963, and 1964. The date for counting the federally sponsored students and for determining the school enrollment for each year shall be February 15. In no case shall a school receive, for any year, more than the product of \$100 and the full-time enrollment in the school for that year.

Matching requirements

None.

Who may receive Federal aid

Any public or nonprofit private diploma school of nursing which is accredited is eligible for such a grant.

Application procedure

Applications (PHS form 4782-1) are submitted to the Division of Nursing. Grants are awarded by the Surgeon General. Applica-

tion forms may be obtained from the Division of Nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

Developments during the past year

None.

Legal basis

Payments to diploma schools of nursing are authorized under section 806 of the Nurse Training Act of 1964, Public Law 88-581. (Title VIII, Public Health Service Act, as amended, 42 U.S.C. 296-298.)

Additional information may be obtained from the Chief, Division of Nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

NURSING

LOANS TO STUDENTS

Purpose

To help remove the financial barrier to entering schools of nursing, the Nurse Training Act of 1964 authorizes a loan program, with a partial forgiveness clause, for students in all types of professional nursing schools. The act stipulates that preference in granting these loans shall be given to persons entering as first year students after the enactment of this legislation.

Financing

	Authoriza- tion	Appropri- ation	Federal expendi- tures ¹
Fiscal year:			
1965.....	\$3,100,000	\$3,100,000	\$3,039,492
1966.....	8,900,000	8,900,000	(2)
1967.....	16,800,000	(2)	(2)

¹ Obligations.

² Not available.

Method of distribution

Funds are distributed to schools with which the Secretary has entered into student loan fund agreements, from a State allotment based on school enrollment and the number of high school graduates in the State. Student loan funds consist of a Federal contribution amounting to nine-tenths of the total working capital and an institutional contribution of the remaining one-tenth. Loans are available from Federal funds for schools which are unable to meet the required institutional contribution from their own resources. The school is responsible for the selection of students to receive loans, and for administration of the loan fund including recapture of payments.

Matching requirements

The applying institution must contribute an amount equal to one-tenth of the entire working capital of the fund. This amount may be borrowed from the Federal Government if necessary.

Who may receive Federal aid

To participate in the program a school must—

- (1) Provide a program of nursing education which is accredited or has reasonable assurance of accreditation.
- (2) Be a public or nonprofit private institution.

To be eligible for a loan the student must—

- (1) Be enrolled in a full-time course of study leading to a diploma in nursing, a baccalaureate or associate degree in nursing or a graduate degree in nursing.
- (2) Be a citizen of the United States or be in a State for other than a temporary purpose and intend to become a permanent resident of the United States.
- (3) Qualify in terms of academic standing and financial need as determined by the school.

Application procedure

Schools wishing to establish loan funds make application (PHS form 4755-2) to the Division of Community Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

Applicants for student loans should apply to the school providing the training.

Developments during the past year

Applications from 559 schools of nursing have been received and allocation of funds made to these schools for the academic year 1965-66.

Legal basis

Loans to students of nursing are authorized under section 822 of the Nurse Training Act of 1964, Public Law 88-581. (Title VIII, Public Health Service Act, as amended, 42 U.S.C. 296-298.) Public Law 89-290 (sec. 5(b)) authorizes the Commissioner of Education to accredit schools for the purposes of this act.

Additional information may be obtained from the Chief, Training Resources Branch, Division of Community Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

NURSE TRAINEESHIPS—PROFESSIONAL*Purpose*

The professional nurse traineeship program, authorized by section 307 of the Health Amendments Act of 1956 was established in August 1956 for the purpose of increasing the number of graduate nurses prepared as administrators, supervisors, and teachers in all fields of nursing. In 1959 the program, originally authorized for 3 years, was extended to June 30, 1964. The Nurse Training Act of 1964, Public Law 88-581, title VIII, section 821, authorized continuation of the program through June 30, 1969, and expanded it to include professional nursing specialties.

Traineeships for long-term academic study—including tuition and fees, stipend for living expenses, transportation cost to the training

institution, and an allowance for dependents—have been provided from the beginning of the program. Short-term traineeships, including stipend and cost of tuition and fees, were added to 1960 to provide nurses in leadership positions who were unable to undertake full-time academic study with opportunities for intensive training to update management and teaching skills.

Financing

Fiscal year:	Authoriza- tion	Appropri- ation	Federal expendi- tures ¹
1957	\$2,000,000	\$2,000,000	\$2,000,000
1959	5,950,000	5,950,000	(2)
1962	6,604,000	³ 6,604,000	6,588,694
1963	7,325,000	7,325,000	7,322,955
1964	7,325,000	7,325,000	7,325,000
1965	8,000,000	8,000,000	7,878,563
1966	9,000,000	9,000,000	(2)

¹ Obligations.

² Not available.

³ Amount available.

From the beginning of the program through fiscal year 1964, 12,698 nurses received long-term traineeships. In 1964, 97 schools participated in the program. Three hundred and forty-nine grants for short-term training, including provisions for 19,107 trainees, were awarded between fiscal year 1960 and 1964.

Method of distribution

Grants for long-term academic traineeships are made to colleges and universities which meet established criteria. Trainees are selected by the schools. Allocations are made to schools on the basis of their demonstrated ability to use the funds.

Grants for short-term intensive courses are made to educational institutions, health agencies, or other organizations prepared to provide the training. Trainees are selected by the sponsoring agency.

Matching requirements

None.

Who may receive Federal aid

Registered nurses who are citizens of the United States enrolled in educational institutions approved to participate in the program, and who are preparing for positions as administrators, supervisors, teachers, and nurse specialists in health agencies of all types, may apply for traineeship assistance.

Application procedure

Applications for short-term grants are made on PHS Form 3190-10; for long-term grants on PHS Form 3190-5. All applications are submitted to the Division of Nursing for staff review. Short-term grant applications are also submitted to the Review Committee for Professional Nurse Traineeship Program Short-term Grants, which recommends action to the Surgeon General and gives approved applications priority ratings.

Application forms are provided by the Division of Nursing to eligible colleges, universities, institutions, and agencies upon request. Candidates for traineeships apply to the educational institution or sponsoring agency.

Developments during the past year

No significant new developments have occurred in the program.

Legal basis

Traineeships for the training of professional nurses are authorized under section 821 of the Nurse Training Act of 1964, Public Law 88-581. (Title VIII, Public Health Service Act, as amended (42 U.S.C. 296-298)).

Additional information may be obtained from the Chief, Division of Nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

NURSE TRAINING

PROJECTS FOR IMPROVEMENT

Purpose

The Nurse Training Act of 1964 authorizes a program of project grants to enable public and nonprofit private diploma, collegiate, and associate degree schools of nursing which are accredited or have reasonable assurance of accreditation to strengthen, improve, and expand programs to teach and train nurses. These grants are expected to improve the quality of instruction and to assist some of the 441 non-accredited nursing schools to meet accreditation standards.

Financing

	Authoriza- tion	Appropria- tion	Federal ex- penditures ¹
Fiscal year:			
1965.....	\$2,000,000	\$2,000,000	\$1,989,564
1966.....	3,000,000	3,000,000	(²)

¹ Obligations.

² Not available.

Method of distribution

The National Advisory Council on Nurse Training will consider applications and make recommendations to the Surgeon General who will award grants on the basis of—

- (1) The relative extent to which the project will contribute to improvement in the teaching and training of nurses in the school involved.
- (2) The relative extent to which the project explores and develops new and improved teaching methods which can be adapted for use by other schools.
- (3) The relative extent to which the project will aid in attaining the wider geographical distribution of high quality schools of the type involved.
- (4) The relative need in the area in which the school is situated for nurses of the type trained in such a school.

(5) Extent to which the project will increase the enrollment in the school.

(6) Extent to which the project will help the school achieve accreditation.

Matching requirements

None.

Who may receive Federal aid

Project grant funds are available to public and nonprofit private diploma, collegiate, and associate degree schools offering programs which are accredited or which have been given reasonable assurance of being accredited at the time the project is terminated.

Application procedure

Application forms (PHS form 478-1) may be obtained from the Division of Nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

Developments during the past year

Policies and procedures applicable to this program have been developed and the program put into operation.

Legal basis

Grants for projects to improve nurse training programs are authorized under Section 805 of the Nurse Training Act of 1964, Public Law 88-581. (Title VIII, Public Health Service Act, as amended, 42 U.S.C. 296-298.)

Additional information may be obtained from the Chief, Division of Nursing, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

PUBLIC HEALTH

GRADUATE TRAINING

Purpose

The Surgeon General is authorized to make project grants to any public or private nonprofit institution which provides graduate or specialized training in public health for the purpose of strengthening or expanding graduate public health training. An administrative decision has been made to limit the award of grants in fiscal year 1966 to the following institutions in the United States or its territories:

(1) Schools of public health accredited for the degree of M.P.H. by the American Public Health Association;

(2) Schools of nursing accredited by the National League for Nursing and which provide graduate or specialized preparation in public health;

(3) Schools of engineering accredited by the Engineers Council for Professional Development and which provide graduate or specialized training in public health;

(4) Departments of preventive medicine in schools of medicine accredited by the Liaison Committee on Medical Education and in schools of osteopathy accredited by the American Osteopathic Association; and

(5) Departments of preventive or community dentistry in schools of dentistry accredited by the Council on Dental Education of the American Dental Association.

These grants are made to assist these schools in improving and enriching their curriculums to meet the needs of changing and emerging public health programs; in strengthening programs of basic training in public health administration; in developing and demonstrating improved public health training methods and procedures; and in enlarging faculties and supporting staff to provide for increased enrollments.

Projects which would strengthen or expand graduate public health training in such schools are eligible for grant support. For purposes of this program, graduate public health training means that specialized academic training in public health offered at the postbaccalaureate or post professional registration level.

Financing

Appropriations are authorized and ceilings established for each fiscal year through June 30, 1969:

Fiscal year:	Authorizations	Appropriations	Federal expenditures ¹
1961	\$2,000,000	\$1,430,000	\$1,429,835
1962	2,000,000	2,000,000	1,998,939
1963	2,000,000	2,000,000	1,987,881
1964	2,000,000	2,000,000	1,993,020
1965	2,500,000	2,500,000	2,493,130
1966	4,000,000	4,000,000	(2)

¹ Obligations.

² Not available.

Method of distribution

These grants may be made by the Public Health Service only for those projects which are recommended by the National Advisory Committee on Public Health Training, which also advises the Service concerning the public health traineeship program as required by section 306 of the Public Health Service Act.

Matching requirements

None.

Who may receive Federal aid

See the first paragraph under "Purpose."

Application procedure

Applications for these grants are made on PHS Form 4744-1, submitted to the Division of Community Health Services.

Developments during the past year

Support was continued for teaching programs under 91 projects to strengthen and expand public health training in schools of public health, engineering, nursing, medicine, and dentistry. This was the first year that grants were awarded to the two latter types of schools.

Legal basis

Section 309 of the Public Health Service Act as amended (42 U.S.C. 242g).

Additional information may be obtained from the Chief, Division of Community Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

PUBLIC HEALTH TRAINEESHIPS

Purpose

The public health traineeship program was authorized for a 3-year period by Public Law 84-911, July 1, 1956. In 1959 and again in 1964 the Congress extended the program for an additional 5 years. The objectives of the program are to increase the number of trained public health personnel and to bring new professional health workers into the field through the opportunities for graduate or specialized health training that are provided. Primary emphasis is placed on the needs of public health agencies for professional workers with a year or more of postprofessional academic public health training. The program is designed to supplement and not to replace or reduce the training activities currently being sponsored by State and local governments.

The National Advisory Committee on Public Health Training advises the Public Health Service on policies and procedures for the administration of this program. This committee is composed of non-Federal Government consultants in the principal health professions, representing the many groups with a vital interest in public health training.

Financing

Prior to fiscal year 1965 there was no limitation on the amount authorized for this program. Appropriations are now authorized and ceilings established for each fiscal year through June 30, 1969.

Fiscal year	Authoriza- tion	Appropri- ation	Federal expenditures ¹
1967	(2)	\$1,000,000	\$886,432
1968	(2)	2,000,000	1,989,963
1961	(2)	2,000,000	1,993,373
1962	(2)	2,000,000	1,894,989
1963	(2)	4,000,000	3,946,111
1964	(2)	4,195,000	4,184,532
1965	\$4,500,000	4,500,000	4,416,479
1966	7,000,000	7,000,000	(2)

- ¹ Obligations.
- ² No limitation.
- ³ Not available.

Method of distribution

Traineeships under the program are awarded to individuals by two methods: (1) by schools which receive grant funds from the Public Health Service for this purpose; (2) directly by the Public Health Service to individuals who have been accepted by schools which do not have such grants.

Specific mechanisms for distribution of grant funds

Traineeship awards to individuals.—These awards are made directly by the Public Health Service to individuals who have been accepted by the training institution of their choice which offers a graduate or specialized training program in public health.

Traineeship grants to schools of nursing.—Grants are made to universities and colleges with baccalaureate programs in nursing to which graduates of diploma and associate of arts degree programs are admitted. The National League for Nursing list of accredited programs is used for this purpose. Traineeships may be awarded to graduate registered nurses preparing for first-level positions in public health nursing. The number of traineeships granted to each school is based on the number of full-time students enrolled who plan to accept full-time students enrolled who plan to accept full-time employment in public health nursing, and the number of public health nursing students from States which have no training facilities approved for this purpose.

General purpose traineeships.—Grants are made annually to schools of public health accredited by the American Public Health Association to award the MPA degree. Traineeships may be awarded from these funds to support trainees in the graduate public health training programs of the schools.

Special purpose traineeship grants.—These grants are provided to any school or department in an accredited college or university for traineeships to support individuals pursuing graduate or specialized public health training in a curriculum area which has been given a high priority. These high priority areas or special purpose areas are designated by the Public Health Service with the advice of the National Advisory Committee on Public Health Training.

Traineeship grants for short-term training.—Public nonprofit institutions which are prepared to provide graduate or specialized short-term training for professional health personnel may receive competitive grants to support individuals during the training. The objectives of this mechanism are (a) to assist in increasing the competence of professional health personnel by enabling them to engage in intensive, short-term public health training designed to update their knowledge and skills relating to the programs in which they are engaged, and (b) to decrease the time lag between discovery of new knowledge in the field of public health and its effective application in public health practice.

Residency traineeship grants.—Physicians and dentists pursuing training in approved residency training programs in preventive medicine or dentistry may receive support for such training through competitive grants for the support of specific individuals approved by the Public Health Service. This mechanism is designed to encourage physicians and dentists who have completed their basic professional training to prepare themselves for positions of leadership in public health practice and teaching.

Apprenticeship training grants.—Under this mechanism, funds are provided through competitive grants to public or nonprofit institutions to support medical, dental, and osteopathy students engaged in preceptor guided training in public health.

Matching requirements

None.

*Who may receive Federal aid*¹

Members of all health professions such as physicians, nurses, engineers, nutritionists, social workers, dentists, dental hygienists, health educators, veterinarians, sanitarians, statisticians, and others whose skills are required in modern public health practice are eligible and may apply through a school of their choice if they:

- (1) Have completed basic professional education.
- (2) Been accepted by a school offering graduate or specialized training in public health.
- (3) Plan to pursue a career in the field of public health.
- (4) Are citizens of the United States or have been lawfully admitted for permanent residence.

Application procedure

An individual applicant seeking a traineeship should complete form PHS-2629, Application for Traineeship Award, and submit it in duplicate to the training institution of his choice that offers a national recognized public health training program in his professional field. Institutions applying for traineeship grants under the mechanisms described above should complete form PHS-2630, and forward it to the Division of Community Health Services.

Developments during the past year

Approximately 6,540 individuals received training in fiscal year 1965 under the mechanisms described above. An additional 3,000 are expected to be supported in fiscal year 1966.

Legal Basis

Section 306 of the Public Health Service Act (42 U.S.C. 242d) as amended by Public Law 88-497.

Additional information may be obtained from the Chief, Training Resources Branch, Division of Community Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

PUBLIC HEALTH TRAINING

SCHOOLS OF PUBLIC HEALTH

Purpose

The Surgeon General is authorized to make grants for the provision of comprehensive professional training, specialized consultative services, and technical assistance in the fields of public health to public or nonprofit schools of public health accredited by a body recognized by the Surgeon General. The educational institutions which meet the legal qualifications at the present time are the 13 schools of public health accredited by the American Public Health Association for the granting of the degree of master of public health. These schools are the University of Minnesota, University of North Carolina, University of Michigan, University of California (Berkeley), University of Cali-

¹ See also the section in Specific Mechanisms for Distribution of Grant Funds, p. 213.

fornia (Los Angeles), University of Puerto Rico, Yale University, Johns Hopkins University, Harvard University, Columbia University, Tulane University, University of Pittsburgh, and the University of Hawaii. These schools perform an essential role in the training of professional public health personnel for Federal, State, and local government and voluntary health organizations.

These grants are intended to support the provision of public health training in schools of public health by offsetting a portion of the deficit which occurs as a result of the disparity between income from tuition and the cost of instruction of federally sponsored students. The effect of the grants is to expand and improve the public health training offered by these schools and to enable them to accept increased enrollments.

Financing

Public Law 85-544 authorized utilization of \$1 million of the annual appropriation to carry out the purposes of section 314(c) of the Public Health Service Act. Enactment of Public Law 87-395 increased the authorization to \$2,500,000 for fiscal years 1962 through 1965. Public Law 89-109 further increased the authorization to \$5 million for fiscal years 1966 and 1967. The following table shows the amounts authorized, appropriated, and expended for this program:

Fiscal year	Authoriza- tion	Appropri- ation	Federal expenditures
1959.....	\$1,000,000	\$450,000	\$442,300
1960.....	1,000,000	1,000,000	952,498
1961.....	1,000,000	1,000,000	851,210
1962.....	2,500,000	1,173,000	1,094,608
1963.....	2,500,000	1,900,000	1,853,573
1964.....	2,500,000	1,900,000	2,190,000
1965.....	2,500,000	2,500,000	2,500,000
1966.....	3,500,000	3,500,000	(³)

¹ Amount available.

² Obligations.

³ Not available.

Method of distribution

Data are collected annually from each school of public health concerning the number of federally sponsored students enrolled.

One-third of the funds are allotted equally among eligible schools and the remaining two-thirds on a 3-year average of the number of federally sponsored students. Funds are available after approval of an application from eligible schools showing the purposes for which the funds will be used.

The listing of institutions accredited for granting the degree of master of public health is used to determine eligibility under this program.

Matching requirements

None.

Who may receive Federal aid

Grant funds are made available to schools of public health.

Application procedure

Each school of public health desiring a grant should submit, for approval by the Surgeon General, an application on PHS form 3506, each fiscal year, to the Division of Community Health Services. Applications are reviewed by individuals with special competence in the field and by the National Advisory Committee on Public Health Training, which recommends action to the Surgeon General.

Developments during the past year

The accredited schools of public health further augmented their graduate and specialized public health training programs and consultative services under these grants during fiscal year 1966. The 13th school of public health, the University of Hawaii, was accredited during the year and was able to rapidly expand its training resources as a result of these funds.

Legal basis

Section 314(c) of the Public Health Service Act, as amended (42 U.S.C. 246c).

Additional information may be obtained from the Chief, Training Resources Branch, Division of Community Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

RADIOLOGICAL HEALTH

INSTITUTIONAL TRAINING

Purpose

Grants for training in radiological health are made to universities and other educational institutions to strengthen curricula for the training of radiation health specialists, the highly qualified professionals needed to plan and direct radiation protection and control programs; and for the training of radiation health technicians needed in the operation of these programs.

Financing

Fiscal year	Authoriza- tion	Appropri- ation	Federal ex- penditures ¹
1962.....	\$1,000,000	\$1,000,000	\$975,098
1963.....	2,000,000	2,000,000	1,729,626
1964.....	2,500,000	2,500,000	2,452,377
1965.....	2,500,000	2,500,000	2,493,632
1966.....	2,500,000	2,500,000	(2)

¹ Obligations.
² Not available.

Method of distribution

Grants are awarded to academic institutions for curriculum development and support in radiological health specialist training. These funds are used primarily to support the salaries of faculty members, to meet equipment purchase costs, and to furnish tuition and stipend assistance to students. Similarly, grants are awarded to develop and support programs in radiological health technician training, except

that aid to students is provided on a different and lesser basis. The following are the principal criteria used when considering applications:

(1) The qualifications of the institution and its staff in the field of radiological health.

(2) The extent to which the proposed project does in fact represent a strengthening or expansion of a program for training radiation health specialists or technicians.

(3) The potential contribution of the project to radiological health training in general.

Matching requirements

None.

Who may receive Federal aid

Training grants are available to universities and other educational institutions offering care study programs in radiological health, or planning to develop such programs.

Application procedure

Applications (PHS form 3582) from institutions are submitted to the Division of Radiological Health for review and then considered by the Committee on Radiation Health Training Grants. Projects are approved by the Surgeon General or his designee, from among those applications favorably recommended by the Committee.

Developments during the past year

The most significant development was the authorization of funds for development of programs for technician training. Eight projects in this category have been approved, and are presently in operation. There are 35 institutions now receiving grants in support of graduate radiation health specialist training curricula. Incomplete data indicate there were over 225 students enrolled in the specialist training programs in the 1964-65 school year, and that there will be at least 250 enrolled during the next school year. During the past year, some 35 on-campus calls were made by staff members for discussion and evaluation of operating or proposed training projects.

Legal basis

Sections 311 and 314(c), Public Health Service Act as amended (42 U.S.C. 241 and 246); Public Law 89-156.

Additional information may be obtained from the Chief, Division of Radiological Health, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

RADIOLOGICAL HEALTH

STATE PROGRAM DEVELOPMENT

Purpose

The objective of State program grants is to assist in the development or expansion of State radiological health programs. Particular emphasis is being given to X-radiation control and programs related to environmental contamination from radionuclides.

Financing

Fiscal year	Appropriation	Expenditures	
		Federal ¹	State and local
1963	\$1,500,000	\$1,393,991	\$2,080,457
1964	2,000,000	1,896,056	2,843,993
1965	2,500,000	2,221,639	3,493,180
1966	2,500,000	(²)	(²)

¹ Obligations.

² Provisional.

³ Not available.

Method of distribution

Radiological health grant funds are allotted among the States by a formula, which takes into consideration population, financial need, and extent of the problem in the States. Allotments are adjusted so that each State receives at least a minimum grant of \$15,000 or 15 cents per capita, whichever is less.

Matching requirements

The States are required to match Federal grant funds on a dollar for dollar basis.

Who may receive Federal aid

State agencies which have responsibility for conducting radiological health programs.

Application procedure

States must submit plans for the use of radiological health funds as a part in their State health plans. These plans are submitted to the DHEW regional offices for review and approval. After the plans have been approved, the States are eligible to receive grant payments in accordance with formula described above.

Developments during the past year

State radiological health program expenditures for the fiscal year ending June 30, 1965, reached an alltime high, the total funds spent amounted to \$6.28 million. Approximately one-third of this sum was grant funds.

Legal basis

Authority for the State program development grants is contained in section 314(c) of the Public Health Service Act as amended (42 U.S.C. 246). The Public Health Service regulations (42 CFR); section 51.1 (f), defines State plans; section 51.2 (g) as amended, defines the basis for determining the extent of the radiological health problem; section 51.3 (h), defines the basis of allotments; section 51.6 (b), defines the contents of State plans; and section 51.9 (a) defines matching requirements. (See the Federal Registers for Nov. 1, 1962, p. 10653 and May 25, 1963, p. 5235.)

Additional information may be obtained from the Chief, Division of Radiological Health, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

REGIONAL MEDICAL PROGRAMS

Purpose

To encourage and assist in the establishment of regional cooperative arrangements among medical schools, research institutions, and hospitals for research and training and for demonstrations of patient care in the fields of heart disease, cancer, stroke, and related diseases; and through such cooperative arrangements to afford to the medical profession and medical institutions of the Nation the opportunity of making available to their patients the latest advances in the diagnosis and treatment of these diseases.

Financing

Fiscal year 1966:

Authorization-----	\$90,000,000
Appropriation-----	\$25,000,000

¹ \$24,000,000 for grants; \$1,000,000 for administration and technical assistance. (Sums appropriated for fiscal year 1966 are to remain available until Dec. 31, 1966.)

Method of distribution

Grants for planning or for establishment and operation of regional medical programs are made to eligible applicants upon approval of a grant application by the Surgeon General, upon the recommendation of the National Advisory Council on Regional Medical Programs.

Matching requirements

A grant can be for all or part of the cost of the planning or other activities with respect to which the application is made, except it may not exceed 90 percent of the cost of any construction of, or built-in equipment for, any facility, or of the cost of alteration and renovation of facilities and of initial equipment and replacement of obsolete built-in equipment.

Who may receive Federal aid

Public or nonprofit private universities, medical schools, research institutions, and other public or nonprofit private institutions and agencies.

Application procedure

Applicants should apply directly to the Division of Regional Medical Programs, National Institutes of Health, Bethesda, Md. Application is made on form NIH-925.

Developments during the past year

The legislation was enacted.

Legal basis

The Heart Disease, Cancer, and Stroke Amendments of 1965: Public Law 89-239, approved October 6, 1965 (79 Stat. 926).

Additional information may be obtained from the Associate Director for Regional Medical Programs, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

RESEARCH CONTRACTS—NATIONAL INSTITUTES OF HEALTH

Purpose

The various institutes and divisions of the National Institutes of Health regularly require research and development services to be performed by outside organizations. These organizations include universities, nonprofit research foundations, and industrial and pharmaceutical companies. Such services consist of resolving specific research problems, developing particular methodology, fabricating new scientific devices, and a variety of other testing and technical services. The responsibility for negotiating and administering these contracts is vested in the contracting officer, Research Contracts Section, Supply Management Branch, Office of Administrative Management. A research or development contract may be of short duration, or it may, by means of annual extension, provide for continuing research aimed at a definite objective. A research contract may be used to meet a single isolated need, or it may be part of a broad multicontract program.

The largest user of research contracts at NIH is the cancer chemotherapy program of the National Cancer Institute. This program is an intensified effort within appropriations made available under congressional directives, to explore exhaustively and rapidly the potentialities of chemical compounds in the control of cancer. The contract mechanism, on a smaller scale, is utilized by the National Heart Institute, National Institute of Allergy and Infectious Diseases, National Institute of Mental Health, National Institute of Neurological Diseases and Blindness, National Institute of Arthritis and Metabolic Diseases, the National Institute of Dental Research, Division of Research Facilities and Resources, and the Division of Biologic Standards.

Financing

The following is a tabulation of NIH contracting in the research and development field since such contracting has been authorized:

Fiscal year	Cancer chemotherapy	Other	Total
1958	\$11,102,600	\$355,700	\$11,458,300
1959	15,845,800	721,100	16,066,900
1960	19,794,600	1,309,000	21,103,600
1961	22,332,500	4,121,000	26,453,500
1962	21,195,275	7,134,039	28,329,314
1963	23,325,000	15,925,000	39,250,000
1964	26,135,900	17,638,100	43,774,000
1965	24,894,000	30,547,771	55,441,771
1966	21,928,000	48,072,000	70,000,000

¹ Projected.

Method of distribution

Most work of a research or development nature is not adaptable to the usual advertisement for bid procedure. Because of the many intangibles incident to research and development work, the cost-reimbursement and cost-plus-fixed-fee methods of contracting are utilized to a large extent.

When it appears to an NIH Institute or Division that its interests will be best served by a research contract, formal proposals are solicited from prospective contractors. The prospective contractor furnishes information in the proposal about the nature, structure, capacity, and qualifications of his organization, the terms under which he can undertake the Government work, and an estimate of the costs (or price) and time which he feels necessary to accomplish the task. Each prospective contractor's proposal is reviewed by program staff and by the NIH contracting officer.

Although a proposal including the exact breakdown of the cost estimate therein is not incorporated into a contract, the proposal is the basis for subsequent direct negotiations which may result in a formal agreement.

Matching requirements

Not applicable to NIH contracts.

Who may receive Federal aid

Any qualified, responsible contractor.

Application procedure

Not applicable to NIH contracts.

Developments during the past year

Public Law 89-115 permits contracts for research and development to provide for the contractor to acquire, construct, or be furnished research, developmental, or test facilities and equipment determined to be necessary for the performance of the contract. This authority is now available to serve the needs of all institutes and divisions of NIH sponsoring contracts for research and development.

Legal basis

Section 302(c) (1), (2), (3), (5), (6), (7), (10), (11), (13), (14), and (15), Federal Property and Administrative Services Act of 1949, as amended (63 Stat. 377, 41 U.S.C. 252(c)). Delegation of authority No. 410 from Administrator of General Services to Secretary of Health, Education, and Welfare, effective March 26, 1962 (27 F.R. 3017, Mar. 30, 1962).

Additional information may be obtained from the Chief, Research Contracts Section, Supply Management Branch, Office of Administrative Management, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare, Bethesda 14, Md.

RESEARCH PROJECT GRANTS—PUBLIC HEALTH SERVICE

Purpose

Passage of the National Cancer Act by Congress in 1937 marked the beginning of the Federal program for grants-in-aid for medical research. The Public Health Service was given responsibility for the administration of the program. In 1945, the Public Health Service accepted the responsibility for administering grants for some 66 uncompleted medical research projects previously administered by the Office of Scientific Research and Development. With the transfer of these projects, the framework of a broad medical and health-related research grants program was established in the Service.

The objective of these grant programs is to further scientific knowledge in all fields bearing on public health—a range covering medicine, biology, dentistry, nursing, the improvement of hospitals, and many activities grouped under the headings of environmental and community health.

Research grants of several different types are awarded each year. The research project grant is awarded to an institution for a discrete project representing an investigator's interests and competence. The research program-project grant is awarded to an institution for a broadly based and usually long-term research program directed toward a range of problems with a central research focus. The research center grant is awarded to an institution solely for the support of basic physical resources or an integrated system of resources and services essential to the conduct of a broad program of research.

Method of distribution

The method of distributing research grant funds has been designed to assure that funds are awarded only to research projects and programs that are competently judged to have high scientific merit and in only such amounts as are necessary for their support.

Applications are uniformly institution initiated, with the exception of the few instances in which the Public Health Service, on the advice and with the concurrence of a Study Section or other initial review group and the appropriate National Advisory Council or Committee, has taken the initiative to make known to competent institutions and investigators those areas in which research is much needed. These are areas determined by the advisory bodies to require such stimulation of research.

The usual steps by which a grant-supported research project comes into being are:

1. The responsible officer of an eligible institution submits to the Public Health Service, on behalf of the principal investigator, an application for a research grant. The application outlines the nature of the research contemplated, as well as the resources and facilities available or needed, and indicates the budget proposed and the years of support requested.

2. A grant application is received and identified with a particular research area. The application is then referred to a study section or an initial review group consisting primarily of non-Federal scientists expert in that research area. The group reports its evaluation of the proposal including its scientific merit and the requested financial support, with recommendation of action, to one of the National Advisory Councils or Committees.

3. The Surgeon General, at his discretion, may award support to any application recommended for approval by a National Advisory Council, in the amount recommended or in a lesser amount. The criteria applied by the committees and councils in considering applications are: (1) That the proposed research shall have high scientific merit; (2) that the principal investigators shall be competent to undertake and pursue the research; and (3) that the facilities available to them shall be adequate.

Matching requirements

None, except that there must be some cost-sharing for research projects by grantees.

Who may receive Federal aid

Research grants are awarded to universities and colleges, to medical, dental, and nursing schools, to schools of public health, and to hospitals, laboratories, State and local health departments, and other public or private nonprofit organizations. Research project grants may also be awarded to individuals.

Application procedure

Application for research grants must be made on PHS forms 398 and 2590, submitted to the Division of Research Grants, National Institutes of Health. Applications must be executed by an official authorized to sign for the applicant institution. Research grant applications provide detailed information on the nature of the proposed project or program, qualifications of the principal investigators, the total facilities and resources that will be available and justification of the funds requested. Research grants are awarded following evaluation by the Councils or Committees at one of the triannual meetings.

Legal basis

Sections 301 (d), 301 (h), 303, 402, 412 (d), 413 (a), 423 (a), 433, 443, 444, and 636, Public Health Service Act of 1944, as amended (42 U.S.C. 241 (d), 242a, 282, 287a (d), 287b (a), 288b, 289c, 289g), and the Clean Air Act, Public Law 88-206, as amended by Public Law 89-272.

Additional information on these programs may be obtained from the Division of Research Grants, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

COMMUNITY HEALTH

(Programs covered: Accident prevention, chronic diseases, community health services, communicable diseases, dental health, hospital and medical facilities, and nursing.)

Financing

Funds have been appropriated for these programs as follows:

1956.....	\$1,200,000
1960.....	1,200,000
1961.....	1,200,000
1962.....	11,921,000
1963.....	7,868,000
1964.....	14,670,000
1965.....	12,911,000
1966.....	19,037,000

Developments during the past year

None.

ENVIRONMENTAL HEALTH

(Programs covered: Air pollution, environmental engineering and food protection, occupational health, radiological health, and environmental health sciences.)

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Financing

Appropriations for selected years are as follows:

1956	¹ \$480,000
1957	530,000
1958	700,000
1959	590,000
1960	450,000
1961	² 1,464,411
1962	10,980,000
1963	13,467,000
1964	³ 18,814,000
1965	22,157,000
1966	^{4,5} 21,608,000

¹ For the years 1956 through 1961 air pollution only; other programs financed through NIH.

² Air pollution and radiological health; other programs financed by NIH.

³ 1st year for environmental health sciences.

⁴ Excludes water supply and pollution control.

⁵ Includes \$1,500,000 for EHS research and training institutes.

Developments during the past year

During fiscal year 1965 all programs in water supply and pollution control were transferred from the Public Health Service to the newly established Federal Water Pollution Control Administration. (See Appendix I.)

NATIONAL INSTITUTES OF HEALTH

(Programs covered: Allergy and infectious diseases, arthritis and metabolic diseases, cancer, child health and human development, dental, general medical sciences, heart, mental health, and neurological diseases and blindness.)

Financing

Funds that have been appropriated for these programs are, for selected fiscal years, as follows:

1958	\$90,000
1946	780,000
1957	89,797,000
1959	141,454,000
1960	202,948,000
1961	293,989,000
1962	¹ 413,662,000
1963	¹ 462,805,000
1964	^{1,2} 494,231,000
1965	³ 496,453,000
1966	⁴ 555,757,000

¹ Excludes funds earmarked for general research support grants.

² In fiscal year 1964, \$3,000,000 for Office of International Research was included in this figure.

³ Excludes \$45,000,000 for general research support. Excludes \$3,350,000 for Office of International Research. Excludes \$350,000 for Gorgas Memorial Laboratory.

⁴ Excludes \$45,200,000 for general research support. Excludes \$3,420,000 for Office of International Research.

Developments during the past year

None.

NATIONAL LIBRARY OF MEDICINE

Purpose

The purpose of the program is to contribute to the public health through improvements in the collection, preservation, storage, processing, retrieving, dissemination, and utilization of information in the

health sciences. For this purpose grants are made for the financial support of discrete projects designed to develop new knowledge, techniques, systems, and equipment applicable to the health information sciences and for projects in the history of the life sciences.

Research and development contracts are made primarily for the purpose of meeting a specific, identified need which requires performance according to specifications defined by the National Library of Medicine.

Financing

Funds have been appropriated as follows :

Fiscal year:

1965	-----	\$46, 000
1966	-----	345, 000

Method of distribution

The projects which are competently judged to be those of highest merit are considered for award. Such projects are supported in amounts determined by the requirements of the projects and the availability of funds.

Research grant applications are assigned for evaluation to groups of non-Federal experts. Such groups make recommendations to the Board of Regents which in turn makes recommendations to the Surgeon General. The Surgeon General, at his discretion, may award support on the basis of these recommendations.

Matching requirements

None.

Who may receive Federal aid

Research grants and contracts may be awarded to universities, colleges, professional schools, libraries, hospitals, laboratories, and other public or private nonprofit organizations. Under certain circumstances research grants may be awarded to individuals. Also, research contracts may be made to profitmaking organizations.

Application procedure

Application forms and procedures are described above.

Developments during the past year

Planning and programing activities have been carried out to develop the research and development program.

Legal basis

Public Law 78-410, sec. 301. and Public Law 89-291.

Additional information may be obtained from the Chief, Research and Training Division, Extramural Programs, National Library of Medicine, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

RESEARCH TRAINING AND TRAINEESHIPS

COMMUNITY HEALTH

(Programs covered: Accident prevention, chronic diseases, community health services, dental health, and nursing.)

Purpose

Research training grants awarded by the Bureau of State Services-Community Health are to support research training programs in public and other nonprofit institutions in the fields of accident prevention, chronic diseases, community health services, dental health, and nursing.

Financing

The following table shows funds appropriated for research training grant programs administered by the Bureau of State Services-Community Health:

Fiscal year:	Total appropriation
1964-----	¹ \$284, 000
1965-----	² 564, 000
1966-----	³ 1, 330, 000

¹ Nursing research training only.

² In addition to nursing, includes chronic diseases and community health services.

³ Includes total research training programs mentioned above.

Method of distribution

Applications are first received in the Division of Research Grants, NIH, where they are processed and referred to the appropriate training committee and national advisory council for review. They are awarded by the Surgeon General on the recommendation of the reviewing groups.

Application procedure

Application forms (PHS-2499) are obtainable from the Division of Research Grants, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

Developments during the past year

The program was extended to include research training grants in accident prevention, chronic diseases, community health services, dental health, and nursing.

Legal basis

Section 301 of the Public Health Service Act as amended by Public Law 87-838 (42 U.S.C. 241), and section 301(d) of the PHS Act (Public Law 410-78) (42 U.S.C. as amended).

Additional information may be obtained from the Chief, Office of Research Grants, Bureau of State Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

ENVIRONMENTAL HEALTH

(Programs covered: Air pollution and environmental health sciences.)

Purpose

Research training grant programs of the Bureau of State Services, Environmental Health, are made to individuals and nonprofit institutions offering training in air pollution problems and control; research training involving the capabilities of the basic sciences as they relate to environmental health.

Financing

The following table shows funds appropriated for training grants programs administered by the Bureau of State Services, Environmental Health:

Fiscal year:	Total appropriation
1957-----	¹ \$105, 000
1958-----	¹ 170, 000
1962-----	² 113, 000
1963-----	³ 450, 000
1964-----	⁴ 2, 455, 500
1965-----	⁵ 5, 335, 447
1966-----	⁶ 4, 887, 000

¹ Air pollution training only.

² Includes air pollution training, \$113,000.

³ Includes air pollution training, \$450,000.

⁴ Includes air pollution training, environmental health services, \$936,500; and \$1,519,000.

⁵ Includes air pollution training, \$1,078,000; environmental health services, \$2,257,447; and water pollution training, \$2,000,000.

⁶ Excludes water pollution training; includes funds for air pollution graduate training.

Method of distribution

Awards are made on the basis of the qualifications of the individual or institution, and appropriateness of the project to the division's programs.

Applications are reviewed by an external advisory group or training committee and then by the Surgeon General or his designee, generally the chief of the division concerned.

Application procedure

Application forms (PHS-2499) for the three programs may be obtained from Chief, Division of Air Pollution; Chief, Research and Training Grants Branch, Office of Resource Development, Bureau of State Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

Developments during the past year

None.

Legal basis

Sections 301, 311, and 314 of the Public Health Service Act, as amended; section 103 of Public Law 88-206, as amended by Public Law 89-272; Public Law 88-605; Public Law 89-156; and point of order language as related to the conduct of training for the field of radiological health.

Additional information may be obtained from the appropriate offices as listed in "Application procedure," above.

NATIONAL INSTITUTES OF HEALTH

(Programs covered: Allergy and infectious diseases, arthritis and metabolic diseases, cancer, child health and human development, dental, general medical sciences, heart, mental health, and neurological diseases and blindness.)

Purpose

Extramural training support by the National Institutes of Health began following passage of the National Cancer Institute Act in 1937. The beginning was modest and involved only part-time support

of a few trainees by the National Cancer Institute. Since then, training grant programs of the National Institutes of Health have steadily increased in the total amount of support available as well as the number of scientific areas involved. Training grants falling within their particular fields of interest now are awarded by all the Institutes of NIH. The direct traineeship program continues in one institute only, the National Institute of Neurological Diseases and Blindness.

The general purpose of these awards is to support graduate training leading toward careers in research in sciences relating to medicine and health or toward increased competence in the treatment of disease. A training grant provides funds to an institution, while the direct traineeship provides Federal funds directly to individual trainees to enable them to undertake special training at the institution of their choice.

"Undergraduate" training grants are awarded to medical, dental, and osteopathic schools as well as collegiate schools of nursing and schools of public health in the United States and its territories to enable them to establish, expand, or improve instruction relating to prevention, diagnosis, and treatment of cancer, mental disease, cardiovascular disease, and related gerontological conditions.

"Undergraduate" training grants are awarded in amounts within the following maximums, which apply to any one year:

Awarding institute	Medical, 4 year	Schools, 2 year	Dental schools	Public health schools	Schools of nursing	Schools of osteopathy
Heart.....	¹ \$25,000	¹ \$15,000	(²)	¹ \$15,000	(³)	¹ \$25,000
Mental Health.....	² 35,000	² 20,000	(²)	(²)	² 4 \$25,000	² 20,000

¹ Plus indirect costs.

² Not made.

³ Present general limit on teaching funds. In addition, schools may request limited funds for student stipends.

⁴ This maximum, to be used in a limited number of instances, has been recommended for collegiate schools of nursing.

Graduate training grants are awarded to assist public and other nonprofit institutions to establish, expand, or improve training opportunities in the health-related sciences for persons interested in careers in research, teaching, and, in certain designated areas, clinical service. In addition to providing sums for the support of the institution's program, such a grant may also provide funds for stipends and allowances awarded by the institution to trainees selected by the institution.

Financing

The following table shows appropriated funds and awards for selected fiscal years:

Fiscal year:	Appropriation ¹
1938.....	\$1,700
1957.....	28,075,000
1962.....	118,506,000
1963.....	154,139,000
1964.....	172,602,000
1965.....	181,311,000
1966.....	209,896,000

¹ The appropriation for fiscal year 1938 was for direct traineeships for the National Cancer Institute only. The appropriations for fiscal years 1957 through 1965 were for training grants and such direct traineeship programs as still existed.

Method of distribution

In addition to administrative review by NIH staff, training grant applications undergo dual review by advisory bodies composed primarily of non-Federal scientists. The first review, to determine scientific merit, is by a training committee; the second, by a national advisory council. These councils advise on program development as well as recommend, from a broad policy standpoint, those applications which in their judgment should be awarded.

The primary factors considered in the evaluation of training grant applications are the significance and relevance of the proposed training program; adequacy of the leadership, faculty, and facilities; and the training record of the institution and department concerned.

Stipends and allowances to individual trainees under training grants vary considerably among the programs of the Institutes. The amount of the overall training grant to the training institution depends upon the applicant's request and justification and the availability of Federal funds.

Direct traineeships are reviewed by the staff of the Institute concerned and by that Institute's training grant committees. The materials reviewed are similar to those reviewed in the fellowship program and generally include: (1) An application consisting of personal data, academic and professional history, record of any previous employment, the applicant's statement as to the manner in which the requested training will fit him for his proposed career of research or public service; and (2) letters of reference. The trainee is free to select any training institution approved for providing the training concerned. Traineeship applications are not reviewed by a national advisory council. Final selection is based on relevance of field of study to the Institute's program interests, applicant's qualifications, qualifications of training institution and sponsor, and availability of funds.

Application procedure

Application for either training grants or direct traineeships is made on PHS form 2499 and 2499-2. The time interval between advisory council review and the required date of receipt of training grant applications differs as between graduate and undergraduate training grants. To some extent, this interval also differs as among the Institutes awarding training grants.

Legal basis

Sections 301(d), 303(a)(1), 402(c), 412(g), 422(f), 433(a), and 444 of the Public Health Service Act of 1944, as amended (42 U.S.C. 241(d), 242(a)(1), 282(c), 287a(g), 288a(f), 289c(a), and 289(g)).

Additional information may be obtained from the Career Development Review Branch, Division of Research Grants, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

* * * * *
The following information applies to all bureaus of the Public Health Service:

Matching requirements

None.

Who may receive Federal aid

Only public and other nonprofit institutions are eligible for training grants.

The following are requirements for direct traineeships: The applicant must have completed residency training requirements in a clinical speciality or its equivalent or have had at least 3 years of pertinent post doctoral training or research experience. He must have made all necessary arrangements with the institution where training will be received and with the person who will be responsible for his training (the sponsor). He must be a U.S. citizen or have been lawfully admitted to the United States for permanent residence. He must be free from any physical or mental disability that would interfere with the proposed training.

SCHOLARSHIP GRANTS TO SCHOOLS OF MEDICINE, DENTISTRY, OSTEO-PATHY, OPTOMETRY, PODIATRY, OR PHARMACY

Purpose

To assist students from low-income families to pursue a course of study in medicine, dentistry, osteopathy, optometry, podiatry, or pharmacy, by making grants to accredited schools for scholarships to be awarded annually by such schools to students thereof.

Financing

Fiscal year	Authoriza- tion	Appropri- ation	Federal expenditures
1966	(1)	\$200,000	(3)
1967	(1)		
1968	(1)		
1969	(1)		

¹ No ceiling—but see limitations on amounts of grants.

² For the current academic year, plus such sums as are necessary to make grants and payments after Mar. 31, for next fiscal year, such obligations to be charged to fiscal year 1967 appropriations.

³ Not available.

Method of distribution

Grants are made to eligible applicants upon application to the Surgeon General, in accordance with regulations prescribed by the Surgeon General after consultation with the National Advisory Council on Medical, Dental, Optometric, and Podiatric Education.

Grants to each school shall be equal to the following amounts for the respective fiscal years:

Fiscal year 1966: \$2,000 times one-tenth of the full-time first-year students of the school.

Fiscal year 1967: \$2,000 times one-tenth of the full-time first- and second-year students.

Fiscal year 1968: \$2,000 times one-tenth of the full-time first-, second-, and third-year students.

Fiscal year 1969: \$2,000 times one-tenth of the number of full-time students in the school.

Matching requirements

None.

Who may receive Federal aid

Public or other nonprofit schools of medicine, osteopathy, dentistry, optometry, podiatry, or pharmacy accredited by a recognized body or bodies approved for such purpose by the Commissioner of Education (except that the accreditation requirement shall be deemed to be satisfied if (1) in the case of a new school, there is reasonable assurance that the school will meet accreditation standards prior to the beginning of the academic year following the normal graduation date of students who are in the first year of school during the fiscal year in which the Surgeon General makes a final determination as to approval of the application, or (2) in the case of any other school there is reasonable ground to expect that with the aid of a scholarship grant such school will meet such accreditation standards within a reasonable time).

Application procedure

Scholarship grant applications (PHS form T344-1) from schools of medicine, dentistry, osteopathy, optometry, and pharmacy are submitted to the Division of Community Health Services. Review is by Division staff, who recommend action to the Surgeon General.

Developments during the past year

New program.

Legal basis

Health Professions Educational Assistance Amendments of 1965, Public Law 89-290, approved October 22, 1965 (79 Stat. 1052).

Additional information may be obtained from the Chief, Division of Community Health Services, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

SOLID WASTE DISPOSAL

DEMONSTRATION STUDIES AND INVESTIGATION GRANTS

Purpose

To make grants for the conduct of municipal and regional studies and investigations, studies and investigations of national value, and demonstrations relating to the operation and financing of solid-waste disposal programs and the application of new and improved methods of solid-waste disposal and the reduction of the amount of such wastes and unsalvageable materials. Demonstration grants may include funds for construction of facilities.

Financing

Fiscal year	Total program authorization	Total appropriation	Demonstration studies and investigation grants portion
1966	\$7,000,000	\$4,000,000	\$2,000,000
1967	14,000,000		
1968	19,200,000		
1969	20,000,000		

¹ \$2,000,000, demonstration studies and investigation grants; \$550,000, research grants; \$400,000, State and interstate planning grants; remainder budgeted for direct operations, including \$100,000 for contracts.

Method of distribution

Funds are awarded to support investigations and studies of an applied nature and to demonstrate the feasibility of new methods. Applicants must indicate an ability to contribute to the financial support of the project.

Matching requirements

Grant funds may not exceed two-thirds of the estimated necessary costs of the project and no more than two-thirds of the construction costs of any facility included as a part of the demonstration project.

Who may receive Federal aid

Public or private nonprofit agencies or institutions.

Application procedure

Application instructions may be obtained from the Office of Solid Wastes, Public Health Service, Washington, D.C., 20201.

Developments during the past year

The legislation was enacted.

Legal basis

Solid Waste Disposal Act, title II, Public Law 89-272, approved October 20, 1965 (79 Stat. 997).

NOTE.—The Public Health Service is also authorized to provide for the conduct of research, training, surveys, and demonstrations (including construction of facilities) by contract.

Additional information may be obtained from the Office of Solid Wastes, Bureau of State Services (EH), Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

SOLID WASTE DISPOSAL

RESEARCH GRANTS

Purpose

To make grants-in-aid for research into the problems and practices of solid-waste disposal including research into the development of devices and facilities therefor, the reduction of the amount of such wastes and unsalvageable waste materials, and the recovery and utilization of potential resources from solid wastes.

Financing

Fiscal year	Total program authorization	Total appropriation	Research grants portion
1966	\$7,000,000	\$4,000,000	\$550,000
1967	14,000,000		
1968	18,200,000		
1969	20,000,000		

Method of distribution

Funds are awarded for research projects that are judged to be of scientific merit, and amounts recommended by advisory groups.

Matching requirements

None. There must be cost-sharing of research projects by grantees.

Who may receive Federal aid

Public or private nonprofit agencies or institutions.

Application procedure

See Research Project Grants, PHS, page 221. Further instructions may be obtained from the Office of Solid Wastes, Public Health Service, Washington, D.C., 20201.

Developments during the past year

The legislation was enacted.

Legal basis

Solid Waste Disposal Act, title II, Public Law 89-272, approved October 20, 1965 (79 Stat. 997).

NOTE.—The Public Health Service is also authorized to provide for the conduct of research, training, surveys, and demonstrations (including construction of facilities) by contract.

Additional information may be obtained from Office of Solid Wastes, Bureau of State Services (EH), Public Health Service, Department of Health, Education, and Welfare, Washington, D.C. 20201.

SOLID WASTE DISPOSAL

STATE AND INTERSTATE PLANNING GRANTS

Purpose

To make grants to survey solid-waste disposal practices and problems within the jurisdictional areas of State or interstate agencies and for development of solid-waste disposal plans for such areas.

Financing

Fiscal year	Total program authorization	Total appropriation	State and interstate planning grants portion
1966	\$7,000,000	\$4,000,000	\$400,000
1967	14,000,000		
1968	19,200,000		
1969	20,000,000		

Method of distribution

Funds are awarded to State and interstate agencies upon application and with satisfactory assurance that the planning of solid-waste disposal will be coordinated so far as practicable with other State, interstate, regional, and local planning activities.

Matching requirements

Grant funds may not exceed 50 percent of the cost of the surveys of solid-waste disposal practices and problems or the development of solid-waste disposal plans.

Who may receive Federal aid

State and interstate agencies.

Application procedure

Application instructions may be obtained from the Office of Solid Wastes, Public Health Service, Washington, D.C., 20201.

Developments during the past year

The legislation was enacted.

Legal basis

Solid Waste Disposal Act, title II, Public Law 89-272, approved October 20, 1965 (79 Stat. 997).

NOTE.—The Public Health Service is also authorized to provide for the conduct of research, training, surveys, and demonstrations (including construction of facilities) by contract.

Additional information may be obtained from Office of Solid Wastes, Bureau of State Services (EH), Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

SOLID WASTE DISPOSAL

TRAINING GRANTS

Purpose

To provide grants for the development of graduate training programs to train technical and management personnel for research development and operation of solid-waste disposal programs, and to provide support for students while enrolled in such training programs.

Financing

Fiscal year	Total program authorization	Total appropriation	Training grants portion
1966	\$7,000,000	\$4,000,000	\$150,000
1967	14,000,000		
1968	19,200,000		
1969	20,000,000		

Method of distribution

Funds are to be awarded for training programs that are judged to be of scientific merit, and amounts recommended by advisory groups.

Matching requirements

None. There must be a cost-sharing of research projects by grantees.

Who may receive Federal aid

Public or private nonprofit agencies or institutions.

Application procedure

Applications are made on PHS form 2499 (rev. 1-58), submitted to the Division of Research Grants, NIH. Initial review is by the Environmental Science Training Committee, and final review by the National Advisory Environmental Health Committee, which recommends action to the Surgeon General.

Further instructions may be obtained from the Office of Solid Wastes, Public Health Service, Washington, D.C. 20201.

Developments during the past year

The legislation was enacted.

Legal basis

Solid Waste Disposal Act, title II, Public Law 89-272, approved October 20, 1965 (79 Stat. 997).

NOTE.—The Public Health Service is also authorized to provide for the conduct of research, training, surveys, and demonstrations (including construction of facilities) by contract.

Additional information may be obtained from Office of Solid Wastes, Bureau of State Services (EH), Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.

SPECIAL RESEARCH RESOURCES

Purpose

Special Research Resources grants support large-scale specialized resources, in which equipment and technical skills are made available to all qualified biomedical investigators within an identified research community. The administrative framework is designed to insure that the Special Research Resource will be responsive to the research needs of the biomedical research community.

Each Special Research Resource not only benefits specific research activities, but broadens the base of national research capabilities. A centralized locale for the specialized equipment, technical skills, and research functions more effectively and efficiently serves the institution and the scientific community in general.

The largest component of the Special Research Resources program is the computer center support program which enables the collection and evaluation of vast quantities of data derived from experiments and other sources. Other kinds of Special Research Resources include projects for biomedical communication and information retrieval, specialized biological preparation centers, a regional enzyme and biopolymer resource, and biomedical instrumentation and biomedical engineering centers.

Long-term commitments of Special Research Resources program funds is characteristic of this program. However, through appropriate charges for research assistance, certain of the facilities may become wholly or partially self-supporting.

In addition to the types of centers mentioned above, it has become increasingly important to identify other needs of biomedical investigators and to devise appropriate ways of meeting their requirements in an efficient and economical manner. Such support for biomedical research is designed to devise new approaches and new theories leading to deeper insight into the problems of health and disease.

Financing

Fiscal year	Appropriation	Obligations
1962	\$5,000,000	\$4,329,000
1963	6,000,000	6,117,000
1964	6,000,000	5,077,000
1965	8,200,000	8,169,000
1966	12,150,000	10,850,000

Method of distribution

The criteria for eligibility include that the institution be well established, nonprofit and conducting a program of biomedical research in a variety of scientific areas in which many different disciplines participate. The research resource must serve qualified biomedical investigators at an institution or a regional group of institutions, or throughout the Nation.

Both grant and contract mechanisms are available for support of specific proposals. However, the contract mechanism is used only where well-defined services or products are needed by the program, and where program flexibility can best be maintained by contract.

Matching requirements

None.

Who may receive Federal aid

Universities, hospitals, and other private nonprofit institutions with programs of biomedical research and specialized research services to many departments and disciplines. Because only maximum use can justify the cost of expensive equipment such as large computers, the program fosters the development of centers that serve scientists and institutions within a region.

Application procedure

Applications for Special Research Resource grants must be made on forms prescribed by the Public Health Service (PHS 398), and executed by an official authorized to sign for the applicant institution. Applications should provide detailed information on the nature of the proposed project or program, details about the qualifications of the principal investigator, total facilities and resources that will be available, and justification of funds requested. All applications are reviewed by the National Institutes of Health scientific staff and special consultants. Further review is conducted by the National Advisory Research Resources Committee which makes recommendations to the Surgeon General concerning final action on applications.

Legal basis

Public Health Service Act, section 301, 42 U.S.C. 241.

Additional information may be obtained from the Chief, Special Research Resources Branch, Division of Research Facilities and Resources, National Institutes of Health, Public Health Service, Department of Health, Education, and Welfare, Bethesda, Md., 20014.

TUBERCULOSIS CONTROL

FORMULA GRANTS

Purpose

The tuberculosis control grant was authorized in section 314(b) of the Public Health Service Act, approved July 1, 1944, to assist States in establishing and maintaining adequate measures for the prevention, treatment, and control of tuberculosis.

In order to focus attention on the need for case-finding, Congress in the 1955 Appropriation Act (Public Law 83-472) restricted the use of the Federal grant and State and local matching funds for direct expenses of prevention and case-finding activities. The use of grant funds was further restricted in fiscal year 1965 in keeping with the recommendations of the Surgeon General's Task Force on Tuberculosis Control. In December 1963, the Surgeon General's Task Force on Tuberculosis Control completed its report which contained recommendations for a 10-year plan to raise the level of nationwide tuberculosis control services by means of increased formula grants to the States. The activities recommended were for services to unhospitalized active cases, inactive cases, and contacts to new active cases; identification of persons at risk through tuberculin testing of school-children and hospital admission X-ray programs; and continuing periodic examination of persons at risk of developing tuberculosis.

Formula grant funds are distributed to the State on a mathematical basis to insure the continuation of basic tuberculosis control services such as laboratory services, record and statistical services, and to insure the continuation of direction, coordination and planning, all in accord with the recommendations of the Surgeon General's Task Force on Tuberculosis Control.

Financing

The legislation governing this program contains no fixed authorization.

Fiscal year	Authoriza- tion	Appropri- ation	Expenditures	
			Federal ¹	State and local ²
1945.....	\$10,000,000	\$1,370,114	\$1,370,114	\$902,389
1946.....	(³)	5,200,000	5,178,965	6,599,009
1962.....	(³)	3,500,000	3,498,650	31,543,012
1963.....	(³)	3,250,000	3,236,358	36,084,511
1964.....	(³)	2,900,000	2,898,217	42,196,506
1965.....	(³)	3,000,000	2,919,914	⁴ 40,128,538
1966.....	(³)	3,000,000	(⁵)	(⁵)

¹ Obligations.

² Excludes maintenance of sanatoria and cost of inpatient care.

³ No limitations.

⁴ Provisional.

⁵ Not available.

Method of distribution

Tuberculosis grant funds are allotted among the States by a formula which, as provided by law, takes into consideration the population, financial need, and extent of the tuberculosis problem in the various States.

Matching requirements

As required in the annual appropriation acts, beginning with fiscal year 1955, the expenditure of tuberculosis grant funds must be matched by expenditure of an equal amount of State and local funds.

Who may receive Federal aid

Formula grant funds are allocated to the 50 States, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands.

Application procedure

States are eligible to receive formula grants upon submission and approval of a State plan for their use. The State plan, the equivalent of a grant application, is submitted to the PHS Regional Health Director, who is authorized to give final approval.

Developments during the past year

No significant developments in formula grant activity.

Legal basis

Authority for the tuberculosis grant is included in section 314(b) of the Public Health Service Act, as amended (42 U.S.C. 246). Section 314(d) cites the basic factors of population, financial need, and extent of the tuberculosis problem to be considered in allotting funds. Sections 51.1(c), 51.1(i), and 51.2(b) of the Public Health Service Regulations (42 CFR) define these factors, and section 51.3(b) prescribes the range of percentage distribution for each factor. Section 51.9(b) prescribes the matching ratio for the formula grant.

Additional information may be obtained from the Chief, Communicable Disease Center, Public Health Service, Department of Health, Education, and Welfare, Atlanta, Ga. 30333.

TUBERCULOSIS CONTROL

PROJECT GRANTS

Purpose

Public Law 87-290, approved September 22, 1961, provided for project grants for tuberculosis control. It was proposed in the fiscal year 1962 that project grants be used almost exclusively for improving services to known tuberculosis patients. Case-finding activities under this authority were limited to examination of contacts and diagnosis of suspects known to the health department. In December 1963, the Surgeon General's Task Force on Tuberculosis Control completed its report which contained recommendations for a 10-year plan to raise the level of nationwide tuberculosis control services by means of increased project grants to the States. The activities recommended were for services to unhospitalized active cases, inactive cases, and contacts to new active cases; identification of persons at risk through tuberculin testing of school children and hospital admission X-ray programs; and continuing periodic examination of persons at risk of developing tuberculosis.

Tuberculosis control project grants are made available to States and their political subdivisions for the purpose of carrying out the recommendations of the Surgeon General's Task Force on Tuberculosis Control.

Financing

The legislation governing these grants contains no fixed authorization and project grant activities have been increasing since their beginning in 1961.

Fiscal year	Appropriation	Federal expenditures ¹
1962	\$500,000	\$495,578
1963	1,250,000	1,242,026
1964	1,606,000	1,575,459
1965	5,000,000	4,991,124
1966	9,700,000	(?)

¹ Obligations.
² Not available.

Method of distribution

Special project grants are allocated to States and other political subdivisions, or to groups of health jurisdictions, depending upon the magnitude of the problem and the assurance that the particular area is capable of carrying out a plan of action in keeping with the priorities of the task force recommendations. At the present time, the magnitude of the problem is determined by the number of new cases reported in any given area.

Matching requirements

None.

Who may receive Federal aid

Any State or, with the approval of the State health authority, any county, health district, political subdivision, or group of health districts of a State may apply for a project grant.

Application procedure

Application for project grants should be made on PHS form 4744-1 and should include (1) project description setting forth the specific need, objectives, etc., (2) a budget estimating the resources required for the project.

Applications from political subdivisions of States must be transmitted through the appropriate State health officer for his approval. All applications must be transmitted through the appropriate Regional Health Director. Review is by regional office, Communicable Disease Center, and Office of Grants Management staff. Grants are awarded by the Surgeon General.

Developments during the past year

During the last year there has been widespread reassessment of the tuberculosis control activities and a redirection of program efforts in accordance with the recommendations of the task force.

Legal basis

Authority for project grants of money, services, supplies, and equipment for control of tuberculosis is contained in the 1966 Appropriation Act, Public Law 89-156.

Additional information may be obtained from the Chief, Communicable Disease Center, Public Health Service, Department of Health, Education, and Welfare, Atlanta, Ga., 30333.

VENEREAL DISEASE CONTROL

Purpose

Amendments to the 1918 Chamberlain-Kahn Act on May 24, 1938, authorized the venereal disease control grant to assist States in establishing and maintaining adequate measures for the prevention, treatment, and control of venereal diseases and established on a permanent and national basis the program to control syphilis and gonorrhea in the United States.

Authority for the venereal disease grant was included with relatively little change in the Public Health Service Act of 1944. During the fiscal year 1943, Federal grants were first made available to States for operation of rapid treatment centers under the provisions of legislation commonly known as the Lanham Act (Public Law 137, 77th Congress, approved June 28, 1941), administered by the Federal Works Agency. Through the transfer of funds from the Federal Works Agency, the Public Health Service actively participated in the initiation of this program by furnishing consultation and medical personnel to the States and by operation of several of the centers. In 1946, the Congress appropriated funds to the Public Health Service to continue the rapid treatment center operations. The appropriation was available for direct operation of the centers by the Public Health Service or for project grants to States and political subdivisions. Such grants could be made in personal services, equipment, and supplies, as well as cash. The dramatic effect of penicillin in the treatment of syphilis changed the emphasis from inpatient treatment centers to casefinding and outpatient services. Funds for formula grants under section 314(a) of the Public Health Service Act have not been appropriated after June 30, 1953, and currently grants are available only for special projects.

Rising venereal disease rates prompted the Surgeon General to appoint a task force committee in 1961 to evaluate control methods and make recommendations for a syphilis eradication program. The task force report called for a 10-year eradication effort of intensified epidemiology and the development of professional and community education program. Implementation has included recruitment and training of personnel, visitation of private physicians and laboratories, expansion of information-education program and support of behavioral science studies.

Financing

The original legislation authorized appropriation of \$3 million for fiscal year 1939, \$5 million for 1940, \$7 million for 1941; no limitation was placed thereafter. The following table of selected years gives the financial pattern of the venereal disease grant:

	Authorization	Appropriation	Federal expenditures ¹
Fiscal year:			
1946	No limitation	\$5,291,000	\$5,291,000
1954	do	3,500,000	2,164,590
1962	do	2,685,000	2,575,131
1963	do	4,335,000	4,327,027
1964	do	5,895,000	5,886,767
1965	do	6,229,000	6,194,153
1966	do	6,229,000	(2)

¹ Obligations. Includes services and supplies in lieu of cash in following amounts: 1962, \$974,438; 1963 \$1,730,804; 1964, \$2,711,068; 1965, \$3,202,157.

² Not available.

Method of distribution

Awards provide trained personnel and supporting costs on the basis of (1) needs in terms of the syphilis problem, (2) project objectives, both long- and short-term plans for achieving task force goals, established in negotiations between grantee and Public Health Service and in the ensuing application, and (3) availability of local resources funds and personnel.

Matching requirements

None.

Who may receive Federal aid

States and their political subdivisions.

Application procedure

Applications for project grants should be made on PHS form 4744-1. Applications from political subdivisions of States must be transmitted through the appropriate State health officer for his approval. All applications must be transmitted through the appropriate Regional Health Director. Review is by regional office, Communicable Disease Center, and Office of Grants Management staff. Grants are awarded by the Surgeon General.

Developments during the past year

Staffing to recommended levels, expansion and acceleration of training program, extending information-education personnel assignments to 16 States and/or major cities were achieved.

Legal basis

Authority for the venereal disease control program is contained in section 314(a) of the Public Health Service Act, as amended (42 U.S.C. 246). Authority for the project grants is contained in annual Appropriations Act (Public Law 89-156) which authorizes grants of money, service, supplies, equipment, and use of facilities to States, and with the approval of the respective State health authorities, to counties, health districts, and other political subdivisions of the States, in such amounts and upon such terms and conditions as the Surgeon General may determine.

Additional information may be obtained from the Chief, Communicable Disease Center, Public Health Service, Department of Health, Education, and Welfare, Atlanta, Ga., 30333.

Summary of data on financial assistance programs of the Public Health Service, fiscal years 1965-66

Program	Amount allocated	Statutory authorization	Matching requirements	Population and financial need	Distribution formula	Extent of specific problem
Accident prevention:						
Research	{ (\$1,695,000) 1,785,000	Sec. 301, PHS Act ²	None		None	
Fellowships	{ 50,000	Public Law 89-272	do		do	
Training	{ 100,000	Sec. 301, PHS Act ²	do		do	
Air pollution:						
Research	{ (4,606,600) 5,339,000	{ Sec. 301, PHS Act ² (Public Law 89-272) fiscal year 1966.	do		do	
Training	{ ² (1,078,000) 1,309,000	{ do. ²	do		do	
Control program grants	{ (4,180,000) 5,000,000	Public Law 89-272	Up to ¼ for control agencies and up to ¾ for intermunicipal or interstate agencies.		do	
Fellowships	{ (252,000) 378,000	do	None		do	
Survey and demonstration	{ (765,000) 1,850,000	do	Same as control program grant.		do	
Allergy and infectious diseases:						
Research	{ (35,996,000) 39,323,000	{ Secs. 301(d) and 431, PHS Act. ²	None		do	
Gorgas Memorial Laboratory	{ (350,000) 350,000	{ (45 Stat. 491) (62 Stat. 1213; 22 U.S.C. 278) (73 Stat. 573; Public Law 86-296).	do		do	
Fellowships	{ (1,071,000) 1,071,000	{ Secs. 301(c) and 433(a), PHS Act.	do		do	
Research career program award	{ (1,905,000) 2,466,000	{ do	do		do	
Training	{ (8,239,000) 9,059,000	{ Sec. 433(a), PHS Act.	do		do	
Areawide health facility planning grants	{ (2,500,000) 5,000,000	{ Sec. 318, PHS Act ²	Federal share not more than 50 percent.		do	
Arthritis and metabolic diseases:						
Research	{ (71,809,000) 76,728,000	{ Secs. 301 and 431, PHS Act.	None		do	
Fellowships	{ (2,205,000) 2,905,000	{ Secs. 301(c) and 433(a), PHS Act.	do		do	
Research career program award	{ (2,774,000) 3,102,000	{ do	do		do	
Training	{ (13,690,000) 14,206,000	{ Sec. 433(a), PHS Act.	do		do	

Cancer:						
Formula	{ (3,500,000) 3,500,000	Public Law 89-156	\$1 State, \$1 Federal	60 percent; population weighted by index of financial need. ⁴		35 percent; cancer mortality for 1961-63. ⁵ 5 percent; weighted reciprocal of population density. ⁷ Minimum allotment \$25,000 or 25 cents per capita, whichever is less.
Project (includes training funds)	{ (5,273,000) 13,933,000 56,964,000	do.	None		None	
Research	{ 63,605,000 (2,198,000)	Sec. 301(d), PHS Act	do.		do.	
Fellowships	{ (1,825,000) (1,744,000)	Secs. 301(c) and 402(d), PHS Act	do.		do.	
Research career program award	{ 1,917,000 (9,000,000)	do.	do.		do.	
Training	{ 10,900,000	Secs. 301(e) and 402(e), PHS Act	do.		do.	
Cerebrovascular:						
Clinical traineeships (NHL)		Sec. 412(g), PHS Act	do.		do.	
Clinical traineeships (NINDB)	500,000	Secs. 431(a) and 433(a), PHS Act	do.		do.	
Training (NHL)		Sec. 412(g), PHS Act	do.		do.	
Training (NTNDB)	1,300,000	Secs. 431(a) and 433(a), PHS Act	do.		do.	
Child health and human development:						
Research	{ (27,879,000) 34,702,000	Secs. 301 and 441, PHS Act	do.		do.	
Fellowships	{ (1,080,000) 1,526,000	Secs. 301(c) and 444, PHS Act	do.		do.	
Research career program award	{ (1,520,000) 2,181,000	do.	do.		do.	
Training	{ (5,544,000) 7,937,000	do.	do.		do.	
Chronic disease:						
Research	{ (1,790,000) 3,551,000	Sec. 301, PHS Act ²	do.		do.	
Training	{ (100,000) 200,000	do. ²	do.		do.	
Chronic illness and aged: Formula	{ (11,750,000) 12,300,000	Sec. 314(c), PHS Act ²	\$1 State, \$1 Federal	40 percent; population weighted by index of financial need. ³		60 percent; population 65 and over weighted by index of financial need. ⁸ Minimum allotment, \$60,000.
Clinical cancer: Training (1967)	2,500,000	Sec. 402(c), PHS Act	None		None	
Communicable disease: Research	{ (1,739,000) 1,921,000	Sec. 301, PHS Act ²	do.		do.	

See footnotes at end of table, p. 251.

Summary of data on financial assistance programs of the Public Health Service, fiscal years 1965¹-66—Continued

Program	Amount allocated	Statutory authorization	Matching requirements	Population and financial need	Distribution formula	Extent of specific problem	
Community health:							
Research	{ (\$2,682,000) 3,816,000	} Sec. 301, PHS Act ²	None		None		
Fellowships	{ (224,000) 100,000		do. ²	do.	do.		
Training	{ (100,000) 400,000		do. ²	do.	do.		
Community health services particularly for the chronically ill and aged: Project.	{ (7,000,000) 10,000,000	} Sec. 316, PHS Act ²	do.		do.		
Community mental health centers:							
Construction	{ (35,000,000) 50,000,000	} Public Law 88-164	Variable based on State standards. Federal share not more than 66% percent or not less than 33½ percent.	100 percent (fixed by law); variable allotment based on population, the extent of the need for mental health centers and the financial need. Minimum allotment, \$100,000 (except American Samoa, Guam, and the Virgin Islands).			
Initial cost of professional and technical personnel.	19,500,000		Public Law 89-105	Federal share declines from 75 percent in the 1st 15 months, to 60 percent in the next 12 months, to 45 percent in the next 12 months, to 30 percent in the last 12 months.		None	
Dental health:							
Formula	{ (520,000) 1,000,000	} Sec. 314(c), PHS Act ²	\$1 State, \$1 Federal	100 percent; population weighted by index of financial need. ³		Minimum allotment \$12,500 or 12½ cents per capita, whichever is less.	
Research (BSS)	{ (784,000) 944,000		Sec. 301, PHS Act ²	None		None	
Training (BSS)	{ (2,269,000) 2,399,000		Sec. 422(f), PHS Act ²	do.		do.	

Research training (BSS).....	150,000	Sec. 301, PHS Act ²	do.....	do.....	
Research (NIH).....	(8,445,000) 10,054,000	Sec. 301(d), PHS Act ²	do.....	do.....	
Fellowships.....	(620,000) 668,000	Secs. 301(c) and 422(c), PHS Act.....	do.....	do.....	
Research career program award.....	(679,000) 1,123,000	do.....	do.....	do.....	
Training.....	(4,708,000) 5,203,000	Secs. 301(d) and 422(f), PHS Act.....	do.....	do.....	
Educational improvement grants to schools of medicine, dentistry, osteopathy, op- tometry, and podiatry (fiscal year 1966).....	10,482,000	Public Law 89-290.....	do.....		\$12,500 to each school plus the product ob- tained by multiplying \$250 times number of full-time students.
Environmental engineering and food protection: Research.....	(4,907,000) 4,799,000	Sec. 301, PHS Act ²	do.....		None.....
Environmental health sciences:					
Research.....	(3,078,000) 6,219,000	Sec. 301, PHS Act ²	do.....	do.....	
Research training.....	(2,262,000) 3,578,000	do. ²	do.....	do.....	
General health: Formula.....	(10,000,000) 10,000,000	Sec. 314(c), PHS Act ²	\$1 State, \$1 Federal.....	95 percent; population weighted by index of financial need. ⁴	5 percent; weighted re- ciprocal of population density. ⁷
Hawaii leprosy payment.....	(1,200,000) 1,200,000	Sec. 331, PHS Act ²	None.....	None.....	
Health professions educational facilities: Construction.....	(100,000,000) 75,000,000	Public Law 88-581.....	do.....	do.....	
Health professions student loan program.....	(10,200,000) 15,400,000	Title VII, PHS Act, ² Public Law 89-290.....	Participating institu- tions required to de- posit in loan funds no less than 1/6 of Federal contribution or no less than 1/6 of total loan fund.	The distribution of funds to participating schools is made in ac- cordance with the re- quirements of title VII, sec. 742(b)(2) of the PHS Act, as amended.	
Health research facilities: Con- struction.....	(50,000,000) 50,000,000	Title VII, PHS Act ²	\$1 institution, \$1 Federal.....	None.....	

See footnotes at end of table, p. 251.

Summary of data on financial assistance programs of the Public Health Service, fiscal years 1965¹-66—Continued

Program	Amount allocated	Statutory authorization	Matching requirements	Population and financial need	Distribution formula	Extent of specific problem
Heart (see also Cerebrovascular): Formula	{ (\$7,000,000) 9,500,000 }	Sec. 314(e), PHS Act ²	\$1 State, \$1 Federal	39 percent; 70 cents per capita for 1st 100,000 population or fraction thereof. ⁵ 61 percent; population weighted by index of financial need. ⁵		
Research	{ (79,019,000) 88,497,000 }	Sec. 301(d), PHS Act	None		None	
Fellowships	{ (2,638,000) 2,454,000 }	Secs. 301(c) and 412(g), PHS Act.	do		do	
Research career program award	{ (3,569,000) 3,921,000 }	do	do		do	
Training	{ (14,981,000) 17,228,000 }	Secs. 301(d) and 412(g), PHS Act.	do		do	
Home health services: Formula	9,000,000	Sec. 314(c), PHS Act ²	\$1 State, \$10 Federal			100 percent; population 65 and over weighted by index of financial need. ⁸ Minimum allotment \$75,000.
Hospital construction	{ (150,000,000) 140,000,000 }	Sec. 601, PHS Act ²	Variable based on State standards, Federal share not more than 66 $\frac{2}{3}$ percent or not less than 33 $\frac{1}{3}$ percent (see Sec. 625(b), PHS Act).	100 percent (fixed by law); variable allotment based on population weighted by the square of the allotment percentage. ¹⁰ Allotment percentage may not exceed 75 percent or be less than 33 $\frac{1}{3}$ percent. Minimum allotment, \$200,000 (except American Samoa, Guam, and the Virgin Islands can receive up to $\frac{1}{2}$ of minimum, if needed).		

Immunization: Project.....	{ 8,000,000 8,000,000 }	Sec. 317, PHS Act ²	None.....		None.....
Medical facilities construction: Diagnostic or treatment centers.	{ 20,000,000 18,600,000 }	Sec. 601, PHS Act ²	Variable based on State standards, Federal share not more than 66% per- cent or not less than 33% percent (see Sec. 625(b), PHS Act).	100 percent (fixed by law); variable allot- ment based on popu- lation weighted by the square of the allotment percent- age. ¹⁰ Allotment per- centage may not ex- ceed 75 percent or be less than 33% per- cent. Minimum allotments \$100,000 for diagnostic or treatment centers, \$200,000 for long-term care facilities and modernization, and \$50,000 for rehabilita- tion facilities (ex- cept American Samoa, Guam, and the Virgin Islands).	
Long-term care facilities.....	{ 40,000,000 70,000,000 }	do. ²			
Rehabilitation facilities.....	{ 10,000,000 10,000,000 }	do. ²			
Modernization.....	20,000,000	do. ²			
Hospital and medical facilities research and demonstration:					
Project.....	{ 2,268,000 4,850,000 }	Sec. 636, PHS Act ²	None.....		None.....
Medical libraries: Construction (1967) Establishment of regional medical libraries.	2,500,000	Public Law 89-291 do.....	Federal share for basic resource materials may not exceed 50 percent of annual operating expenses of the previous year.		None.....
Special scientific project.....	500,000	do.....	None.....		do.....
Publications.....	545,000	Sec. 301 and Public Law 89-291.	do.....		do.....

See footnotes at end of table, p. 251.

Summary of data on financial assistance programs of the Public Health Service, fiscal years 1965-66—Continued

Program	Amount allocated	Statutory authorization	Matching requirements	Population and financial need	Distribution formula	Extent of specific problem
Mental health:						
Formula.....	{ (\$6,750,000) 6,750,000 }	Sec. 314(c), PHS Act 2	\$1 State, \$1 Federal	30 percent; population weighted by index of financial need. ¹		70 percent; extent of emotional and psychiatric disorders considered directly proportional to population. ² Minimum allotment \$65,000.
Hospital improvement.....	{ (12,000,000) 18,000,000 }	Secs. 303 (a) and (b), PHS Act.	None		None	
Research.....	{ (57,799,000) 61,391,000 }	Secs. 301 (d), 303 (a) and (b), PHS Act.	do		do	
Fellowships.....	{ (4,657,000) 4,964,000 }	Sec. 301 (c), PHS Act	do		do	
Research career program award.....	{ (3,400,000) 3,400,000 }	do	do		do	
Training.....	{ (73,213,000) 86,231,000 }	Secs. 301(d) and 303(a) (1), PHS Act.	do		do	
Mental retardation facilities construction:						
Mental retardation research centers.....	{ (8,000,000) 6,000,000 }	Public Law 88-164	Federal share not to exceed 75 percent of the cost.		do	
University-affiliated clinical facilities.....	{ (7,500,000) 10,000,000 }	do	do		do	
Facilities for mentally retarded.....	{ (10,000,000) 12,500,000 }	do	Variable based on State standards, Federal share not more than 66 $\frac{2}{3}$ percent or not less than 33 $\frac{1}{4}$ percent.	100 percent (fixed by law); variable allotment based on population, extent of the need for facilities for the mentally retarded and the financial need. Minimum allotment, \$100,000 (except American Samoa, Guam, and the Virgin Islands).		
Mental retardation:						
Implementation project.....	{ (1,140,000) 2,750,000 }	Public Law 89-97	\$1 State, \$3 Federal		None	
Project.....	{ (700,000) 4,500,000 }	Public Law 89-156	None		do	

Project grants for training	2,500,000	do	do	do
Migrant health: Project	(2,500,000) 3,000,000	Sec. 310, PHS Act ²	do	do
National Heart Institute: Graduate clinical training.		Sec. 412(g), PHS Act	do	do
National Library of Medicine: Research	(46,000) 345,000	Sec. 301, PHS Act ²	do	do
Training	(65,000) 65,000	do ²	do	do
Fellowships	(8,000) 20,000	Sec. 301(h), PHS Act ²	do	do
Neurological and sensory diseases (see also Cerebrovascular): Project	(2,750,000) 11,275,000	Public Law 89-156	do	do
Research	(50,998,000) 58,578,000	Secs. 301 and 431, PHS Act.	do	do
Direct traineeships	(2,200,000) 2,200,000	Sec. 433(a), PHS Act	do	do
Fellowships	(400,000) 573,000	Secs. 301(c) and 433 (a), PHS Act.	do	do
Research career program award.	(1,760,000) 2,580,000	do	do	do
Training	(12,551,000) 15,657,000	Sec. 433(a), PHS Act	do	do
Nursing: Research	(1,953,000) 2,170,000	Sec. 301, PHS Act ²	do	do
Fellowships	(362,000) 412,000	do. ²	do	do
Training: Professional nurse traineeships.	(8,000,000) 9,000,000	Sec. 821, PHS Act ²	do	do
Nurse-scientist graduate training.	(364,000) 480,000	Sec. 301, PHS Act ²	do	do
Diploma schools	(4,000,000) 2,500,000	Sec. 806, PHS Act ²	do	do
Loans to students	(3,100,000) 8,900,000	Sec. 822, PHS Act ²	Participating institutions required to deposit in loan funds no less than $\frac{1}{2}$ of Federal contribution or no less than $\frac{1}{10}$ of total loan fund.	Allotment based on school enrollment and number of high school graduates in the States.
Projects for improvement.	(2,000,000) 3,000,000	Sec. 805, PHS Act ²	None	None
Construction	15,000,000	Sec. 801, PHS Act ²	Federal share not more than 66 $\frac{2}{3}$ percent or not less than 50 percent.	do

See footnotes at end of table, p. 51.

Summary of data on financial assistance programs of the Public Health Service, fiscal years 1965¹-66—Continued

Program	Amount allocated	Statutory authorization	Matching requirements	Population and financial need	Distribution formula	Extent of specific problem
Occupational health: Research	(\$2,305,000) 2,705,000	Sec. 301, PHS Act ²	None		None	66% percent allocated on basis of the average number of federally sponsored students in each school. 33% percent divided equally between each school.
Public health: Graduate training	(2,500,000) 4,000,000	Sec. 309, PHS Act ²	do.		do.	
Public health traineeships: Training	(4,500,000) 7,000,000	Sec. 306, PHS Act ²	do.		do.	
Public health training: Schools of public health	(2,500,000) 3,500,000	Sec. 314(c), PHS Act ²	do.		do.	
Radiological health: Formula	(2,500,000) 2,500,000	do. ²	\$1 State, \$1 Federal	35 percent; population weighted by index of financial need. ³		
Research	(2,122,000) 2,546,000	Sec. 301, PHS Act ²	None		None	
Training	(2,500,000) 2,500,000	Public Law 89-156	do.		do.	
Regional medical programs	12 25,000,000	Public Law 89-239	do.		do.	
Research and services, general: (a) National Institute of General Medical Sciences						
Research	(52,720,000) 57,229,000	Sec. 301(d), PHS Act	do.		do.	
Fellowships	(9,424,000) 10,948,000	Sec. 301(c), PHS Act	do.		do.	
Research career program award	(6,141,000) 7,506,000	do.	do.		do.	
Training	(37,182,000) 41,375,000	Secs. 301 (d) and 442 PHS Act.	do.		do.	
Contracts	(55,442,000) 70,000,000	Public Law 89-115	do.		do.	
(b) Office of International Research:						
Research	(3,350,000) 3,420,000	Secs. 301 and 308, PHS Act.	do.		do.	
Fellowships (all international post-doctoral)	(1,200,000) 1,200,000	Secs. 301(c) and 308(b), PHS Act.	do.		do.	

(c) Division of Research Facilities and Resources:

Research project	{ (15,200,000) 13 19,150,000 }	Sec. 301(d), PHS Act	do	do	
General research support	{ 14 (45,000,000) 45,200,000 }	do	do	do	
General clinical centers	{ (27,684,000) 28,500,000 }	do	do	do	
Scholarship grants to schools of medicine, dentistry, osteopathy, optometry, podiatry, or pharmacy.	200,000	Public Law 89-290	do		\$2,000 to each school times 1/10 of full-time 1st year students estimated to be enrolled in the school by Oct. 15, 1966.
Solid waste disposal:					
Demonstration studies and investigation grants	2,000,000	Public Law 89-272	Federal share not to exceed 66 2/3 percent.	do	None
Planning	400,000	do	Federal share not to exceed 50 percent.	do	
Research	550,000	do	None	do	
Training	150,000	do	do	do	
Tuberculosis control:					
Formula	{ (3,000,000) 3,000,000 }	Sec. 314(b) PHS Act ²	\$1 State, \$1 Federal	20 percent; population weighted by index of financial need. ³	Basic grant (\$7,500 to each State). 37.5 percent; tuberculosis mortality, 1961-63. ⁴ 62.5 percent; tuberculosis morbidity, 1961-63. ⁵ (Percentages applied to 80 percent of total amount allocated less total basic grant.)
Project	{ (5,000,000) 9,700,000 }	Public Law 89-156	None	do	
Venereal disease control: Project	{ (6,229,000) 6,229,000 }	{ Sec. 314(a), PHS Act, ² Public Law 89-156 }	do	do	

¹ Fiscal year 1965 figures are in parentheses.

² As amended.

³ Amount available. Excludes grants to individuals which are included under "Fellowships."

⁴ Amount available. Excludes grants to individuals which are included under "Fellowships." Includes funds for research training.

⁵ Population—Bureau of the Census Provisional Estimates: Series P-25, No. 289 (except Guam and Virgin Islands, P-25, No. 272). Financial Need—Per Capita Income Estimates, Department of Commerce, 1959-63, 5-year average.

⁶ Cancer and Tuberculosis Mortality—Vital Statistics of the United States, 1961-63; Tuberculosis Morbidity Annual Tuberculosis Report Form PHS-1393.

⁷ Population Density—The latest available land area from Department of Commerce. (See footnote 5 for population reference.)

⁸ Population—Bureau of the Census; Series P-25, No. 294 for United States; P.C. (1)

54B and 55B, 1960 for Guam and Virgin Islands; Series P-25, No. 280 for Puerto Rico. Financial Need—Per Capita Income Estimates, Department of Commerce, 1959-63, 5-year average.

⁹ Includes \$1,500,000 for Environmental Health Sciences Institutes for Research and Training.

¹⁰ Population—Bureau of the Census Provisional Estimates; Series P-25, No. 289 (except Guam and Virgin Islands, P-25, No. 272). Financial Need—Per Capita Income Estimates, Department of Commerce, 1961-63; 3-year average.

¹¹ Approximately \$1,275,000 was reserved for training.

¹² \$24,000,000 for grants; \$1,000,000 for administration and technical assistance.

¹³ Includes \$12,150,000 for special resource centers and \$7,000,000 for primate centers.

¹⁴ Funds for the general research support program were transferred from each of the 9 NIH appropriations.

DIVISION OF RESEARCH GRANTS, CAREER DEVELOPMENT REVIEW BRANCH

Training Grant Applications Received

	Fiscal year 1963—Period, July 1, 1962, through June 30, 1963					Fiscal year 1964—Period, July 1, 1963, through June 30, 1964					Fiscal year 1965—Period, July 1, 1964, through June 30, 1965				
	Total received	New	Com- peting	Com- mitted (con- tinued)	Supple- ments	Total received	New	Com- peting	Com- mitted (con- tinued)	Supple- ments	Total received	New	Com- peting	Com- mitted (con- tinued)	Supple- ments
Institute:															
NIAID	178	24	28	104	22	218	40	32	116	30	205	19	34	133	19
NIAMD	483	60	48	255	120	420	48	63	256	53	383	37	70	242	34
NICL	143	20	5	66	52	134	19	26	62	27	92	8	18	56	11
NICHD						97	50	12	25	10	145	49	19	52	25
NIDR	106	44	8	38	16	131	27	18	71	15	119	17	13	71	18
NIGMS	896	195	103	517	81	849	159	109	518	63	933	127	157	545	104
NHL	270	39	44	150	37	393	25	68	274	26	414	50	23	284	52
NINDB	309	66	49	142	52	331	56	47	161	67	354	54	61	187	52
NIMH											6		2	4	
BSS—CH:															
AC						1	1								
CC						1	1								
CD						2	2				7	6			1
CH						6	6				6	4		2	
NU	6	4		1		7	7		4	2	11	1		5	3
DH	60	2	2	40	16	59	1	8	38	12	55		2	44	8
BSS—EH:															
AP	19	11	1	6	1	32	13		11	8	31	8	5	18	5
ES	2	2				56	17		32	7	61	12	8	33	8
WP	27	20		1	6	111	38	1	60	12	99	32		54	13
National Library of Medicine						3	3				8	8			
Total	2,498	487	288	1,320	403	2,851	507	384	1,628	332	2,929	432	420	1,724	353

Federal-State grant-in-aid programs administered by the Public Health Service¹

State and territory	Year 1st payment made		Year 1st project approved	
	Tuber- ctolosis control ²	Veneral- disease control ³	Community immuniza- tion ⁴	<i>Aedes aegypti</i> eradica- tion ⁴
Alabama.....	1945	1939	1963	1966 ⁵
Alaska.....	1945	1939	1964	
Arizona.....	1945	1939		
Arkansas.....	1945	1939	1963	
California.....	1945	1939	1963 ⁶	
Colorado.....	1945	1939	1963	
Connecticut.....	1945	1939	1964	
Delaware.....	1945	1939		
District of Columbia.....	1945	1939	1963	
Florida.....	1945	1939	1963	1964
Georgia.....	1945	1939	(e)	1966 ⁵
Hawaii.....	1945	1939	1965	1965
Idaho.....	1945	1939	1965	
Illinois.....	1945	1939	1964 ⁶	
Indiana.....	1945	1939		
Iowa.....	1945	1939	1963 ⁶	
Kansas.....	1945	1939	1964 ⁶	
Kentucky.....	1945	1939	1963	
Louisiana.....	1945	1939	1964	
Maine.....	1945	1939		
Maryland.....	1945	1939	(e)	
Massachusetts.....	1945	1939	1963	
Michigan.....	1945	1939	(e)	
Minnesota.....	1945	1939	(e)	
Mississippi.....	1945	1939	1963	
Missouri.....	1945	1939	1963 ⁶	
Montana.....	1945	1939	1964	
Nebraska.....	1945	1939	(e)	
Nevada.....	1945	1939	(e)	
New Hampshire.....	1945	1939	1964	
New Jersey.....	1945	1939	1963	
New Mexico.....	1945	1939	1963	
New York.....	1945	1939	1963 ⁶	
North Carolina.....	1945	1939	1963	
North Dakota.....	1945	1939	1963	
Ohio.....	1945	1939		
Oklahoma.....	1945	1939	1963	
Oregon.....	1945	1939	1963	
Pennsylvania.....	1945	1939	1964 ⁶	
Rhode Island.....	1945	1939		
South Carolina.....	1945	1939	1963	1966 ⁵
South Dakota.....	1945	1939	1963	
Tennessee.....	1945	1939	(e)	
Texas.....	1945	1939	(e)	1964
Utah.....	1945	1939	1963	
Vermont.....	1945	1939	1964	
Virginia.....	1945	1939	(e)	
Washington.....	1945	1939		

See footnotes at end of table, p. 254.

*Federal-State grant-in-aid programs administered by the Public Health Service*¹—Continued

State and territory	Year 1st payment made		Year 1st project approved	
	Tuber- culosis control ²	Veneral- disease control ³	Community immuniza- tion ⁴	<i>Aedes aegypti</i> eradica- tion ⁴
West Virginia.....	1945	1939	1963	
Wisconsin.....	1945	1939	(⁵)	
Wyoming.....	1945	1939		
Guam.....	1958			
Puerto Rico.....	1945	1939	1963	1964
Virgin Islands.....	1945	1939	1964	1964

¹ Year each program was authorized: Tuberculosis control 1944, venereal disease control 1930, community immunization 1962, *Aedes aegypti* eradication 1963.

² Project grants became available in 1962.

³ Formula grants have not been available since 1953.

⁴ Project grants exclusively.

⁵ Fiscal year.

⁶ Project grants have been made to the following local health departments:

California:

Alameda County.....	1964
Berkeley.....	1964
Contra Costa County.....	1964
Long Beach.....	1965
Los Angeles.....	1964
San Joaquin County.....	1964
San Jose.....	1964
Santa Clara.....	1964
Santa Cruz.....	1964
Sutter-Yuba.....	1965
Ventura.....	1964

Georgia:

Troup County.....	1964
Savannah.....	1964

Illinois:

Chicago.....	1963
Lake County.....	1964

Iowa: Des Moines.....

1963

Kansas: Kansas City.....

1964

Maryland: Baltimore.....

1963

Michigan:

Detroit..... 1965

Saginaw..... 1964

Virginia: Richmond..... 1964

Wisconsin:

Milwaukee.....	1964
Waukesha.....	1964

Minnesota:

Rochester.....	1964
St. Paul.....	1964

Missouri:

Kansas City.....	1964
St. Louis (city).....	1964
St. Louis County.....	1963

Nebraska: Omaha.....

1964

Nevada: Reno.....

1964

New York: New York City.....

1963

Pennsylvania:

Allegheny County.....	1963
Philadelphia.....	1963

Tennessee:

Memphis.....	1964
Nashville.....	1965

Texas:

Dallas.....	1963
El Paso.....	1965
Houston.....	1963
Laredo.....	1964
Eagle Pass.....	1965

Federal-State grant-in-aid programs administered by the Public Health Service ^{1 2}

State and territory	Year 1st payment made							Year 1st project approved for waste treatment construction	Year program adopted		
	General health	Tuberculosis control	Cancer control	Mental health	Heart disease control	Venereal disease control ³	Water pollution program grant		Hospital construction	Medical facilities construction	Radiological health
Alabama.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1963
Alaska.....	1936	1945	1943	1948	1950	1939	1950	1959	1946	1955	1963
Arizona.....	1936	1945	1943	1948	1950	1939	1950	1957	1948	1954	1963
Arkansas.....	1936	1945	1943	1948	1950	1939	1950	1956	1947	1955	1963
California.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1955	1963
Colorado.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1954	1963
Connecticut.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1955	1963
Delaware.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1963
District of Columbia.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1964
Florida.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1963
Georgia.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1963
Hawaii.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1955	1963
Idaho.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1954	1963
Illinois.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1954	1963
Indiana.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1963
Iowa.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1954	1963
Kansas.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1955	1963
Kentucky.....	1936	1945	1943	1948	1950	1939	1950	1957	1948	1954	1963
Louisiana.....	1936	1945	1943	1948	1950	1939	1950	1957	1948	1954	1963
Maine.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1955	1963
Maryland.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1954	1963
Massachusetts.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1963
Michigan.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1955	1963
Minnesota.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1955	1963
Mississippi.....	1936	1945	1943	1948	1950	1939	1950	1957	1946	1954	1963
Missouri.....	1936	1945	1943	1948	1951	1939	1950	1957	1946	1954	1963
Montana.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1955	1963
Nebraska.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1955	1963
Nevada.....	1936	1945	1943	1948	1950	1939	1950	1957	1949	1955	1963
New Hampshire.....	1936	1945	1959	1948	1950	1939	1960	1957	1947	1956	1963
New Jersey.....	1936	1945	1943	1948	1950	1939	1950	1957	1947	1954	1963

See footnotes at end of table, p. 256.

Federal-State grant-in-aid programs administered by the Public Health Service^{1 2}—Continued

State and territory	Year 1st payment made							Year 1st project approved for waste treatment construction	Year program adopted		
	General health	Tuberculosis control	Cancer control	Mental health	Heart disease control	Venereal disease control ³	Water pollution program grant		Hospital construction	Medical facilities construction	Radiological health
New Mexico.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
New York.....	1936	1945	1948	1948	1950	1939	1950	1957	1948	1954	1963
North Carolina.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1954	1963
North Dakota.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
Ohio.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
Oklahoma.....	1936	1945	1948	1948	1950	1939	1950	1957	1946	1955	1963
Oregon.....	1936	1945	1948	1948	1950	1939	1950	1957	1946	1955	1963
Pennsylvania.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
Rhode Island.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
South Carolina.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1954	1963
South Dakota.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
Tennessee.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1954	1963
Texas.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1954	1963
Utah.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
Vermont.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
Virginia.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1954	1963
Washington.....	1936	1945	1948	1948	1950	1939	1950	1957	1946	1956	1963
West Virginia.....	1936	1945	1948	1948	1950	1939	1950	1957	1946	1955	1963
Wisconsin.....	1936	1945	1948	1948	1950	1939	1950	1957	1947	1955	1963
Wyoming.....	1936	1945	1948	1948	1952	1939	1950	1957	1947	1955	1963
Guam.....	1958	1958	1958	1958	1958				1956	1957	1963
Puerto Rico.....	1940	1945	1949	1948	1950	1939	1950	1957	1947	1954	1963
Virgin Islands.....	1946	1945	1948	1948	1950	1939	1950	1957	1948	1954	1963

¹ Formulas grants only.

² Year each program was authorized is as follows: Venereal disease control 1939, tuberculosis control 1944, general health 1936, mental health 1946, heart disease control 1940,

cancer control 1948, water pollution program grant 1956, waste treatment construction 1956, hospital construction 1946, medical facilities construction 1954, and radiological health 1963.

Air pollution control program grants awarded as of January 10, 1966

Agency	Amount	Type ¹	Area of jurisdiction
Alabama:			
Alabama Department of Public Health	\$60,000	D	State of Alabama.
Jefferson County Board of Health	240,510	D	Jefferson County (including Birmingham).
Mobile County Board of Health	22,071	D	Mobile County (including Mobile).
Huntsville Air Pollution Control Board	20,000	E	City of Huntsville.
Arizona:			
Maricopa County Health Department	164,268	E	Maricopa County (including Phoenix).
Pima County Health Department	49,987	D	Pima County (including Tucson).
Arkansas: Arkansas Pollution Control Commission.	38,680	E	State of Arkansas.
California:			
Bay Area Air Pollution Control District	58,107	I	San Francisco Bay area.
Los Angeles County Air Pollution Control District	308,483	I	Los Angeles County (including Los Angeles).
San Bernardino County Air Pollution	76,570	I	San Bernardino County (including San Bernardino).
Colorado:			
Tricounty District Health Department	35,914	E	Adams and Arapahoe Counties (excluding Denver).
Denver Building Department	88,476	I	City of Denver.
Connecticut:			
Connecticut Department of Health	86,182	D	State of Connecticut.
Bridgeport Board of Air Pollution Control	22,208	E	City of Bridgeport.
Fairfield Health Department	15,100	D	Town of Fairfield.
Middletown Board of Health	12,449	D	City of Middletown.
Stratford Health Department	14,200	D	Town of Stratford.
District of Columbia: District of Columbia Department of Public Health.	33,262	I	District of Columbia.
Florida:			
Dade County Department of Public Health	115,940	I	Dade County (including Miami).
Palm Beach County Health Department	39,093	E	Palm Beach County (including W. Palm Beach).
Georgia:			
Georgia Department of Public Health	88,940	D	State of Georgia.
Fulton County Health Department	18,000	D	Fulton County (including Atlanta).
Macon-Bibb County Health Department	15,845	D	Macon-Bibb County.
Hawaii: Hawaii Department of Health	23,874	I	State of Hawaii.
Illinois:			
Illinois Air Pollution Control Board	158,832	I	State of Illinois.
Cook County Air Pollution Control Bureau	100,168	I	Cook County (excluding Chicago and other incorporated areas).
Chicago Department of Air Pollution Control	786,000	I	City of Chicago.
Indiana:			
Indiana Air Pollution Control Board	77,520	I	State of Indiana.
East Chicago Bureau of Air Pollution Control	29,360	I	City of East Chicago.
Evansville Smoke Abatement Department	11,147	I	City of Evansville.
Gary Department of Health	125,530	I	City of Gary.
Iowa:			
Cedar Rapids Department of Public Health	10,400	D	City of Cedar Rapids.
Kansas: Kansas City-Wyandotte County Health Department.	24,372	D	Kansas City and Wyandotte County.
Kentucky:			
Kentucky State Department of Health	79,412	D	State of Kentucky.
Jefferson County Air Pollution Control District	21,000	I	Jefferson County (including Louisville).
Louisiana: Louisiana Air Control Commission.	66,896	E	State of Louisiana.
Massachusetts:			
Massachusetts Department of Public Health	204,820	I	Metropolitan Boston.
Do	66,000	D	Springfield metropolitan area.
Worcester Department of Public Health	45,214	E	City of Worcester.
Michigan:			
Michigan Department of Health	54,648	D	State of Michigan.
Muskegon County Health Department	31,770	E	Muskegon County (including Muskegon).
Wayne County Health Department	223,464	I	Wayne County (excluding Detroit).
Detroit Bureau of Air Pollution Control	42,785	I	City of Detroit.
Wyandotte	31,525	I	City of Wyandotte.

See footnotes at end of table, p. 259.

Air pollution control program grants awarded as of January 10, 1966—Continued

Agency	Amount	Type	Area of jurisdiction
Minnesota:			
Minnesota Department of Health.....	\$10,000	I	State of Minnesota.
Minneapolis Department of Buildings and Inspections.	37,895	I	City of Minneapolis.
St. Paul Department of Public Utilities..	42,857	I	City of St. Paul.
Missouri:			
Missouri Division of Health.....	45,865	E	State of Missouri.
St. Louis County Health Department.....	225,123	E	St. Louis County (excluding St. Louis).
St. Louis Division of Air Pollution Control.	42,768	I	City of St. Louis.
Montana: Montana Board of Health.....	10,058	D	State of Montana.
Nevada: City-County District Health Department.	52,732	E	Cities of Reno and Sparks and Washoe County.
New Hampshire:			
New Hampshire Department of Health and Welfare.	12,680	D	State of New Hampshire.
New Jersey:			
New Jersey Department of Health.....	500,876	I	State of New Jersey.
East Orange Health Department.....	8,000	D	City of East Orange.
New Mexico:			
New Mexico Department of Public Health.	31,379	D	State of New Mexico.
Albuquerque Health Department.....	12,548	I	City of Albuquerque.
New York:			
New York State Air Pollution Control Board.	112,391	I	State of New York.
Albany County Department of Health....	2,940	D	Albany County (including Albany).
Broome County Health Department.....	18,127	D	Broome County (including Binghamton).
Chemung County Health Department.....	6,169	D	Chemung County (including Elmira).
Columbia County Department of Health..	3,836	D	Columbia County (including Hudson).
Dutchess County Department of Health..	3,220	E	Dutchess County (including Poughkeepsie).
Eric County Health Department.....	75,720	D	Eric County (including Buffalo).
Nassau County Department of Health.....	54,150	D	Nassau County (including Farmingdale).
Niagara County Health Department.....	35,244	D	Niagara County (including Niagara Falls).
Mount Vernon Department of Health....	5,502	D	City of Mount Vernon.
New Rochelle Department of Public Health.	12,789	E	City of New Rochelle.
New York City, Department of Air Pollution Control.	190,172	I	City of New York.
Schenectady Health Department.....	2,917	D	City of Schenectady.
Yonkers Department of Health.....	17,312	D	City of Yonkers.
North Carolina:			
Buncombe County Health Department....	48,894	D	Buncombe County (including Asheville).
Durham County Health Department.....	26,758	D	Durham County (including Durham).
Gaston County Health Department.....	19,282	D	Gaston County (including Gastonia).
Guilford County Health Department.....	37,494	D	Guilford County (including Greensboro).
New Hanover County Health Department.	12,524	D	New Hanover County (including Wilmington).
Rowan County Health Department.....	12,651	D	Rowan County (including Salisbury).
North Dakota: North Dakota Department of Health.	10,000	D	State of North Dakota.
Ohio:			
Akron Department of Public Health.....	188,310	D	Cities of Akron and Barberton.
Lorain Department of Public Service....	38,772	E	City of Lorain.
Toledo Division of Air and Water Pollution Control.	48,834	I	City of Toledo.
Canton City Health Department.....	35,368	D	City of Canton.
Cleveland Division of Air and Stream Pollution.	34,922	I	City of Cleveland.
Oklahoma:			
Oklahoma State Department of Health..	20,000	D	State of Oklahoma.
Oklahoma City-County Health Department.	10,177	D	Oklahoma City-County.
Tulsa City-County Health Department....	25,134	D	Tulsa City-County.
Oregon:			
Oregon State Board of Health.....	53,557	I	State of Oregon.
Portland Bureau of Health.....	72,598	I	City of Portland.

See footnotes at end of table, p. 259.

Air pollution control program grants awarded as of January 10, 1966—Continued

Agency	Amount	Type	Area of jurisdiction
Pennsylvania:			
Pennsylvania Department of Health.....	113,600	I	State of Pennsylvania.
Allegheny County Department of Health..	159,631	I	Allegheny County (including Pitts- burgh).
Lower Macungie Township.....	1,040	E	Lower Macungie Township.
Philadelphia Department of Public Health.	253,510	I	City of Philadelphia.
Puerto Rico:			
Puerto Rico Department of Health.....	114,351	D	Puerto Rico.
Rhode Island:			
Providence Air Pollution Control Divi- sion.	7,052	I	City of Providence.
South Carolina:			
Pollution Control Authority of South Carolina.	45,421	E	State of South Carolina.
Spartanburg.....	10,030	I	City of Spartanburg.
Tennessee:			
Tennessee Department of Public Health..	38,437	D	State of Tennessee.
Nashville & Davidson County Metropol- itan Health Department.	15,123	D	City of Nashville and Davidson County.
Chattanooga Bureau of Air Pollution Control.	29,261	I	City of Chattanooga.
Texas: Texas Department of Health.....	17,974	D	State of Texas.
Virginia: Roanoke Air Pollution Control De- partment.	1,823	I	City of Roanoke.
Washington: Seattle-King County Depart- ment of Public Health.	37,500	D	City of Seattle and King County.
West Virginia: West Virginia Air Pollution Control Commission.	203,914	I	State of West Virginia.

¹ Explanation of type of awards: D, award to develop a new air pollution control program; E, award to establish a program already authorized by law; I, award to improve an existing program.

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SECTION VIII

PERSONNEL

Under the Surgeon General, the Office of Personnel is responsible for directing and coordinating the Service's personnel programs, including planning and evaluation, coordination of recruitment, career development, research and standards, and operations and services.

To operate diversified programs in clinical medicine, preventive medicine and public health, research, and administration, the Service employs over 35,000 persons in medical, paramedical, and supporting services.

The recruitment—and retention—of an adequate number of qualified personnel often presents problems because—

- (1) An unusual variety of occupations (numbering about 350) are required to operate and provide supporting services for a complex of programs to combat simultaneously all the major diseases of mankind.

- (2) The wide geographical dispersion of PHS activities requires employment of personnel throughout the Nation and around the world.

- (3) There is extensive assignment of personnel to many other Federal as well as non-Federal health agencies.

- (4) A national shortage of medical manpower produces great competition in the "market" from State health departments, educational institutions, and other Federal and non-Federal health agencies.

DESCRIPTION OF PERSONNEL SYSTEMS

For manning its programs, the Service operates two personnel systems: civil service and commissioned corps.

Civil service.—The civil service system is administered under the rules and regulations of the Civil Service Commission merit system. As of November 30, 1965, there were 30,348 employees under the system, including professional, administrative, subprofessional, and others.

In 1950 the Public Health Service Act was amended by Congress to permit the Administrator (now the Secretary) to establish and fix salaries, subject to approval of the Civil Service Commission, for a number of positions not subject to the Classification Act. These positions were established to effectuate those research and development activities of the Service which require specially qualified scientific, professional, and administrative personnel.

At this time, there are authorizations for 150 such positions.

The salaries were last adjusted October 1965. They continue to be the same range as supergrade salaries. The 1965 range is \$19,619 to \$25,382. Of these 150 positions, 130 are filled, 99 at the National Institutes of Health and 31 throughout the remainder of the Service.

The Service has eight quota supergrades; one at GS-17 and seven at GS-16. They are:

Executive officer, Public Health Service, GS-17.

Assistant to the Surgeon General, GS-16.

Assistant to the Surgeon General for Legislation and Public Program Policy, GS-16.

Chief Finance officer, GS-16.

Assistant executive officer, Public Health Service, GS-16.

Executive officer, Bureau of State Services, GS-16.

Executive officer, Bureau of Medical Service, GS-16.

Chief, Abatement Branch, Division of Air Pollution, GS-16.

The 1962 Pay Reform Act authorizes agencies to establish in these higher grades those professional positions in the physical and natural sciences and medicine and professional engineer positions primarily concerned with research and development. There are now 46 such positions established throughout the Public Health Service.

Commissioned corps.—The Service's broad and diversified use of medical and health-related manpower requires a mobility of personnel not provided by the civil service system.

A uniformed service similar to the Army, Navy, and Air Force, the commissioned corps requires that personnel serve wherever needed by the Nation. As of November 30, 1965, there were 4,987 Regular and Reserve commissioned officers on active duty.

Background.—The Public Health Service was initially established as the Marine Hospital Service by an act of Congress in 1798 to care for ill and injured merchant seamen. During the 19th century, the westward migration and the epidemics which followed underscored the need for a mobile force of physicians who could face the health emergencies of peace and war and serve where assigned. This need led to establishment of the commissioned corps by regulations of the Treasury Department in 1873. In 1889, Congress gave statutory recognition to the commissioned corps, which today includes not only physicians, but dentists, sanitary engineers, scientists, nurses, and other categories of professional personnel as well. By law, these categories must be in health-related fields.

The pattern of the corps, as established, was similar to that of the country's military services, and has been maintained without substantial modification. Since 1920, Public Health Service officers have been included in the pay legislation of the military services. They are currently paid under the Career Compensation Act of 1949 which provides for basic pay, allowances for subsistence and quarters, transportation, and additional pay for hazardous duty in certain special assignments. Under other legislation applicable to the uniformed services, Service officers are entitled to additional benefits such as the retired servicemen's family protection plan, servicemen's and veteran's survivor benefits, etc.

The Public Health Service, like the military services, has a restriction of the number of officers serving in the flag or general grades. Here, the number of officers serving in pay grades 0-7 (equivalent to brigadier general) and above cannot exceed three-fourths of 1 percent of the total commissioned corps' active duty strength. The following

table shows the rank and grade of PHS officers and their Army and Navy equivalents.

Equivalent grades

Pay grade	PHS	Navy	Army
O-8	Surgeon General Deputy Surgeon General Assistant Surgeon General	Rear admiral	Major general.
O-7	do	Rear admiral	Brigadier general.
O-6	Director grade	Captain	Colonel.
O-5	Senior grade	Commander	Lieutenant colonel.
O-4	Full grade	Lieutenant commander	Major.
O-3	Senior assistant grade	Lieutenant	Captain.
O-2	Assistant grade	Lieutenant (junior grade)	1st lieutenant.
O-1	Junior assistant grade	Ensign	2d lieutenant.

The corps has a regular and reserve component. Officers of the regular corps are selected after professional examination and appointed by the President by and with the consent of the Senate. The corps is administered by the Surgeon General, who is appointed from the regular corps by the President, subject to Senate confirmation. Officers of the reserve corps are appointed by the Secretary of Health, Education, and Welfare on behalf of the President. All officers of the Service hold ranks equivalent to those of Navy officers.

There is great similarity between the regular and reserve corps. Pay allowances, travel and transportation, retirement and survivors benefits are identical. The commissioned corps' promotion policy provides like opportunity for advancement.

The reserve corps has both an active duty component and an inactive component. The active component is not a career service. It increases or decreases in strength as programs of the Service expand or contract. The inactive component is the emergency preparedness component of the corps. It consists of trained professional health personnel held in reserve for national emergencies involving partial or full mobilization of the Nation's health resources. Currently the inactive reserve numbers 7,895.

Presidential appointments, a system of regular promotion, agreement to serve wherever the needs of the Service require, rank and tenure comparable to those of the Navy—these and other characteristics of the corps have demonstrated continuing appeal to professional people through the years.

Although the Service is not of itself military in concept, its mission is so diverse that officers of the commissioned corps are subject to hazardous and isolated assignments. These include sea duty with the Coast Guard, service in penal institutions, service with AID missions in underdeveloped countries all over the world, and tours of duty in small Indian hospitals. Such assignments can be staffed at an acceptable level of professional competence only by a system of rotation. Effective maintenance of such a system, in turn, is possible only in an organization that is highly disciplined and highly regarded professionally.

Under the Public Health Service Act, the President has authority to declare the commissioned corps to be a military service in time of

war or national emergency. The structure of the present system facilitates the integration of individual officers or the commissioned corps as a whole into military service when the corps is declared to be a military service, or when individual officers are detailed to the armed services. Irrespective of the status of the commissioned corps—whether it be a military service or a uniformed service—a minimum 2-year tour of active duty satisfies selective service obligations under the Universal Military Training and Service Act.

The commissioned corps system also provides for two special programs which constitute major recruitment and training devices: the commissioned officer student training and extern (COSTEP) and commissioned officer residency deferment (CORD).

THE CORD PROGRAM

The commissioned officer residency deferment program, developed and conducted by the U.S. Public Health Service with the cooperation of the Selective Service System, permits a limited number of draft-eligible physicians (1) to become inactive reserve officers in the commissioned corps of the Public Health Service, and (2) to complete 1 or more years of formal residency training before serving on active duty.

When residency training is completed and/or deferment is terminated, the CORD program officer is obligated to serve on active duty with the Public Health Service for a period of at least 24 months, thus satisfying selective service obligations.

COSTEP

The commissioned officer student training and extern program offers opportunities for college students in health-related studies to be employed in assignments between terms of academic year. Commissioned in the reserve corps, they are called to active duty for a period of between 30 and 120 consecutive days in any fiscal year. A significant number of these students—after graduating from college or professional school—return to the Service.

THE TWO PERSONNEL SYSTEMS

Each of the systems has strengths and advantages which place the Service in a much stronger position to staff its complex and diverse programs.

In its recent study, the Advisory Committee on Public Health Service Personnel Systems (the Folsom committee) concluded that the existing combination of systems—if used imaginatively and in concert—could best serve the ever-expanding programs of the service.

The committee felt that the commissioned corps is particularly effective in recruiting young physicians; that its mobility and the training opportunities it offers permit substantial career development; it has a tradition and esprit de corps which are valuable assets to the Service; and that it facilitates provision of service in special or unusual circumstances, as for example, to the Coast Guard or to the Bureau of Prisons.

The civil service system, the committee said, provides a basic mode of employment throughout the Service; it permits free movement of

personnel between the Public Health Service and other agencies; it provides flexibilities in appointing at senior levels which the commissioned corps does not; and it, too, offers career development opportunities through mobility and training.

While by law the commissioned corps is composed of professional people in health-related fields, the civil service is composed of professional, administrative, subprofessional, and other personnel.

REORGANIZATION

In accordance with recommendations of the Advisory Committee on Public Health Service Personnel Systems, personnel management has been reorganized to accomplish the following objectives: (1) Establish clearer, stronger lines of management responsibility and authority; (2) provide more speedy, efficient personnel services, both in civil service and commissioned corps; and (3) streamline personnel operations to more effectively contribute to the mission of the Service.

The following actions have been taken:

Appointment of the Assistant Surgeon General for Personnel to advise and represent the Surgeon General on personnel matters.

Establishment of divisions in the following areas:

Program planning and evaluation for more efficient policy-making, planning, and evaluation:

Career development: For development of career potential of personnel, as well as improve coordination of recruitment, assignment, and utilization of personnel.

Research and standards: To develop broader, "in depth" standards relating to personnel acquisition and utilization.

Operations and services: To strengthen personnel management in the areas of personnel utilization, job evaluation, and personnel relations.

Decentralization of authority: For more efficient handling of personnel matters, Bureaus have been delegated certain responsibilities and authorities which could be more efficiently handled at that level.

Automatic data processing is being developed to improve accuracy and efficiency in handling personnel matters.

DETAIL OF PUBLIC HEALTH SERVICE PERSONNEL TO OTHER HEALTH AGENCIES—FEDERAL AND NONFEDERAL

The Public Health Service has personnel on detail to almost every State in the Union, engaged in cooperative Federal-State health programs or giving assistance to State, county, and local health departments. The Service also has several hundred of its personnel detailed to other Federal departments and agencies and to international organizations. These include: Pan American Sanitary Bureau, World Health Organization, U.S. Coast Guard, Bureau of Prisons, Agency for International Development, Peace Corps, Atomic Energy Commission, U.S. Coast and Geodetic Survey, U.S. Maritime Administration, Bureau of Employees Compensation, Department of the Army, National Aeronautics and Space Administration, Federal Aviation

Agency, Department of Agriculture, and Office of Emergency Planning. Those detailed are predominantly commissioned personnel. Present assignments are shown below:

Assignments of paid commissioned and civil service personnel with other Federal agencies and international organizations as of October 31, 1965

Assignment	Commissioned officers	Civil service
Bureau of Prisons.....	93	183
U.S. Coast Guard.....	90	10
Agency for International Development.....	35	
Peace Corps.....	101	1
St. Elizabeths Hospital.....	3	
Bureau of Employees Compensation, Department of Labor.....	6	2
U.S. Coast and Geodetic Survey.....	1	
Office of Emergency Planning.....	1	
Office of the Secretary, DHEW.....	2	
Housing and Home Finance Agency.....	3	
Department of the Navy (shipping port reactor project).....	1	
Department of the Army:		
Fort Detrick, Md.....	1	
Edgewood Arsenal, Md.....	1	
Vocational Rehabilitation Administration.....	2	
Welfare Administration, DHEW.....	1	
Food and Drug Administration.....	1	
U.S. Maritime Administration.....	3	
Pan American Health Organization.....	1	
National Aeronautics and Space Administration.....	1	
World Health Organization.....	1	
Office of Economic Opportunity.....	1	
President's Committee on Physical Fitness.....		8
White House Conference on Health.....		23

USE OF CONSULTANTS AND ADVISORY GROUPS

The Public Health Service makes extensive use of intermittent consultants and advisers. These individuals, highly qualified in their professional fields, provide the Service with an indispensable source of expert knowledge and advice, and they constitute the best possible link with the many and diverse agencies and individuals concerned with the Nation's health. Of the 3,200 persons serving in a consulting capacity, about 2,300 are members of one of the Service's public advisory groups, while the others serve as individual consultants. Section V of this report contains additional information on public advisory groups.

DATA ON PRESENT STAFF CONSULTANTS

Approximately 900 persons with outstanding scientific or technical qualifications serve the Public Health Service in a temporary or intermittent capacity as individual experts or consultants. Many of these are appointed to consult with more than one Service program. Although their areas of service vary widely, typically they are invited to participate in the development of programs and program approaches or to give advice and assistance on specific problems or questions. Ordinarily they serve only a few days each year; a few, however, are needed for longer periods, ranging from 90 to 180 days a year.

TRENDS IN EMPLOYMENT

Trends in the employment of civil service and commissioned corps personnel strength may be seen in the tables and the two charts that follow, which depict the number of civil service and commissioned

personnel in the Public Health Service each fiscal year from 1900 through 1965.

The increases of personnel during World War I and World War II may be seen, as well as the postwar decreases which, however, resulted in greater personnel strength than the prewar levels.

SERVICE-WIDE PERSONNEL PROBLEMS AND NEED

Many of the personnel problems that the Public Health Service faces today have evolved because of its expansion. The size of the Service has doubled in the past 10 years. Personnel needs exceed the supply of people trained in the various health fields who are available to the Public Health Service. More trained people must be recruited and their abilities must be used to the maximum if the potential of the Service programs is to be realized.

RECRUITMENT AND RETENTION

Though the personnel requirements of the various programs are similar, they are not identical. The Bureau of Medical Services is interested primarily in clinicians, the Bureau of State Services in those trained in preventive medicine and public health, and the National Institutes of Health in people with an inclination toward research. The Bureau of State Services needs more engineers than any other bureau. The National Institutes of Health uses more scientists at the postdoctoral level. The Office of the Surgeon General has greatest need for general managers.

Due to a chronic shortage of staff and funds, it has not been possible in recent years to conduct the kind of aggressive, year-round, Service-wide recruiting program necessary to assure the staffing of Service programs at the desired levels of competence. It is anticipated that this problem will become increasingly difficult as expanding national health interests place greater demands upon professional specialties which are already in short supply.

In spite of these limitations, substantial improvements in overall recruiting efforts have been made through better coordination among bureau and operating program recruitment activities; and through the stimulus and assistance provided by newly established career development committees in the major professional categories. Also, a coordinated, Service-wide recruiting program for physicians is now jointly administered by the Bureau of Medical Services and the Office of Personnel.

Remaining problems, which can only be resolved by additional staff and budgetary support, include obtaining more accurate, long-range projections of future staffing needs; the development of more attractive and comprehensive Service-wide recruitment materials; the development and tighter coordination of a network of recruitment contact points and field recruiters; and central training programs for those engaged in face-to-face recruitment activities.

The recently established career development committees have been of great assistance in improving the retention of employees, particu-

larly those who enter the Service to meet their selective service obligation. Through personal followup, career counseling, and improved and expanded orientation and training programs, an increasing number of these "2-year" men are finding it to their advantage to extend their careers with the Service.

CAREER DEVELOPMENT AND TRAINING

The implementation of the Folsom report in 1963 has served to alleviate many longstanding problems in this area, notably the need to give greater attention to Service-wide training and educational requirements; and the need for formal, Service-wide career programming. Although the bulk of the financial support for employee development and training remains at the operating program or field station level, the coordination and review functions at the Service level have been greatly strengthened.

Formal career development programs, operated through Service-level committees, have been established in the fields of mental health, dentistry, engineering, nursing, and therapy and the area of international health. These committees have been effective in recruitment; the development of career patterns; career counseling and monitoring of progress; the planning of individual assignments; and the evaluation of need for and use of formal training opportunities.

At the Service level, a more comprehensive review of all long-term "outside" (non-Government facility) training, both commissioned corps and civil service, is achieved through the Surgeon General's committees on training outside the Service, to assure both the appropriateness and legality of such training. Also, a limited expansion of new employee orientation, particularly for personnel located out of the Washington, D.C., area, is now underway.

With the establishment of operating personnel offices at the bureau level, greater attention is being directed to those needs which are local in nature, or which are peculiar to a single bureau or operating program. These added resources have also permitted some increase in the amount of supervisory and managerial training which can be provided.

Although considerable progress has been made since 1963, many facets of career development and training remain largely neglected because of a lack of support. Chief among these are the establishment of additional career development programs in the remaining categories; improved projections of long-range staffing needs which could be met through training; a comprehensive evaluation of available training facilities, educational programs, etc.; and tighter coordination of inservice training programs being conducted by various segments and echelons of the Service.

Paid employment as of Nov. 30, 1965

Total paid.....	37, 171
Full time.....	35, 335
Consultants.....	¹ 374
Other part time.....	1, 462

¹ In addition to those in pay status in November 1965, the PHS had approximately 2,800 consultants in nonpay status but subject to call when needed.

TABLE 1.—Distribution of full-time civil service and commissioned officer employment by major occupations or occupational groups as of Oct. 31, 1965

	Total	Commissioned officers	Civil service
Total, all occupations	35,306	4,998	30,308
Physicians	2,772	2,341	431
Dentists	465	453	12
Sanitary engineers	753	652	101
Other professional engineers and architects	274		274
Scientists	2,619	207	2,412
Veterinarians	103	90	13
Pharmacists	252	241	11
Sanitarians	195	185	
Nurses	2,566	297	2,269
Dietitians	149	79	70
Dietitians	131	75	56
Occupational and physical therapists			
Health services personnel (health educators, medical social workers, medical record librarians, and hospital administrators)	583	368	215
Public health advisers, representatives and analysts, and similar professional positions in public health administration	1,502		1,502
Medical technology and other professional medical care occupations not elsewhere classified	206		206
Medical technicians, nursing assistants, and other nonprofessional medical care occupations	3,751		3,751
Biological and physical science aids or technicians; engineering draftsman and aids; and scientific laboratory mechanics and instrument makers	1,478		1,478
Statisticians and mathematicians	345		345
Statistical clerks and mathematical aids	420		420
Public health inspectors and public health quarantine inspectors	475		475
Writers, editors, information specialists, and related clerical occupations ¹	329		329
Personnel administration and related clerical occupations ¹	447		447
Accounting, budgeting and related clerical occupations ¹	788		788
Procurement, supply and transportation administration and related clerical occupations ¹	693		693
General administrative, clerical, and office services	7,954		7,954
Librarians and library assistants	205		205
Guard and fire protection occupations	216		216
Other white-collared occupations not elsewhere classified	550		550
Wage board occupations	5,085		5,085

¹ Does not include occupations such as typing, stenography, and office machine operating which are counted in the "General administrative, clerical and office services" group.

TABLE 2.—Distribution of commissioned and full-time civil service physicians and scientists by bureau as of Oct. 31, 1965

PHS Bureau assigned	Commissioned officers		Civil service	
	Physicians	Scientists	Physicians	Scientists
Office of the Surgeon General	131	6	3	12
Bureau of Medical Services	1,096	12	1,158	50
Bureau of State Services:				
Community Health	308	52	26	374
Environmental Health	60	30	8	546
National Institutes of Health	742	107	231	1,417
National Library of Medicine	4		5	13
Total	2,341	207	431	2,412

¹ 93 of these medical officers are at Freedmen's Hospital.

TABLE 3.—Full-time employment and inactive reserve strength (by endings of fiscal years 1900–1965)

Fiscal year (June 30)	Full-time employment					Inactive reserve
	Commis- sioned and civil service total	Civil service total	Commissioned corps active duty			
			Total	Regular	Reserve	
1900.....	1,095	988	107	107		
1910.....	1,423	1,295	128	128		
1915.....	2,131	1,944	187	187		
1920.....	14,455	13,772	683	200		
1925.....	4,672	4,422	250	182		
1930.....	5,293	5,004	289	232		
1935.....	6,295	5,896	399	335		
1940.....	9,522	8,895	627	482		
1941.....	10,799	10,031	768	509		
1942.....		(2)	991	525		
1943.....	17,390	15,602	1,788	594	1,194	1,467
1944.....	17,477	15,135	2,342	594	1,748	2,002
1945.....	16,069	12,984	3,135	634	2,501	3,057
1946.....	16,699	14,187	2,512	820	1,692	3,142
1947.....	15,921	14,062	1,859	841	1,018	3,203
1948.....	16,781	14,766	2,015	1,007	1,008	2,217
1949.....	17,751	15,529	2,222	1,133	1,089	1,151
1950.....	17,133	14,981	2,152	1,185	967	1,212
1951.....	16,361	13,936	2,425	1,263	1,162	1,287
1952.....	16,130	13,539	2,591	1,342	1,249	1,341
1953.....	15,228	12,672	2,556	1,265	1,291	1,369
1954.....	15,315	12,851	2,464	1,211	1,253	1,381
1955.....	16,226	13,629	2,597	1,190	1,407	1,684
1956.....	21,268	18,304	2,964	1,266	1,698	2,426
1957.....	23,354	19,998	3,356	1,422	1,934	3,268
1958.....	24,483	20,980	3,503	1,478	2,025	3,849
1959.....	25,050	21,464	3,586	1,564	2,022	4,617
1960.....	28,430	22,614	3,816	1,666	2,150	5,089
1961.....	28,630	24,651	3,979	1,808	2,176	5,720
1962.....	31,309	26,808	4,501	1,909	2,592	6,142
1963.....	33,266	28,337	4,929	2,067	2,862	6,695
1964.....	34,594	29,660	4,934	2,163	2,771	7,354
1965.....	36,056	30,908	5,148	2,375	2,773	7,385

¹ Reserve corps established March 1919, with 120 on active duty as of June 30, 1919.

² Data not available.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

FULL-TIME CIVIL SERVICE EMPLOYMENT

(By Fiscal Year)

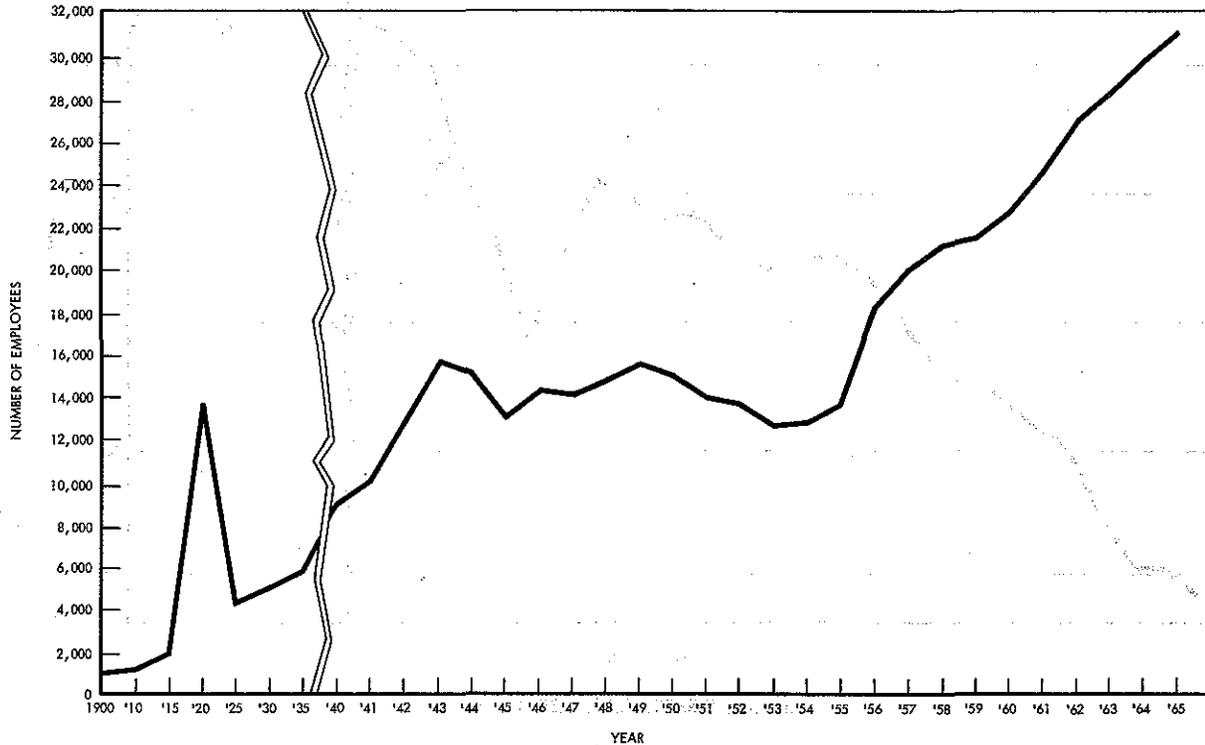


FIGURE 1

COMMISSIONED CORPS STRENGTH

(By Fiscal Year)

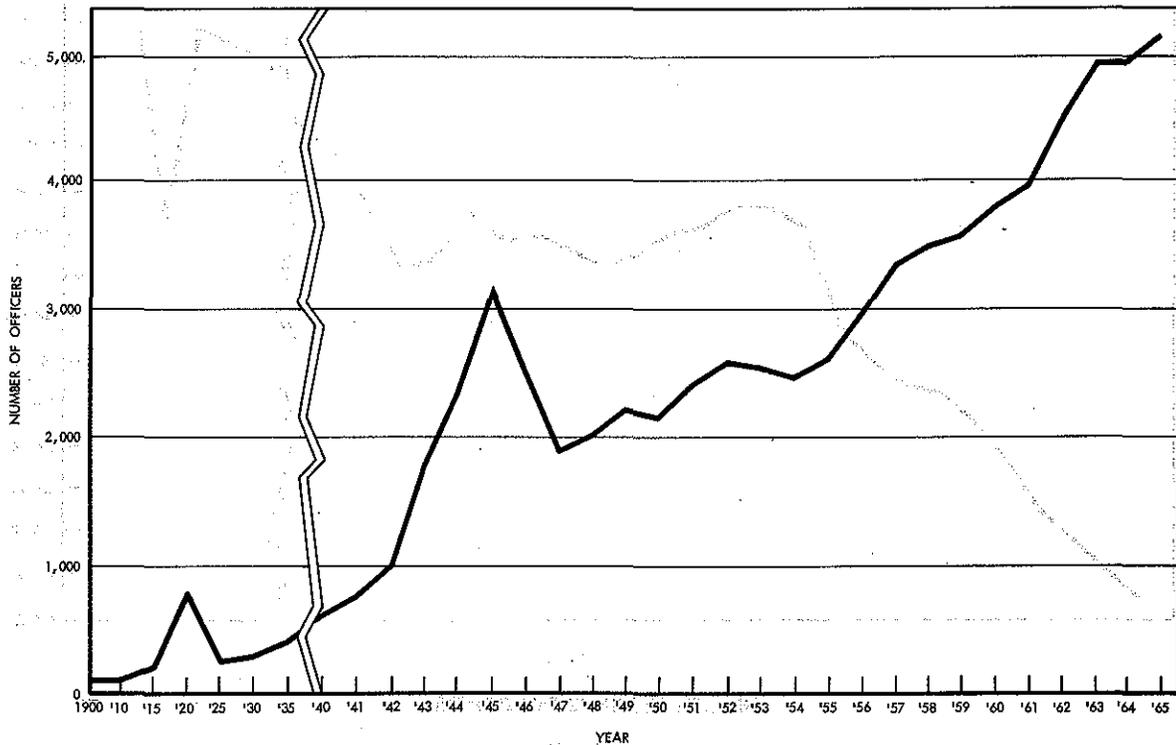


FIGURE 2

SECTION IX

PHS INTERNATIONAL ACTIVITIES

The Public Health Service is a primary resource in the field of international health. It cooperates with national and international agencies, governmental and nongovernmental, by providing scientific information, expert advice, technical assistance, and in some instances financial support to international health programs. This is much the same relationship as it has with the States, local communities, and domestic institutions in our country with the exception that substantial financial support is given to our States. It provides support to the World Health Organization, which also is a primary resource in the health field for its 124 members, each of which develops and administers its own health program.

During the past 20 years, the United States has played an increasingly important part in world health, directly in its programs under the Marshall plan and Point 4 and their successor bilateral agencies, and multilaterally through the World Health Organization, the Pan American Health Organization, the United Nations Children Fund, and other agencies of the United Nations.

Our Government joined with others in convening the International Health Conference of 1946 at which Surgeon General Thomas Parran of the Public Health Service was elected President. He guided the Conference in the drafting and adoption of the constitution of the World Health Organization by 62 signatory powers.

The Public Health Service is the official technical liaison of the U.S. Government with the World Health Organization. Beginning with the first World Health Assembly, the Surgeon General of the Service has served as chief U.S. delegate to most of the 18 World Health Assemblies, and PHS medical officers have been the U.S. designated members to the executive board. Eighty-seven Public Health Service specialists are members of the World Health Organization's expert advisory panels in 44 fields.

In a sense, the creation of the World Health Organization was the culmination, on a worldwide basis, of an effort begun 46 years previously when the United States participated in the organization of the first hemispherewide health organization, later to become the Pan American Sanitary Organization, and its Secretariat, the Pan American Sanitary Bureau. With the creation of WHO in 1948, the Pan American Sanitary Bureau was designated the regional office for WHO in the Americas. Since the beginning of the Pan American Sanitary Bureau, the first permanent international health agency, the Public Health Service has supplied personnel and technical support. For 34 years (1902-36) the Surgeon General of the Public Health Service was also the Director of the Pan American Sanitary Bureau. The present Deputy Director is a Public Health Service officer serving

through an arrangement which permits the Service to assign officers to PAHO and WHO on request.

This tie has brought the Public Health Service intimately into the family of the World Health Organization.

Likewise, the bilateral assistance provided by the U.S. Government in health began in this hemisphere with the Inter-American health programs. With the expansion of the program to Africa, Greece, Turkey, and southeast Asia under the Marshall plan and Point 4, the Public Health Service became an active participant utilizing many of its officers who had obtained foreign experience while detailed to UNRRA and the various military commands.

This active participation of the Public Health Service in the bilateral program continues. The Public Health Service has participating agency service agreements with the Agency for International Development in community water supply development, measles-smallpox immunization, vital statistics, nutrition, manpower development, and health education, in addition to insect control, clinical research, and surgical care.

It will be of interest to the committee that under an agreement with the Agency for International Development the Public Health Service has fielded surgical teams consisting of surgeons, nurses, anesthetists, and laboratory technicians to provide care particularly for civilian casualties in South Vietnam. These teams are performing superbly under difficult conditions in the provincial hospitals of that country.

Within the context of its own responsibilities, the Public Health Service believes it is the intent of Congress that the Service use its longstanding relationships with professional organizations, the health professions, educational institutions, and voluntary agencies in our country to support and further our country's renewed effort in technical service for peace. The Service is endeavoring to do this through its international exchange mission programs, international research activities, its cooperative epidemiological and quarantine programs, and other foreign activities arising out of the expanding domestic programs.

The passage of the International Health Research Act of 1960 gave recognition to the importance of international collaboration in research in the health sciences, research training, and the planning of research.

It has given impetus to programs either directly sponsored or administered by the Public Health Service overseas, or in which the Service cooperates with other agencies of the U.S. Government, with international agencies or foreign governments.

During the past 12 months, many foreign scientists and health administrators visited the facilities of the Public Health Service in the Washington area for observation and consultation, and Public Health Service scientists were sent to foreign countries for consultation and conferences. These consultations covered the full scope of the health sciences—from air pollution, shellfish sanitation to arbovirus research and cancer. In addition, 425 foreign health workers from 85 countries were provided program guidance and backstopping for professional study at American universities, hospitals, and other health institutions.

Research training and experience were exchanged with 190 foreign scientists working in the laboratories of the National Institutes of Health and 92 working in universities and other health research institutions in the United States; and 335 American scientists received similar experience and training in foreign laboratories.

To supplement knowledge being obtained from American laboratories, during fiscal year 1965, 801 research grants totaling \$11.5 million were awarded by the Public Health Service to international organizations, and to institutions and investigators in foreign countries. It should be noted here that the international medical research program is further expanded through grants to U.S. institutions in behalf of highly qualified scientists who supervise or conduct research training. Foreign scientists may participate in such training under special conditions. During fiscal year 1965 approximately 5 percent of training stipends were paid to foreign nationals. This represents 928 people who bring a new dimension to the research they undertake during their stay in this country.

In carrying out the intent of Congress as expressed in section 104 (k) of the Foreign Agriculture Assistance Act of 1954 (Public Law 83-480), the Public Health Service has developed collaborative research projects in each of the 10 foreign countries in which excess currency funds are available for these purposes. Under this program, two Communist-bloc countries, Poland and Yugoslavia, have been collaborating with the United States.

To coordinate and provide surveillance of Public Health Service activities abroad, to stimulate the flow of scientific information on medical research abroad, and to evaluate overseas research potential, the National Institutes of Health has established overseas offices in Paris, London, Rio de Janeiro, Tokyo, and New Delhi. Officers assigned to these offices work with overseas science personnel of the Department of State and other Government agencies as integral parts of teams representing U.S. science in Western Europe, the British Isles, Latin America, the Pacific, and south Asia. Coordination at the Washington level is accomplished by close working relationships with the Office of the President's Science Adviser, and through membership on the International Committee of the Federal Council on Science and Technology. The Public Health Service has assigned a scientist to the Office of International Scientific and Technological Affairs in the Department of State to further coordination of activities of the two agencies, and an officer has been assigned to the mission in Geneva to effect technical liaison between the Service and the World Health Organization.

The fourth biennium of exchanges between the Union of Soviet Socialist Republics and the United States in public health and medicine since the Lacy-Zarubin agreement of 1958 is nearing completion. In 1964 and 1965, 29 Americans visited the Soviet Union as members of delegations on viral encephalitides, urban health planning, physiological development of the child, hemorrhagic fevers and hospital systems planning, and 6 Soviet scientists visited the United States for the study of various topics in genetics. Joint scientific sessions were held in cardiovascular diseases, virology and rheumatology, the first

two in Bethesda and the third in Moscow. During the period 1958-65, 189 American and 162 Soviet medical scientists have participated in the exchange program.

The National Library of Medicine, a part of the Public Health Service, through its scientific exchange programs which include Russia and other Communist bloc medical publications, has been able to introduce American medical publications into the scientific literature in these countries and has provided translations of Communist medical publications for American medical scientists. Its basic publication, "Index Medicus," is worldwide in scope. It is of interest to note here that over 10 percent of photoduplication done by the Library goes overseas in response to individual requests.

Perhaps the most direct program aimed at the advancement of health sciences arising out of the International Health Research Act of 1960 has been the establishment and support of international centers for medical research and training. Under collaborative agreements between American universities and foreign counterparts, research and research training for American and foreign medical investigators are related to specific research and training for American scientists in the overseas institutions under conditions not found in the United States. Five such centers have been established. They have been singularly successful in attracting competent young scientists into the international field.

The Public Health Service administers the cholera research laboratory in Dacca, Pakistan. This is, in fact, an autonomous international project operating under an agreement between the Government of Pakistan and the United States with provisions for adherence by other nations. The laboratory, which is concerned with all phases of cholera research, is the only one of its kind in the world, and serves as a center for research training in Pakistan. It is supported in part by Pakistan, by AID, and through Public Law 480 funds by the NIH.

The Middle America Research Unit, a field station of the Public Health Service located in the Canal Zone, studies virus and fungal diseases of the Tropics. Supported by the National Institute of Allergy and Infectious Diseases and Walter Reed Army Institute of Research, it maintains active professional contacts with cooperating organizations concerned with health and medical research in the countries of Central America, nearby South America, and the Caribbean, and works closely with the Gorgas Memorial Laboratory, the Army Medical Service, and the Pan American Health Organization.

Another program which has wide application to international health is that of the Nutrition Section (formerly Interdepartmental Committee on Nutrition for National Defense), Office of International Research. This group has carried out surveys for appraisal of nutritional status in 28 developing countries in collaboration with host country scientists, and has assisted in the initiation of numerous nutrition-related research programs throughout the world. The principal objectives of the Section are: (1) To define the major nutrition problems; (2) to develop practical recommendations for maximum utilization of local resources in resolving these problems; (3) to train host

country personnel in public health nutrition; and (4) to define those nutrition problems requiring further research which would assist the host country and also contribute to a better understanding and knowledge of nutrition health throughout the world.

The Nutrition Section is collaborating in the food-for-peace program through an agreement with the Office of Technical Cooperation and Research, AID, by which the Section provides technical support services to AID, including participant training, briefings of food-for-peace and AID personnel; preparation of technical and educational materials; technical consultant and advisory services on nutrition and feeding programs of AID and food-for-peace; technical and scientific review and guidance on evaluation of programs and projects in relation to AID and food-for-peace programs to combat malnutrition; technical and scientific review and guidance on development and testing of food mixtures, utilizing locally produced food and food-for-peace commodities; and coordination of AID-supported nutrition programs with other U.S. Government agencies, PAHO, WHO, FAO, UNICEF, and private sources. Funding for these activities is provided by AID.

The current activities of the Section which are directed toward the "Epidemiology of World Nutritional Diseases" are supported by a contract with the Advanced Research Projects Agency (ARPA), Department of Defense. Recent projects have included nutrition surveys in Nigeria, Paraguay, Guatemala, and El Salvador. Eventually all of the Central American countries will be studied. The later are being conducted in conjunction with PAHO and INCAP.

The Nutrition Section has the responsibility for programing, monitoring, and supervising nutrition research projects for AID and ARPA. AID-supported collaborative research projects to develop and evaluate, from a nutrition-health standpoint, numerous foods and food supplements for use in infant and school feeding programs have been initiated in five countries; namely, the Philippines, Turkey, Peru, Chile, and Brazil. The project in Brazil also involves the evaluation of the absorption and metabolism of vitamin A added to dry nonfat milk when fed to infants suffering from kwashiorkor.

Ongoing ARPA-funded research stemming from the nutrition surveys includes the following areas: (1) the elucidation and etiology of anemias associated with malnutrition in infants; (2) studies of mineral requirements, mineral metabolism, and evaluation of applied programs to prevent mineral deficiencies; (3) possible relationship of virus and parasitic diseases to nutritional status and the influence of diet on bone maturation; (4) evaluation of the effect of maternal nutrition on growth and development of the offspring; (5) development of food composition tables for Africa; and (6) survey of aflatoxin content of foods.

Communications in the health and medical sciences have become increasingly important to the most effective use of manpower and funds as the worldwide tempo of research and development increases. A major tool in this field is the international meeting at which personal interchange of information can take place, and new research avenues explored.

Among the oldest activities of the Public Health Service has been the quarantine inspection of persons entering the United States and the medical examination of aliens. The United States has enjoyed 19 years of freedom from the outbreak of a quarantinable disease known to have been introduced from abroad. Yet the expansion in international travel since World War II, and in particular the increase in the volume and speed of travel, have intensified quarantine problems. In maintaining our vigilance, the Public Health Service has enjoyed the full cooperation of the World Health Organization whose responsibility is to pinpoint foci of quarantinable diseases and to marshal worldwide support for their isolation, control, and eradication. The experience the Public Health Service has gained in its 88 years of quarantine activities, as well as our modern procedures emphasizing the immunization and inspection of travelers, insect and rodent control, and sanitation of conveyances, are shared with other nations through the Service's participation in meetings of the Export Committee on International Quarantine convened by the World Health Organization and the cooperative enforcement of the international sanitary regulations agreed to by member nations.

The international programs of the Public Health Service are growing in number and in diversity as more recognition is given to the inter-relationship of our own problems, their solutions, and those of other countries, and to the importance of health as a factor in world peace. The attached material indicates the diversity of the international activities of the Service and explains the character of these programs.

International Activities of the Public Health Service

Organizational units participating in international activities	Public Health Service direct operations	Operations in support of other Federal agencies	Cooperation with international intergovernmental agencies	Legislative authorities
<p>A. Office of Surgeon General: 1. Office of International Health.</p> <p>2. National Center for Health Statistics.</p>	<p>The Office of International Health is the central PHS coordinating point in international health and the point of contact with international organizations and U.S. agencies concerned with health on a world-wide basis. The Office prepares or reviews U.S. policies and positions on international health matters; assesses basic international health needs and recommends courses of action; arranges for U.S. Government and PHS representation in international health negotiations and conferences, provides for technical assistance, and the detail of personnel to the AID, the Peace Corps, U.S. Department of State, USIA, and international health agencies; coordinates Public Law 480 program and operates the U.S.S.R. exchange program in the medical fields; furnishes information on health and disease in foreign countries; performs staff duties for U.S. representatives to the WHO, PAHO, and similar official bodies and for the Surgeon General; promotes appropriate publication and presentation abroad of the accomplishments of U.S. medical science and public health; programs the technical training of foreign health personnel; performs staff work for development of international technical exchange programs of health personnel; and provides central coordinating point for all PHS international travel.</p> <p>I. Special foreign currency research program.</p> <p>II. Contracts for international statistical studies.</p> <p>III. Collaborative studies with foreign governments.</p> <p>IV. Consultation to foreign governments.</p>	<p>None.</p>	<p>V. Collaboration with WHO on revision of international classification of diseases.</p> <p>VI. Membership participation on Health Statistical Committees of WHO and PAHO.</p>	<p>Public Law 83-480, sec. 104k. Public Law 78-410, sec. 313. Public Law 87-582, title II.</p>

International Activities of the Public Health Service—Continued

Organizational units participating in international activities	Public Health Service direct operations	Operations in support of other Federal agencies	Cooperation with international intergovernmental agencies	Legislative authorities
<p>B. National Library of Medicine.</p>	<p>I. International medical and health related research documentation. II. International services of library as an autonomous institution.</p>	<p>None.</p> <p>The Library has a formal agreement to support programs of the Agency for International Development with literature search and photoduplication services, but none with the U.S. Information Agency or others with foreign aid or information missions. It has provided technical advice and support to the USIA libraries, to the Office of Naval Research, Taiwan, and to NAMRU installations. In the past, the library has provided technical consultation to individuals preparing for foreign aid missions.</p>	<p>None.</p> <p>The library has no formal agreements to support the programs of international agencies related to its field. At operating levels it regularly provides photo duplication and reference services on request to the Pan American Health Organization, WHO, UNESCO, FAO, NATO, Euratom, and the like. In addition it provides technical consultation, as requested on a wide range of problems relating to the medical literature and its management, and in the past has participated in surveys (e.g., library services at WHO).</p>	<p>Public Law 83-480, sec. 104k. Public Law 78-410. Public Law 87-882.</p>
<p>C. Bureau of Medical Services...</p>	<p>I. Quarantine. II. Sanitation. III. Health education and information. IV. Collection and dissemination of health statistics.</p>	<p>V. Medical examination of Aliens. VI. PHS assistance to AID.</p>	<p>VIII. International health collaboration and consultation.</p>	<p>PHS Act as amended, 42 U.S.C. 215.</p>

D. National Institutes of Health

- I. Support of medical research program:
 - (a) Research grant program
 - (b) Collaborative research agreements under Public Law 480.
 - (c) Visiting scientists program.
- II. Support of research training:
 - (a) Fellowships and traineeships:
 - (1) International post-doctoral fellowship program.
 - (b) Training grants:
 - (1) Training of foreign nationals through domestic training grants.
 - (c) International centers for medical research and training.
 - (d) International research associates program.
- III. International medical science communications: Meetings, translations, and publications.

IV. Interdepartmental Committee on Nutrition for National Defense.

V. Cholera Research Laboratory.

Public Law 78-410.
Public Law 83-480.
Public Law 86-610.

E. Bureau of State Services:

1. Environmental Health

- I. Research grants.
- II. Research contracts.
- III. Special foreign currency program.

IV. U.S. Army Tokyo-Yokohama asthma research.

V. Collaboration and consultation with intergovernmental and international organizations and foreign governments.

Public Law 78-410.
Public Law 81-152.
Public Law 83-480.
Public Law 84-660.

2. Community Health

- I. Public Law 480 special currency program.
- II. Training of foreign health workers.
- III. Visiting scientist program.
- IV. Consultation to foreign governments and international organizations.

V. Agency for International Development Technical Assistance program.

VI. Peace Corps consultation and training program.

VII. Support of International Centers.
VIII. Support of Collaborative International Research.
IX. Audiovisual Training Aids.

INTERNATIONAL ACTIVITIES OF THE NATIONAL CENTER FOR HEALTH STATISTICS

I. PUBLIC HEALTH SERVICE DIRECT OPERATIONS

A. Special international research program

The problems presented by population and growth and population change have become a major concern to health programs and have led to concern over reliable measurement of the changes. The need to measure population change in the absence of adequate vital statistics in developing countries has led the National Center for Health Statistics to collaborate on research projects supported from foreign currencies under Public Law 480 in Egypt, India, and Pakistan. These studies are primarily on methodology, to determine effective alternative ways of measuring birth and death rates which can be applied in various situations in those and other countries. Related studies on the physical growth of school-age children are supported in Egypt and India.

The methodology for the measurement of health problems is being studied through two projects in Yugoslavia currently underway and in two others about to begin, one in Yugoslavia and one in Poland. These studies are on infant mortality, the utilization of medical care, the influence of industrialization on health (particularly mental health), and the separation of factors contributing to chronic respiratory disease.

All these collaborations with the National Center for Health Statistics are not only making useful contributions to knowledge needed in the United States, but are also developing research capabilities in the countries concerned along lines new to them.

B. Contracts for international statistical studies

After a period of rapidly declining mortality, the death rate for the United States leveled off, starting about 1954. This change in the mortality trend has occurred in a number of countries, including some in Europe, Oceania, and Latin America. A similar halt has occurred in the downward trend of the infant mortality rate in the United States and several other countries. The consequences of the failure of the general death rate to continue downward will increase with time, and will have important social and economic significance. The reasons for the leveling off of these death rates are not readily apparent. In an effort to ascertain underlying causes, contracts were made for the statistical analysis of general mortality trends in Chile and in England and Wales; for the analysis of infant mortality trends in Denmark, England and Wales, Netherlands, Norway, Scotland, and the United States; and a conference on infant mortality problems involving experts from the United States and other developed countries was held in Washington, D.C.

C. Collaboration and consultation with foreign governments

In connection with the 8th Revision of the International Classification of Diseases and Causes of Death, subcommittees of the U.S. National Committee on Vital and Health Statistics recently completed collaboration with the corresponding subcommittees of the medical

advisory committees to other foreign governments to establish a classification that is intended for use over a 10-year period.

From time to time, personnel from the staff of NCHS are requested to serve as consultants either to a foreign government, a foundation, or an international organization interested in undertaking a biostatistical project in a foreign country.

II. OPERATIONS IN SUPPORT OF OTHER FEDERAL AGENCIES

None.

III. COOPERATION WITH INTERNATIONAL AGENCIES

Since 1946 the World Health Organization has been responsible for the revision of the International Classification of Diseases. NCH's Office of Health Statistics Analysis has been a focal point for coordination of the U.S. recommendations and for liaison with WHO for the eighth revision of the Classification which was completed in 1965. This Office provides the Secretariat for the U.S. National Committee on Vital and Health Statistics, which has subcommittees for international list revision and for the classification of various groups for diseases and for accidents, poisonings, and other acts of violence.

IV. PROJECT ON ESTIMATION OF BIRTH AND DEATH RATES FROM INTERVIEW DATA

The National Center for Health Statistics, the Agency for International Development, the University of North Carolina and the Research Triangle Institute of North Carolina are cooperating in an experimental project to develop methods of measuring birth and death rates and population change through a one-time retrospective household interview procedure. This project is a two-phase undertaking which is expected to last about 2 years, ending in the summer of 1967. The first phase is experimental; the second phase involves a test of the procedure with a probability survey of the North Carolina population, the criterion in the second phase being the official State vital registration data.

Thus an intensive effort is being made in North Carolina under laboratory, or nearly ideal, conditions to develop this type of survey. If the effort is successful in the "laboratory," there is a basis for hoping that modified procedures can be developed to produce adequate measurement of birth, death, and population change in other lands and particularly in the developing countries. If the "laboratory" effort is not successful, then serious question is raised as to whether a one-time retrospective interview survey can be used to secure acceptable estimates of vital rates.

INTERNATIONAL ACTIVITIES OF THE NATIONAL LIBRARY OF MEDICINE

Over more than 80 years, the National Library of Medicine has built up a preeminent reputation as an international center of biomedical communication. It services requests for information from all over the world, drawing for this purpose on the largest collection of published

literature in the biomedical area. The library has developed a mechanized retrieval system called Medlars (medical literature analysis and retrieval system) which has evoked worldwide interest.

This system enabled the time to prepare for printing "Index Medicus," a monthly listing of the world's medical literature published by the library, to be cut from 22 to 5 days; and it makes possible the printing of recurrent bibliographies on specialized topics and easy searching for data stored on the magnetic tapes. This includes both the data printed out in "Index Medicus" and supplementary data which are not.

The library's international activities fall under two main categories: Those services provided to the library to strengthen its services to its users, and those provided by the library to improve biomedical communication everywhere.

I. PUBLIC HEALTH SERVICE DIRECT OPERATIONS

A. Development of the library

1. *Exchange of publications.*—To build up its collections, the library has exchange arrangements with more than 800 libraries, institutions, and government offices throughout the world. In return for journals, reports, and other publications, the library distributes its own publications, including "Index Medicus" and the "Bibliography of Medical Reviews," as well as other Public Health Service publications.

In fiscal year 1965, from Bulgaria, Finland, Poland, U.S.S.R., and Yugoslavia alone, the library received in exchange for its publications 649 monographs and 243 serial titles.

2. *Training and exchange of personnel.*—To strengthen the staffs of medical libraries overseas, the library provides training for privately and publicly sponsored exchange personnel or sends experienced personnel overseas to provide consultative services. Of particular importance is the training of search specialists and programmers for overseas Medlars installations. Two persons from the United Kingdom and one from Sweden received this training during the year.

3. *Indexing activities overseas.*—One of the major problems of the library is finding indexers with the capability of reading some of the less common foreign languages. One solution would be for the indexing to be done by indexers in the country concerned who have an adequate knowledge of English. A project is being developed with Keio University in Japan to explore the possibility of inputting Japanese journals into the Medlars system in this way.

B. Services from the Library

1. *Publication distribution.*—The "Index Medicus," published monthly with annual cumulations by the Library, is the most comprehensive index of its kind in the world. It is used extensively by overseas libraries for literature search; in 1965, they purchased 1,726 copies. In addition, the Library sent out 604 copies in exchange for publications received. In all, 2,330 copies, or just under one-third of the 7,213 produced, are sent abroad. Other publications of the Library, such as the "Bibliography of Medical Reviews," are also widely distributed overseas.

2. *Interlibrary loans.*—In fiscal year 1965, the Library completed 142,452 interlibrary loans through photoduplication; 23,715, or 1 in 6, represented orders from overseas. This service, which provides photocopies of single articles in the medical literature, is provided free to libraries throughout the world in lieu of lending original materials.

3. *Search services.*—The Library also answers requests for information sent in by telephone, mail, cable, or other routes. If the request is suitable for the medlars computer, it is processed in this way. Of 1,623 requests processed by computer in 1965, 79 (5 percent) were from abroad. Of 20,931 requests processed in other ways (e.g., by having search staff looking in books, etc.), 249 (about 1 percent) came from overseas.

4. *Drug information.*—The need for more effective collection, processing, and dissemination of published literature about drugs has led the Library to set up a drug literature program. This program is designed to accumulate and disseminate all the published literature dealing with drugs and their effect on man and animals. For this purpose, indexes to published information on drugs will be maintained, reference and search services on drugs will be expanded, and support will be provided both for other services, such as abstracts, translations, and selective bibliographies, and for research and training in the communication of drug information.

To assure the success of this program, coverage will have to be worldwide. Under the special foreign currency program, the Library has a cooperative arrangement with the Food and Drug Administration and supports the preparation, from 25 foreign journals in the drug field, of abstracts of articles reporting adverse reactions of drugs in humans or animal studies of drugs and chemicals on the fetus. An experiment, undertaken at the request of the Surgeon General, is designed to determine the value of digests as a means for communication. These digests, which comprise comprehensive extracts from the foreign literature, are prepared in Israel by a group of specialists and published in a monthly bulletin, "Drug Digests." Some 800 scientists from government, academic, and industrial laboratories are participating; they will evaluate the usefulness of the publication.

II. LIBRARY-SPONSORED PROGRAMS

1. *Activities funded by the special foreign currency program.*—On behalf of the Public Health Service, the Library conducts biomedical communication activities funded under section 104(k) of Public Law 83-480. These activities include the support of specialized abstracting and the preparation of critical reviews, bibliographies, histories of medicine, and translations of the scientific literature. Such programs are currently underway in Israel, Poland, and Yugoslavia and are being developed in India. The Library is responsible for the scientific and technical content of these programs; close cooperation is maintained with professional scientific societies, which assist the Library. In coordinating its programs, the Library works cooperatively with other elements of the Public Health Service and the Department of Health, Education, and Welfare, the National Science Foundation,

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the Office of International Scientific Affairs in the Department of State, and other Federal agencies.

At present, 10 Polish biomedical journals and 3 Yugoslav journals are being translated. Specialized abstracts of the oral research literature are being prepared by a group of scientists and physicians in Israel from articles in 40 journals published in about a dozen languages. Support for this effort has come also from the National Institute of Dental Research and the Division of Dental Health; this cooperative arrangement with the American Dental Association will result in a new oral research abstracts journal appearing in 1966.

2. *Publication support program.*—With the large increase in the number of sources providing translations, and hence in the consequent number of translations, the need for information on their availability became apparent. The Library therefore made a cooperative arrangement with the clearinghouse for Federal scientific and technical information in the Department of Commerce to prepare a "Bibliography of Medical Translations." This appears semimonthly and contains a list of translations produced by governmental and nongovernmental sources within the United States and overseas. It is distributed as a locating device to 1,400 biomedical libraries.

Other activities include support of a translation supplement of the federation proceedings of the Federation of American Societies for Experimental Biology. Selected articles from 40 Soviet biomedical research publications are translated and published in this supplement, which is distributed to about 14,000 users. The Library also supports the preparation from Soviet health-related biological and medical fields of 10,000 abstracts by the Bio-Sciences Information Service of biological abstracts and similar abstracting from the Japanese and Soviet biomedical literature by the Excerpta Medica Foundation.

To aid workers in the biomedical field, support was given to prepare and publish a "Directory of Biomedical Institutions in the U.S.S.R."

3. *Medlars services overseas.*—To make Library resources more readily available to the world biomedical community, agencies with adequate computer facilities in other countries are being encouraged to apply for medlars tapes. The Library expects to provide these at cost to these institutions able to provide a regional search facility. Training at the Library, as described above, is also provided at the country's expense. So far, medlars programs have been made available to two countries: The United Kingdom, where the system will be operated on behalf of the British Government by a computer facility at the University of Newcastle-upon-Tyne; and in Sweden, at Data-centralen in the Karolinska Institutet in Stockholm. It is expected that search services will be provided to biomedical scientists in these countries in 1966.

Inquiries have been received from agencies in seven other countries: Australia, Belgium, Canada, Czechoslovakia, the German Federal Republic, Japan, and Yugoslavia.

III. OPERATIONS IN SUPPORT OF OTHER U.S. AGENCIES

The Library has concluded a formal agreement to support programs of the Agency for International Development. In return for AID assistance in strengthening the Library's collections, the Library pro-

vides lending services for AID missions and medlars search services for AID programs. In the case of those agencies with foreign aid or information missions with which the Library has no formal agreements, requests made are responded to as they occur. Thus, technical advice and support has been provided to U.S. Information Agency libraries, to the Office of Naval Research, Taiwan, and to Navy Medical Research Unit installations.

IV. COOPERATION WITH INTERNATIONAL AND INTERGOVERNMENTAL AGENCIES

Although the Library has no formal agreements to support the programs of international agencies, reference and photoduplication services are provided on request to WHO, UNESCO, FAO, NATO, PAHO, and others. Technical consultative services have advised on setting up regional communication centers in Central and South America. Consultations have been held with groups in France and Germany interested in standardizing medical terminology.

INTERNATIONAL ACTIVITIES OF THE BUREAU OF MEDICAL SERVICES

I. PUBLIC HEALTH SERVICE DIRECT OPERATIONS

DIVISION OF FOREIGN QUARANTINE

A. Quarantine

The Division applies health controls to international sea, air, and land traffic in order to prevent the introduction into the United States of (1) Quarantinable diseases: namely, smallpox, cholera, plague, yellow fever, louse-borne typhus, and louse-borne relapsing fever—which are prevalent in many parts of the world; (2) rabies and other human diseases transmitted by dogs, cats, and monkeys; (3) psittacosis, through restrictions on the importation of parrot-family birds; (4) anthrax, through laboratory check on imported lather brushes; (5) other serious communicable diseases, through controls applied in cooperation with local health departments; (6) disease-transmitting insects, by spraying of airplanes and ships and by entomological surveillance of airport and seaport areas; (7) unauthorized shipments of disease organisms or transmitting agents.

The Division also applies measures to prevent the immediate spread of quarantinable and other dangerous communicable diseases in the event they are introduced into the country. These measures are: (1) Application of health controls, including vaccinations, surveillance, or isolation, to travelers; (2) stimulation of immunization of persons working in and around ports of entry who come into contact with international travelers; (3) insect vector control in international traffic areas; and (4) rodent control on ships and in dock areas.

B. Sanitation

Division personnel inspect foreign-flag passenger liners to insure that the vessels have adequate rat and insect controls, that their food sanitation is satisfactory, and that their water supply and waste disposal systems do not present any hazard to health. Water samples are

collected for analysis as a part of the inspection. The Division has asked the World Health Organization to establish international standards of sanitation for ships.

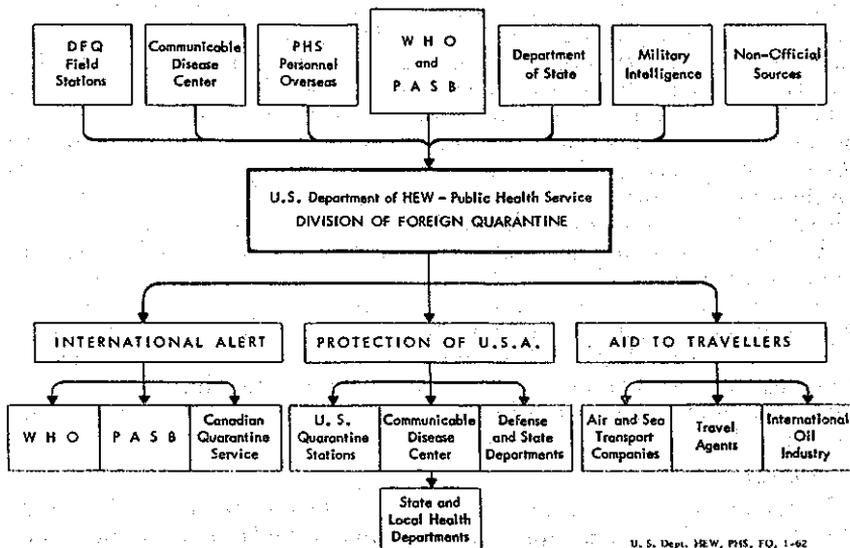
C. Health education and information

The Division serves as the official source in the United States of health information for international travel. To inform the traveling public about health hazards and immunization requirements, the Division issues leaflets, booklets, and other publications, and disseminates information to transportation companies; to travel agencies; to newspapers and magazines; to other Federal agencies, such as the Defense Department, the Passport Division of the State Department, and the U.S. Travel Service of the Commerce Department; to local and State health departments; to the national health departments of other governments; and to the World Health Organization and its regional offices.

D. Collection and dissemination of health statistics

The Division collects, analyzes, and disseminates international epidemiological information on the quarantinable and other dangerous communicable diseases. Particular attention is paid to endemic and epidemic occurrences of the quarantinable diseases in any country. Such occurrences are followed closely from day to day to determine their prevalence and incidence, their geographical distribution, and the chances of their being brought into the country by travelers. The flow of epidemiological intelligence is shown in the following chart.

FLOW OF EPIDEMIOLOGICAL INTELLIGENCE



U. S. Dept. HEW, PHS, FO, 1-62

CHART 13

II. OPERATIONS IN SUPPORT OF OTHER FEDERAL AGENCIES

A. Medical examination of aliens

The Division of Foreign Quarantine examines aliens at major U.S. consulates and at ports of entry to detect excludable conditions specified in immigration law. These include (1) dangerous communicable diseases; (2) mental retardation, insanity (present or previous attack); psychopathic personality, sexual deviation, narcotic drug addiction, chronic alcoholism, and certain other mental defects; and (3) physical defects or diseases that may affect the alien's ability to earn a living.

Under the 1965 modification of the Immigration and Nationality Act, the Division administers health controls for certain immigrants having excludable conditions, who are admitted under waiver.

B. PHS assistance to AID

PHS recruits surgical teams at the request of AID to provide medical care to the civilian population of South Vietnam. Each team includes surgeons, nurses, and medical technologists. PHS also conducts continuing professional supervision of the teams.

III. COOPERATION WITH INTERNATIONAL AGENCIES

The Division of Foreign Quarantine implements the International Sanitary Regulations issued by the World Health Organization. It also furnishes other governments with technical assistance in the development of quarantine programs and the training of quarantine personnel. The Chief of the Division serves on the Committee on International Quarantine of the World Health Organization, and is a member of the WHO Expert Advisory Panel on International Quarantine. In addition, headquarters and field personnel participate in international conferences dealing with the control of quarantinable diseases, the facilitation of international travel, and related matters.

INTERNATIONAL ACTIVITIES OF THE NATIONAL INSTITUTES OF HEALTH

I. BACKGROUND AND LEGISLATIVE AUTHORITY

Growth of medical knowledge in the United States up to World War II depended to a large extent on the flow of information and knowledge from Europe. Our own medical research, which had come of age between the two world wars, was then subjected to even greater demands by the increasing recognition of the importance of medical research associated with the rising standards of living and medical care which followed World War II.

The renewed flow of skills and ideas from Europe facilitated the spectacular growth in scope and productivity of American medical research following World War II. It was during this period, when the United States was coming into a position of world leadership in medical research, that the basic interdependence between Europe and

America for stimulation of ideas and interchange of skills came to be understood as necessary for rapid progress of medical science both nationally and internationally.

Early official U.S. recognition of the usefulness of foreign research resources and talents in throwing light on our indigenous medical problems was in the 1930 act of Congress which (in establishing the National Institute of Health) authorized fellowship arrangements for sending American scientists overseas for training and to carry on investigations abroad or in collaboration with foreign scientists. The concept was greatly broadened in section 301 of the Public Health Service Act of 1944 and related legislation establishing the categorical research institutes which authorized the present grant and fellowship programs and permitted them to be conducted both in the United States and elsewhere.

Explicit legislative recognition of the importance of international medical research activities to progress of the health sciences in the United States came in the International Health Research Act of 1960 (Public Law 86-610). This act authorized the Surgeon General of the Public Health Service to carry on "cooperative endeavors with other countries in health research and research training." In the same act Congress recognized a permanent U.S. interest in international cooperation to further the "international status of the health sciences," an interest which had previously been manifested mainly through the various foreign aid programs. The act authorized the President to carry out "cooperative enterprises in health research, research planning, and research training." This authority has been exercised by the National Institutes of Health under limited and specific delegations in such instances as the financial assistance provided to the World Health Organization and the Pan American Health Organization through research planning grants.

II. PHILOSOPHY

The National Institutes of Health have in recent years greatly increased the use of foreign scientific resources to carry forward their medical research objectives. By selecting appropriate projects among the many foreign opportunities offered abroad, the Institutes are supplementing domestic resources both in quantity and scope. Thus our own supply of highly trained scientists in certain fields is being reinforced by grants affording partial support for outstanding foreign scientists working on projects of mutual interest and concern.

Use of foreign scientific resources and environments not only adds unusual talent and the stimulation of other ideas, but it also affords a greater variety of techniques and approaches to solve problems related to causation, prevention, and treatment of diseases of importance to the American people as well as those of other nations.

Studies of geographic pathology and epidemiology carried on among divergent national and ethnic groups make it possible to compare genetic and environmental factors in disease and thus may provide important clues to the causes of certain diseases which might not become evident in studies restricted to our own environment.

The international activities of the National Institutes of Health are not a separate program with its own objectives. Rather, they represent the aggregate of the foreign segments of the programs of the categorical Institutes which are directed toward advancing the health sciences in the United States, and thereby the health of the American people.

Collaboration of foreign scientists and institutions is, for the most part, readily offered because few of the health problems of the American people are unique. Most of them represent equally serious problems for other scientifically advanced countries. This mutuality of interest leads to a ready interrelationship and interdependence which is the basis for scientific cooperative efforts.

III. SCOPE OF INTERNATIONAL SCIENTIFIC ACTIVITIES

NIH international scientific activities have grown both in scope and magnitude in recent years. Generally, these activities fall within one or more of three general types: Support of research projects, support of research training, and support of research communications—that is, interchange of information and skills. The principal international activities and the funds expended for their support and the geographic distribution of the major programs are shown in the accompanying tables.

Principal international activities of the NIH by program, fiscal year 1965

[In thousands of dollars]

Total, principal international activities.....	27, 565
Total, located primarily in foreign countries.....	18, 903
Research project grants.....	11, 467
Research contracts.....	1, 008
Research project agreements financed with U.S.-owned Public Law 480 foreign currency.....	3, 163
U.S. research fellows and trainees in foreign laboratories.....	2, 655
Research training grants to foreign laboratories.....	487
International research career development program.....	128
Total, located primarily in the United States.....	8, 662
Foreign scientists in NIH labs under visiting program.....	1, 172
International postdoctoral fellowship program.....	1, 199
Nonimmigrant foreign trainees under domestic training grants ¹	3, 800
International centers for medical research and training.....	2, 491

¹ Partly estimated.

IV. SUPPORT OF MEDICAL RESEARCH

As indicated in the above table, the principal mechanisms involved in NIH support of research overseas are research project grants to foreign investigators and international organizations, research contracts and collaborative research project agreements financed by foreign currencies derived from sales of agricultural surpluses (Public Law 480).

NIH foreign grants and awards, fiscal year 1965

Country	Total awards ¹		Research grants and contracts		U.S. fellows and trainees abroad		International research fellows		Visiting scientists		Training grants		Foreign currency program ²	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
World total.....	1,501	\$17,983,430	823	\$12,470,121	342	\$2,654,976	166	\$1,199,445	156	\$1,172,219	14	\$486,669	19	\$3,163,044
Western Hemisphere (total).....	266	4,187,049	198	3,470,587	19	117,191	35	237,049	7	46,225	7	315,997		
Canada.....	96	1,759,386	71	1,401,844	16	97,217			3	10,278	6	250,047		
Latin America (total).....	170	2,427,663	127	2,068,743	3	19,974	35	237,049	4	35,947	1	65,950		
Argentina.....	29	337,268	23	294,617			4	20,714	2	21,997				
Brazil.....	34	314,618	31	293,854	1	6,820	1	4,365	1	9,479				
Chile.....	18	209,692	10	157,530			8	52,062						
Colombia.....	10	121,737	5	81,502	1	7,354	4	32,881						
Costa Rica.....	4	43,477	3	33,105			1	10,372						
El Salvador.....	3	33,120	2	24,611			1	8,509						
Jamaica.....	4	48,530	4	48,530										
Mexico.....	30	522,656	22	411,694	1	5,800	5	34,691	1	4,531	1	65,950		
Peru.....	23	471,026	15	424,343			8	46,683						
Uruguay.....	7	158,310	5	139,250			2	19,060						
Venezuela.....	8	167,429	7	159,717			1	7,712						
Western Europe (total).....	778	7,804,019	331	4,333,722	292	2,286,353	74	525,293	76	561,621	5	97,030	(3)	1,767
Austria.....	12	67,332	8	41,595	1	6,495	2	18,267	1	976				
Belgium.....	23	169,338	13	126,941	3	11,060	5	19,810	2	10,627				
Denmark.....	32	321,389	21	231,978	6	43,979	4	33,432			1	12,000		
Finland.....	20	196,843	13	151,282			5	38,270	2	7,291				
France.....	68	795,048	32	516,619	27	214,317	6	44,504	3	19,608				
Germany, Federal														
Republic of.....	52	385,669	9	59,961	26	188,520	7	53,847	10	33,541				
Greece.....	11	116,037	8	101,070			2	12,173	1	2,794				
Iceland.....	2	41,545	2	41,545										
Ireland.....	9	70,024	3	30,820	1	6,661	4	31,943	1	600				
Italy.....	59	609,969	31	380,850	10	89,092	8	50,983	10	89,104				
Netherlands.....	32	336,686	18	225,175	11	90,858	1	8,449	2	15,204				
Norway.....	25	241,480	17	180,315	1	6,609	7	54,556						
Portugal.....	2	13,526	1	8,100					1	5,426				
Spain.....	13	78,239	6	38,023			5	25,593	2	14,623				
Sweden.....	109	1,440,225	52	901,130	41	391,874	8	62,851	6	46,020	2	38,320		
Switzerland.....	37	367,012	12	143,861	19	170,088	2	11,943	4	41,120				
Turkey.....	1	14,617							1	14,617				
United Kingdom.....	281	2,465,295	78	1,099,697	146	1,065,960	6	45,621	29	207,307	2	46,710		
Yugoslavia.....	10	70,545	7	54,760			2	13,021	1	2,704			(3)	1,767

East Europe (total).....	13	106,357			1	6,164	7	54,944	5	45,249			3	222,832
Czechoslovakia.....	2	18,848			1	6,164			1	12,684				
Hungary.....	2	12,326							2	12,326				
Poland.....	9	75,183					7	54,944	2	20,239			3	222,832
Africa (total).....	28	406,485	18	320,539	3	22,325	5	43,562	2	20,059			4	612,136
Egypt.....	1	6,825			1	6,825							4	612,136
Ghana.....	1	7,284					1	7,284						
Kenya.....	1	14,561	1	14,561										
Liberia.....	2	37,916	2	37,916										
Nigeria.....	1	31,950	1	31,950										
Senegal.....	1	6,000			1	6,000								
South Africa, Republic of.....	20	292,449	14	236,112			4	36,278	2	20,059				
Uganda.....	1	9,500			1	9,500								
Middle East (total).....	105	1,319,410	72	1,082,440	15	117,335	8	54,645	10	64,990			10	1,146,011
Israel.....	90	1,117,833	58	896,993	15	117,335	8	54,645	9	48,860			10	1,146,011
Lebanon.....	15	201,577	14	185,447					1	16,130				
South Asia and Far East (total).....	284	2,697,754	180	1,877,187	12	105,608	37	283,952	55	431,007			2	1,180,298
Australia.....	56	778,481	35	588,906	8	64,600	5	53,955	8	71,020				
Burma.....	1													
India.....	15	108,561	4	37,381			3	22,447	8	48,733			(3)	4,723
Indonesia.....	1	10,310							1	10,310			(3)	4,213
Iran.....	3	46,759	2	36,700					1	10,059				
Iraq.....	1	10,250							1	10,250				
Japan.....	156	1,375,652	113	1,054,341	4	41,008	7	53,122	32	236,181				
Korea.....	3	32,910	2	20,746					1	12,164				
Malaysia.....	2	17,581	2	17,581										
New Zealand.....	15	117,936	9	68,502			6	49,434						
Pakistan.....													2	1,171,362
Philippines.....	9	49,791	3	11,920			5	25,871	1	12,000				
Taiwan.....	16	116,249	6	37,030			8	58,929	2	20,290				
Thailand.....	7	33,274	4	13,080			3	20,194						
Stateless.....	1	3,068							1	3,068				
International organizations (Total).....	26	1,459,288	24	1,385,646							2	73,642		
INCAP.....	10	551,048	9	495,406							1	55,642		
PAHO.....	4	218,028	4	218,028										
WHO.....	4	385,695	4	385,695										
Other.....	8	304,617	7	286,517							1	18,000		

¹ Does not include 6 grants to domestic institutions totaling \$2,490,709 for international centers for medical research and training.

² Not included in total awards column.

³ Represents supplement to previous year's funds.

SOURCE: Program Analysis Section, Office of International Research, Nov. 17, 1965.

A. Research grants

The total number of research grants to foreign investigators and international organizations decreased from 932 in fiscal year 1964 to 801 in 1965 and the amount awarded from \$13.8 million to \$11.5 million. Foreign grants also decreased from 3.4 percent in fiscal year 1964 to 2.7 percent of the total of regular research grants in fiscal year 1965. In this calculation, grants for general research support made for the purpose of enlarging and improving the research resource base are not included, because grants for this purpose are not made to foreign institutions.

Efforts are continuing to assure increasing local financial participation in medical research projects supported by NIH, particularly in countries of clear economic capability. However, because these countries are the ones which are most productive in fields of medical research and of greatest interest and concern to the United States, it will always be necessary to maintain a close interrelated common research effort.

B. Collaborative research agreements under Public Law 480

Foreign currencies generated from the sale of surplus agricultural products are available for medical research purposes in a limited number of countries. NIH uses these funds to support collaborative agreements with research institutions in such countries for research on disease problems important both to the country concerned and the research effort of the Public Health Service. During fiscal year 1965, \$3,163,044 was obligated for 19 projects in 5 countries: Egypt, India, Israel, Pakistan, and Poland.

C. Visiting scientist program

Productive scientific relations and collaboration between the NIH laboratories and foreign research centers are greatly facilitated by the visiting scientist program authorized in 1950 by sections 207 (f) and (g) of the Public Health Service Act. This enables NIH to employ distinguished citizens or noncitizens where civil service or commissioned corps appointments are not feasible, and thus supplements employment possibilities within an overall fund limitation of 10 percent for this purpose. In fiscal year 1965, 156 foreign scientists were employed at a cost of \$1,172,219 for salary and travel expenses.

V. SUPPORT OF RESEARCH TRAINING

Foreign-trained scientists and foreign nationals trained in the United States are contributing very significantly to the manpower base for medical research in the United States. Description of the major international elements in the training program follows.

A. Fellowships and traineeships

The international segment of the overall fellowship program operates through—

1. Awards for study and research at foreign institutions made to U.S. nationals under the same general conditions as for postdoctoral fellowships at domestic institutions. There were 342 such fellowships awarded in fiscal year 1965 with stipends and travel amounting to \$2,654,976.

2. The international postdoctoral fellowship program for study by foreign scientists in the United States which is administered under special conditions. This program is described below.

B. International postdoctoral fellowship program

As part of the regular Public Health Service fellowship program dating from the 1930's, awards to promising foreign scientists to prepare for careers in biomedical research have become a significant factor since 1958. Although these fellowships undoubtedly help build research capabilities in other countries, the program retains a basically domestic orientation. One purpose is to enrich postgraduate biomedical training in this country by enabling foreign investigators to share their ideas and background with American colleagues. Another is to encourage foreign scientists to participate in research bearing upon American health problems—research which is often continued and extended by the fellow upon return to his home country, thus generally enhancing opportunities for future collaborative research.

The fiscal year 1965 appropriation of \$1,200,000 supported 166 fellows. To provide some of the resources needed in starting a medical research career and make optimal use of their U.S. training, research grants up to \$2,500 per year for 3 years are available to international fellows newly returned to their home countries. During fiscal year 1965, \$256,000 was awarded for support of 95 research projects of such fellows.

Country fellowships nominating committees now total 43, and most of these are invited to submit up to six candidates for competitive selection by the PHS fellowship awards committee. A followup survey of all foreign fellows who have completed their fellowship training in the United States since the beginning of the program in 1958 is being completed. The study covers such factors as relation of present work to training, present institutional setting, and allocation of time to research, teaching, administration, and clinical practice. In addition, the American preceptors of all such fellows are being surveyed to determine the value to their laboratories, and thus to American health-related research, of the presence of these fellows. An analysis of the response to this two-part survey and of the research accomplishments of the international fellows will assess the effectiveness of this program.

C. Training grants

NIH training support is accomplished through grants to U.S. academic institutions in behalf of highly qualified scientists who supervise and conduct the training. These grants provide stipends for trainees and certain research costs related to the training. In this way NIH supports nearly 20,000 domestic and foreign research trainees each year.

Under special conditions, young foreign scientists may participate in this training at U.S. institutions. In fiscal year 1963 about 928 (5 percent) of the research training stipends were paid to foreign nationals, involving an expenditure of about \$3,800,000. Participation of these young investigators from abroad furthers U.S. research objectives in several ways. They provide an immediate and productive source of manpower, since they carry out important research in the course

of their training. They often bring to our research programs new skills, fresh ideas, and sometimes special techniques. Upon their return to their home countries, they may use their U.S. training in research of importance to American health problems even though their subsequent work is carried out in a foreign country and supported by that country. Lastly, many continue to collaborate with and assist their American preceptors in the research begun in the United States. Despite these benefits, NIH intends to study the mechanisms, terms, and conditions of these appointments with a view to directing them more selectively and specifically toward needed areas of research manpower development.

A few training grants have been made to outstanding scientists in foreign countries who are prepared to transfer some of their skill and special approach to young scientists. In fiscal year 1965, 14 such grants involving \$487,000 were made in 6 countries: Canada, Denmark, Guatemala (Institute for Nutrition in Central America and Panama), Mexico, Sweden, and the United Kingdom. On training grants awarded up to fiscal year 1962, a portion of these grant funds could be used for stipends to nationals of the country where the training project was located. On all new grants, stipends now will be available only to U.S. citizens in training there.

D. International centers for medical research and training

This program represents a direct response to the objective in the International Health Research Act of 1960 (Public Law 86-610) to advance the status of U.S. health science through cooperative endeavors abroad. Five centers now have been established through collaborative agreements between American medical schools and a foreign medical research institute: the University of California with the Institute of Medical Research, Kuala Lumpur, Malaya; Tulane University with University del Valle, Cali, Colombia; Johns Hopkins University with Calcutta School of Tropical Medicine, India; Louisiana State University with University of Costa Rica, San Jose; and University of Maryland with Institute of Hygiene, Lahore, West Pakistan.

Each of the international centers consists of two operational elements: (1) A research and research training activity in the United States, including both American and foreign medical investigators, which is closely related to (2) specific research and training conducted in the overseas institution where American scientists may have the advantage of conducting research under unusual environmental, ethnic, and medical conditions not available for study at home. While oriented generally toward the need of American physicians and scientists to have the stimulus of research in foreign settings, a corollary advantage of the centers is the stimulus and experience afforded the foreign collaborating institutions to develop and expand indigenous medical research and training resources. The centers were supported in fiscal year 1965 by grants totaling \$2,491,000 to the five American universities concerned. These grants cover costs for a 1-year period, against an overall commitment for 5 years' support.

The initial phase of program development has been completed for each of the centers, and research is now being actively pursued at each foreign site. This involved the administratively complex job of con-

cluding agreements satisfactory not only to the two private institutions involved in each case, but also meeting the requirements of the United States and the foreign government concerned. Staffing also was involved, and each of the centers has been unusually successful in attracting well-trained young scientists interested in experience and careers in international research. Each of the centers will be moderately expanded in the second phase through staff additions so that a multidisciplinary team approach can be brought to bear on the complex biomedical problems at the foreign research sites.

E. International research career development program

This new program, which went into operation in fiscal year 1963, was developed to assure that there will be available to the Public Health Service an adequate number of highly capable internationally oriented U.S. investigators. This has been done by broadening the present research associate program of NIH to permit assignment of 8 to 10 Public Health Service commissioned officers each year to research projects carried out overseas by PHS units or to projects of special interest to the Service carried out by other organizations. Thus, research experience and training of high quality and interest can be assured, and at the same time fulfill an important need of the PHS by supplying additional skilled manpower in support of foreign projects. The budget for fiscal year 1966 amounts to \$165,000.

VI. INTERNATIONAL MEDICAL SCIENCE COMMUNICATIONS

Major support is being given by NIH to three of the four basic elements or functional processes¹ involved in biomedical communications: the personal interchange among scientists, publication of findings, and the training and educational process.

Formal meetings, seminars, symposia, and other activities arranged by scientific, professional, and related organizations, which form the basic framework of the process of personal interchange among scientists, have come to have major importance in international scientific communications. As an integral part of many NIH programs and activities, support is provided for this important personal interchange process as a basic means of enlarging communications in biomedical sciences. Participation in international meetings is also permitted by allowing investigators upon specific approval to use research grant funds for travel to international meetings.

There is an apparent need for an international conference center where working conferences and international meetings may be supported within the biomedical research environment of the National Institutes of Health.

It has been estimated that a large part of world biomedical research literature is in languages infrequently read by American scientists. Thus, an important international objective of the Public Health Service (the National Institutes of Health and the National Library of Medicine, specifically) is to find means of encouraging the translation

¹ These processes are outlined and discussed in "Communication in the Biomedical Sciences," a report by the National Institutes of Health, Mar. 9, 1962. Reprinted in hearings before Subcommittee on Department of Health, Education, and Welfare appropriations for 1963, House Committee on Appropriations, pt. 3, p. 1595.

and publication of foreign literature of importance to American medical science. NIH support of primary publications, bibliography, and abstracts (e.g., Cancer Chemotherapy Reports, Psychopharmacology Abstracts, World Neurology) makes a major contribution to international science communications.

VII. ADMINISTRATION

Responsibility for policy formation, program analysis, and coordination of foreign and international activities of the National Institutes of Health is in the Office of International Research, a staff arm of the Office of the Director, National Institutes of Health. Creation of this Office was motivated by the need for special attention to these activities, which have expanded rapidly in magnitude and complexity in recent years, and to give specific expression to the purposes stressed in the International Health Act of 1960. The Office of International Research directly administers the NIH portion of the special foreign currency program financed from Public Law 480-derived funds, the international centers for medical research and training, the international postdoctoral fellowship programs, the visiting scientists program, and the international research career development program, all of which have been discussed above.

To fulfill its responsibility for evaluating medical research and scientific manpower opportunities not available in the United States and to stimulate the flow of information on medical research underway in other countries, NIH now has established oversea offices and scientific representatives in Paris for Western Europe, London for the British Isles, Rio de Janeiro for Latin America, Tokyo for the Pacific area, and New Delhi for south Asia.

Without a broadened legal authority, either through Presidential delegation (Public Law 86-610), or from new legislation, there will be no significant change in the scope and character of the NIH international activities. There is a definite need for legislative authorities to provide NIH scientific personnel benefits and logistic support necessary for the establishment and maintenance of foreign direct operations.

INTERNATIONAL ACTIVITIES OF THE BUREAU OF STATE SERVICES: ENVIRONMENTAL HEALTH

I. PUBLIC HEALTH SERVICE DIRECT OPERATIONS

A. Research grants

Grant support is provided to research carried out by foreign investigators and institutions in order to secure the benefits of superior scientific capability or exceptional research opportunities which these present.

In the field of radiological health, grants have been approved in England, Japan, Portugal, Italy, Sweden, Norway, and Finland. In air pollution control, there are two research grants in Sweden, one in England, and one in Canada. In the area of environmental engineering and food protection, there are seven research projects in six countries. Five occupational health research grants, in Italy, Japan,

Chile, and Peru, support studies on the causes of byssinosis, the effects of lower air pressure (high altitude) on the development of silicosis, the influence of work on cardiovascular disease, the chronic effect of exposures to irritating gases (mustard gas), and the toxic effects of manganese.

B. Research contracts

None.

C. Special foreign currency program

In the air pollution area, scientists in Poland are conducting a study of the relationship between hydrocarbons in the atmosphere and the occurrence of cancer. Seven research projects in occupational health are being carried on in Poland and Yugoslavia.

D. International shellfish sanitation agreements

The Public Health Service is responsible for fulfillment of U.S. responsibilities in Canadian-United States and Japanese-United States shellfish sanitation agreements. Annual field visits are made to both countries to validate foreign certification of shellfish exports to the United States. Discussions have been held with Department of State and the embassies of various countries interested in exporting shellfish products to the United States, including South Korea, Australia, Mexico, the Netherlands, Denmark, and France. It is expected that an agreement between the United States and France will be negotiated by the spring of 1966.

II. OPERATIONS IN SUPPORT OF OTHER FEDERAL AGENCIES

A staff member has been assigned to Japan since February 1965 to participate in a U.S. Army research project (with liaison with Japanese governmental units) on Tokyo-Yokohama asthma.

III. COOPERATION WITH FOREIGN GOVERNMENTS AND INTERNATIONAL AGENCIES

Each year, technical training is provided to a large number of foreign health workers. A number of requests for consultation are received; each has to be judged on its merit and whether the program can afford the contribution.

Some examples of such activities are (1) representation on the U.S. National Committee for the International Biological Program; (2) consultation and cooperation with the National Coal Board of Great Britain and the European Coal and Steel Community on chest diseases among coal miners; (3) arrangement of an international conference, in cooperation with the Medical Research Council of Great Britain, to discuss a common procedure for determining dust concentrations in coal mines; (4) detailing of eight officers to the Atomic Bomb Casualty Commission in Japan and two to radiation safety duty in Antarctica; (5) advisory services to the Swedish American Line, the Italian Line, Homes Lines, Norwegian-American Lines, and Cunard Lines in the construction and inspection of new ships; (6) consultative services to British Aircraft Corp., Timmons Aviation Ltd. (Canada), C. F. Taylor Organization (Great Britain), Motor Coach Industries (Canada), in the construction of aircraft and bus galley equipment; con-

sultation with scientists and officials in Israel on research programs in water supply and pollution control; (8) representation on a consulting team to Organization for Economic Cooperation and Development (OECD, Paris, France) on effects of detergents in water supply and treatment; (9) sanitary engineering for the development of water supplies in developing countries such as Brazil, Bolivia, and the Somali Republic; (10) translation and publication of technical bulletins of the International Research Group for Refuse Disposal; (11) participation in the air pollution activities of the World Health Organization and the Organization for Economic Cooperation and Development, including consultation with foreign governments; (12) assistance in the formation of the International Union of Air Pollution Associations, which will hold its first formal meeting in London in 1966; (13) participation in air pollution activities of the International Joint Commission of the United States and Canada.

INTERNATIONAL ACTIVITIES OF THE BUREAU OF STATE SERVICES: COMMUNITY HEALTH

Public health is being universally recognized as a community responsibility—whether the community represents a few families, several jurisdictions that make up a metropolitan area, or nations joined together for the common good. But just as important is the universal recognition that the control of disease and the prevention and control of disability are enhanced by the sharing of knowledge and information secured from research of scientists and from comparative experience and observation of medical and public health practitioners in the world.

Community health divisions share knowledge and information about health with the international community through: (1) training courses for health workers, (2) consultation with intergovernmental and international organizations and foreign governments, (3) participation in international conferences, congresses, and seminars, (4) interchange of technical information, (5) research or field trials for intergovernmental agencies or governments, and (6) direction of disease eradication programs through participating agency agreements.

The following are illustrative of the international health activities of the Bureau of State Services, Community Health:

I. PUBLIC HEALTH SERVICE DIRECT OPERATIONS

A. *Public Law 480 special currency program.*

These projects are aimed at extending and improving practical means of solving health problems through utilizing the efforts of well-qualified scientists of other nations as well as our own.

The Communicable Disease Center has negotiated projects for the study of insect-borne encephalitides and staphylococcus pathogenesis in Poland; arthropod-borne virus diseases, tuberculosis and diagnostic reagents in India; arboviruses, gonococcal susceptibility to penicillin, rabies, and hepatitis in Israel; and survey of the significance of the infection with the "Trojica virus" in Yugoslavia.

The Division of Dental Health, in cooperation with the Ministry of Health for the Government of India, is initiating a cooperative re-

search project on periodontal diseases, particularly factors influencing the deposition of oral calculus.

B. Training of foreign health worker

Each year workers attend training courses and programs conducted by community health divisions or sponsored jointly with States in accident prevention, communicable and chronic disease control, hospital and medical care administration, dental public health and nursing. During fiscal year 1965, 303 international health workers from 69 countries received training at the Communicable Disease Center by participating in 163 different courses and 368 individual instruction programs, and a series of seminars and symposia. These international health workers come to the center under the sponsorship of AID, WHO, PAHO, private foundations or through the direct sponsorship of their own health institutions. They range from Ministers and General Directors of Health, coming for a few days of consultations, to scientists, senior officials, and recent graduates who may spend a year in training.

C. Visiting scientist program

The Communicable Disease Center has approval from the Department of State for scientists from the other countries to come to the United States and participate in the center's activities. The fundamental purpose and spirit of the visiting program are: (1) to broaden the utility of the physical facilities and intellectual environment of the CDC as a national research resource, (2) within limits, to strengthen the mutually productive scientific relationships between the similar centers throughout the world with that part of the scientific community represented by the CDC. The visiting program of the CDC supplements the ordinary employment possibilities. Recognition is also given to the role of the CDC in the training of recent postdoctorates as visiting fellows, associates, and scientists.

D. Consultation to foreign governments

Each year many health workers from other countries receive consultation and advisory assistance from the various community health divisions. One technique by which this is accomplished is sponsorship or support to international conferences such as the International Conference on Health and Health Education in Philadelphia, the World Forum on Syphilis and Other Treponematoses in Washington, a World Conference on Hospital Infections, the United States-Mexico Border Public Health Association annual meetings, the International Committee on Bacteriological Nomenclature, the Committee on Food Microbiology and Hygiene, the Scientific Group on Research on Leptospirosis, the Seminar on Organization and Operation of an Epidemiological Surveillance Service, etc. Exchange of viewpoints, techniques, and developments among workers from different countries is furthered through seminars and through travel by members of the Division staff to other countries, either as individuals or teams, to study and evaluate the techniques in terms of our ever-changing needs. Examples are laboratory consultation in Panama, programed instruction of auxiliary personnel, and assessment of malaria eradication programs in different countries.

Aside from the continuing activities, the community health divisions, particularly the Communicable Disease Center, are called upon

to provide emergency assistance to deal with an epidemic in various parts of the world (recent examples are the plague outbreak in Colombia, the cholera spread on the Asian subcontinent). The Center has now in progress or will extend: a smallpox vaccination evaluation program in Tonga, a measles evaluation program in Togo, an epidemic aid team and a mass polio vaccination program in Honduras, and assistance against a yellow fever epidemic in Senegal. An evaluation program on smallpox vaccine was just completed in Brazil and Cameroon.

II. SUPPORT FOR OTHER FEDERAL AGENCIES

A. Agency for International Development

The Public Health Service Audiovisual Facility at the Communicable Disease Center, through contract, provides audiovisual services, materials, and consultative services to AID. Among materials produced and distributed are motion pictures, filmstrips, filmographs, slides, and audiotapes in Spanish, French, and English. They relate to a wide range of medical and health subjects. Films of the Communicable Disease Center's immunization programs helped inhabitants of the Tonga Islands against smallpox. The film on the biology and control of schistosomiasis in Puerto Rico, among others, is being distributed as a teaching tool among health officials and others dealing with the problem in tropical and subtropical areas.

The Communicable Disease Center, through contract with AID, also is evaluating DDVP residual fumigant techniques for the malaria eradication program. In cooperation with the Pan American World Airways, the Center carried out an aircraft disinfection system using DDVP. As a result of the success of these tests, the European airlines were fully informed about the system and its operation. International airline companies contacted were quite enthusiastic about the system and indicated their willingness to cooperate on trial installations. The World Health Organization and the United Nations specialized agencies assist in the coordination of such works and the wide dissemination of results.

B. Peace Corps

The Communicable Disease Center, through contract, also provides technical consultation and assistance for the training of Peace Corps personnel in the diagnosis, prevention, and control of those infectious diseases still prevalent in many parts of the world.

A provisional agreement has been signed whereby the Center will provide technical assistance in the training of auxiliary and paramedical staff in support of a hospital-public health center in Monrovia, Liberia. This complex is being financed by an AID loan.

III. COOPERATION WITH INTERNATIONAL AND INTERGOVERNMENTAL AGENCIES

A. Support of international centers

Community health divisions, primarily the Communicable Disease Center, are cooperating with the World Health Organization, the Pan

American Health Organization, and other international health agencies on problems of mutual concern. Under this pattern the Communicable Disease Center operates as a part of the worldwide network of disease tracking centers. CDC acts as the international influenza center of the Americas, the arbovirus center for the Western Hemisphere, and the international shigellosis center. There are now more than 70 collaborating laboratories in the Western Hemisphere conducting antigenic analyses on isolated influenza strains. Influenza diagnostic reagents are produced, standardized, and distributed to the collaborating laboratories by the Center. It is anticipated that the Center will also be designated as the world center for streptococcal typing. The Center's plague laboratory located in San Francisco continues its plague surveillance in the Western Hemisphere, its diagnostic work, and confirmation of suspected cases.

Cooperative agreements are planned to secure human convalescent sera of west Nile fever in the United Arab Republic and to provide antisera for exotic viral diseases posing a threat to U.S. travelers abroad.

B. Support of collaborative international research—

The Communicable Disease Center collaborates with other foreign research installations to support research in such subjects as schistosomiasis, fungal diseases, insecticides, filariasis, echinococcosis, TB, *Aedes aegypti* and malaria eradication programs.

C. International audiovisual services

The WHO, PAHO, and other international agencies look to the Public Health Service Audiovisual Facility at the Communicable Disease Center as a resource for training and assistance in audiovisual communications. The facility catalogs over 20,000 titles of the identifiable audiovisual material available from any place in the world for teaching health or medical subjects. During fiscal year 1965, it distributed more than 43,000 shipments of audiovisuals to more than 60 nations. The Center, through the facility, provides on a continuing basis professional consultation and leadership in audiovisuals and in the interpretation and presentation of health knowledge through audiovisual devices.

D. Disease eradication programs

Plans for campaigns to protect 105 million people from smallpox and measles in 18 African countries are underway. AID and the PHS have been holding consultation with African and WHO officials on plans for the campaign, its acceptability to African countries, and their willingness to contribute to the program. This program is being designed to fit into plans of the World Health Organization to eradicate smallpox throughout Africa and the rest of the world within 10 years.

Such eradication programs as malaria and smallpox would help prevent the possible reintroduction of the disease into the United States and other disease-free countries. The smallpox activity would run concurrently with a measles control program within the same area of Africa. Local cost and operational personnel would be supplied by the individual countries cooperating in the program. The

18 African countries are among the 45 countries that are now the principal sources from which smallpox infections are spread to other parts of the world.

INTERNATIONAL TRAINING PROGRAMS IN THE PUBLIC HEALTH SERVICE

The Public Health Service conducts training programs for research scientists and public health professionals from foreign countries. The programs for the research scientists are operated primarily by the National Institutes of Health and are an integral part of the NIH international activities discussed under direct operations.

The programs for public health professionals are participated in by the other bureaus of the Service and are programs of formal graduate training and programs of short-term visits to schools and to health and hospital facilities for students and visitors sent to the United States under the sponsorship of the Agency for International Development, the WHO, other U.N. agencies, and the Department of State.

During fiscal year 1965, the Service provided professional consultation and guidance services to 542 foreign students and visitors from 85 countries. These students and visitors received program assistance for a total of 2,325 months of study and visitation in the United States. This averages slightly more than 4.3 months per person. The stay of the AID participants averaged more than 7 months each. This represents a full academic year for many of the 205 AID long-term participants.

Formal graduate training programs were arranged for 63 participants in 10 schools of public health, for 75 in 39 schools of medicine, for 22 in 7 nursing schools, and for 52 in 16 other U.S. academic centers, in addition to those in hospitals, clinical centers, and other institutions. PHS units, numbering 17, received 187 participants for varying lengths of time and 107, chiefly on travel status, visited health departments, laboratories, hospitals, and other facilities in the United States. In all, 121 separate U.S. training centers provided experience for international students and visitors during the year.

A comparison of the fiscal year 1965 experience with that of fiscal year 1964 reveals certain significant trends. The numbers sent to schools of public health (excluding Puerto Rico) increased only 7 percent (from 59 to 63) whereas the numbers training in medical schools decreased from 85 to 75 and the gross number of U.S. medical schools involved decreased from 43 to 39. While the numbers sent to nursing schools decreased from 31 to 22, the number of schools participating decreased from 13 to 7.

The number of fellows under World Health Organization sponsorship for whom the PHS was asked to undertake training responsibility increased from 112 to 119.

The increase in the numbers of those coming for study in public health, environmental sanitation, clinical medical sciences, and dentistry offset the decreases in the basic sciences and in nursing.

Analysis of countries of origin shows that the three major developing areas—Latin America, Near East, and south Asia, and the Far

East—sent comparable numbers of students. From Europe, however, came only about half the number from other areas and most of these were short-term visitors. The slight increase (122 to 156) of visitors from Latin America and the broader sponsorship suggests, as with respect to Europe, a maturation and increased health sophistication within these countries.

During fiscal year 1965, the staff of the Office of International Health sponsored several special events and planned a number of special courses or seminars for international students and visitors. For example, 15 AID medical education participants took part in the Ninth Annual Conference on Medical Education for Foreign Scholars in the Medical Sciences at the University of Virginia, June 13–16, 1965.

At the request of this office, the George Washington University organized a fourth annual forum for international medical scholars on selected problems in medical education exclusively for AID medical faculty participants during April 4–7, 1965, at Airlie House in Warrenton, Va. A total of 54 AID medical education participants attended.

A special intensive course for two foreign hospital administrators was conducted by the Columbia University School of Public Health for 6 months (February–July 1965). The course combined classroom work and supervised practice.

A specially designed short course of 3 weeks' duration for public health administrators was offered by the staff at the Communicable Disease Center for 30 AID participants on applied epidemiology and public health. This was followed by a special 2-week program in county health departments developed in conjunction with the Georgia and Tennessee State Health Departments.

A special course for sanitarians was repeated for 4 weeks, July–August, at the Communicable Disease Center, seven sanitarians participating. Nine sanitarians attended a special nondegree 4-month basic course in environmental sanitation at the University of Indiana Medical Center. The University of Oklahoma's summer field institute, a 2-month practical training program for public health workers, was attended by 5 AID participants.

In June, the Water and Sewerage Technical School, Neosho, Mo., repeated a special 4-week course in the operation and maintenance of water and sewerage systems. Ten sanitary engineers and sanitarians participated. In addition, seven participants are currently enrolled in a 36-week course designed to make competent water and sewerage plant operators of persons having little or no knowledge or experience in these fields.

Other special seminar-type courses attended by foreign sanitary engineers and sanitarians include the international program in sanitary engineering design, University of North Carolina; engineering management of water supply systems, the University of Akron; and the ground water development course, University of Minnesota.

Again in 1965, a special effort was made by the staff of this office to acquaint additional resource people in U.S. academic and other training centers with the U.S. foreign aid program and the special needs of AID participants for training opportunities and experience. Visits

by the staff to a number of unutilized (or underutilized) institutions were made primarily for orientation and exploratory purposes. This is a continuing need and one which has a high priority in the planning of staff time.

Number of new students and visitors and program months, by sponsor

	Number, 1965	Program months, 1965
AID—long-term programs, ¹ primary responsibility ²	205	1,891
AID—short-term programs, ¹ primary responsibility ²	71	123
AID—secondary responsibility ²	26	13
WHO—primary responsibility ²	40	101
WHO—secondary responsibility ²	79	56
United Nations fellows, primary responsibility ²	1	2
United Nations fellow, secondary responsibility ²	3	1
Foreign leader programs, State Department.....	49	60
Visitors.....	68	78
Programs, students, and visitors.....	542	2,325

¹ The terms "long term" and "short term" refer to whether the foreign students' or visitors' programs in the United States were over 6 months or under 6 months, respectively.

² The terms "primary responsibility" and "secondary responsibility" refer to whether the U.S. program was developed and supervised entirely by the Public Health Service or whether the Service merely assisted or supplemented the primary responsibility of some other agency.

PHS PERSONNEL SERVING OVERSEAS¹

I. PHS personnel assigned overseas by the National Institutes of Health :

Commissioned officers..... 17
Civil service..... 41

Personnel are serving in the following countries :

Brazil	Israel
England	Italy
France	Japan
Germany	Malaya
Ghana	Pakistan
Holland	Sweden
India	Switzerland

II. PHS personnel assigned overseas by foreign quarantine :

Commissioned officers..... 9
Civil service..... 1

Personnel are serving in the following countries :

England	Hong Kong
France	Italy
Germany	

III. PHS personnel assigned overseas by Bureau of State Services :

Environmental Health

Commissioned officers..... 7
Civil service..... 6

Personnel are serving in the following countries :

Brazil	Somalia
Bolivia	

Community Health

Commissioned officers..... 6
Civil service..... 0

Personnel are serving in the following countries :

England	Israel
India	Pakistan

¹ This table does not include staff assigned overseas with other agencies. See sec. VIII, "PHS Personnel," p. 267.

Research project grants awarded by the Public Health Service to foreign institutions and international organizations, by awarding agency and fiscal year

[Dollar amounts in thousands]¹

Fiscal year	Total		National Institutes of Health		Bureau of State Services					
					Total		Community Health		Environmental Health	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
1947	5	\$130	5	\$130						
1948	11	253	11	253						
1949	16	130	16	130						
1950	20	219	20	219						
1951	28	210	28	210						
1952	22	257	22	257						
1953	24	245	24	245						
1954	15	145	15	145						
1955	14	111	14	111						
1956	18	190	18	190						
1957	61	824	61	824						
1958	92	1,307	92	1,307						
1959	170	2,997	170	2,997						
1960	307	5,249	307	5,249						
1961	563	8,999	563	8,999						
1962	822	13,803	811	13,410	11	\$393			11	\$393
1963	1,001	15,477	981	14,956	20	521	1	\$21	19	500
1964	966	14,651	932	13,759	34	791	8	131	26	660
1965	833	12,170	801	11,467	32	703	7	72	25	631

¹ Totals may not add due to rounding.

Research project grants awarded by the National Institutes of Health to foreign institutions and international organizations compared to total research project grants, by institutes, fiscal years 1964 and 1965

[Dollar amounts in thousands]¹

Institute	Fiscal year 1964			Fiscal year 1965		
	Total research project awards ²	Foreign awards		Total research project awards ²	Foreign awards	
		Amount	Percent		Amount	Percent
Total.....	\$402,086	\$13,759	3.4	\$426,788	\$11,467	2.7
National Institute of Allergy and Infectious Diseases.....	33,939	2,171	6.4	34,996	1,587	4.5
National Institute of Arthritis and Metabolic Diseases.....	67,070	2,330	3.5	70,539	2,272	3.2
National Cancer Institute.....	50,332	1,577	3.1	51,158	1,217	2.4
National Institute of Child Health and Human Development.....	21,674	559	2.6	27,379	674	2.5
National Institute of Dental Research.....	8,122	310	3.8	8,080	229	2.8
National Institute of General Medical Sciences.....	48,342	1,787	3.7	51,870	1,408	2.7
National Heart Institute.....	74,526	2,435	3.3	76,869	1,762	2.3
National Institute of Mental Health.....	51,057	934	1.8	55,888	749	1.3
National Institute of Neurological Diseases and Blindness.....	46,805	1,458	3.1	49,753	1,313	2.6
Former international postdoctoral fellows.....	198	198		256	256	

¹ Totals may not add due to rounding.

² Excludes funds for general research support, clinical research center, and other special program grants for which foreign institutions and international organizations are not eligible.

Research project grants awarded by the Public Health Service to foreign institutions and international organizations, by country, fiscal years 1961 through 1965

[Dollar amounts in thousands] 1

Area or country	Fiscal year 1961 2		Fiscal year 1962		Fiscal year 1963		Fiscal year 1964		Fiscal year 1965	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
PHS total.....	563	\$8,999	822	\$13,803	1,001	\$15,477	966	\$14,551	833	\$12,170
Canada.....	79	1,124	108	1,864	121	2,079	103	1,996	72	1,431
Latin America, total.....	52	736	83	1,299	116	1,853	127	1,964	124	1,894
Argentina.....	8	55	16	202	21	356	20	308	23	295
Brazil.....	9	103	13	123	25	292	30	300	31	294
Chile.....	8	65	10	105	12	97	13	167	10	158
Colombia.....	2	9	4	33	3	87	5	99	5	82
Costa Rica.....	1	10	1	7	1	11	2	23	2	24
Ecuador.....					1	15	1	13		
El Salvador.....	1	32	1	15	2	39	3	45	2	25
Guatemala.....	1	7	1	8						
Jamaica.....	1	11			3	52	4	37	2	26
Mexico.....	10	168	15	206	23	308	22	278	21	269
Panama.....			1	26	1	22	1	20		
Peru.....	7	231	12	360	13	363	16	412	15	424
Uruguay.....	4	46	6	107	7	116	6	126	5	139
Venezuela.....			3	107	4	96	4	136	7	160
Europe, total.....	246	3,537	362	5,453	422	5,906	407	5,459	337	4,201
Austria.....	4	30	8	50	12	86	11	56	8	42
Belgium.....	12	114	16	213	21	197	16	144	13	127
Denmark.....	17	135	21	190	25	286	26	253	20	139
Finland.....	14	135	18	175	16	140	18	226	14	191
France.....	25	383	44	873	39	524	44	638	31	432
Germany, Federal Republic of.....	7	54	11	83	16	128	11	72	9	60
Greece.....	2	6	2	15	3	41	6	56	8	101
Iceland.....	1	11	2	36	2	36	2	20	2	42

*Research project grants awarded by the Public Health Service to foreign institutions and international organizations, by country,
fiscal years 1961 through 1965—Continued*

[Dollar amounts in thousands] ¹

Area or country	Fiscal year 1961 ²		Fiscal year 1962		Fiscal year 1963		Fiscal year 1964		Fiscal year 1965	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount	Number	Amount
Ireland.....	6	\$46	7	\$64	5	\$35	4	\$33	3	\$31
Italy.....	24	326	30	323	39	496	42	491	32	354
Netherlands.....	8	102	13	143	18	191	16	135	16	131
Norway.....	6	71	10	115	15	175	16	195	17	148
Portugal.....	3	50	1	9	2	26	2	22	2	22
Spain.....	2	19	2	14	3	30	3	29	6	38
Sweden.....	50	1,011	70	1,369	78	1,535	75	1,273	55	947
Switzerland.....	6	47	14	173	15	175	13	175	12	144
Turkey.....	1	14	1	9						
United Kingdom.....	57	980	90	1,559	110	1,762	98	1,606	82	1,147
Yugoslavia.....	1	5	2	32	3	42	4	36	7	55
Africa, total.....	19	428	21	465	19	348	20	361	18	321
Congo, Republic of the.....	2	42	1	10						
Kenya.....			1	17	1	12	1	12	1	15
Liberia.....	4	141	3	110	2	55	2	46	2	38
Nigeria.....			2	92	2	37	2	37	1	32
Senegal.....	1	29								
South Africa, Republic of.....	11	193	12	194	13	237	15	266	14	236
Tanzania.....	1	24	2	42						
Uganda.....					1	6				
Middle East, total.....	61	823	77	1,167	110	1,429	91	1,295	72	1,082

Israel.....	49	688	60	951	95	1,202	75	1,062	58	897
Jordan.....			1	54	1	28	1	28		
Lebanon.....	12	136	16	181	14	200	15	206	14	185
South Asia and Far East, total.....	73	952	128	1,516	176	2,044	191	2,002	188	1,904
Australia.....	11	210	27	501	36	537	39	654	37	619
Hong Kong.....	2	25	1	9	1	16	1	18		
India.....	5	37	6	55	4	33	6	47	4	37
Iran.....							1	3	2	37
Japan.....	44	604	84	885	111	1,209	116	1,071	119	1,042
Korea.....	2	14	2	15	2	14	3	25	2	21
Malaysia.....			1	11	2	37	3	24	2	18
New Zealand.....	3	18	2	12	8	91	10	83	9	69
Pakistan.....	1	24			1	10				
Philippines.....	2	3	2	13	4	24	5	28	3	12
Taiwan.....					2	36	2	19	6	37
Thailand.....	3	16	3	15	5	37	5	30	4	13
International organizations, total.....	33	1,399	43	2,039	37	1,819	27	1,474	22	1,336
Institution of Nutrition of Central America and Panama.....	5	242	12	378	9	418	7	337	8	361
Pan American Health Organization.....	9	380	8	365	9	514	5	360	5	223
World Health Organization.....	2	283	5	608	4	614	3	549	4	614
Other.....	17	494	18	692	15	272	12	228	5	138

¹ Totals may not add due to rounding. ² There were no Bureau of State Services Research project grants for fiscal year 1961.

SECTION X

LIST OF SELECTED PUBLICATIONS

The 134 publications shown in the list that follows are representative of the many publications recently issued by the Public Health Service. They were selected to be representative, not only of the Service, but also of each bureau or other component. In addition, they were selected for their content; together these publications will constitute a small library of materials of considerable potential use by the House Committee on Interstate and Foreign Commerce in its forthcoming study of the Public Health Service. Single copies may be obtained from the Public Inquiries Branch, Office of Information and Publications.

I. OFFICE OF THE SURGEON GENERAL

<i>PHS publication No.</i>	<i>Title</i>
----	Final Report of the Study Group on Mission and Organization of the Public Health Service.
----	Public Health Service: General Organization, Functions, Procedures, and Forms—Reprint from Federal Register of June 10, 1958.
----	PHS Annual Report, 1961.
----	Today and Tomorrow in Public Health, Presentation by Dr. Luther L. Terry.
----	Report of the Advisory Committee on Public Health Service Personnel Systems, March 1962 (Folsom Committee Report).
----	Publications Issued by the PHS During 1961.
----	Interim List of Publications Issued by the PHS, January-June 1962.
----	A List of Health Information Leaflets and Pamphlets of the PHS, April 1962.
262	PHS Public Advisory Groups: Authority, Structure, Functions.
262A	Roster of Members of PHS Public Advisory Groups.

II. BUREAU OF STATE SERVICES—COMMUNITY HEALTH

<i>PHS publication No.</i>	<i>Title</i>
----	CDC Training Program Bulletin, July 1, 1965 through June 30, 1966.
255	Management of Chancroid, Granuloma Inguinale, Lymphogranuloma Venereum in General Practice.
341	VD Fact Sheet—1964. Basic Statistics on the Venereal Disease Problem in the United States.
411	Serologic Tests for Syphilis. 1964 Manual.
476	Clinical Handbook on Economic Poisons: Emergency Information for Treating Poisoning.
487	Film Reference Guide for Medicine and Allied Sciences, 1965.
638	Reported Tuberculosis Data. 1965 Edition.
776	Public Health Service Film Catalog, 1964-65.
801	Tuberculosis Beds in Hospitals and Sanatoria: An Index of Beds Available, June 30, 1963.

II. BUREAU OF STATE SERVICES—COMMUNITY HEALTH—Continued

<i>PHS publication No.</i>	<i>Title</i>
859	Notes of Modern Management of VD.
918	The Eradication of Syphilis: A Task Force Report to the Surgeon General, Public Health Service, on Syphilis Control in the United States.
997	Proceedings of World Forum on Syphilis and Other Treponematoses.
1017	Laboratory Techniques in the Control of Anticoagulant Therapy.
1119	The Future of Tuberculosis Control.
1133	Field Procedures for Bacteriological Studies of Diarrheal Diseases.
1186	Food-Borne Disease Investigation: Analysis of Field Data. An Instructive Communication.
1190	Venereal Disease Education. A Report of the Special Subcommittee of the Public Advisory Committee on Venereal Disease Control.
1230	Attribute Sampling Methods for Local Health Jurisdictions With Special Reference to Immunization Surveys.
1280	A Child-Centered Program to Prevent Tuberculosis.
930-G-3	Publications of the Division of Hospital and Medical Facilities.
930-D-20	Guidelines for Hospital Modernization.
930-F-3	Hill-Burton Program: Progress Report, 1961-65.
1181-B-1	Planning of Facilities for the Mentally Retarded.
1180-A-1b	Medical Education Facilities: Planning Considerations and Architectural Guide.
1180-F-1b	Nursing Education Facilities: Programing Considerations and Architectural Guide.

III. BUREAU OF STATE SERVICES—ENVIRONMENTAL HEALTH

<i>PHS publication No.</i>	<i>Title</i>
----	Restoring the Quality of Our Environment (Tukey Committee Report).
908	Report of the Committee on Environmental Health Problems (Gross Committee).
----	One Hundred Problems in Environmental Health.
1022	Proceedings of the National Conference on Air Pollution, 1962.
979	Air Pollution Publications: A Selected Bibliography, 1955-1963.
1257	Air Pollution and Respiratory Disease.
----	Reference List of Publications, Section 1, Air Pollution.
----	Air Pollution Films.
----	Bibliography of Occupational Health, 1961-1963.
----	Occupational Health in Transition.
961	Catalog of Occupational Health Films & Filmstrips.
1010	Periodic Health Examinations, Abstracts from the Literature.
1040	Preventing Dermatitis, If You Work With Epoxy Resins.
1041	Occupational Health Services for Employees, A Guide to State and Local Governments.
1044	Man, Medicine, and Work, Historic Events in Occupational Medicine.
1076	Silicosis in the Metal Mining Industry, A Reevaluation 1958-1961.
1084	Heat and Cold Effects and their Control.
1097	Occupational Diseases, A Guide to their Recognition.
1118	A Look at the Division of Occupational Health.
1279	Health Education of Workers.
1296	Nursing Part Time in Industry.
1314	The Health of Women Who Work.
1330	Trends in Employee Health Service.
----	Radiological Health Data and Reports (monthly).
1243	Highlights of Public Health Service Activities in Radiological Health.

III. BUREAU OF STATE SERVICES—ENVIRONMENT HEALTH—Con.

<i>PHS publication No.</i>	<i>Title</i>
999-RH-16	Medical Uses of Radium and Radium Substitutes.
-----	Public Health Radiation Surveillance.
-----	Federal Radiation Council Reports, 1 through 7.
-----	Current Concepts in Radiation Protection Parts I and II, by Luther L. Terry and Donald R. Chadwick.
229	Grade A Pasteurized Milk Ordinance—1965 Recommendations of the Public Health Service.
1046	Procedures Governing the Cooperative State-Public Health Service Program for Certification of Interstate Milk Shippers. Safe Milk.
1011	Utilization of the Milk Ordinance and Code Recommended by the U.S. Public Health Service.
1018	A Sanitary Standard for Manufactured Ice.
1183	Cold Facts About Home Food Protection.
1247	You Can Prevent Foodborne Illness.
1105	Cooperative Program for the Certification of Interstate Shellfish Shippers. Part I—Sanitation of Shellfish Growing Areas.
33	Cooperative Program for the Certification of Interstate Shellfish Shippers. Part II—Sanitation of Harvesting and Processing of Shellfish.
943	Shellfish Industry Equipment Construction Guide.
387	Safe Drinking Water in Emergencies.
957	Water Supply and Plumbing Cross Connections.
1195	Environmental Health Practices in Recreational Areas.
526	Manual of Septic Tank Practice.
73	Septic Tank Care.
823	Environmental Health Planning Guide.
183	Safe and Sanitary Home Refuse Storage.
24	Manual of Individual Water Supply Systems.
956	Public Health Service Drinking Water Standards.
984	Food Service Sanitation Manual.
-----	Proceedings: Shellfish Sanitation Workshop.
-----	The Shellfish Sanitation Program of the Public Health Service.
-----	Quiet Guardians of the People's Health.
281	From Hand to Mouth.
91	Refuse Collection and Disposal—An Annotated Bibliography (with supplements).
1081	Pesticides.
-----	Pesticides in Soil and Water: An Annotated Bibliography.
1266	Systemic Antidotes for Selected Toxic Materials.
-----	A Survey of Pesticide Problems (American Journal of Public Health reprint).

IV. BUREAU OF MEDICAL SERVICES

<i>PHS publication No.</i>	<i>Title</i>
384	Immunization Information for International Travel.
1074	Career Opportunities in the Public Health Service Bureau of Medical Services.
1026	The Indian Health Program of the U.S. Public Health Service.
-----	Indian Health Highlights, 1964.
1376	Medical Internships in U.S. Public Health Service Hospitals.
-----	Medical Record Library Science Training by the U.S. Public Health Service.

V. NATIONAL INSTITUTES OF HEALTH

<i>PHS publication No.</i>	<i>Title</i>
1067	A Guide to Public Health Service Grants and Awards.
1233	Public Health Service Grants and Awards Fiscal Year 1964 Funds Part I, Research Grants part I.
1233	Public Health Service Grants and Awards Fiscal Year 1964 Funds Part II, Training Grants, Traineeships, Fellowships and Research Career Program Awards, part II.

V. NATIONAL INSTITUTES OF HEALTH—Continued

<i>PHS publication No.</i>	<i>Title</i>
1233	Public Health Service Grants and Awards Fiscal Year 1964 Funds Part III, Construction of Health Research Facilities and Hospital and Medical Facilities, part III.
1233	Public Health Service Grants and Awards Fiscal Year 1964 Funds Part IV, Health Services, Formula and Project Grants, part IV.
1233	Public Health Service Grants and Awards Fiscal Year 1964 Funds Part V, Summary Tables for the Extramural Programs, part V.
1301	Public Health Service Grants for Research Projects Policy.
1302	Public Health Service Grants for Training Projects Policy Statement.
BOOK	
1290	Scientific Directory 1965 and Annual Bibliography 1964, 60 cents.
BROCHURES	
81	The National Institutes of Health (revised 1966).
BOOKLETS	
----	Basic Data Relating to the National Institutes of Health, 1966.
----	Basic Reference Tables on Graduate Enrollment and Ph. D. Output in Selected Science Fields at 100 Leading Institutions, 1959-60 to 1963-64.
----	Resources Analysis Memo No. 5, Trends in Graduate Enrollment and Ph. D. Output in Selected Science Fields at 80 Leading Schools 1960-61 and 1961-62.
----	Resources Analysis Memo No. 6, Trends in Graduate Enrollment and Ph. D. Output in Scientific Fields at 100 Leading Institutions 1961-62 and 1962-63.
----	Resources Analysis Memo No. 7, National Time Series on Support of Medical and Health-Related Research—The Years Since 1947.
969	Resources for Medical Research, Report No. 1, Federal Expenditures for Medical and Health-Related Research, 1960-63, 20 cents.
983	Resources for Medical Research, Report No. 2, Foundation Expenditures for Medical and Health-Related Research and Education 1960, 20 cents.
1001	Resources for Medical Research, Report No. 3, Manpower for Medical Research Requirements and Resources 1965-70, 55 cents.
1068	Resources for Medical Research, Report No. 4, Federal Support for Medical and Health-Related Research 1947-64, 40 cents.
1261	Resources for Medical Research, Report No. 5, Federal Support For Medical and Health-Related Research, 1962-65, 25 cents.
----	Resources for Medical Research, Report No. 6, Special Report on Five-year Trend in Graduate Enrollment and Ph. D. Output in Scientific Fields at 100 Leading Institutions 1959-60 to 1963-64, \$1.
----	Roster of Legislative Committees and Executive Offices Concerned with Federal Medical Research, April 1965.
LEAFLETS	
----	The National Institutes of Health—A Statement of Its Mission and Function.
----	We Have Been Asked—"Are Laboratory Animals Well Cared For at the National Institutes of Health?"
500	Patient Admission Procedures.

VI. NATIONAL LIBRARY OF MEDICINE

<i>PHS publication No.</i>	<i>Title</i>
-----	Index Medicus.
-----	Cumulated Index Medicus.
-----	Medical Subject Headings.
-----	List of Journals Indexed in Index Medicus.
-----	Bibliograph of Medical Reviews.
-----	Bibliograph of Medical Translations.
-----	National Library of Medicine Catalog.
1108	National Library of Medicine Classification.
910	Biomedical Serials, 1950-60.
507	National Library of Medicine Services.
1277	Facts About the National Library of Medicine.
-----	Organization and Functions of the National Library of Medicine.
-----	The Medlars Story at the National Library of Medicine.
-----	Dentistry and the National Library of Medicine.

VII. NATIONAL CENTER FOR HEALTH STATISTICS

<i>PHS publication No.</i>	<i>Title</i>
1000-1, 1	Origin, Program, and Operation of the U.S. National Health Survey.
1000-2, 2	Measurement of Personal Health Expenditures.
1000-2, 5	An Index of Health: Mathematical Models.
1000-3, 1	The Change in Mortality Trend in the United States.
1000-4, 1	Fertility Measurement.
1000-10, 11	Health Insurance Coverage, July 1962-June 1963.
1000-10, 14	Illness, Disability, and Hospitalization Among Veterans, July 1963-June 1964.
1000-10, 25	Current Estimates from the Health Interview Survey, July 1964-June 1965. (Similar publications annually.)
1000-11, 6	Heart Disease in Adults, 1960-1962.
1000-11, 12	Periodontal Disease in Adults, 1960-1962.
1000-12, 2	Characteristics of Residents in Institutions for the Aged and Chronically Ill, April-June 1963.
1000-22, 1	Hospitalization in the Last Year of Life, 1961.
-----	Vital Statistics of the United States. 4 volumes annually.
-----	Monthly Vital Statistic Report. (Provisional statistics.)

VIII. DIVISION OF PUBLIC HEALTH METHODS

<i>PHS publication No.</i>	<i>Title</i>
-----	The Advancement of Medical Research Through the Department of Health, Education, and Welfare. (Bayne-Jones Committee report.)
-----	Physicians for a Growing America (Bane Committee report).
-----	Federal Support of Medical Research (Jones Committee report).
263-1	Health Manpower Source Book 1. Physicians.
263-2	Health Manpower Source Book, 2. Nursing Personnel.
263-7	Health Manpower Source Book, 7. Dentists.
263-9	Health Manpower Source Book, 9. Physicians, Dentists, and Professional Nurses.
263-10	Health Manpower Source Book, 10. Physicians' Age, Type of Practice, and Location.
263-12	Health Manpower Source Book 12. Medical and Psychiatric Social Workers.
263-13	Health Manpower Source Book, 13. Hospital House Staffs.
263-14	Health Manpower Source Book, 14. Medical Specialists.
-----	Handbook on Programs of the U.S. Department of Health, Education, and Welfare—PHS Portion.
-----	Chart Book on Health Status and Health Manpower.
511	Health Manpower Chart Book.

VIII. DIVISION OF PUBLIC HEALTH METHODS—Continued

<i>PHS publication No.</i>	<i>Title</i>
969	Resources for Medical Research—Report No. 1.
874	Medical School Facilities—Planning Considerations.
875	Medical School Facilities—Planning Considerations and Architectural Guide.
940	Dental School Planning.
----	Federal Support of Schools of Public Health, Public Health Reports, Volume 77.

IX. DIVISION OF HEALTH MOBILIZATION

<i>PHS publication No.</i>	<i>Title</i>
1071-A-1	Emergency Health Preparedness Publications Catalog (reprint/revision due January 1966).
1071-A-2	Community Emergency Health Preparedness (1964).
1071-A-3	Emergency Health Service Preparedness Check List (1965).
1071-A-4	Health Materiel and Facilities Planning Guide for Emergency Management (1965).
1071-C-1	Therapeutic Guide for Pharmaceuticals in the Packaged Disaster Hospital (1965).
1071-D-1	Austere Medical Care for Disaster—A reference manual for allied health workers and selected trained laymen (1964).
1071-D-1A	Guide for Suggested Course in Austere Medical Care for Disaster (1965).
1071-D-2	List of Available Training Literature (1964—Discontinued—to be revised).
1071-D-3	Disaster Nursing Preparation in a Hospital Nursing Service (1965).
1071-D-4	Disaster Nursing Preparation in a Practical Nursing Program (1965).
1071-D-5	Disaster Nursing Preparation in Basic Professional Programs (1965).
1071-F-1	Establishing the Packaged Disaster Hospital (reprinted/revised December 1964).
1071-F-2	X-ray Section of the Civil Defense Emergency Hospital (1964).
1071-F-3	Central Supply Section of the Civil Defense Emergency Hospital (1964).
1071-F-4	Laboratory Section of the Civil Defense Emergency Hospital (1964).
1071-F-5	Operation of Generators in the Civil Defense Emergency Hospital (1964).
1071-F-6	Water Supply Management in the Packaged Disaster Hospital (1965).
1071-F-7	Storage Structures Erected for Pre-positioned Civil Defense Emergency Hospitals (reprinted 1964).
1071-F-8	Storage Code, Model 62, Civil Defense Emergency Hospital (obsolete, superseded by F-11).
1071-F-9	Storage Locations Pre-positioned and Training Civil Defense Emergency Hospitals (February 1964, obsolete).
1071-F-10	Custodian's Handbook (revised 1965).
1071-F-11	Series 62000 Packaged Disaster Hospital—Component Listing and Storage Data (reprinted/revised June 1965).
1071-F-11.a	Supply Addition No. 2 (1965).
1071-F-11.b	Laboratory Service Unit (1965).
1071-F-11.c	Supply Addition No. 1 (1965).
1071-F-11.d	Series 62000 Packaged Disaster Hospital Packed for Tropical Storage (1965).
1071-F-12	Nurses' Ward Management Guide for the Packaged Disaster Hospital (1965).
1071-F-15	Illustrated Catalog and Guide for Distribution of Packaged Disaster Hospital Materials (1965).

IX. DIVISION OF HEALTH MOBILIZATION—Continued

<i>PHS publication No.</i>	<i>Title</i>
1071-G-1	Hospital Planning for Nuclear Disaster (1965).
1071-H-1	Inspection and Rehabilitation Handbook for Packaged Disaster Hospital Equipment (1965).
1071-H-2	Emergency Operations Planning Guide for PHS/GSA Emergency Medical Supply Depot (1965).
1071-I-1	Community Emergency Health Manpower Planning (1964).
1071-I-2	The Role of the Dentist in National Disaster (1964).
1071-I-3	The Role of the Veterinarian in National Disaster (1964).
1071-I-4	The Role of the Pharmacist in National Disaster (1964).
1071-I-5	The Role of the Nurse in National Disaster (1965).
1071-J-1	Manual for Protection of Public Water Supplies from Chemical Agents (1965).

BROCHURES

PHSP 1042	Medical Self-Help Training—For you and your community.
GPO-O-735-166	If Disaster Strikes—and there is no doctor.
GPO-O-735-165	Make Room for Danny Thomas (on MSH promotional film).
PHSP 1311	Packaged Disaster Hospitals.

X. OFFICE OF PERSONNEL

<i>PHS publication No.</i>	<i>Title</i>
----	The Commissioned Corps of the Public Health Service.
----	Commissioned Office Residency Deferment Program in the Public Health Service.
----	Commissioned Officer Student Training and Extern Program in the Public Health Service.
----	Opportunities for Social Workers in the Public Health Service.
394	The Physician in the U.S. Public Health Service.
361	The Nurse in the U.S. Public Health Service.
----	Careers for College Graduates in the U.S. Public Health Service.
----	Commissioned Officers Handbook.
----	Careers in the Public Health Service.
----	PHS Career Planning Guide.
----	Brief Summary of the Public Health Service.
----	Physicians in the Peace Corps.

APPENDIX I

FEDERAL WATER POLLUTION CONTROL ADMINISTRATION¹

Program objectives.—To enhance the quality and value of the Nation's water resources and to establish a national policy for the prevention, control, and abatement of water pollution.

Extent of problem.—The increasing demand for water quality control is a consequence of our population and industrial growth, new and changing technology, new agricultural practices, and new contributions to a continually rising standard of living. The problems of pollution have developed in scope, number, and complexity much faster than our efforts to deal with them.

Present program scope.—Responsibilities include development of comprehensive programs for all drainage basins of the country; enforcement of Federal laws; basic data collection, evaluation, and dissemination; direct research; administration of fellowships, grants, and contracts for research or training projects and for demonstrations; administration of construction grants to municipalities and program grants to State and interstate agencies; supervision of the establishment by the States of water quality standards for interstate streams or the setting of these standards if States do not do so by June 30, 1967; provision of information and technical assistance to other Federal agencies, State and interstate agencies, municipalities, and industries; training.

Recent changes.—Public Law 89-234, approved October 2, 1965, creates the Federal Water Pollution Control Administration and an additional Assistant Secretary of Health, Education, and Welfare to administer the provisions of the Federal Water Pollution Control Act under the Secretary of Health, Education, and Welfare. The new legislation also provides for increased grants to municipalities for waste treatment works construction; authorizes a new 4-year program of grants to States, municipalities, intermunicipal and interstate agencies for research and development of new or improved methods of controlling the discharge of untreated or inadequately treated sewage from sewers which carry storm water or both storm water and sewage or other wastes; provides for the establishment of water quality standards for interstate waters; and directs the Secretary to call an enforcement conference whenever he finds substantial economic injury resulting from the inability to market shellfish in interstate commerce because of pollution.

Legal basis.—Federal Water Pollution Control Act, as amended (33 U.S.C. 466-466k).

¹ On Jan. 1, 1966, the activities of this Administration were transferred from the Public Health Service to the Office of the Secretary of Health, Education, and Welfare.

On Feb. 23, 1966, the President proposed the transfer of this Administration to the Department of the Interior.

Limits in authorization.—None, except for (1) the program of grants for waste treatment works construction which expires in 1967 and carries appropriation limitations of \$150 million annually for fiscal years 1966 and 1967; (2) the demonstration grants program to investigate problems of combined storm and sanitary sewers, which expires in 1969 and carries an appropriation limitation of \$20 million per fiscal year; and (3) the program of grants to States which expires in 1968 and carries an annual appropriation ceiling of \$5 million.

Advisory groups.—Water Pollution Control Advisory Board.

<i>Budget and employment</i>	
Appropriations.....	\$180,601,000 ¹
Direct operations.....	25,994,000
Grants.....	154,607,000
<hr/>	
Paid employment as of Nov. 20, 1965.....	1,448
<hr/>	
In District of Columbia area.....	230
Outside District of Columbia area.....	1,218

¹ Includes \$121,000,000 for waste treatment works construction grants and \$20,000,000 for demonstration grants dealing with problems caused by combined storm and sanitary sewers.

WATER POLLUTION CONTROL PROGRAM GRANTS

Purpose

The current water pollution control program grants are authorized by section 7 of the Federal Water Pollution Control Act (Public Law 600, 84th Congress), approved July 9, 1956, as amended by the Federal Water Pollution Control Act Amendments of 1961 (Public Law 87-88), approved July 20, 1961, and further amended by the Water Quality Act of 1965 (Public Law 89-234), approved October 2, 1965. The grants are for the purpose of assisting States and interstate agencies in meeting the costs of establishing and maintaining adequate measures for the prevention and control of water pollution. Prior to this act, grants to States and to interstate agencies were available from 1950 through 1952 for studies and investigation of water pollution caused by industrial wastes. The current legislation permits development of a much broader program.

In addition, sections 5 and 6 of the Federal Water Pollution Control Act, as amended, authorize grants-in-aid for research or training projects and for demonstration purposes, as well as for research fellowships. The purpose of such grants is to encourage, cooperate with, and support appropriate public authorities, agencies, institutions, and individuals in the conduct of studies, research, and investigations relating to the causes, control, and prevention of water pollution.

Section 6 of the Federal Water Pollution Control Act, as amended by the Water Quality Act of 1965, authorizes a new 4-year program of grants to States, municipalities, intermunicipal and interstate agencies for research and development of new or improved methods of controlling the discharge of untreated or inadequately treated sewage for sewers carrying storm water or both storm water and sewage or other wastes. It also authorizes research and demonstrations for these purposes by contract with public or private agencies and institutions and individuals. These contracts are not to exceed 25 percent of funds appropriated for these purposes in any fiscal year. The act authorizes

annual appropriations of \$20 million for fiscal years 1966 through 1969. Grants are limited to 50 percent of the project cost, and no grant may exceed 5 percent of the total amount authorized in any one fiscal year.

Financing

Section 7(a) of the act authorizes an annual appropriation of \$5 million through the fiscal year ending June 30, 1968, for grants to States and to interstate agencies. The previous authorization was for \$3 million annually through the fiscal year ending June 30, 1961. The following table shows the current authorization and appropriation for the formula grant program. Also shown is information concerning the prior grants for industrial waste studies. The amount of the appropriation to be allocated to interstate agencies and special projects was determined administratively in fiscal years 1950-52. The current appropriation act specifies separately the amounts for States and for interstate agencies. In addition, for 1966 grants, the following amounts were made available: \$5,232,000 for research grants, \$2,500,000 for training grants, \$21,165,000 for demonstration grants (including \$20 million for the demonstration grant program involving combined storm and sanitary sewers) and \$710,000 for fellowships.

Industrial waste studies

Year	Authori- zation	Appropriation		Expenditures		
		State (formula)	Interstate agencies and special projects	Federal		State and local
				Grants to	Grants to interstate agencies and for special projects	
1950-----	\$1,000,000	\$850,000	\$150,000	\$845,519	\$149,908	\$2,286,941
1951-----	1,000,000	825,000	175,000	815,313	140,448	2,993,322
1952-----	1,000,000	782,500	117,500	768,934	157,155	4,016,530
1953-----	1,000,000	(¹)	(²)	(²)	22,723	3,912,404

¹ Exceeds the amount appropriated because funds allotted in previous years were available until expended. Excludes \$2,500 refund shown in 1953.

² None.

Water pollution control program

Year	Authori- zation	Appropriation		Expenditures		
		State (formula)	Interstate agencies and special projects	Federal		State and local
				Grants to	Grants to interstate agencies and for special projects	
1957-----	\$3,000,000	\$1,800,000	\$200,000	\$1,683,331	\$181,132	\$4,004,501
1958-----	3,000,000	2,700,000	300,000	2,527,902	248,613	6,069,059
1959-----	3,000,000	2,700,000	300,000	2,580,991	256,376	6,514,980
1960-----	3,000,000	2,700,000	300,000	2,658,572	242,255	7,043,472
1961-----	3,000,000	2,700,000	300,000	2,643,016	248,844	8,233,736
1962-----	5,000,000	4,500,000	300,000	4,340,473	252,447	11,430,340
1963-----	5,000,000	4,700,000	300,000	4,470,817	226,985	15,129,188
1964-----	5,000,000	4,700,000	300,000	4,555,996	243,180	15,503,576
1965-----	5,000,000	4,700,000	300,000	(¹)	(¹)	(¹)
1966-----	5,000,000	4,700,000	300,000	(¹)	(¹)	(¹)

¹ Not available.

Method of distribution

Under the current legislation the water pollution control program funds which are appropriated for the States are allotted by statutory provision (sec. 5(c)) on the basis of the population, the extent of the water pollution problem, and financial need. The act does not specify the basic factors for allotting funds to interstate agencies. By regulation, these funds are allotted generally on the same basis as State allotments, utilizing the population, financial need, and other data applicable to those States which comprise the interstate agency. By regulation, for the State allotment a basic grant of \$12,000 is made, and of the balance, 66 $\frac{2}{3}$ percent is allocated on the basis of population weighted by the reciprocal of per capita income and 33 $\frac{1}{3}$ percent on the basis of extent of the problem as measured by density of population and number of industrial establishments discharging industrial wastes. The same factors and percentages apply to interstate agencies, except that there is no basic grant in this allotment.

State allotments are determined as follows:

A. Each State is allotted a basic grant of \$12,000.

B. Two-thirds of the balance of the appropriation for State grants is allocated on basis of population weighted by index of financial need:

1. One thousand divided by each State's 3-year average per capita income equals reciprocal weighting value;

2. Each State's population times reciprocal weighting value equals weighted population;

3. Two-thirds of the balance of the appropriation divided by sum of weighted population of all States equals per capita allotment;

4. Per capita allotment times each State's weighted population equals individual State's allotment.

C. One-third of the balance of the appropriation is allocated on the basis of the extent of the water pollution problem as follows:

1. One-sixth is allotted on the basis of population density:

(a) Fourteen most densely populated States are assigned equal population density corresponding to the lower limit in the upper quartile group.

(b) One-sixth of the appropriation divided by the sum of the population density of all States equals the allotment per unit.

(c) Allotment per unit times each State's density equals State's allotment on this basis.

2. One-sixth is allotted on the basis of the number of industrial establishments discharging industrial wastes:

(a) One-sixth of the appropriation divided by the total number of individual establishments discharging industrial wastes equals the allotment per establishment.

(b) Allotment per establishment times the number of establishments in each State equals State's allotment on this basis.

A State's allotment is the sum of the amounts obtained by the computations shown under A, B, and C.

Interstate agencies' allotments are determined as follows:

A. Two-thirds of the appropriation for interstate agencies is allocated on the basis of the population of the States comprising such agencies weighted by index of financial need:

1. 1,000 divided by the sum of the 3-year average per capita income for the States comprising the interstate agencies equals reciprocal weighting value.

2. The sum of the population of the States comprising each interstate agency times reciprocal weighting value equals weighted population.

3. Two-thirds of appropriation divided by the sum of weighted population for all interstate agencies equals per capita allotment.

4. Per capita allotment multiplied by weighted population of the States comprising each interstate agency equals individual interstate agency allotment.

B. One-third of appropriation is allocated on the basis of the extent of the water pollution problem as follows:

1. One-sixth is allotted on the basis of population density.

(a) One-sixth of the appropriation divided by sum of the population density of the States comprising the interstate agencies equals the allotment per unit.

(b) Allotment per unit times each interstate agency population density equals the interstate agency allotment on this basis.

2. One-sixth is allotted on the basis of the number of industrial establishments discharging industrial wastes.

(a) One-sixth of the appropriation divided by sum of number of individual establishments discharging industrial wastes in the States comprising all interstate agencies equals allotment per establishment.

(b) Allotment per establishment multiplied by establishments in the States comprising each interstate agency equals allotment on this basis.

The allotment to each interstate agency is the sum of the amounts obtained by the computations under A and B.

In addition, under 4(a) grants are made to public or private agencies and institutions and to individuals for research or training projects, and for demonstrations by contract with public or private agencies and institutions and individuals. Research fellowships are established and maintained with stipends and allowances which include travel and subsistence expenses.

Matching requirements

The matching requirements are variable based on per capita income. The Federal share for any State equals 100 percent less the percentage which bears the same ratio to 50 percent as the per capita income of such State bears to the per capita income of the United States. The Federal share for Guam, Puerto Rico, and the Virgin Islands is 66 $\frac{2}{3}$ percent. The Federal share may not be more than 66 $\frac{2}{3}$ percent nor less than 33 $\frac{1}{3}$ percent.

There are no matching requirements, contained in section 4(a) covering research, investigations, training, and demonstration grants.

Source of data

Population: U.S. census annual estimates available as of January of the year preceding the fiscal year.

Per capita income: Department of Commerce, latest 3-year period available. A 3-year average is used to avoid fluctuation which might occur through the use of data for a single year.

Number of industrial establishments discharging industrial waste: Latest census of manufacturers, Department of Commerce.

Legal basis

Authority for the water pollution control program grants is included in section 7(a) of the Federal Water Pollution Control Act (33 U.S.C. 466d(a)). Section 7(c) cites the basic factors of population, financial need, and extent of the water pollution problems for allocating funds to States. Section 55.2 of the Public Health Service regulations describes the basis of allocation. Section 55.5 describes the Federal share. In addition, authority for research, training, demonstration, and research fellowships is contained in sections 5(a) and 6(a) of the Federal Water Pollution Control Act as amended.

Additional information can be obtained from the Commissioner, Federal Water Pollution Control, Washington, D.C.

WASTE TREATMENT WORKS CONSTRUCTION GRANTS

Purpose

The Federal Water Pollution Control Act, Public Law 660, 84th Congress, approved July 9, 1956, as amended by Public Law 87-88, and further amended by Public Law 89-234, authorizes grants to be made to any State, municipality, or inter-municipal or interstate agency, for the construction of waste treatment works, including intercepting and outfall sewers. The legislation was enacted to accelerate local programs of treatment works construction by providing an incentive to local communities to take action to clean up the waters of the country.

Financing

The act, which authorized the appropriation of \$50 million for each fiscal year for grants for construction of sewage treatment works, was amended in 1961 to authorize appropriations of \$80 million for fiscal year 1962, \$90 million for fiscal year 1963, and \$100 million for fiscal years 1964 through 1967. The act was further amended in 1965 to authorize additional appropriations of \$50 million for a total of \$150 million for fiscal years 1966 and 1967.

The act provides that no grant shall be made for any project from the first \$100 appropriated in an amount exceeding 30 percent of the estimated reasonable cost thereof, as determined by the Secretary of Health, Education, and Welfare, or in an amount exceeding \$1.2 million, whichever is the smaller. For projects serving more than one municipality, these limitations are applied to each municipality's share of the cost of the project, provided that the total of the amounts so determined do not exceed \$4.8 million.

If the States match the funds dollar for dollar, the Federal grant from the appropriations in excess of \$100 million can be a full 30 percent even if it exceeds the limits described above. An extra 10 percent may be added to the grant if the project has been certified as being part of a regional or metropolitan plan.

The following table shows the authorizations and appropriations in this grant program :

Year	Authorization	Appropriation	Grants made	Expenditures	
				Federal ¹	State and local
1967	\$50,000,000	\$50,000,000			
1968	50,000,000	² 45,957,000			
1969	50,000,000	² 46,316,000	\$229,265,505	\$223,232,577	\$1,082,504,964
1960	50,000,000	² 46,101,000			
1961	50,000,000	² 45,000,000			
1962	80,000,000	80,000,000	60,308,739	42,103,315	317,679,121
1963	90,000,000	90,000,000	³ 92,228,028	50,044,335	469,007,834
1964	100,000,000	⁴ 90,000,000	84,000,504	29,031,897	260,791,294
1965	100,000,000	⁴ 90,000,000	84,325,089	1,647,564	382,069,161
1966	150,000,000	121,000,000	(⁵)	(⁵)	(⁵)

¹ Expenditures are actual disbursements based on construction completed averaging 21 months after the grant offer.

² The sum of \$45,000,000 was appropriated, but the act specified that \$50,000,000 be allocated among the States. Fiscal years 1958, 1959, and 1960 included supplemental appropriations.

³ Includes funds reallocated from prior years.

⁴ The sum of \$90,000,000 was appropriated, but the act specified that \$100,000,000 be allocated among the States.

⁵ Incomplete.

Method of distribution

The act provides that funds appropriated for the construction of sewage treatment works up to \$100 million shall be allotted among the States as follows:

(1) Fifty percent of such sum in the ratio that the population of each State bears to the population of all the States, and (2) 50 percent of such sums in the ratio that the quotient obtained by dividing the per capita income of the United States by the per capita income of each State bears to the sum of such quotients for all States. The following computations are used in complying with these requirements:

A. Fifty percent of appropriation is allocated on basis of population:

1. Fifty percent of appropriation divided by the total population equals per capita allotment;

2. Per capita allotment times each State's population equals the State's allotment under this portion of the appropriation.

B. Fifty percent of appropriation is allocated on the basis of the ratio of the per capita income of the United States to the per capita income of each State:

1. The 3-year average per capita income of the United States divided by the 3-year average per capita income to State per capita income;

2. Fifty percent of appropriation divided by sum of the ratios of U.S. per capita income to State per capita income equals unit allotment;

3. Unit allotment times each State's ratio equals the State's allotment under this portion of the appropriation.

C. State's allotment is the sum of the amounts obtained under A2 and B3 above.

NOTE.—Under the act as amended by Public Law 87-88, sums allotted to a State which are not obligated within 6 months following fiscal year for which allotted, shall be reallocated to other States having approved projects for which grants have not been made because of lack of funds.

The act further provides that all sums in excess of \$100 million appropriated for this grant program after July 1, 1965, shall be allotted among the States on the basis of population. These funds may also be reallocated if unused by the States to which the funds were originally assigned.

Matching requirements

Before a grant for construction of a sewage treatment works project may be approved by the Secretary, the grantee must agree to pay all costs of the project over and above the amount of the Federal grant. Also, as described above, if a State matches the funds dollar for dollar, the Federal grant from the appropriations in excess of \$100 million can be a full 30 percent even if it exceeds the dollar limits of \$1.2 million per project for one municipality and \$4.8 million for a project serving more than one municipality.

Source of data

The act provides for use of the following data: Per capita income—Department of Commerce—average for the three most recent consecutive years for which satisfactory data are available.

Population—the latest decennial census for which figures are available, as certified by the Secretary of Commerce.

Legal basis

Authority for sewage treatment works construction grants is included in section 8 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 466(e)). Section 8(c) cites population and financial need as the factors to be used in allotting funds.

Additional information can be obtained from the Commissioner, Federal Water Pollution Control Administration, Washington, D.C.

