096527
2.0423
B-164031(2)

Management Of Health Research And Teaching Facilities Construction Programs B-164031(2)

National Institutes of Health
Department of Health, Education,
and Welfare

UNITED STATES
GENERAL ACCOUNTING OFFICE

70157 096527

JUNE 16, 1972

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

MANPOWER AND WELFARE
DIVISION

B-164031(2)

Dear Mr. Secretary:

This is our report on management of health research and teaching facilities construction programs by the National Institutes of Health, Department of Health, Education, and Welfare.

Our principal observations are summarized in the digest of the report. The Department has concurred with the recommendations in the report and has informed us of a number of corrective actions which have been or will be taken.

C1-4 Copies of this report are being sent to the House and Senate Committees on Appropriations and Government Operations; the appropriate legislative committees of the Congress; and the Director, Office of Management and Budget. Copies are also being sent to your Assistant Secretary for Health and Scientific Affairs; Assistant Secretary, Comptroller; and Director, National Institutes of Health.

Sincerely yours,

Gregory J. Ahart

Director, Manpower and
Welfare Division

The Honorable
The Secretary of Health,
Education, and Welfare

Contents

ABBREVIATIONS

GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare
NIH	National Institutes of Health

GENERAL ACCOUNTING OFFICE
REPORT TO THE
SECRETARY OF HEALTH,
EDUCATION, AND WELFARE

MANAGEMENT OF HEALTH RESEARCH AND
TEACHING FACILITIES CONSTRUCTION PROGRAMS
1 National Institutes of Health 28
2 Department of Health, Education, 22
and Welfare B-164031(2)

D I G E S T

WHY THE REVIEW WAS MADE

Federal grants assist in financing the construction of facilities under a health research program and a health teaching program administered by the National Institutes of Health (NIH), a unit of the Department of Health, Education, and Welfare (HEW). These programs' objectives are

--the prevention and control of the many crippling and killing diseases affecting the Nation's population and

--the alleviation of the shortages of physicians and other professional health personnel.

Since the inception of the health research facilities program in 1956 through June 30, 1971, grants of about $473 million have been awarded for 1,179 projects. Since the inception of the health teaching facilities program in 1964 through June 30, 1971, grants of about $795 million have been awarded to 172 schools.

Because of the significance of these programs from the standpoint of both their objectives and the grant expenditures involved, the General Accounting Office (GAO) has reviewed the management of the programs.

FINDINGS AND CONCLUSIONS

Program goals

NIH has approved health research facilities grant applications primarily on the basis of the overall scientific merit of the research programs proposed for each facility. Priority ratings based on evaluations of scientific merit have established the order in which applications are funded. Because of the limited funds available, many approved applications have not been funded. (See p. 14.)

Because of the lack of funds to finance many approved projects, GAO believes that, in addition to considering the scientific merit of proposed projects, NIH should (1) determine systematically the nature and dimensions of the needs of the Nation and of the health research community by assessing existing research efforts and capabilities by area, discipline, and disease and (2) establish program objectives and priorities on the basis of such determinations so that, within available funding limits,

these needs can be met in the order of their established priorities. (See p. 17.)

Actual increases in first-year medical and dental school enrollments did not meet the needed increases estimated when the health teaching facilities legislation was considered. HEW attributed this failure to (1) insufficient Federal funds to finance all approved applications for grants and (2) schools' problems in raising matching funds. (See p. 19.) The funding problems cited by HEW may be alleviated by recent revisions to the authorizing legislation. (See p. 22.)

Utilization

GAO's review of seven research facilities which had been completed for more than 2 years showed that none had attained the research personnel levels projected by the grantees in their grant applications. (See p. 24.) At five of these projects, a total of about 15 percent of the research space was being used by the grantees for health research in areas other than the specific research areas to which the grantees had committed themselves as a condition of the awards. (See p. 26.) Similar problems were noted in the use of space at a completed teaching facility. (See p. 30.)

The law provides for recovery of the Federal participation in construction projects when the facilities are not used for the purposes for which constructed. GAO believes that, when research and teaching facilities are used for programs and purposes which deviate substantially from those described in the grant application, the Secretary of HEW either should concur in such uses or should seek appropriate recoveries from the grantees. (See pp. 26 and 32.)

GAO believes that NIH should improve its procedures for determining whether completed facilities constructed with grant funds are utilized as proposed in grant applications and conform to the general objectives of the construction programs. Adequate follow-up procedures are needed to show whether proper use is being made of the facilities. (See p. 31.)

Grant administration

GAO noted opportunities for NIH to improve its procedures for awarding and administering grants for the construction of health research and health teaching facilities. Improvements could be made (1) by establishing uniform policies and procedures for administering the health research and teaching construction programs (see p. 34), (2) by requiring justification of costs in grant applications that relate to incorporating in a facility features to facilitate the future expansion of the facility (see p. 35), and (3) by requiring applicants to state the source of funding for their movable equipment needs and by issuing criteria clarifying the sources of funding available (see p. 38.)

RECOMMENDATIONS OR SUGGESTIONS

GAO recommends that HEW

--determine systematically health research needs, including assessing existing research efforts and capabilities by area, discipline, and disease and establish program objectives and priorities on the basis of such determinations so that these needs can be met within the constraints of available funding limitations (see p. 18);

--require applicants for teaching facility grants to submit detailed information on the proposed use of space (see p. 32);

--establish appropriate follow-up procedures for both programs, to ensure that the grant-funded facilities are being used for the purposes for which they were constructed, and either concur in such uses or seek appropriate recoveries from the grantees (see p. 32);

--supplement the existing certification procedure, which requires grantees to certify to the actual use being made of NIH-funded research facilities, by requiring descriptive details relating to such use and by periodic verifications (see p. 32);

--establish, to the extent feasible, uniform procedures for all NIH construction grant programs (see p. 35);

--obtain from applicants for facility grants sufficient information relating to future expansion of the facilities to enable appropriate appraisals of the relative costs and merits of the grant applications (see p. 37); and

--strengthen grant administration procedures for the financing of movable equipment related to the construction of health research facilities by clarifying the sources of funding available under NIH's several authorized grant programs to ensure uniform treatment of grant applicants and better use of funds appropriated for the several programs and by requiring applicants to state clearly the proposed funding for their movable equipment needs (see p. 40).

AGENCY ACTIONS AND UNRESOLVED ISSUES

HEW concurred in GAO's recommendations and reported that a number of corrective actions had been or would be taken. (See p. 44.)

CHAPTER 1

INTRODUCTION

The Federal grant programs to assist in the construction of health research facilities and health teaching facilities are authorized by parts A and B of title VII of the Public Health Service Act (42 U.S.C. 292, 293) and are administered by the National Institutes of Health, Department of Health, Education, and Welfare.

Prior to January 1969 the two programs were administered separately. The health research facilities construction program was administered by the Division of Research Facilities and Resources, NIH. The health teaching facilities construction program was administered by the Bureau of Health Manpower, which was a separate operating bureau of the Public Health Service until April 1968. Under the reorganization of the Public Health Service in 1968, the Bureau of Health Manpower was transferred to NIH which became responsible for the administration of all programs concerned with the education and training of health manpower.

In January 1969 the Bureau became responsible for the administration of all NIH construction grant programs, which covered nursing educational facilities, allied health professions educational facilities, medical library facilities and the two previously cited programs. The Bureau currently is called the Bureau of Health Manpower Education.

HEALTH RESEARCH FACILITIES PROGRAM

The Public Health Service Act, as amended by the Health Research Facilities Act of 1956, authorizes a program of Federal matching grants to public and nonprofit private institutions to expand the capacity or improve the quality of the health-related research environment by supporting the construction, renovation, and equipping of research facilities. The act authorized grants up to 50 percent of the cost of constructing, renovating, and/or equipping facilities. Effective July 1, 1969, an amendment authorized grants up to 66-2/3 percent of the costs for projects which have special national or regional significance.

The act also established a National Advisory Council on Health Research Facilities (hereinafter referred to as the Research Council), composed of 12 members appointed by the Secretary of HEW and 2 ex officio Government members--the Director of NIH and a representative of the National Science Foundation--to review and recommend appropriate action on applications for grants-in-aid relating to the construction, renovation, and/or equipping of health research facilities.

The primary objective of the health research facilities program was to meet the needs for new and replacement facilities for the Nation's research in the health sciences. NIH has stated that modern facilities are essential to the Nation's colleges, universities, and research institutions in effectively prosecuting research efforts leading to better health for the American people. Photographs taken by us of a health research facility constructed with Federal funds are shown on page 7.

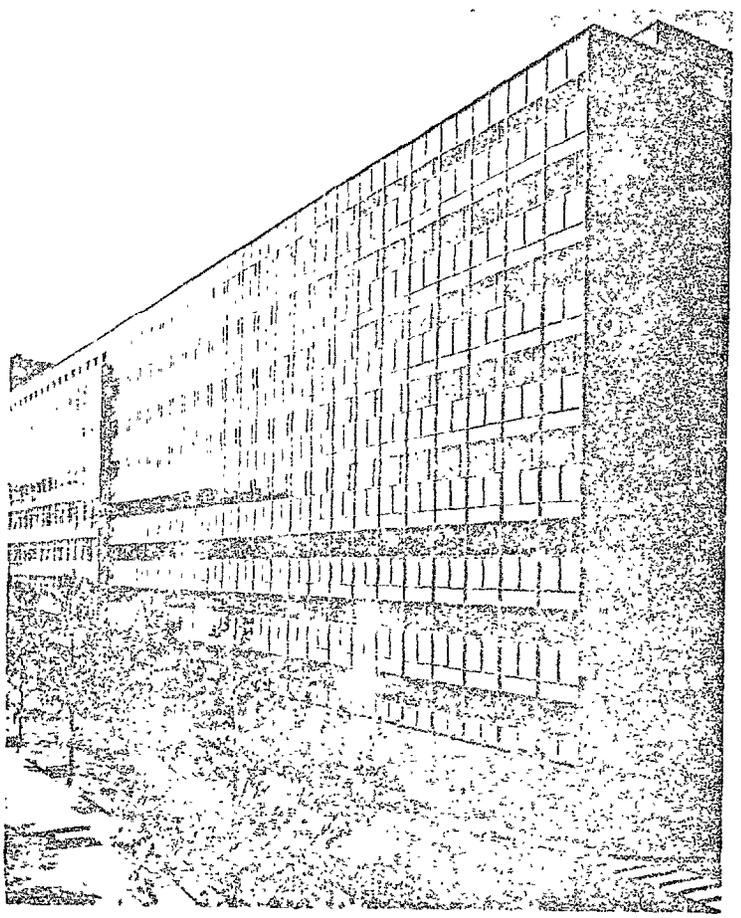
The amounts appropriated for this program through fiscal year 1972 were as follows:

Fiscal year	Amount (millions)
1957 to 1964	$280.0
1965	50.0
1966	50.0
1967	50.0
1968	35.0
1969	8.4
1970	-
1971	-
1972	-
Total	$473.4

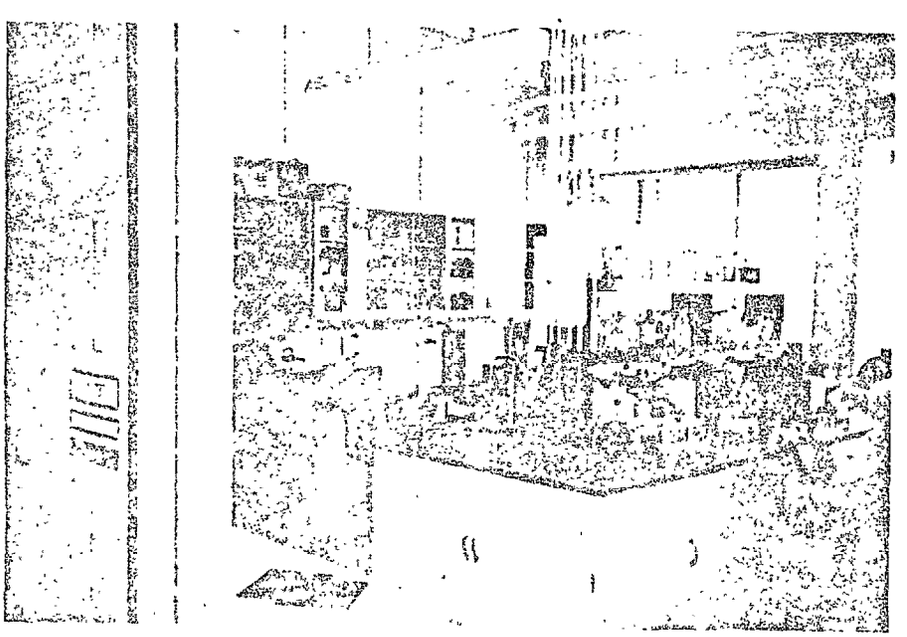
According to NIH funds were not requested for this program in recent years because of overall constraints on funds. NIH decided that health research facilities would have a low priority in competing for the limited funds available.

BEST DOCUMENT AVAILABLE

A health research facility in Cambridge, Massachusetts, financed, in part, with Federal funds.



Exterior view.



Laboratory.

The Comprehensive Health Manpower Training Act of 1971 (85 Stat. 431), which was enacted November 18, 1971, provides for a consolidated appropriation authorization for the health research and health teaching facilities programs. The amount authorized for the two programs for fiscal year 1973 is $250 million.

HEALTH TEACHING FACILITIES PROGRAM

The Public Health Service Act, as amended by the Health Professions Educational Assistance Act of 1963, authorizes a program of Federal matching grants to public and nonprofit private schools of medicine, dentistry, osteopathy, pharmacy, optometry, podiatry, veterinary medicine, or public health to assist in the construction, renovation, and equipping of teaching facilities for training medical, dental, and other professional health personnel.

Institutions desiring support for facilities in which both health-related research and teaching are to be conducted can apply for joint construction grants. The Health Manpower Act of 1968 provides for Federal assistance in constructing multipurpose or joint facilities which may include, in addition to teaching space, space for research, medical libraries, and areas for advanced and continuing education, as they relate primarily to education.

Grants for teaching facilities are authorized in amounts up to 75 percent of construction, renovation, and/or equipment costs for public health schools; up to 66-2/3 percent for new schools or new facilities for existing schools to provide for major expansions of training capacity; and up to 50 percent of costs for other approved projects. Effective July 1, 1969, an amendment increased the 50-percent rate to 66-2/3 percent if the Secretary of HEW determined that unusual circumstances made the larger percentage necessary.

The Comprehensive Health Manpower Training Act of 1971 increased the maximum Federal grant percentages, effective in fiscal year 1972, for all facilities except public health schools. The maximum percentage was set at 80 percent for (1) new schools or new facilities for existing schools to provide for major expansions of training capacity; (2) major remodeling or renovation of an existing facility to meet

increased student enrollment; and (3) other projects when the Secretary determined that unusual circumstances made the larger percentage necessary. The percentage for other approved projects was set at 70 percent.

The Health Professions Educational Assistance Act of 1963 also established a National Advisory Council on Education for Health Professions (hereinafter referred to as the Education Council), composed of 17 members appointed by the Secretary of HEW and 2 ex officio Government members--the Director of NIH and the Commissioner of Education--to review applications for grants-in-aid relating to the construction, renovation, and/or equipping of health teaching facilities. Effective in fiscal year 1972, grant applications are being reviewed by a new National Advisory Council on Health Professions Education, composed of the Secretary of HEW (or his delegate) as chairman and 20 members appointed by the Secretary.

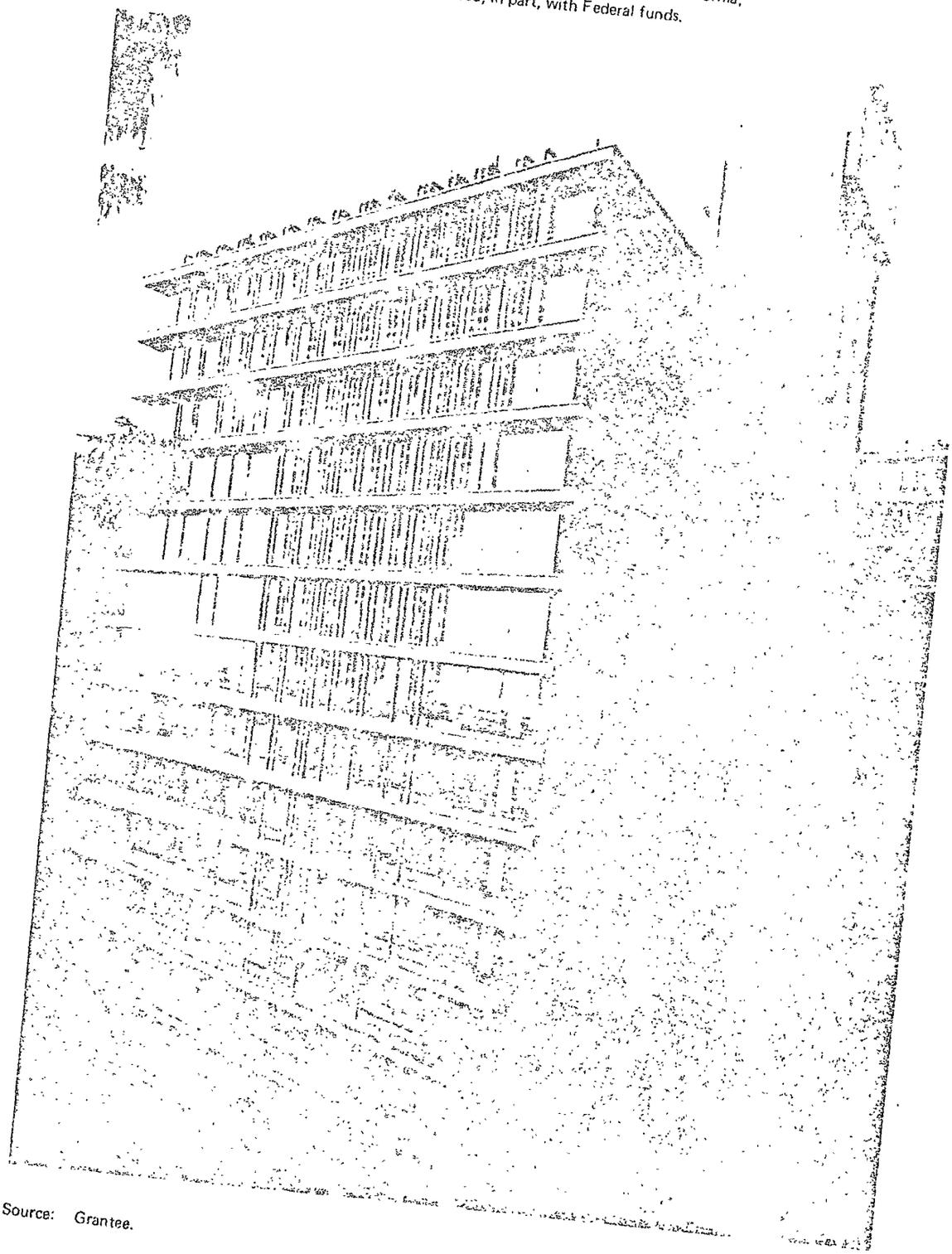
The purpose of the program is to increase the training capacity of health profession schools to alleviate shortages of physicians and other professional health personnel. Photographs of health teaching and joint health teaching and research facilities are on pages 10 and 11.

The amounts appropriated for this program through fiscal year 1972 were as follows:

Fiscal year	Amount (millions)
1965	$100.0
1966	75.0
1967	135.0
1968	175.0
1969	75.0
1970	118.1
1971	131.6
1972	142.4
Total	$952.1

BEST DOCUMENT AVAILABLE

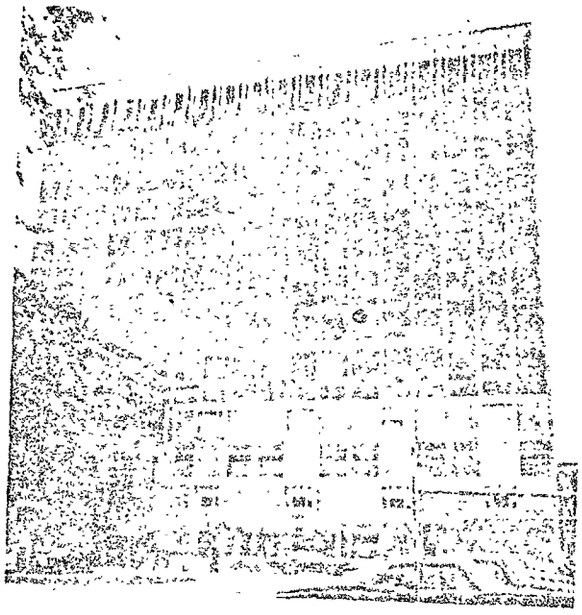
Health teaching facility in San Francisco, California, financed, in part, with Federal funds.



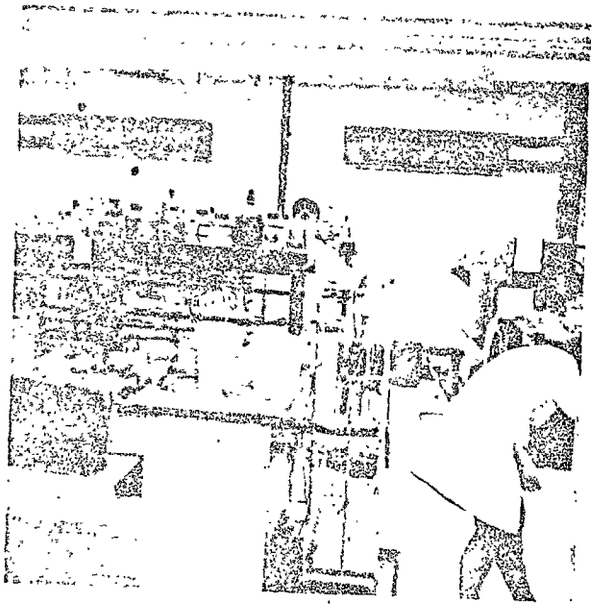
Source: Grantee.

BEST DOCUMENT AVAILABLE

A joint research and teaching facility in Boston, Massachusetts, financed, in part, with Federal funds.



Exterior view.



Laboratory.

Source: GAO.

BEST DO

CHAPTER 2

ESTABLISHING AND ATTAINING PROGRAM GOALS

ESTABLISHMENT OF GOALS AND PRIORITIES FOR ALLOCATION OF RESOURCES FOR HEALTH RESEARCH FACILITIES

The present NIH system for awarding health research facilities grants is based on the individual scientific merits of each proposed project. To obtain the most benefits from a grant program for the construction of research facilities to serve the national health research needs, we believe that it is necessary to (1) determine systematically the nature and dimensions of the needs of the Nation and of the health research community by assessing existing research efforts and capabilities by area, discipline, and disease and (2) establish program objectives and priorities on the basis of such determinations so that, within available funding limits, these needs can be met in the order of their established priorities.

Federal matching funds of about $473 million have been provided under the health research facilities program, since its establishment in 1956 through June 30, 1971, for the construction, renovation, and/or equipping of 1,179 projects containing about 19 million net square feet of modern laboratory space.

According to the Surgeon General of the Public Health Service, the most serious problem confronting the program since the program's inception has been NIH's inability to finance all the applications recommended for approval by the Research Council.

We believe that NIH, because of the lack of funds to finance many approved projects, should allocate funds not only on the basis of the scientific merits of proposed projects but also on the basis of program objectives and priorities.

Benefits to be realized from identification of national objectives and priorities

The legislation authorizing Federal grants for the construction of health research facilities states that the objective of such grants is to assist in providing research facilities for the prevention and control of the many crippling and killing diseases affecting the Nation's economy, welfare, and security.

HEW regulations contained in the Code of Federal Regulations (42 CFR 57.5) relating to the approval of grant applications provide:

> "*** In so recommending or approving, particular consideration shall be given to facilities that: (a) Will be used for research in disciplines or diseases or aspects of a disease which have the most urgent needs ***." (Underscoring supplied.)

The rates for the 10 leading causes of death in the United States in 1970, according to the National Center for Health Statistics, HEW, were estimated as shown in the following table.

Leading Causes of Death in the United States in 1970

Rank	Cause	Death rate per 100,000 population	Percent
1	Diseases of heart	360.3	38.3
2	Malignant neoplasms (cancer)	162.0	17.2
3	Cerebrovascular diseases	101.7	10.8
4	Accidents	54.2	5.8
5	Influenza and pneumonia	30.5	3.2
6	Certain mortality in early infancy	20.9	2.2
7	Diabetes mellitus	18.5	2.0
8	Arteriosclerosis	15.9	1.7
9	Cirrhosis of liver	15.8	1.7

Rank	Cause	Death rate per 100,000 population	Percent
10	Bronchitis, emphysema, and asthma	14.9	1.6
	All other causes	145.8	15.5
	Total	940.4	100.0

We recognize that information on the leading causes of death is only one factor to be considered in establishing objectives and priorities for the health research facilities construction program. Such information, however, should be considered in addition to NIH's current review for scientific merit and it is indicative of the type of data available.

NIH has awarded health research facility construction grants primarily on the basis of the overall scientific merit of the research programs proposed for each facility, the capabilities of the grantee institution in these research areas, and the relationship of the proposed programs to other similar research programs in the particular field of endeavor. NIH has not established specific program objectives and priorities in relation to national health research needs.

In its appraisal of grant applications submitted by institutions, NIH has relied essentially on the judgment of two panels of experts, the Scientific Review Committee and the Research Council.

The Scientific Review Committee consists of 16 members who are leaders in specific fields of research and who are appointed by the Director, NIH, for overlapping terms of 4 years. The Committee determines whether an applicant's proposed research programs are health related and have scientific merits. If the Committee recommends approval of an application, it assigns a priority rating on the basis of its estimate of the professional quality of the proposed research programs to be carried out in the facility. The rating establishes the order of approved projects to be funded. Concerning these ratings, NIH instructions state:

BEST DOCUMENT AVAILABLE

> "Judging by his own ideal scale of values, employing criteria of merit used by the review group and without reference to other applications, each participating member will rate each application recommended by the majority for approval on the basis of merit from 1 (first order) to 5 (last order)." (Underscoring supplied.)

The Committee submits its recommendations to the Research Council which makes the final recommendation as to whether an application should be approved by the Secretary of HEW. A grant may be made only if the application is recommended for approval by the Research Council, and the amount cannot exceed the amount recommended by the Research Council.

An NIH official advised us that the Research Council generally accepted the priority rating established by the Committee for a proposed project. Neither NIH nor the Research Council has established program objectives and priorities on the basis of identifiable national health needs.

NIH had a significant backlog of approved grant applications which could not be funded from available appropriations due, in part, to spending limitations imposed on NIH by the Office of Management and Budget. During the years 1965 through 1970, funds appropriated to NIH totaled about $193 million; however, funds of about $293 million were needed for approved applications in this period.

We believe that the determination of national research objectives, on the basis of needs, and the establishment of national priorities will assist NIH in ensuring that the available funds are allocated for projects in research areas of the highest national priority. Inherent in such a determination is the need to consider the availability of research personnel in high-priority areas.

For example, a shortage of research personnel in some scientific areas could hinder the attainment of research goals. We noted that, at the facility constructed by grantee A, only 125 of the 183 biochemistry research personnel proposed in the grant application were employed as of February 1969, 4 years after construction. At the facility

constructed by grantee B, only 51 of the 67 proposed biochemistry research personnel were employed as of April 1969, 6 years after construction. The shortages of research personnel are discussed more fully in chapter 3.

During the period July 1, 1965, through February 28, 1969, NIH awarded grants for the construction of biochemistry-oriented facilities involving approximately 3,300 full-time equivalent researchers. NIH was unable to evaluate the reasonableness of providing the facilities to house the 3,300 biochemistry researchers because of the lack of program information on the availability of trained personnel in relation to the facilities being constructed. In our opinion, this points to the need for NIH, in determining national research objectives and priorities, to obtain information on space and trained personnel needed to carry out research in the various disciplines.

Survey of health research facilities

NIH officials advised us of their efforts to obtain information on all health-related research facilities in public non-Federal and private nonprofit institutions throughout the country. In March 1968 NIH contracted with a professional survey research organization for a national survey of research facilities--the first survey after the research construction program began.

The survey report, dated April 1969, showed that about September 1968 the institutions covered[1] were using 41.5 million net square feet of health-related research space, of which 10.2 million net square feet were reported to be in unsatisfactory condition and in need of remodeling or replacement. Also the institutions reported that estimated requirements showed that 14.8 million net square feet of additional space were needed to relieve overcrowding.

---

[1]The contractor mailed questionnaires to 1,093 institutions and received responses from 671, which the contractor believed included essentially all the public non-Federal and private nonprofit institutions throughout the country where health-related research was being conducted.

Needs by 1980 were estimated at 54 million net square feet of new space and 17 million net square feet to be remodeled.

We believe that the survey represents a positive step by NIH toward obtaining the information needed to effectively allocate the limited available funds. From a planning standpoint, however, the survey lacked an important element, that is, information on the classification by the various research disciplines of the space presently used as well as of the space required in the future. Although the survey included information on the total net square feet of health-related research space, it contained no information on the amount of space devoted to the various research disciplines.

NIH officials told us that the original purpose of the survey was to obtain information to support future appropriation requests and that therefore the scope of the survey had been limited.

Conclusion

Since 1956 much has been accomplished under the health research facilities program to provide research space. The present NIH system for awarding research construction grants is based on the individual scientific merits of each project. Although there is a need for NIH to review each grant proposal for scientific merit, we believe that NIH should establish program objectives and priorities for use in determining whether proposals are directed toward meeting national needs.

The large backlog of approved projects that have not been funded evidences a high demand for funds under the program. To obtain the most benefits under a grant program for the construction of research facilities that are to serve the national health research needs, we believe that it is necessary for NIH to (1) determine systematically the nature and dimensions of the needs of the Nation and of the health research community by assessing existing research efforts and capabilities by area, discipline, and disease and (2) establish program objectives and priorities on the basis of such determinations so that, within available funding limits, these needs can be met in the order of their established priorities.

Recommendation to the Secretary of HEW

To obtain the most benefits from the health research facilities construction program in meeting the health needs of the Nation, we recommend that HEW determine systematically the nature and dimensions of the health research needs including assessing the existing research efforts and capabilities by area, discipline, and disease and establish program objectives and priorities on the basis of such determinations so that these needs can be met within the constraints of available funding limitations.

In its comments dated February 4, 1972 (see app. I), on a draft of this report, HEW stated that it agreed in concept with our recommendation and would develop a program plan if research facility program funds again became available. HEW also noted that this effort would involve not only the program staff and the Research Council but also, to a larger extent, the extramural programs of all NIH institutes and central NIH administration.

Concerning funding for this program, we noted that the Comprehensive Health Manpower Training Act of 1971 provided for a consolidated appropriation authorization for the research and teaching facilities programs, amounting to $250 million for fiscal year 1973.

ATTAINMENT OF GOALS FOR HEALTH TEACHING FACILITIES

The primary goal of the health teaching facilities program is to increase first-year enrollments in schools for the basic health professions. Actual increases in first-year medical and dental school enrollments, however, have not met the needed increases estimated when the health teaching facilities legislation was considered.

HEW attributed this failure to meet the needed increases in enrollments to (1) insufficient Federal funds to finance all approved applications for teaching facility grants and (2) schools' problems in raising matching funds.

Health manpower goals

When the health teaching facilities program legislation was being considered in 1962, the Secretary of HEW stated that, to maintain the ratio of physicians and dentists to the population, by 1970 admissions to medical schools would have to increase by about 50 percent and admissions to dental schools would have to increase by nearly 100 percent.

The law requires the Education Council and the Secretary of HEW, in acting upon applications for health teaching facility grants, to consider the relative effectiveness of the proposed facilities in expanding capacity for training first-year students and in promoting an equitable geographical distribution of opportunities for such training. In each application the grantee states the number of additional first-year students to be admitted following completion of construction.

In the case of projects for rehabilitating existing facilities, consideration also must be given to (1) the need for replacing or rehabilitating facilities to prevent curtailment of school enrollments and deterioration of the quality of training provided by the schools and (2) the relative size of any curtailment and its effect on the geographical distribution of opportunities for training.

The health teaching construction program was established in 1964. Through fiscal year 1972 the Congress appropriated $952.1 million for the construction of health teaching facilities. Through June 30, 1971, grants totaling about $794.5 million were awarded to 172 schools for 228 projects. NIH estimates that accommodations for 6,112 new first-year students will be created when construction of these projects is completed.

The following table summarizes the number of first-year accommodations for additional students estimated to have been provided by the grants awarded from inception through June 30, 1971.

Type	Number of schools assisted	Amount of awards	Accommodations for additional first-year students (note a)
Medical	78	$537,558,731	2,695
Dental	36	173,097,758	1,123
Osteopathy	3	8,951,321	23
Pharmacy	18	19,025,568	556
Optometry	6	7,085,868	181
Public health	7	19,294,251	465
Veterinary medicine	7	16,416,371	215
Nursing (note b)	16	8,830,647	766
Podiatry	1	4,249,138	88
Total	172	$794,509,653	6,112

[a]Based on statements in grantee applications.

[b]Funded prior to passage of Nurse Training Act of 1964.

Measurement of program accomplishments

Planning and construction is a long-term process, especially for a new medical or dental school which may encompass several years from planning to the productive yield of its first graduating class. Because of the relative newness of the program, the teaching facilities we visited

at six schools either were not completed or had been in use only for a relatively short period of time. Consequently we were unable to determine how well the teaching program was meeting its stated objectives at these schools.

As indicated by the following comparison of HEW estimates of medical and dental school enrollment increases needed by 1970 with actual increases, the national need for increased medical and dental school enrollments, as stated by the Secretary of HEW in 1962 when the health teaching facilities legislation was considered by the Congress, is not being met.

	Number of first-year students	
	Medical schools	Dental schools
Academic year 1960-61	8,298	3,616
Academic year 1970-71	11,360	4,565
Actual increase from 1960-61 through 1970-71	3,062	949
Increase estimated by HEW as needed by 1970	3,800	3,300
Percent of increase met	81	29

According to HEW available Federal funds for the program have not permitted the funding of all applications for grants by eligible schools. As of June 30, 1971, there was a backlog of approved but unfunded grant applications totaling $701.7 million. According to HEW also, another constraint on construction progress has been the delay by schools in raising matching funds. Some schools have found it extremely difficult to raise the necessary funds for their share of construction costs.

An official of the Bureau said that an additional constraint on the availability of school funds in the field of dentistry had been the lack of serious disorders to be treated compared with disorders to be treated in the field of medicine. Medical disorders can cause great pain and

even death whereas dental disorders, to a large extent, involve appearance problems. As a result dentistry has a lower priority than medicine. Increases in dental school enrollments would require a substantial commitment on the part of major university medical centers to the problems of dental education.

The funding problems cited by HEW may be alleviated by revisions to the authorizing legislation which became effective in fiscal year 1972. The Comprehensive Health Manpower Training Act of 1971 increased the amounts authorized to be appropriated and increased the Federal share of the cost of a project. The act also supplemented the grant program by adding new provisions to guarantee loans for institutions and to subsidize interest for guaranteed loans.

BEST DOCUMENT AVAILABLE

CHAPTER 3

OPPORTUNITIES FOR IMPROVING GRANT ADMINISTRATION

On the basis of our review of 16 selected health research and teaching construction projects, we believe that opportunities exist for NIH to improve its procedures for awarding and administering grants for the construction of such facilities.

Improvements could be made by (1) establishing adequate follow-up procedures for determining whether completed facilities are utilized as proposed in grant applications and conform to the general objectives of the construction programs, (2) establishing uniform policies and procedures for administering the health research and teaching construction programs, (3) requiring justification of any costs in grant applications which relate to incorporating features in a facility to facilitate the future expansion of the facility, and (4) issuing criteria clarifying circumstances under which movable equipment is eligible for funding on a matching basis under the research construction grant program.

UTILIZATION OF FACILITIES

During our visits to seven selected health-related research facilities which had been completed for more than 2 years, we noted that none had attained the research personnel levels projected in the grant applications. The personnel shortages ranged from 6 to 36 percent of the projected levels. At five of these facilities, about 15 percent of the space was being used for research in areas other than the specific areas to which the grantees had committed themselves as conditions of the grants.

Only one of the six teaching facilities included in our review had been completed for more than 2 years. At this facility about 8,700 net square feet of a total of about 33,000 net square feet were being used by departments other than the one for which the facility had been constructed.

Facilities not fully staffed

NIH requires that applications for research facility construction grants include information on the type of research to be conducted and on the number of researchers to be housed in the proposed facility. An applicant institution for a grant for a health-related research facility must show the number of persons engaged in that type of research at the time of the application and the number expected to be so engaged 2 years after completion of the facility.

The Research Council and its review groups use this information as one of the bases for evaluating the reasonableness of the applicant's space request and the amount of the grant to be awarded. NIH established a space standard which generally allowed 200 net square feet for each full-time equivalent employee working in research space. This standard was established as a control mechanism to avoid unwarranted space demands by an institution and overextension of its facilities.

We noted that the seven health-related research facilities shown in the following table, which had been completed for more than 2 years, were lacking approximately 900 of the 5,000 research or research-related personnel who were to conduct research in the facilities as proposed by the grantees in their applications.

	Number of researchers			
	Proposed--2 years following facility completion	Actual at time of our review	Shortage	
Project			Number	Percent
Grantee A:				
Project 1	145	136	9	6
Project 2	286	207	79	28
Grantee B	222	143	79	36
Grantee C	69	50	19	28
Grantee D	2,140	1,826	314	15
Grantee E	1,229	1,148	81	7
Grantee F	867	557	310	36
Total	4,958	4,067	891	18

There was no indication that NIH was aware that personnel projections had not been achieved at the seven projects reviewed. A national shortage of qualified research personnel and insufficient research funds were the two most common reasons given by grantee officials for not achieving their personnel projections.

For example, project 2 of grantee A was to accommodate the grantee's biochemistry and genetics departments. At the time of our review, about 3-1/2 years after the facility had been accepted by the grantee as being complete, the genetics department had 21 fewer full-time equivalent researchers and the biochemistry department had 58 fewer full-time equivalent researchers than proposed in the grant application.

Genetics department officials advised us that their research funds were not plentiful and that, as a consequence, caution had been used in recruiting additional researchers. Genetics department officials advised us also that the great expansion of health research facilities, due to the establishment of Federal programs to promote health research, had placed heavy demands on the supply of available talent. Officials of both departments advised us that competition for qualified personnel in their disciplines was quite intense.

An official of the biochemistry department informed us that certain areas of his department's facility had been used only temporarily after the departure in June 1966 of one of its professors, who had assumed chairmanship of a similar department at another university. Because of this professor's departure, six postdoctoral fellows, two graduate students, and three nonacademic staff members also left the department.

Space utilization not in accord with approved plans

Some of the completed research and teaching facilities were not being used in accordance with the approved grant applications.

Research facilities

The Public Health Service Act requires institutions that are awarded research facility construction grants to provide assurances that, for at least 10 years, the completed facilities will be used for the purposes of research for which constructed. The act provides that, if the grantee does not fulfill these assurances, the Government be entitled to recover an amount bearing the same ratio to the then-current value of the facility as the Federal grant bore to the cost of constructing the facility.

In April 1962 HEW's Office of General Counsel issued an advisory opinion--with which we tend to agree--stating in effect that a facility constructed with health research facility grants must be used for the specific disciplines and programs set forth in the grant application approved by HEW. The opinion stated also that any other use, even if health related, would not be permitted in the absence of a release for cause by the Secretary of HEW.

Although we believe that a formal release is not required, we are of the view that any substantial deviation from the research disciplines and programs described in the grant application, without the concurrence of the Secretary of HEW, would constitute a basis for recovery from the grantee.

As discussed in chapter 2, NIH's primary consideration in awarding health research facility grants is the scientific merit of the research programs proposed to be carried out in the facility. The importance placed by NIH on the proposed research programs is illustrated by the following comments of an NIH official in response to a request by a grantee to modify a project which had been approved but not constructed.

> "*** Since there were seven departments involved in the original application and obviously the scientific merit of the research activities were unlikely to have been considered of equal merit for all departments, a substantial reduction in program, necessitated by this reduced request, might very well entail a different priority

BEST DOCUMENT AVAIL

judgment on the part of the Council if, for example, the scientifically weaker programs were to be accommodated and the stronger programs left out."

At five NIH-financed projects expected to provide about 665,000 net square feet of space for health-related research following completion of construction, we noted that about 99,000 net square feet were not being used by the research departments or disciplines specified in the approved applications, as shown in the following table.

Grantee	Net square feet of research space: Committed to health-related research after project completion	Not used or not used for purposes intended	Percent not used for purposes intended
B	39,216	11,342[a]	29
C	5,929	1,506[b]	25
D	301,177	27,611	9
E	248,238	31,629	13
F	70,114	27,287	39
	664,674	99,375	15

[a]Includes 3,606 net square feet unassigned from September 1967 to March 1969.

[b]Unassigned from May 1968 to January 1969.

For example, we noted considerable variation at grantee B in the amount of space assigned to departments from that originally proposed by the grantee. About 8,500 net square feet of committed research space were assigned to such departments as pathology, radiotherapy, and protein chemistry, which were not shown in the approved grant application. Also, for an 18-month period immediately preceding the date of our review, over 3,600 net square feet

BEST DOCUMENT AVAILABLE

of this space were not used. Subsequently this vacant space was reassigned from the pharmacology department to the pathology department, a department not assigned research space in the approved grant application.

A grantee official advised us that the research space was not in use during the 18-month period because the university had not been successful in hiring a chairman for the pharmacology department and that, as a result, pharmacology had been discontinued as a separate department.

Grantee B also had proposed to use about 4,200 net square feet of space for biophysics purposes, but only about 2,100 net square feet were used for these purposes because biophysics was not established as a separate department as had been planned. Grantee officials were of the opinion that the university was required to use the space only for health-related research and was not required to use the space only for those disciplines specified in the grant application.

Our review indicated that grantee officials generally were not aware of the legal restrictions on the use of NIH-funded research facilities. Grantee officials with whom we discussed the variations between projected and actual uses of research facilities believed that the use of grant-constructed facilities was limited to health-related research activities but not necessarily to the research areas shown in the grant applications.

In April 1968 NIH instituted a procedure requiring grantees to certify periodically whether the facilities were being used for the purposes for which they had been constructed. NIH, however, did not require the grantees to submit any details to support the certifications and did not make any follow-up visits to verify the certifications. NIH officials stated that there were no procedures requiring reviews of the use or staffing of grant-constructed facilities.

At three of the facilities included in our review, the grantees had certified to NIH that the facilities were

BEST DOCUMENT AVAILABLE

being used for the purposes for which they had been constructed. We found, however, that none of these facilities were being used completely in accordance with the NIH-approved grant applications.

For example, when grantee B certified in June 1968 that the approximately 28,000 net square feet of grant-constructed research space were being used properly, over 3,600 net square feet of this space were vacant and had been unassigned for about 9 months.

This space continued to be unassigned for 9 additional months. Similarly, at grantee C, over 1,500 net square feet of the approximately 5,900 net square feet of grant-constructed research space were vacant at the time the institution certified that all the space was being used properly.

Our discussion with an NIH official indicated problems concerning changes in the use of research facilities. The official explained that there was a twofold problem associated with the grantee's desire to change areas or disciplines of research within a grant-financed facility. The first problem relates to HEW's possible loss of control over the research space after the grantee has been granted permission by HEW to use the facility for a purpose other than that stated in the application.

The second problem involves the additional review that would have to be made by the reviewing bodies, including the Research Council and the Scientific Review Committee. The official said that, to properly evaluate a request for such a change, NIH would have to evaluate the grantee's capabilities in the proposed new area and would have to make an additional site visit and that the grantee would have to submit the request to the Research Council.

Officials of the Bureau of Health Manpower Education told us in December 1969 that they would seek from the HEW General Counsel clarification of the April 1962 advisory opinion on the use of research facilities. HEW advised us that, as of February 1972, disposition of this matter was still pending with the HEW General Counsel.

BEST DOCUMENT AVAILABLE

Teaching facilities

The Public Health Service Act provides that, if a health teaching facility ceases to be used for the teaching purposes for which it was constructed within 20 years after completion, the Government be entitled to recover an amount bearing the same ratio to the then-current value of the facility as the Federal grant bore to the cost of constructing the facility.

The act provides also that, when a construction grant is awarded to expand the training capacity of an existing school, the first-year enrollment during the first full school year after completion of construction and for each of the next 9 school years must exceed the school's highest first-year enrollment for any of the 5 full years preceding the year in which the grant application was made by at least 5 percent or five students, whichever is greater.

Due to the relative newness of the health teaching facilities construction program, only one of the teaching projects included in our review had been completed for more than 2 years. This was a teaching facility of the college of optometry at grantee G.

At the time of our visit to this facility, the college had attained its required annual increase of 10 first-year students. Our review showed, however, that other departments also were using the health teaching facility. We noted that, of approximately 33,000 net square feet in the facility, about 800 net square feet (two offices and one teaching laboratory) were being utilized exclusively by a department other than the optometry department and about 7,900 net square feet were being utilized jointly by the optometry and other departments. The jointly used lecture classrooms were used by other university departments 53 percent of the time to teach subjects not related to optometry, such as philosophy, sociology, and psychology.

The dean of the college of optometry advised us that the use of classroom space by other university departments was not expected to change significantly in the future. The dean stated that the primary reason for scheduling other university department classes in the optometry facility was

that the classroom space on campus was insufficient to accommodate the other departments. The use of classroom space by other departments, in his opinion, did not interfere with the college of optometry's operations.

NIH did not require applicants to submit a detailed class schedule showing the proposed use of space to enable NIH to evaluate the reasonableness of the amount of space requested.

NIH did not establish detailed procedures concerning follow-up reviews of completed projects. HEW regional offices were instructed to make follow-up inspections of completed teaching facilities during the third, sixth, and ninth years of operations to determine whether the facilities were being used for the purposes for which the construction grants had been awarded. The regional offices were not given any criteria or detailed instructions for conducting these inspections, other than these general instructions. An NIH official told us that NIH had not made any follow-up reviews of grantee G's facility.

NIH officials advised us that, as a result of this information on grantee G's facility, procedures would be developed so that in the future grantees would be aware of their responsibilities regarding the use of health teaching space. NIH officials advised us also that detailed procedures would be developed concerning follow-up reviews of completed facilities.

Conclusions

NIH should improve its procedures for ensuring that health research and teaching facilities are utilized as proposed in grant applications and in conformance with the general objectives of the construction program. Such improved procedures are needed to provide NIH with a means of identifying, on a timely basis, the areas in which grant commitments are not being met and in which facilities are not being used properly.

Because one of the expressed purposes of the health research facility construction program is to expand the applicant's capacity for research, we believe that it is

important for NIH to be fully cognizant of the uses (or nonuses) being made of a research facility and of the actual research contributions being made toward program objectives.

NIH does not require applicants for teaching facility grants to submit detailed schedules of proposed use of space. We believe that such information is necessary for NIH to evaluate the reasonableness of the amount of space requested.

NIH officials agreed that the follow-up review procedures were in need of improvement. They stated that, subject to the availability of personnel and operating funds, NIH planned to develop a system of periodic postconstruction reviews for both health research and health teaching facilities, to determine (1) what institutions are doing in facilities and (2) whether program requirements are being met.

In the case of research and teaching facilities used for programs and purposes which deviate substantially from the programs and purposes described in the grant applications, we believe that, on the basis of an evaluation of the uses to which the facilities are being put, the Secretary of HEW either should concur in such uses or should seek appropriate recoveries from the grantees.

Recommendations to the Secretary of HEW

We recommend that HEW

--require applicants for teaching facility grants to submit detailed information on the proposed use of space;

--establish appropriate follow-up procedures for both the health research and the health teaching facilities programs, to ensure that the grant-funded facilities are being used for the purposes for which they were constructed, and either concur in such uses or seek appropriate recoveries from the grantees; and

--supplement the existing certification procedure, which requires grantees to certify to the actual use being made of NIH-funded research facilities, by

requiring descriptive details relating to such use and by periodic verifications.

In its comments (see app. I), HEW stated that it accepted, in concept, our recommendation that applicants for teaching facility grants be required to submit detailed information on the proposed uses of space but that it would be difficult to require all applicants to submit such detail. HEW stated also that an alternative approach--evaluating the effectiveness of planned utilization through the use of site-visit teams from NIH--was contained in new construction grant review criteria recently accepted by the Secretary. In our opinion, this approach, if properly carried out, would enable NIH to adequately review the reasonableness of space requested.

HEW agreed that follow-up procedures should be improved and stated that a detailed procedure had been developed to determine the effectiveness of teaching facilities in meeting stated needs, including efficiency of utilization of such facilities. HEW stated that essentially all teaching facilities constructed and in operation for at least 1 year either had been reviewed or were scheduled for site visits within the next few months using the new postconstruction assessment procedure.

With respect to research facilities, HEW stated that progress had been more limited because of a shortage of staff and funds to allocate to a project which was not receiving new funds. HEW stated also that it had taken action in cases of obvious inappropriate usage or nonusage of research facilities; that it expected, at a minimum, to continue follow-up of problem situations; and that it hoped to be able to expand these activities.

HEW agreed that our recommendation with respect to the certification procedure should be implemented and stated that it was modifying the procedure by requesting a description of ongoing research activities and space usage, including the rationale for significant projected or actual changes in space utilization. HEW stated also that necessary follow-up would be made when usage problems were identified.

BEST DOCUMENT AVAILABLE

ESTABLISHMENT OF UNIFORM PROGRAM PROCEDURES

Prior to the consolidation of responsibility for the two construction programs under NIH as a result of HEW's 1968 reorganization of health functions (see p. 5), the two programs were administered under different procedures and guidelines promulgated by the respective organizational offices formerly responsible for their administration. These differences--which affect the allowability of costs to be charged to grant funds and the manner in which grants are administered--continue to exist, although NIH has taken several steps to consolidate the organizational responsibilities and has initiated studies of the administrative procedures with a view toward their consolidation.

To assist NIH in this task, we brought to NIH's attention a number of varying procedures noted in our review that appeared to be subject to consolidation or coordination. For example, one program allows demolition costs and the other does not.

NIH advised us in June 1969 that it considered the task of developing uniform guidelines for the several construction programs placed under NIH as a high priority and that a study being made of NIH's management functions for construction programs was expected to lead to the development of consolidated policies within the context of NIH, HEW, and Bureau guidelines.

In July 1971 an NIH official told us that action had not been completed on uniform guidelines since funds had not been appropriated for some of the construction programs in fiscal years 1970 and 1971.

Conclusion

We believe that the consolidation of all NIH construction functions under the Bureau emphasizes the need to establish, to the extent feasible, uniform policies and procedures for the various construction grant programs. Uniform policies and procedures seem to be particularly desirable for projects under two or more facility construction grant programs, such as joint projects involving both research and teaching, because they would simplify NIH's administration

BEST DOCUMENT AVAILABLE

of the programs and the grantees' adherence to policies and procedures.

Recommendation to the Secretary of HEW

We recommend that HEW establish, to the extent feasible, uniform policies and procedures for all NIH construction grant programs.

In its comments (see app. I), HEW agreed that uniform policies and procedures were desirable and stated that uniform policies were being established to cover most of the differences noted at the time of our review.

NEED FOR JUSTIFICATION RELATING TO FUTURE EXPANSION OF FACILITIES

NIH has encouraged applicants for facility construction grants to include in their grant applications costs relating to features which will facilitate future expansion of the facilities. NIH, however, does not require that the applications describe the proposed timing and purposes of the future expansion or specifically identify the additional costs for the expansion features. As a result neither NIH nor the Education and Research Councils is able to properly consider the provisions for future expansion or their costs in evaluating and establishing priorities on the relative merits of construction grant applications.

Future expansion features are provided by designing and constructing a facility in such a way--for example, by using larger structural components--that at some future time additions can be made readily. NIH encourages grantees to include future expansion capabilities in their project construction plans. For example, NIH's Office of Architecture and Engineering stated that:

> "The Public Health Service is interested in knowing whether future expansion of the proposed facility has been considered. Anticipated expansion, as well as unanticipated expansion of isolated segments of the facility, should be provided for in the design. Neglect of this provision will be questioned ***."

For four of the projects included in our review, we estimated that construction costs applicable to expansion features totaled about $354,500.

For example, at grantee H's institution, each of the three schools (medicine, dental, and nursing) involved in the new construction was designed so that at some future date two additional floors could be added. We estimated that project costs had been increased by $228,000 to provide this capability for expansion. We found no evidence that NIH had inquired into the additional costs or the intentions of grantee H for expansion.

Grantee A's project 3 included estimated construction costs of about $114,000 for undefined future expansion purposes. One of the buildings was designed and constructed to provide for a future four-floor addition. Grantee officials advised us that they planned to partially implement this expansion capability by adding two floors for use as an extension of the university's existing hospital rather than specifically for health-related research.

NIH officials agreed that there was a need for information in the grant application concerning the additional cost of providing for future expansion capabilities, as well as the intent and timing of the grantee to implement future expansion provisions, and that such information would be useful in evaluating the relative merits of requests for construction grants.

Conclusion

We believe that applications containing provisions for future expansion should include descriptions of the proposed timing and purposes of the expansion and the estimated costs of incorporating construction features to facilitate the expansion of the facilities. Without such information NIH and the Education and Research Councils cannot adequately consider provisions for expansion in evaluating the relative merits and establishing the priority of the applications in comparison with other construction grant applications.

Recommendation to the Secretary of HEW

We recommend that HEW require NIH to obtain from applicants for facility grants sufficient information relating to future expansion of the facilities to enable appropriate appraisals of the relative costs and merits of the grant applications.

In its comments (see app. I), HEW agreed that additional information would be desirable and stated that a new program guide being developed for construction grants would include a requirement for more specific information in the grant application on the need, schedule, and costs for any future expansion included in the project and on whether Federal participation would be requested for such expansion.

MOVABLE EQUIPMENT--NEED FOR FULL DISCLOSURE OF GRANTEES' NEEDS AND CRITERIA FOR DETERMINING SOURCE OF FUNDING

NIH provides grant financing on two bases--one on a matching basis, the other on a full-funding basis--for movable equipment needed to furnish newly constructed or remodeled research facilities, including expensive scientific laboratory equipment.

NIH, however, does not require applicants to state how their movable equipment needs will be financed in the applications for health research facilities grants and has not issued any criteria defining the circumstances under which movable equipment is eligible for funding on a matching basis or on a full-funding basis. We believe that such requirements are necessary to provide NIH and the Research Council with sufficient information on the applicants' total needs and sources of funding at the time of the grant review and approval process and to provide for uniform treatment of all applicants for research facility construction grants.

The authorizing legislation permits the use of construction grant funds for the equipping of newly constructed or existing buildings. These grants, except grants for projects determined to have special national or regional significance, are subject to a 50-percent matching requirement; that is, Federal funds may not exceed 50 percent of the cost of the facility to be constructed.

The component research institutes of NIH award grants for research projects to universities, hospitals, laboratories, and other public or private institutions. Under these research project grants, which are not subject to a matching requirement as are construction grants, the grantees are permitted to procure movable equipment not available for the projects but required for their execution.

For the projects reviewed by us, similar types of equipment had been financed from the two different funding sources, generally without any justification for the use of either source.

The sources of funding for movable equipment used by grantees reviewed by us are shown in the following table.

Grantee	Source of funding
A:	
Project 1	Nonmatching research project grant funds.
Project 2	Nonmatching research project grant funds.
B	Matching construction grant funds.
D	Nonmatching research project grant funds.
E	Nonmatching research project grant funds.

For example, subsequent to the award of a research facilities construction grant to grantee A, under which it requested no funds for movable equipment, research project grants totaling $308,650 were awarded by the National Institute of General Medical Sciences, NIH, to grantee A for the purchase of scientific movable equipment for the new facility. Since research project grants were used, the purchases were not subject to matching requirements. We noted that similar equipment had been purchased by grantee B using matching funds provided by NIH under its research facilities construction grant.

Conclusion

NIH does not require applicants to state how their movable equipment needs will be financed in applications for research facilities grants. NIH funds movable equipment under two separate authorities, research project grants which do not have a matching provision and research facilities grants which do have a matching provision. Since NIH has not issued any definitive criteria on the use of these two funding sources, there is no assurance that applicants will be treated uniformly. Also NIH and the Research Council are not provided with full information on equipment needs and sources of funding.

We believe that NIH should establish criteria defining the type of movable equipment eligible for financing on a matching basis under the research construction grant program or on a full-funding basis under the research project grant programs of the several NIH institutes. An NIH official with whom we discussed this situation stated that it would be feasible and reasonable for NIH to establish such criteria.

Recommendation to the Secretary of HEW

We recommend that HEW require NIH to strengthen its grant administration procedures for the financing of movable equipment related to the construction of health research facilities by

--clarifying the sources of funding available under NIH's several authorized grant programs to ensure uniform treatment of grant applicants and better use of funds appropriated for the several programs and

--requiring grant applicants to state clearly the proposed funding for their movable equipment needs.

In its comments (see app. I), HEW agreed that formal guidelines would be needed to clarify the sources of funding available if the research facilities construction program received new funds. HEW agreed also that grantees should be required to state clearly the proposed funding sources for movable equipment and stated that HEW would develop such a requirement when the need arose.

BEST DOCUMENT AVAILABLE

CHAPTER 4

SCOPE OF REVIEW

We examined into the management of the health research and health teaching facilities programs by NIH. We reviewed NIH policies and procedures used in (1) allocating construction program resources, (2) reviewing and approving applications for construction grants, and (3) performing follow-up reviews of completed projects.

We reviewed also grants totaling about $30 million that had been awarded for the construction of 13 research facilities projects and grants totaling about $14 million that had been awarded for the construction of six health teaching projects. Three of these projects were joint projects which received Federal grants from both the health research and the health teaching facilities programs.

We examined the authorizing legislation and NIH and grantee institution files relating to the administration of the two construction programs. We also held discussions with appropriate officials of NIH, HEW regional offices, and the grantee institutions.

Our review was made at NIH headquarters in Bethesda, Maryland, and at HEW regional offices in San Francisco, California; Chicago, Illinois; Boston, Massachusetts, and New York, N.Y. Our review was made also at grantee institutions located in the States of Washington, Oregon, California, Ohio, New York, Massachusetts, and Rhode Island.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D.C. 20201

OFFICE OF THE SECRETARY

FEB 4 1972

Mr. Morton A. Myers
Assistant Director
Civil Division
General Accounting Office
Washington, D.C. 20548

Dear Mr. Myers:

The Secretary has asked that I respond to your letter of October 19, 1971, which transmitted a draft of a GAO audit report entitled, "Management Of Health Research And Teaching Facilities Construction Programs." The enclosed statement sets forth the Department's comments on the specific findings and recommendations in the draft report.

We appreciate the opportunity to review and comment on the draft report.

Sincerely yours,

James B. Cardwell
Assistant Secretary, Comptroller

Enclosure

APPENDIX I

DHEW COMMENTS ON GAO DRAFT REPORT ON MANAGEMENT OF HEALTH RESEARCH AND TEACHING FACILITIES CONSTRUCTION PROGRAMS, NIH

GAO RECOMMENDATION - p. 20 [See GAO note, p. 49.]

To obtain the most benefits from the health research facilities construction program in meeting the health needs of the Nation, we recommend that HEW periodically determine the nature and dimensions of the health research needs, including an assessment of the existing research effort and capabilities by area, discipline and disease; and establish program objectives and priorities based on such determinations so that these needs can be met within the constraints of available funding limitations.

DHEW Comments

We agree in concept with this recommendation and will develop such a plan, if and when research facility program funds become available again. In this connection, it should be noted that while the Comprehensive Health Manpower Training Act (HR 8629) mentioned in GAO's report has been enacted, funding for the above purposes has not been provided.

The GAO report accurately describes the care shown by NIH in its administration of the program for constructing health research facilities. However, there were several facets of the way in which the program was administered that were not brought out in the report. We would like to mention them for the record:

- NIH Institutes providing significant support for investigators at the applicant institution were asked to comment as to their interest in providing future support of such programs. Their responses were available during review of the construction proposals.

BEST DOCUMENT AVAILABLE

- The Research Council, while seldom changing numerical priorities established by the Review Committee, did make relative program relevance judgments by designating certain projects to have higher or lower program relevance indicated by the priority score. However, since few projects affected by this procedure (initiated in 1967) were funded, there is little basis on which to determine the effectiveness of these ratings in promoting better utilization of space.

- A third mechanism for establishing priorities on funding health research facility needs was made possible in legislative amendments which authorized up to 2:1 matching for projects designated to have special national or regional significance. No funds have been appropriated since this provision was added, however.

In overview, we realize that our past practices and procedures fell short of a definitive plan for establishing ordered objectives and priorities. We will attempt, if and when research facility program funds again become available, to develop such a plan. This effort, however, involves not only the program staff and the Research Council, but to a larger extent the extramural programs of all NIH institutes and central NIH administration.

GAO RECOMMENDATION - p. 36 [See GAO note, p. 49.]

We recommend that HEW require applicants for teaching facility grants to submit detailed information on the proposed use of space.

HEW Comments

We accept in concept the GAO recommendation that we require applicants for teaching facility grants to submit detailed information on the proposed use of space. It will be difficult, however, to require all applicants to provide such detail. For example, schools planning new facilities are also planning new programs. Therefore, schedules are not fixed at that point in time.

An alternate approach to solving this problem is contained in new construction grant review criteria which was recently accepted by the Secretary. These criteria speak to evaluating the effectiveness of the planned utilization of a proposed facility through the use of site visit teams from NIH. These teams will base their evaluations on

BEST DOCUMENT AVAILABLE

information supplied by the institution - such as space utilization schedules which should indicate the reasonableness of the amount of the space requested. The institution will be asked to provide information dealing with such factors as time, density, distribution, and flexibility.

Time and density utilization is related primarily to the instructional space such as classrooms, conference, auditorium, and basic science laboratories. In the case of density, the teams will be looking at the occupancy factor and where the number of occupants, for instance, exceeds the number of stations planned, or where the number of occupants planned is substantially less than the number of stations planned it would indicate examples of poor utilization. Under distribution, the functional relationships of space would be looked at in order to minimize additional space. If it is felt by a site team that utilization of proposed space cannot be judged without a detailed class schedule, the applicant will have to provide the schedule.

GAO RECOMMENDATION - p. 36 [See GAO note, p. 49.]

We recommend that HEW establish appropriate follow-up procedures, for both the health research and health teaching facilities programs, to ensure that the grant-funded facilities are being used for the purposes for which they were constructed, and either concur in such uses or seek appropriate recoveries from the grantees.

DHEW Comments

As stated in the GAO report, we agree that follow-up procedures should be improved. Much has been done within the past year to remedy the situation--in January 1971, a detailed procedure was developed to determine effectiveness of teaching facilities in meeting stated needs, including efficiency of utilization of such facilities. Updating information obtained from the grantee was used as background review material prior to on-site assessments by teams comprised of health manpower staff and consultants from health professions schools and related institutions. Following in depth discussions with grantee representatives, including review of benefits and problems, rationale for proposed usage changes, etc., site visit reports were prepared and presented to appropriate review committees and to the teaching council for review and approval or, if necessary, other recommendations for follow-up actions to deal with problem situations. At this time, essentially all teaching facilities constructed and in operation for at least one year either have been reviewed or are scheduled for site

BEST DOCUMENT AVAILABLE

visits within the next few months using this post construction assessment procedure. We plan to continue this evaluation with other projects as new facilities become sufficiently operational for a meaningful review.

In the case of research facilities, progress in improving follow-up procedures has been more limited. Our General Counsel is currently amplifying the April 1962 General Counsel advisory opinion on the use of research facilities. Our primary limitation on extensive follow-up, however, continues to be lack of staff and funds to allocate to an activity which for over two years has had no new money and may not be funded for an indefinite time to come. Nonetheless, we have acted in cases of obvious inappropriate or nonusage of research facilities coming to our attention through the triennial certification procedures or through occasional site visits. Such activities have resulted in a number of recommendations for release of space and/or substitution of equivalent space and, in several instances, reduction of grant or attempts to recapture funds. We expect, at a minimum, to continue careful follow-up of definite problem situations and hope to be able to expand these activities.

GAO RECOMMENDATION - p. 36 [See GAO note, p. 49.]

We recommend that HEW supplement the existing procedure requiring grantees to certify on the actual use being made of an NIH-funded research facility by requiring descriptive details relating to such use, and by periodic verification.

DHEW Comments

We agree that this recommendation should be implemented and are modifying the certification procedure by requesting a brief but complete description of ongoing research activities and space usage, including rationale for significant projected or actual changes in space utilization. This modification will affect future certifications for research projects, and the information obtained will be evaluated for appropriateness of usage by comparison with intent of the Research Council in recommending the project for approval. Necessary follow-up will be conducted in cases where usage problems are identified.

BEST DOCUMENT AVAILABLE

GAO RECOMMENDATION - p. 38 [See GAO note, p. 49.]

We recommend that HEW establish, to the extent feasible, uniform policies and procedures for all NIH construction grant programs.

DHEW Comments

We agree that uniform policies and procedures for all NIH construction grant programs are desirable and we have proceeded accordingly during the past two years.

Following the consolidation of responsibility for the Health Research Facilities and Health Professions Education Facilities Programs in the Bureau of Health Professions Education and Manpower Training, a formal procedure was established to develop uniform policies for the administration of all Bureau construction programs. Through this mechanism DHEW, NIH, and Bureau policy and procedure decisions are implemented for the construction programs of the Bureau. Uniform policies are being established to cover most of the differences in program procedures noted at the time of the detailed GAO review in 1969.

Under the multipurpose provisions of the Health Manpower Act of 1968, research and library space, which formerly would have been funded as joint projects with Health Professions, are now funded entirely under the Health Professions Authority. This authority has done much to eliminate grantee confusion.

GAO RECOMMENDATION - p. 40 [See GAO note, p. 49.]

We recommend that HEW require NIH to obtain from applicants for facility grants sufficient information relating to future expansion of the facilities to enable appropriate appraisals of the relative costs and merits of the grant applications.

DHEW Comments

We concur that additional information would be desirable and would enable site visitors, Review Committee, and Research Council to more definitely evaluate the relative merits of future expansion needs, capabilities, and costs. The new program guide for construction grants which is now being developed will include a requirement for more specific information in the application (Form HEW-537) on the

BEST DOCUMENT AVAILABLE

...costs for any future expansion included in the ... Federal participation will be requested for such ...

...available on future expansion plans or options has ...red and evaluated in all phases of the review ... of the information provided necessitated somewhat ...ents. In many cases, however, these considerations ...nt modification in the final project scope and ...ation.

...DATION - p. 43 [See GAO note.]

...that HEW require NIH to strengthen its grant admini- ... for the financing of movable equipment needed in ... the construction of health research facilities by ... sources of funding available under NIH's several ...programs to ensure uniform treatment for grant ...timum use of funds appropriated for the several ... requiring grant applicants to clearly state their ...needs and proposed funding for movable equipment.

...

...that formal guidelines will be needed to clarify sources ...available - if and when the Health Research Facilities ... Program is reactivated. Also, we concur that grantees ...required to clearly state the proposed funding source for ...and will develop such a requirement when the need ...

...point out, however, that the research facilities pro- ...ently requested and obtained lists of movable equipment ...housed in the proposed facility as part of the grant ... Although the usefulness of such a listing, developed in many ...years prior to anticipated occupancy, has been ...staff, consultants, and applicants, it has been available ...

...The page numbers on these comments refer to the pages of ...draft report.

BEST DOCUMENT AVAILABLE

PRINCIPAL OFFICIALS OF
THE DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
RESPONSIBLE FOR THE ADMINISTRATION OF ACTIVITIES
DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
SECRETARY OF HEALTH, EDUCATION, AND WELFARE:		
Elliot L. Richardson	June 1970	Present
Robert H. Finch	Jan. 1969	June 1970
Wilbur J. Cohen	Mar. 1968	Jan. 1969
John W. Gardner	Aug. 1965	Mar. 1968
ASSISTANT SECRETARY (HEALTH AND SCIENTIFIC AFFAIRS):		
Merlin K. DuVal, Jr.	July 1971	Present
Roger O. Egeberg	July 1969	June 1971
Philip R. Lee	Nov. 1965	Jan. 1969
SURGEON GENERAL, PUBLIC HEALTH SERVICE:		
Jesse L. Steinfeld	Dec. 1969	Present
William H. Stewart	Oct. 1965	July 1969
DIRECTOR, NATIONAL INSTITUTES OF HEALTH:		
Robert Q. Marston	Sept. 1968	Present
James A. Shannon	Aug. 1955	Aug. 1968
DIRECTOR, BUREAU OF HEALTH MANPOWER EDUCATION (note a):		
Kenneth M. Endicott	Nov. 1969	Present
Leonard D. Fenninger	Jan. 1967	Nov. 1969

[a]The Bureau of Health Manpower was created in January 1967 from a number of ongoing programs. It was a separate operating bureau of the Public Health Service until April 1968, when it was transferred to the National Institutes of Health. The Bureau's name was changed to the Bureau of Health Professions Education and Manpower Training in January 1969 and to the Bureau of Health Manpower Education in September 1970.

U.S. GAO, Wash., D.C.