

# Federal Support of Schools of Public Health

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THE UNITED STATES has 12 accredited schools of public health, 6 public and 6 private. Each is part of a university that operates a medical school.

The six public schools are at the Universities of California at Berkeley and Los Angeles and the Universities of Michigan, Minnesota, North Carolina, and Puerto Rico. The six private schools are at Columbia, Harvard, Johns Hopkins, Pittsburgh, Tulane, and Yale Universities.

All six of the private schools were included in this study but only five of the public schools. The school of public health of the University of California, Los Angeles, was not included because it first became a separate, accredited school during the period covered by this study and its sources of support were not comparable to those of the other schools.

Schools of public health have a unique public service function in that their major responsibility is to give advanced training to physicians, nurses, and other health workers who are preparing for or are engaged in public service in Federal, State, and local health agencies, or in public health services in other countries. Since the number of schools is so small, each of the 12 accredited schools has a regional, or indeed a national, role. In addition to training students for work in many geographic areas, the schools through their faculties perform a variety of

advisory and service functions for public health and related agencies.

Enrollment in the schools of public health has increased substantially in the past 4 years. Between 1957 and 1961 enrollment increased by 13 percent, with a rise in graduate enrollment of 28 percent. Despite this increase, however, output of the schools falls far short of meeting the demand for trained public health workers. As new areas of public health responsibility emerge, the problem of providing adequate training to meet the manifest public need increases in urgency.

The major teaching emphasis and operational cost in these schools relate to graduate education of professional personnel—the most costly level of education. In 1961 the 11 schools in full operation had 1,257 full-time equivalent graduate and special students, of whom 751, or 60 percent, were federally sponsored (table 1). Two part-time students are counted as equivalent to one full-time student. The figure 1,257 was derived from the total of 1,489 full-time and part-time graduate and special students reported by the schools of public health and is very close to the number of equivalent full-time students reported in computations for formula grants from the Public Health Service. Seven percent of the graduate and special students were sponsored by international agencies and foreign governments. These proportions were much the same in the public and private schools. In addition to the training of graduate students, the five public schools provide undergraduate training which is largely public health training for nurses. About a quarter of the undergraduate students were federally sponsored. Of the total enrollment, 52 percent were sponsored by

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the Federal Government and 6 percent by international agencies or foreign governments.

Students in schools of public health come from all the 50 States, the District of Columbia, Puerto Rico, and some 70 foreign countries (table 2).

In 1956, the Federal Government sought to help reduce the national shortage of trained public health workers by providing annually a number of traineeships to equip professional people for public health careers (sec. 306 of the Public Health Service Act). In fiscal year 1961, the 11 schools of public health had 276

such trainees. They received monthly stipends to cover living and school expenses; tuition and fees were paid as well. Substantial aid to students has also been made available through training grant stipends from the National Institutes of Health.

In the fiscal year 1961, expenditures of the 11 schools of public health for basic operations and sponsored research totaled \$17.8 million (table 3). Of this amount \$10.9 million, or 61 percent of the total, was from Federal sources.

Expenditures for basic operations of these

**Table 1. Students<sup>1</sup> in 11 schools of public health,<sup>2</sup> by source of support, United States, fiscal year 1961**

Source of funds	All students		Graduate and special students		Undergraduate students	
	Number	Percent	Number	Percent	Number	Percent
<i>Total</i>						
All sources.....	1, 585	100	1, 257	100	328	100
Nongovernmental.....	504	32	318	25	186	57
Governmental:						
Federal.....	828	52	751	60	77	24
Public Health Service.....	622	39	551	44	71	22
Other.....	206	13	200	16	6	2
State and local.....	157	10	97	8	60	18
International agencies and foreign governments.....	96	6	91	7	5	1
<i>Public schools</i>						
All sources.....	1, 076	100	748	100	328	100
Nongovernmental.....	341	32	155	21	186	57
Governmental:						
Federal.....	547	51	470	63	77	24
Public Health Service.....	404	38	333	45	71	22
Other.....	143	13	137	18	6	2
State and local.....	135	12	75	10	60	18
International agencies and foreign governments.....	53	5	48	6	5	1
<i>Private schools</i>						
All sources.....	509	100	509	100		
Nongovernmental.....	163	32	163	32		
Governmental:						
Federal.....	281	56	281	56		
Public Health Service.....	218	43	218	43		
Other.....	63	13	63	13		
State and local.....	22	4	22	4		
International agencies and foreign governments.....	43	8	43	8		

<sup>1</sup> Full-time equivalents.

<sup>2</sup> 5 public, 6 private.

SOURCE: Reports from individual schools.

**Table 2. Place of residence of full- and part-time graduate and special students in 11 schools of public health,<sup>1</sup> 1960-61**

Place of residence	All schools	Public	Private
Total.....	1, 489	868	621
United States.....	1, 155	683	472
Alabama.....	7	5	2
Alaska.....	2	2	-----
Arizona.....	6	4	2
Arkansas.....	2	2	-----
California.....	112	94	18
Colorado.....	13	12	1
Connecticut.....	12	2	10
Delaware.....	2	1	1
District of Columbia.....	31	14	17
Florida.....	21	13	8
Georgia.....	21	15	6
Hawaii.....	4	4	-----
Idaho.....	2	2	-----
Illinois.....	28	25	3
Indiana.....	14	11	3
Iowa.....	11	11	-----
Kansas.....	10	7	3
Kentucky.....	18	15	3
Louisiana.....	14	6	8
Maine.....	2	1	1
Maryland.....	64	9	55
Massachusetts.....	51	6	45
Michigan.....	43	41	2
Minnesota.....	93	93	-----
Mississippi.....	4	3	1
Missouri.....	11	8	3
Montana.....	2	2	-----
Nebraska.....	4	3	1
Nevada.....	3	2	1
New Hampshire.....	3	-----	3
New Jersey.....	20	3	17
New Mexico.....	6	5	1
New York.....	129	34	95
North Carolina.....	52	48	4
North Dakota.....	5	5	-----
Ohio.....	39	24	15
Oklahoma.....	3	3	-----
Oregon.....	5	5	-----
Pennsylvania.....	74	25	49
Rhode Island.....	2	1	1
South Carolina.....	14	13	1
South Dakota.....	4	4	-----
Tennessee.....	13	9	4
Texas.....	20	11	9
Utah.....	8	6	2
Vermont.....	2	1	1
Virginia.....	20	13	7
Washington.....	10	7	3
West Virginia.....	6	4	2
Wisconsin.....	14	9	5
Wyoming.....	1	1	-----
Puerto Rico.....	48	37	11
Not stated.....	50	2	48
Foreign countries (71).....	334	185	149

<sup>1</sup> 5 public, 6 private.

SOURCE: Reports from the individual schools.

schools (including sponsored teaching and training programs) totaled \$8.5 million, \$4.1 million of it from Federal funds. Expenditures for sponsored research, including reimbursable indirect costs, totaled \$9.3 million, \$6.8 million of it from Federal funds.

### Basic Operations

The \$4,134,000 in Federal funds for basic operations accounted for 49 percent of all basic operating funds of the 11 schools of public health in fiscal year 1961. The public and private schools report substantially the same amounts and proportions of operating funds from Federal sources, 49 and 48 percent, respectively (table 3).

The chief types of Federal grants noted under the heading of basic operations of schools of public health are formula grants, project grants for improved public health training, and National Institutes of Health training grants. All except the formula grants are made for specifically defined and limited purposes and are not unrestricted funds for the general operations of the schools.

*Formula grants.* In accordance with section 314(c)(2) of the Public Health Service Act formula grants are given "for provision in public or nonprofit schools of public health . . . of comprehensive professional training, specialized consultative services, and technical assistance in the administration of State and local public health programs" giving primary consideration to the number of federally sponsored students attending each such school.

*Project grants.* Section 309 of the Public Health Service Act makes grants available for improved public health training to schools of public health and to those schools of nursing or engineering that provide graduate or specialized training in public health for nurses or engineers, for the purpose of strengthening or expanding graduate public health training in such schools. Important areas of curriculum expansion include medical care administration, radiation health, rehabilitation and chronic disease, public health dentistry, international health, and water resources.

*NIH training grants.* The training grants awarded by the National Institutes of Health

are made to assist in establishing and maintaining graduate instructional and research training programs, and to make funds available for the payment of trainee stipends.

Tuition for federally sponsored students is another source of revenue for the schools, although it falls short of meeting the cost of training these students. Such tuition comes primarily from title I traineeships provided by section 306 of the Public Health Service Act and from NIH training grants.

Of the total of \$4.1 million in Federal support to the schools in fiscal year 1961 for basic

operations, \$931,000 represented formula grants related to the number of federally sponsored students, \$57,000 represented project grants to strengthen or expand teaching, \$2.1 million was in the form of NIH training grants to assist in establishing and maintaining graduate instructional and research training programs (exclusive of stipends), \$428,000 was in teaching or training grants from other Federal agencies, \$477,000 was tuition paid on behalf of students sponsored by the Public Health Service, and \$142,000 was tuition for other federally sponsored students (table 4).

**Table 3. Sources of funds expended by 11 schools of public health<sup>1</sup> for basic operations and sponsored research, United States, fiscal year 1961**

Source of funds	Total expenditures		Basic operations		Sponsored research	
	Amount <sup>2</sup>	Percent	Amount <sup>2</sup>	Percent	Amount <sup>2</sup>	Percent
<i>Total</i>						
All sources.....	\$17,814	100	\$8,497	100	\$9,317	100
Nongovernmental.....	5,115	29	2,697	32	2,418	26
Governmental:						
Federal.....	10,911	61	4,134	49	6,776	73
Public Health Service.....	8,456	47	3,565	42	4,890	53
Other.....	2,455	14	569	7	1,886	20
State and local.....	1,704	10	1,582	19	123	1
International agencies and foreign governments.....	84	1	84	1		
<i>Public schools</i>						
All sources.....	6,772	100	3,767	100	3,005	100
Nongovernmental.....	881	13	328	9	553	18
Governmental:						
Federal.....	4,274	63	1,852	49	2,421	81
Public Health Service.....	3,019	45	1,593	42	1,426	48
Other.....	1,255	18	259	7	996	33
State and local.....	1,584	23	1,553	41	31	1
International agencies and foreign governments.....	33	1	33	1		
<i>Private schools</i>						
All sources.....	11,041	100	4,730	100	6,312	100
Nongovernmental.....	4,233	38	2,368	50	1,865	29
Governmental:						
Federal.....	6,637	60	2,282	48	4,355	69
Public Health Service.....	5,437	49	1,972	42	3,465	55
Other.....	1,200	11	310	7	890	14
State and local.....	120	1	28	1	92	2
International agencies and foreign governments.....	51	1	51	1		

<sup>1</sup> 5 public, 6 private.

<sup>2</sup> In thousands.

NOTE: Some figures do not add to the totals shown because of rounding.

SOURCE: Reports from individual schools.

The total share of the expenditures for basic operations met from Federal funds (49 percent), including funds for general purposes, was less than the total share of the federally sponsored students (52 percent). Only 11 percent of the funds for basic operations, the \$931,000 in formula grants, was specifically related to the federally sponsored students, who make up more than half the enrollment of these schools.

### Federal Support for Research

The \$6.8 million in Federal funds accounted for 73 percent of the money available to schools of public health for sponsored research (table 3). The public schools report 81 percent of their research funds from Federal sources. The private schools have available considerably more research money from Federal sources than do the public schools, but since the private schools have also considerably more research money from nongovernmental sources, Federal sources account for only 69 percent of their research funds. The chief Federal research funds were research grants from the National Institutes of Health. One or more of the institutes made grants to each of the schools of public health in fiscal year 1961. In total the schools reported \$4.9 million from this source.

Some \$1.9 million was received from other Federal agencies for research purposes.

### Comparison With Other Institutions

To provide a basis for viewing the share of Federal aid received by schools of public health in relation to that received by other types of institutions of higher learning, some comparisons have been made between the financial resources of the schools of public health and other branches of the same universities.

Among the universities having schools of public health, none received less than one-sixth of their total income for educational and general purposes from Federal funds in 1959-60, while in a few institutions with large research contracts the proportion was nearer two-thirds or three-quarters. The average Federal share of 45 percent represented an increase of almost one-fifth over the average of 39 percent in 1957-58 (table 5). Although much of the Federal money took the form of research grants or contracts, a portion was for training or general operating expenses.

A recent report on the impact of Federal funds on Harvard University (1) provides somewhat more detail on the extent of Federal support in the various segments of that university. Supplying one-quarter of the budget of

**Table 4. Federal contributions expended by 11 schools of public health<sup>1</sup> for basic operations in relation to total expenditures, United States, fiscal year 1961**

Purpose and source	All schools		Public schools		Private schools	
	Amount <sup>2</sup>	Percent	Amount <sup>2</sup>	Percent	Amount <sup>2</sup>	Percent
Total.....	\$8, 497	100	\$3, 767	100	\$4, 730	100
Federal.....	4, 134	49	1, 852	49	2, 282	48
Grants:						
Public Health Service formula.....	931	11	530	14	401	8
Public Health Service project.....	57	1	27	1	30	1
National Institutes of Health training.....	2, 100	25	806	21	1, 294	27
Other.....	428	5	186	5	242	5
Tuition:						
Public Health Service.....	477	6	230	6	247	5
Other.....	142	2	74	2	68	1
Other.....	4, 363	51	1, 915	51	2, 448	52

<sup>1</sup> 5 public, 6 private.

<sup>2</sup> In thousands.

NOTE: Some figures do not add to the totals shown because of rounding.

SOURCE: Reports from individual schools.

the university as a whole in 1959-60, Federal funds supplied as much as 57 percent of the total in the medical faculty and as little as 1 percent or less in such faculties as law, business administration, public administration, and design. A number of departments within the various faculties drew 60 percent or more of their support from the Federal Government. As in the case of universities generally, much of the Federal aid was concentrated in the area of research. However, Harvard received funds for instructional programs not only in public health but also in medicine, Far Eastern and Middle Eastern languages, military science, and science teacher training, among other areas.

Among the various branches of a university, the medical school perhaps parallels most closely the school of public health in the character of its research and training activities. Since each of the universities having a school of public health also operates a medical school, it was possible to make a fairly comprehensive comparison of the sources of funds of the schools of public health and of medicine in the same institutions.

Of their total operating and research expenditures of \$92.9 million in 1959-60, the 11 medical schools derived 41 percent from the Federal Government (table 6), or less than the average of 61 percent for the schools of public health (table 3). For sponsored research expenditures the Federal share was almost the same in

both groups of schools, 71 percent and 73 percent. In the support of basic operations, the Federal Government provided an average of 19 percent of the costs in the medical schools (teaching and training grants, primarily training grants for research), compared with 49 percent in the schools of public health. This difference of 30 percent represents the support received by schools of public health over and above the support given to the medical schools.

### Federal Interest in Higher Education

Before considering whether the present Federal support for schools of public health is necessary and proper in relation to national needs and the level of support for other types of higher educational institutions, it may be useful to review the general character of the Federal interest in higher education. Since schools of public health differ from other institutions of higher learning mainly in the share of Federal support for training or basic operations, rather than in the share of research aid, and since a fairly general consensus exists in favor of continued high levels of Federal support for health and medical research, the present discussion will deal only with programs providing funds for training. Large research grants will, of course, affect the educational programs of the schools, enriching them in many respects although in other respects taxing their resources.

**Table 5. Current-fund income for educational and general purposes<sup>1</sup> in universities<sup>2</sup> having schools of public health, by source of funds, United States, 1957-58 and 1959-60**

Source of funds	1957-58		1959-60	
	Amount <sup>3</sup>	Percent	Amount <sup>3</sup>	Percent
Total.....	\$568, 191	100	\$729, 305	100
Tuition and fees from students.....	80, 554	14	90, 929	12
Federal Government <sup>4</sup> .....	219, 325	39	329, 867	45
State and local governments.....	168, 423	30	187, 529	26
Endowment earnings.....	40, 475	7	47, 232	6
Private gifts and grants.....	45, 441	8	55, 461	8
Other.....	13, 975	2	18, 288	3

<sup>1</sup> Excluding income from organized activities relating to educational departments, such as income from teaching hospitals and clinics.

<sup>2</sup> University of California figure is for all campuses combined.

<sup>3</sup> In thousands.

<sup>4</sup> Includes funds for off-campus research centers.

SOURCE: U.S. Office of Education: Unpublished data on financial statistics of institutions of higher learning.

The objective of Federal support for training in institutions of higher education has generally been to provide for or to improve a particular branch of education that is of special value or importance to the nation. The branch of education may be quite broad, as in the case of the financial grants for education in agriculture and the mechanic arts under the second Morrill Act of 1890; but it is typically more circumscribed, as with grants or contracts for training of rehabilitation personnel, medical research specialists, science or modern language teachers, public health personnel, and other specialized groups. Federal support has been justified on the basis that (a) the training program is essential to the national welfare or security and (b) existing sources of funds are not adequate to assure the

necessary provision or expansion of training activities in the time available.

Means of giving support have varied widely according to the character of the teaching program involved and other factors. Federal aid for agricultural extension activities, for example, is provided through grants to cooperating State agencies, which in turn distribute the money to the land-grant colleges and other educational institutions or organizations. General support for the land-grant colleges under the second Morrill Act is paid directly to the colleges in the form of substantially unconditional grants, with the U.S. Office of Education serving mainly as an accounting agency. The National Science Foundation makes available funds for science teacher training institutes on

**Table 6. Sources of funds expended for basic operations and for sponsored research by 11 medical schools <sup>1</sup> in same university as a school of public health, United States, fiscal year 1960**

Source of funds	Total expenditures		Basic operations		Sponsored research	
	Amount <sup>2</sup>	Percent	Amount <sup>2</sup>	Percent	Amount <sup>2</sup>	Percent
<i>Total</i>						
All sources.....	\$92, 912	100	\$52, 952	100	\$39, 960	100
Nongovernmental.....	40, 869	44	29, 651	56	11, 218	28
Governmental:						
Federal.....	38, 357	41	10, 003	19	28, 354	71
State and local.....	13, 686	15	13, 298	25	388	1
International agencies and foreign governments.....						
<i>Public schools</i>						
All sources.....	39, 052	100	25, 816	100	13, 236	100
Nongovernmental.....	12, 601	32	8, 881	34	3, 720	28
Governmental:						
Federal.....	13, 660	35	4, 354	17	9, 307	70
State and local.....	12, 791	33	12, 581	49	210	2
International agencies and foreign governments.....						
<i>Private schools</i>						
All sources.....	53, 859	100	27, 136	100	26, 723	100
Nongovernmental.....	28, 268	52	20, 770	77	7, 498	28
Governmental:						
Federal.....	24, 696	46	5, 649	21	19, 047	71
State and local.....	895	2	716	3	178	1
International agencies and foreign governments.....						

<sup>1</sup> 5 public, 6 private.

<sup>2</sup> In thousands.

NOTE: Some figures do not add to totals because of rounding.

SOURCE: Unpublished material supplied by the Association of American Medical Colleges.

the basis of contracts itemizing costs for the particular project. Under the graduate fellowship program of the National Defense Education Act, the institution providing the training receives a cost-of-education payment to help pay the full costs of education for the fellowship student. Indeed, almost every Federal program of aid for training in institutions of higher learning utilizes a different mechanism for administering the funds, with the emphasis in program development having been placed more on meeting the particular educational need than on establishing uniform procedures for providing support.

The practice of providing operating fund support in the form of cost-of-education payments to help meet the full costs of education, as in the case of the National Defense Education Act graduate fellowships, has increased in recent years. Other Federal scholarship or fellowship programs making cost-of-education payments to the schools include the Cooperative Graduate Program of the National Science Foundation and the Office of Education program for training teachers of mentally retarded children. Provisions for cost-of-education payments have been included in the administration's legislative proposals for scholarships to medical and dental students and for scholarships to college students generally. The formula grants to the schools of public health might be regarded as a form of cost-of-education payment, to the extent that they are graduated on the basis of the number of federally sponsored students in the schools.

The "institute" device has also been adopted in a number of the newer programs. In addition to the institutes for science and mathematics teachers supported by the National Science Foundation, there are institutes for teachers of modern foreign languages (Office of Education), for guidance counselors (Office of Education), and for teachers interested in radiation biology (Atomic Energy Commission), among others. Some of these institutes are held in the summer; others last an entire academic year. In most cases the Federal Government pays the full cost of the institutes, including stipends for students as well as teaching costs. To illustrate the magnitude of these programs, expenditures for the National Science Founda-

tion science and mathematics institutes totaled more than \$30 million in fiscal year 1961, while more than \$7 million was provided for the language institutes.

The President's Science Advisory Committee in November 1960 (2) advocated an increase in Federal support for selected centers of graduate education, especially where the education would be linked closely with new fields of research. The committee proposed that Federal agencies in general seek forms of support which would permit universities to enlarge their permanent faculties, such forms to include training grants, institutional grants "for a relatively large sector—say 'biological sciences,' " or other appropriate means. Urging expansion of federally supported fellowship programs, the committee favored the provision of supplementary grants based on the full cost of such education. The committee also favored the development, under the leadership of the Office of the President, of a "well-coordinated and powerfully directed" general policy governing the support of scientific research and education at universities, as an essential basis for sound expansion of Federal activity in this area.

During the last session of Congress the administration recommended that various programs of Federal support for higher education be expanded or extended, among them the National Defense Education Act graduate fellowship program, the NDEA language development program, and the NDEA guidance and counseling program. Reference has been made earlier to the proposed scholarship programs for medical and dental students and for college students generally, which would carry with them cost-of-education payments for the schools. Also pointing toward a growing role of the Federal Government in higher education is a recent National Science Foundation report (3), which projects an almost threefold increase in national investment in science and engineering education between 1961 and 1970, with the Federal Government providing an increasing proportion of the total funds.

## Discussion

Support provided by the Public Health Service to schools of public health falls into two



broad categories. The first is a series of grants which support the research function. The second is a series of grants which support the educational and teaching function of the schools. The specifics of these grants are indicated in the body of the report. Review of the purposes and actual use of the grants indicates that they perform separate functions which are, however, closely related.

*Research.* Almost three-quarters of the sponsored research funds of the schools of public health come from Federal sources and are given for rather specifically defined projects. In using these funds the schools are confronted with the problem of developing balanced research programs and career stability for research workers while still carrying strong programs in the areas in which project grants are made available. This problem is found with respect to the optimum development of research and research training activities in all types of institutions—universities, medical schools, and schools of public health.

Recognizing that less restrictive forms of support for research and research training could contribute constructively to the alleviation of these problems, the previous administration sought and the Congress enacted Public Law 86-798 authorizing the Surgeon General to make grants to "public or nonprofit universities, hospitals, laboratories, and other institutions for the general support of their research and their research training programs." Under this authority the National Institutes of Health has initiated a program of general research support grants in fiscal year 1962. Eligibility during the first year is limited to schools of medicine, osteopathy, dentistry, and public health.

*Basic operations.* With the Federal Government making an increasing practice of helping pay the full costs of education for federally sponsored students, Federal operating fund support for the schools of public health probably could be continued on the basis solely of the high proportion of federally sponsored students in these schools. Yet to base Federal support on the number of federally sponsored students alone would suggest that the Federal Government has an interest in the training of federally sponsored students only, when in fact

the national responsibility extends to many other students at these schools.

In view of the international commitments of the United States, there is a clear Federal concern with public health trainees supported by international agencies or foreign governments. Almost as clear is the national interest in adequate training of students supported by State and local governments and private sources, an interest which derives from the fact that many of these students will work and make essential contributions to the welfare and security of the country in States other than the ones where they were trained, or in national or international agencies.

Since most graduates of schools of public health enter public service, a strong case can be made that a large share of the financial support of the schools should be a public responsibility. With the 12 accredited schools of public health serving the entire United States and many foreign countries, it would be unreasonable to expect the States or localities where the schools are situated to increase substantially their already quite generous support of the schools. Interstate arrangements could be only partially relied upon as a means of providing any additional funds. In recognition of the overall national and international functions of the schools, the Federal Government has a substantial responsibility in the financing of the schools.

The present pattern of support to the schools of public health already reflects the Federal interest in public health training generally, over and above the interest in federally sponsored students. Thus, as we have seen earlier, only 11 percent of the 1960-61 basic operating budgets of the schools was financed from the Federal formula grants specifically related to the number of federally sponsored students. The greater part of the Federal support was for special projects and training programs to meet the nation's needs for specialized personnel without regard to the particular sponsors of the students concerned.

Adherence to this general pattern would mean that the Federal Government would continue to accept at least a part of the responsibility for meeting the general operating costs of the schools, over and above helping to pay

full educational costs for federally sponsored students, and without restricting the share of the operating budgets met from Federal sources to that share of the students who were Federally sponsored. The most important consideration in fixing the total amount of Federal support would be the amount required by the schools to meet the needs of the United States, and of other countries as appropriate, for trained public health personnel.

Existing mechanisms for providing Federal operating fund support to schools of public health go a considerable way toward accomplishing national purposes in public health training without unduly restricting the schools in their programs and functions. In the case of the Federal support provided to the schools of public health through the payment of tuition and fees for students, no special problems of Federal controls arise: the effect on the schools is for most purposes the same as if the student himself paid these amounts. The project grants to the schools permit the Federal Government to give special aid to selected programs of particular quality or promise, including new fields of training. The training grants allow encouragement of particular teaching programs although they limit the schools in the fields of study which may be so supported.

The formula grants strengthen the ability of the schools to develop balanced programs of teaching appropriate to their particular needs and opportunities, independently of the interests or requirements of the Federal Government. These formula grants perform the same function for the general educational responsibilities of the schools as that performed for the research function by the general research support grants.

In satisfying as many criteria as they do for sound Federal support, the mechanisms for aiding the schools of public health compare fairly favorably with the mechanisms used in aiding certain other branches of higher education. The recent report on the impact of Federal funds

on Harvard University (1), for example, expressed concern about a general overemphasis on project grants, "which always tend to make the strong departments stronger, and weaken the university's ability to develop with a proper balance." The Harvard report, like the President's Science Advisory Committee report a year earlier (2), saw as a means of reducing the dependence on project grants the development of a system of institutional grants for unrestricted purposes in particular areas of learning (1, 2). The formula grants for the schools of public health go at least part of the way toward accomplishing this purpose in the field of public health training.

### Summary

A review of the character and extent of financial support to the schools of public health reveals that Federal grants are consistent with national policy of aid to higher education. It is also clear that international health interests and national health program requirements create unique obligations that are best served through the continued educational programs of these schools. It appears logical that Federal as well as non-Federal sources of support should be continued to insure accomplishment of specific national objectives as well as teaching program flexibility and research independence in accordance with the best principles of professional education.

### REFERENCES

- (1) Harvard and the Federal Government. A report to the faculties and governing boards of Harvard University. The University, Cambridge, Mass., September 1961.
- (2) President's Science Advisory Committee: Scientific progress, the universities, and the Federal Government. U.S. Government Printing Office, Washington, D.C., November 15, 1960.
- (3) National Science Foundation: Investing in scientific progress, 1961-1970. U.S. Government Printing Office, Washington, D.C., 1961.