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ABSTRACT

Information about state support for health professions education and for students attending health professions schools is presented, based on a request by the Senate Subcommittee on Health and Scientific Research. The Subcommittee will be considering legislation, during the 96th Congress, to extend and modify Titles VII and VIII of the Public Health Service Act, which authorize federal programs affecting the training and deployment of health personnel. State financial aid to selected health professions education from 1975 through 1980 is assessed, including three separate fiscal periods, and the relationship between federal capitation, state institutional aid, and tuition revenues is explored. Based on a survey of the states and site visits, information is also presented on state scholarships and loans, and on growth and changes in states' efforts to tie student financial assistance to future service payback principally in underserved communities. Trends in state commitments to the following health professions are analyzed: medicine: osteopathy: dentistry: optometry: pharmacy: podiatry: veterinary medicine: and diploma, associate-level, and baccalaureate-level nursing. Appended materials include: state financial aid program descriptions and statistical data for the 50 states and the District of Columbia: information on the health professions federal student assistant programs, 1979-80: and a description of the study methodology. (SW)

96th Congress
2d Session

COMMITTEE PRINT

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State Support for Health Professions Education

A Compendium Prepared at the Request of

Senator Edward M. Kennedy, Chairman,

Subcommittee on Health and Scientific Research, United States Senate

for the use of the

Committee on Labor and Human Resources, United States Senate

Senator Harrison A. Williams, Jr., Chairman

[Prepared by the Congressional Research Service, Library of Congress, 96th Congress, 2d Session]

December, 1980

FOREWORD

In the course of preparing S. 2375, the "Health Professions Education and Distribution Act of 1980," for consideration by the Subcommittee on Health and Scientific Research and the Committee on Labor and Human Resources, the Congressional Research Service (CRS) was asked to undertake an inventory of state programs which support the education of health personnel. In response, CRS contracted for the study to be done because no existing source was available. Preliminary information from the contract was used by the Committee in preparing the Committee Report on this legislation.

The final report, which follows, contains valuable information about state support for health professions education and for students attending health professions schools. Members of Congress, state officials, health professions students, school administrators and the public will find this document to be a useful compendium of information which is not otherwise available.

HARRISON A. WILLIAMS, JR.,
Chairman,
Committee on Labor and Human Resources.

EDWARD M. KENNEDY,
Chairman,
Subcommittee on Health and Scientific Research.

United States Senate
COMMITTEE ON HUMAN RESOURCES
WASHINGTON, D.C. 20510

August 15, 1979

Gilbert Gude, Director
Congressional Research Service
Library of Congress
Washington, D.C. 20540

Dear Mr. Gude:

The Subcommittee on Health and Scientific Research will be considering legislation, during the 96th Congress, to extend and modify Titles VII and VIII of the Public Health Service Act which authorize Federal programs affecting the training and deployment of health personnel.

As you know, many States provide support for health professions education and resource development. As Chairman of the Subcommittee, I have learned that full information about the purpose and amount of this support, both for the schools and their students, is not retrievable from any readily available source. Yet, this information is critically important as the Subcommittee considers its legislation.

Therefore, I am requesting that the Congressional Research Service undertake an inventory of current state programs which support the education of health personnel. The amount of the support, the conditions which it is provided, and the expected outcomes, by school, would be very helpful.

Thank you for your assistance in helping the Subcommittee on this matter.

Sincerely,

Edward M. Kennedy
Chairman
Senate Subcommittee on Health
and Scientific Research

Congressional Research Service
The Library of Congress

Washington, DC 20540

LETTER OF SUBMITTAL

December 1, 1980

Honorable Edward M. Kennedy
Chairman, Subcommittee on Health
and Scientific Research
United States Senate
Washington, D.C. 20510

Dear Senator Kennedy:

Enclosed please find a copy of the study "State Support for Health Professions Education" prepared at your request by the Congressional Research Service for the Subcommittee on Health's deliberation on the extension of Title VII and Title VIII health manpower training programs. You had requested a detailed inventory of State programs which support the education of health personnel. The enclosed contract study, prepared for the Congressional Research Service by Lewin and Associates, examines changing levels of State support for health professions training and the various conditions which may accompany such assistance. In so doing, it surveys both institutional support and student assistance provided by the States for health professions training.

It has been our pleasure assisting the Subcommittee with this study. I understand that this document has been useful to the Subcommittee in its deliberation on health manpower training legislation during the past several months, and we look forward to its publication by the Committee. We hope that we can be of further assistance in the future.

Sincerely,

Gilbert Gude
Director

Enclosure

INTRODUCTION

This study, "State Support for Health Professions Education," was prepared at the request of Senator Edward M. Kennedy, Chairman of the Subcommittee on Health and Scientific Research, for use by the Committee on Labor and Human Resources.

The study was prepared for the Congressional Research Service (CRS) by Lewin and Associates, Inc., under a CRS contract (Contract No. 79-105). It provides an inventory of State programs which support health professions training and examines changing levels of such support. Project officers for this contract were Richard Price and Janet Kline of the Education and Public Welfare Division of CRS. The views expressed herein do not represent an endorsement by the Congressional Research Service.

ACKNOWLEDGMENT

This report represents the contributions of many individuals who participated actively in its development. Although Lewin and Associates accepts full responsibility for the content of this study and its presentation, we wish to express our deep appreciation to the Congressional Research Service project team, Ms. Janet Kline, Chief, Health Section and Mr. Richard Price, Analyst in Social Legislation, who were sources of thoughtful criticism and constant stimulation.

This project would not have been successful had we been unable to secure the generous support of the major national associations involved in the training of health professions students, state finance and educational officers who sponsor and operate institutional support programs, and various leaders of health professions schools. All were co-operative and patient.

We engaged the services of three consultants: Ms. Lauren Leroy, University of California Health Policy Program, San Francisco; Ms. Linda LeBlanc; and Ms. Marion Ein, Washington, D.C. Ms. Ein and Ms. Leroy interviewed selected state officials and Ms. Leroy wrote Supplement 2 of the report, "The Health Professions Federal Student Assistance Programs 1979–80." Ms. LeBlanc assisted in the early phases of data collection.

The principal Lewin and Associates staff responsible for this project are:

Mr. Lawrence Lewin
Mr. Robert Derzon
Ms. Rhea Margulies
Ms. B. J. Quinn
Mr. Eric Gaensler

We were ably assisted in the production of the manuscript by Ms. Kristine Grimley, Ms. Karen Loveridge and Ms. Ilana Gruber.

CONTENTS

Chapter I. Executive Summary

This report is a study of state financial aid to selected health professions education from 1974 (school year 1973–74) through 1980 (school year 1979–80). The study examines three separate fiscal periods and analyzes trends in state commitments to eight health professions. The relationship between Federal capitation, state institutional aid, and tuition revenues is explored.

Based on a survey of the states and site visits, the study reports on state scholarships and loans, and on growth and changes in states' efforts to tie student financial assistance to future service payback principally in underserved communities.

State Role in Institutional Financing of Health Professions Education

The financing of health professional education is a blend of Federal and state aid, tuition and fees, and a myriad of special income sources that range from fees for patient and animal care services to contract research, endowment, and gifts. The multiple revenue sources reflect the multiple products of health professions schools. It is possible, within limits, however, to isolate the principal revenue sources for the "educational" component of the mix.

There are three principal sources of financing for the educational programs of health professions schools:

State institutional support for public schools (or) state "capitation" for private schools;
Tuition; and
Federal "capitation" to public and private schools.

Although states provide other forms of support to health professions schools, this study limits its definition to state institutional and interstate contractual purchases. Appropriations for teaching hospitals, the educational component in Medicaid reimbursement, and special project grants, such as primary care residency training grant or mental health fellowships, were not included.

Why have states provided a strong underpinning of financial support to health professions education? In sum, their support rests on their desire to:

Provide career opportunities for state residents;
Fill state health manpower needs;
Secure educational opportunities for disadvantaged residents;
Build a scientific and economic base; and
Develop a community health service capacity.

As long as these motivations continue to drive state legislative policy, it is likely that substantial state commitment to health professional training will persist.

Trends in State Institutional Aid From 1974–80

Study findings show that in contrast to Federal institutional support which has declined, state financing is substantial and has grown over the six-year period for reporting public and private schools. Average annual growth in state aid has ranged from 11 percent to 31 percent, depending on the profession.

State institutional support is, of course, higher on average for public than for private schools. In 1980, public medical schools received per student state aid averaging $20,500; public state aid to private medicine was $2,930. It should be noted that "per student" calculations are based on enrollment of first professional degree candidates only.

States have been willing to support in-state, private health professional education, but at lower levels. Private schools of medicine and osteopathy, however, are not benefitting from increased state aid as their costs increase. In the 36 reporting private medical schools, average annual per capita state support rose only 3.5 percent per year over the six-year period compared to 11.1 percent for the public schools. In contrast, private dental and optometry schools appear to be gaining increased state support. State aid for these private schools increased 23.8 percent and 45.7 percent per year on an average annual basis over the six-year period. It is apparent that state per capita aid to private dental education was nominal in 1974, but by 1980 was nearly double the per capita aid for the reporting private medical schools.

An assessment of relative trends in state aid to public and private schools can be made by examining the public-to-private ratios of per student state financing between 1974 and 1980. In medicine, state aid to private schools is one-tenth the level of aid to public schools. In dentistry, private schools receive on average one-half of the public schools' support; in optometry about one-third.

The study also provides a snapshot of institutional aid by states to the extent that data were available. There is wide range in dollars per student on a profession-by-profession basis across the several reported states. While the range can be explained in part in those states with a mix of public and private schools, some states appear to be spending two to three times more student dollars than other states.

State Institutional Support in Relation to Tuition and Federal Capitation

As state financing to the health professions has grown, Federal institutional support through capitation has declined. The reduction in Federal financing was most precipitous from 1974 to 1978 when the average annual percentage decline ranged from about 13 percent for medicine and dentistry to almost 17 percent annually for veterinary medicine and optometry. Federal capitation, however, for the three school years studied (1974, 1978, 1980) never exceeded $2,137 on average for any profession. By 1980 average Federal capitation for medicine, osteopathy, and dentistry had declined to $1,072 per student for optometry and podiatry, Federal capitation amounted to $313 and $391 respectively.

As a proportion of state institutional aid, the study found that by 1980 Federal capitation amounted to a small percentage of state support—as little as 6.1 percent in medicine, 9–10 percent in osteopathy and dentistry, and 4.4 percent in veterinary medicine.

Despite the increase in state institutional support the study does not conclude that states have made up the Federal losses on a dollar-for-dollar basis. Interviews in selective states disclosed that some states' appropriations did recognize the Federal shift and others did not. Clearly the private schools, particularly in medicine, did not benefit from sizeable increases in state support over the six-year period.

Tuition represents the third important revenue resource for the educational component of health professions schools. Tuition and fee revenues are expanding rapidly, particularly in private schools. The gap between public and private average tuition is widening. In 1980 that gap is $4,700 per year in medicine, in dentistry $5,400, and in osteopathy $5,560. Private schools, even those with considerable income from endowment and gifts, reported in interviews their concerns for maintaining students diversity and ability to compete for students.

When Federal capitation, state institutional aid, and tuition are combined, the relative importance of each revenue source can be measured. The findings conclude that:

State support for public schools and tuition increases in private schools are the dominant explanation of expanded revenues;

State support for private health professions other than dentistry has not kept up with inflation nor with declines in Federal support; and

Tuitions are likely to increase at a rate that exceeds inflation in the general economy.

Interstate Contracts in State Financing of Health Professions Education

States support health professions education by subsidizing other states to provide places for residents. The number of participating students, classified by profession, and the state dollars paid are described in this report. In 1978 contract places represented 22.0 percent of the entire enrollment of optometry students, 12.3 percent of veterinary medicine enrollment, 4.1 percent for dentistry, and 1.0 percent of all medical school enrollment.

Interstate contracting reflects a rather genuine market in education and should be watched carefully. Contracting is a reflection of a state's option "to make or to buy" health professions education depending upon its perception of the cost of education, its manpower needs, and the extent of educational opportunity it wishes to provide. Most contracts are arranged through clearinghouses known as "compacts" although some arrangements are made directly between a state and an out-of-state institution.

The study found that among all students involved in compacts, health professions students are the dominant users of interstate compacts. In 1980, 3,631 students in the eight professions were financed by over $24.8 million dollars of state support. Comparable figures in 1974 showed 2,387 students at a cost of $7.6 million.

The average cost for contracting when contrasted with average state institutional support figures shows there are significant economic advantages to contracting for certain health professions.

Since 1978 contract costs have been rising at a slower rate than state institutional support for in-state schools. With respect to the professions studied, states appear to be reducing their purchase of out-of-state medical school places and stabilizing their purchase of dental posts. This finding may reflect the relative and increasing costs of these seats, greater satisfaction with the in-state supply of health manpower, or a tendency of schools to limit the admissions process to in-state residents only.

The State Role in Student Aid Financing

State support of health professions education includes various forms of aid to students. Of particular concern in this study is the extent to which state sponsored student financial aid achieves specific manpower goals. The three major categories of state student aid are: Scholarships; loans; State service payback programs.

State Grants

The terms "grants" or "scholarships" are used interchangeably. In this report grants are treated separately from programs which require "service payback" scholarships. Grants are unconditional forms of aid.

The report attempts to isolate state grants as state funds which are awarded to students in the health professions generally on the basis of merit or need. Caveats are expressed to alert the reader to methodological constraints that lead to under-reporting of special state funds for these purposes. Tuition remission and public university fundings for scholarships, as examples, were not readily traceable.

Individual student grant awards earmarked for the health professions students were found to be of low value, compared to average loans and to Federal Exceptional Financial Need (EFN) grants. Almost all state grants are need-based and less aid is available to graduate students than to undergraduate students.

Of 116 reporting Association of American Medical Colleges (AAMC) medical schools, only 13 reported state scholarship aid to their students in 1978. All but four were public schools and one of the public schools, which reported over $1.2 million in state scholarship aid, requires students to sign a "learning contract" which stipulates service. State scholarship aid, if averaged across all medical schools in 1978, was only 3.4 percent of all university grants and averaged only $10,200 per school.

State scholarship aid to dental students is reported to the American Dental Association annually. State funds amounted to $67 per dental student, for all schools in 1978. In 1977, only 45 percent of all dental schools reported any state scholarship aid, the aggregate dollars at just under $1.5 million.

State loan programs for students were also investigated. Only three states identified special health professions loan programs and they were small in scope. State guaranteed loans were not counted since they are

almost universally Federally guaranteed and do not commit state funds. The study concludes that state loan programs, as defined, make a minor contribution to meeting financial needs of health professions students.

State Service Payback Programs

States have been actively developing special programs which fund students in return for services provided within the state following the training period. Thirty-nine payback programs in 29 states involving one or more of the eight health professions are in place currently. Every state program covers medical students, 11 states include dentistry and/or osteopathy, 5 include veterinary medicine, 7 include optometry, and public health and pharmacy students are eligible in only one state program.

Most states expect that the service payback will be in primary care, allowing a grace period for post-graduate training. Three-fourths of the programs specify service in an underserved area. Most state programs mandate that students accept no other service-condition student aid program. State residency is invariably required and some states show preference for students whose homes are in underserved regions. Most programs have buy-out provisions which are becoming stiffer and less attractive.

State payback programs tend to be less generous than similar Federal programs such as National Health Service Corps or Armed Forces "scholarships." For that reason, the number of state programs have proven more appealing to public school students whose tuition levels are lower. State payback programs and the number of participating students are increasing in several states. Kansas (1980) has 544 health professions students in payback arrangements; Alabama (1980) 241 students; South Dakota (1980) 273 students; North Carolina (1980) 216 students, and Massachusetts (1980) 210 students. Service payback programs by state and by profession are documented fully in the report.

Not all states are enthusiastic about payback programs. The programs are usually quite costly with a long, slow yield. Furthermore, some states believe health manpower is adequately supplied, while others prefer to encourage primary care through special programs at the post-graduate training level.

More students will seek Federal and state payback arrangements as educational costs increase. When a large number of students begin to compete for the various program slots and Federal and state programs seek students from the same pool, certain problems are likely to arise. To date they tend to be minor except in placement activities where it was reported in a few instances that the National Health Service Corps and a state program had failed to plan together.

Most states concede that their major responsibility is to provide institutional support and to control tuition levels of the public schools, leaving loans and scholarships to others.

Chapter II. The State Role in Institutional Financing of Health Professions Education

A. Background and Introduction

The financing of health professional education institutions is a subject of great interest and equally great complexity. Our public and private educational establishment makes a substantial commitment to the preparation of health manpower. This commitment is evidenced by high ratios of faculty to health professional students, elaborate facilities that accompany health science training, the research and clinical environments considered essential to the training mission, and years of multiple graduate education required for almost every major health profession. It is not unusual for 25–40 percent of a university's budget to be devoted solely to graduate health professional training and for substantial additional capital and operating funds to be committed to university-owned hospitals.

A major reason for the complexity and immense financial effort devoted to health professions educational institutions is the fact that these institutions produce not only professional education but also the development of knowledge through biomedical research, patient care, and community service. The existence of these often joint products and the complicated multiple funding sources on which they must rely makes efforts to identify the cost of education extremely difficult.

As noted above in chapter I there have been three principal sources of financing for the educational programs of health professions schools—federal capitation, state appropriations, and tuition. Later in this chapter we discuss the relative roles played by each of these three sources of income and show that during the 1974 to 1980 period Federal capitation had, for all seven professions studied, declined both in absolute terms (in medicine from $2,137 per student to $1,072) and as a percentage of all three sources (in medicine from 16.0 percent to 4.7 percent). Thus, while the costs of education have risen considerably during this six-year period, Federal institutional support has been a shrinking income source, leaving an increasing share of a rapidly growing total to be borne by state appropriations and tuition. While both of these latter sources increased significantly in terms of dollars per student, state institutional support increased its proportional share in each of the professions studied, a pattern that was particularly pronounced with respect to public schools.

This increased reliance on state appropriations to finance educational costs reflects a history of state involvement in this area. Despite the technical difficulties state budget and appropriations staff face in determining precisely what they are paying for and what it should cost, many states seem firmly committed to this use of public funds.

State support is not, of course, limited just to public institutions; a large number of the private medical and dental schools also receive some form of state capitation or subsidy. In 1978, of the 50 private med-

ical schools, 37 received state funds in 16 states and the District of Columbia although 12 private schools in the same states and Puerto Rico did not. Howard University in the District of Columbia received Federal support.[1] In dentistry, of 24 private schools reporting 1978 fiscal information to the American Dental Association, 16 reported state educational support of $28 million[2] for the year, roughly one-third of the dollars received by private medical schools. State support to private dental schools was larger, in fact, than Federal capitation support to them. The American College of Pharmacy (ACP) testified in 1979 that 45 percent of the expenses of all colleges of pharmacy was met by state and local appropriations. (Local assistance is minimal.)

The level and constancy of state institutional support through the appropriation process reflects the high priority many states have placed on health personnel training. The Association of American Medical Colleges (AAMC) has reported that in the states of West Virginia, Texas, Kansas and Nebraska medical education has received respectively, 12.9 percent, 11.0 percent, 9.0 percent, and 8.3 percent of all public funds appropriated to institutions of higher education.[3] Considering the number of medical students relative to total graduate and undergraduate students, this level of public support for medical education is impressive.

Several aspects of health professions education should be kept in mind when considering state support:

First, there is great diversity among the professions in the level, duration, clinical exposure, and cost of education. Although recent studies have not been made on the costs of educating various health professions, we know from prior studies such as that of the Institute of Medicine (IOM) in 1972–73 that there is a wide range of average cost within each profession as well as between them. (See table II.1.)

Second, as the IOM study also revealed, there are important differences that sponsored research and patient care programs play in both the educational process and overall financing of these professional schools. This factor is important in selecting the appropriate total cost figures to use as a benchmark at each school and for each profession. The IOM, AAMC, and other studies have sought to use a consistent definition of "education."

Third, it should also be noted that there is considerable cost sharing and cross-subsidization which has not and cannot be precisely accounted for in our study of state institutional appropriations. Health professional education is now clustered on campuses, often within a "health sciences center" organizational structure where there is joint teaching, common use of physical facilities, and shared support services. Thus, state appropriations made directly to the centers are often expected to serve a broad range of professional training and may mask a true accounting of state institutional support for each health profession.

Finally, state institutional support is often a lump sum budget to the university or to a campus of the university which then allocates

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[1] Rosenthal, Joseph, "Datagram: State Funds in Support of Public and Private Medical Education," *Journal of Medical Education*, Vol. 54, December 1979, pp. 964–967. Washington, D.C.

[2] American Dental Association, "Annual Report Dental Education 1977–78." Financial Report Supplement, #4, Table 1, Chicago, Illinois.

[3] Rosenthal, Joseph, *Op. cit.*

funding. For these reasons, most studies (such as our own) rely on university or school-produced data rather than on state budgetary records.

TABLE II.1.—AVERAGE AND RANGE OF ANNUAL NET EDUCATION EXPENDITURES PER STUDENT BY PROFESSION, 1972-73

	Average	Range
Profession:		
Medicine	$9,700	$5,150–$14,150
Osteopathy	7,000	6,350– 7,800
Dentistry	7,400	5,050– 13,400
Optometry	3,100	2,550– 4,950
Pharmacy	3,050	1,600– 4,950
Podiatry	4,900	3,850– 5,950
Veterinary medicine	5,550	4,300– 7,750
Nursing:		
Baccalaureate	2,450	1,200– 4,050
Associate	1,650	1,050– 2,150
Diploma	1,500	400– 2,550

Note: Dollars are rounded to nearest $50.

Source: Institute of Medicine "Costs of Education in the Health Professions," National Academy of Sciences, January 1974. P.xviii, Washington, D.C.

State financial support of health professions schools may take any one of several forms: These include:

State appropriations to public universities, their universities' medical centers as a "line item" appropriation, or to specific free-standing public schools. All of these are called "institutional aid" or "institutional support."

Private school capitation, often referred to as private school "subsidies" or "private capitation."

Interstate contracts in which state funds are paid directly, or through compacts, to out-of-state institutions to cover negotiated "overhead" expenses in order to permit the exporting states' students to enroll and pay resident tuition rates at the importing, out-of-state institutions.

Direct support in the form of teaching hospital supplements usually to state or public university hospitals to offset free care or educational costs for pharmacy, dental, nursing, and medical students.

Special project educational support to universities for in-state training of various health professionals, in conjunction with such diverse activities as operating public health services, staffing area health education centers, establishing primary care residency training centers in which medical students participate, etc.

Indirect state support such as the state share of medicaid monies that flow into university-owned clinics or to faculty-practice pools for services.

This study deals with the most significant form of state educational support, "institutional aid" and private school state "capitation" financing. We will also discuss certain features of the interstate contracts in this chapter.

B. The Purposes of State Institutional Aid to the Health Professions

To provide a context for a review of state institutional aid, our interviews attempted to assess the various reasons why states have been

eager to fund health professional training. In the past six years budget actions reflect the willingness of most state governments to increase health professions student numbers and total dollars. Underlying our quest was the thought that should these purposes change, the states might modify their current enthusiasm for consistently enlarging their core financial assistance to health professional schools.

We have found that the following factors at the state level drive decisions for financing institutional support of health professional education and its related activities.

CAREER OPPORTUNITIES FOR RESIDENTS OF THE STATE

State legislators are extremely sensitive to the number of positions in schools of medicine, dentistry, and veterinary medicine in particular. The usual measure of student places (by health profession) per 1,000 eligible in-state resident students or per 10,000 in the population is frequently cited and compared to other states even where states may have high ratios of practitioners to population. Low opportunity ratios for youngsters raises enrollment goals and state aid that is ordinarily tied to increased enrollment.

States are often prepared to pay higher capitation levels to in-state private medical schools which accept greater proportions of state residents. North Carolina and New York are prime examples of states with such incentives. (See table II.2.)

—New York State buys medical student posts in Israel for New Yorkers;

—Illinois is considering extra places at Meharry for Illinois residents. Meharry has proposed 15 medical and 5 dental slots in each entering class for Illinois students. Illinois would pay Meharry $4,200 (M.D.) and $3,000 (D.D.S.) in exchange for a future three-year Illinois service commitment.

FILLING STATE HEALTH MANPOWER NEEDS

States, with their historic responsibilities for protecting the public health and welfare, train essential health professionals for their communities. Every state legislature has justified state funding of health professional education on the basis of perceived health manpower needs within its own state.

State support has also been influenced by Federal maintenance-of-effort incentives for enrollment expansion that are conditions of Federal capitation.

TABLE II.2.—STATE FUNDS IN SUPPORT OF PRIVATE MEDICAL SCHOOLS, 1978 [4]

District of Columbia—Capitation allowance of $5,000 per medical student.

Florida—Capitation allowance of $9,000 for each Florida resident enrolled in the M.D. program and $11,000 for each Florida resident enrolled in the Ph. D. to M.D. degree program.

[4] Source: Association of American Medical Colleges, Journal of Medical Education, December 1979.

Georgia—Through the Southern Regional Education Board, capitation allowance of $6,500 for each Georgia resident enrolled over a base period number; in addition, a special appropriation to the developing private school.

Illinois—Through the Illinois Board of Higher Education, capitation allowance, up to a ceiling amount, of $4,200 per year for Illinois residents enrolled in a four-year program and $5,600 a year for Illinois residents enrolled in a three-year M.D. degree program.

Louisiana—Capitation allowance of $5,000 for each Louisiana resident enrolled in the M.D. degree program, for up to 50 residents per class. Due to budgetary considerations, the actual allowance has been less than $5,000 per resident.

Maryland—Capitation allowance per full-time equivalent student equal to 15 percent of the state appropriation to the public medical school per full-time equivalent student.

Massachusetts—Through the New England Board of Higher Education, capitation allowances to two private medical schools of $8,872 for the enrollment of seven Massachusetts residents for each of the first two-year classes.

Minnesota—Capitation allowance of $8,000 for each Minnesota resident up to a ceiling of 40 students per class.

New Hampshire—Capitation allowance for $5,000 for each new Hampshire resident for a total of 16 enrolled in three-year curriculum.

New York—Funds to private medical schools through three types of contractual arrangements: (a) enrollment expansion aid—$6,000 per year for New York state residents admitted from a foreign medical school under the "Fifth Pathway" program or through the Coordinated Transfer Application System, limited to 25 students in the clinical years; (b) capitation allowance—$1,500 for the preclinical years and $2,500 for the clinical years, except for students counted under (a); 70 percent of school's entering class must be New York state residents for the school to receive all of the capitation allowance, and the capitation award decreases proportionately for a less than 70 percent resident student enrollment; (c) Bundy plan—$3,100 for each M.D. and Ph. D. graduate and $650 for each masters degree graduate, except for students counted under (a).

North Carolina—Capitation allowances to the two private medical schools for each North Carolina resident enrolled. One school receives $4,500 plus $500 for a special scholarship fund for North Carolina residents; the other school receives $7,000 plus $1,000 for the scholarship fund.

Ohio—State level of support per medical student equal to the state appropriation per medical student to the public medical schools in the state.

Pennsylvania—Capitation allowances of $4,000 to each of the four private schools and varying levels of support provided to the two state-related schools.

Rhode Island—State level of support is not conditioned upon student residence in the state, but one-fourth of the students are state residents.

Texas—State level of support based upon the state appropriations, per medical student, to the public medical schools in the state. An

informal agreement provides that 70 percent of each entering class be state residents.

Virginia—Capitation allowance of $5,333 per student.

Wisconsin—Capitation allowance of $8,303 for each Wisconsin resident, conditioned on the enrollment of at least 350 Wisconsin residents.

Just as Federal policy makers are raising questions related to the reality of shortages, so too are the states. In the State of Washington, for example, many individuals within the pharmacy profession, the school faculty, and the Legislature have expressed the view that a reduction in pharmacist output of the two public pharmacy schools may be desirable. The school believes that there is unemployment and underemployment of well-trained registered pharmacists in the state. Because institutional support to public schools has been closely tied to negotiated faculty-student ratios and square-feet-per-faculty formulae, it is likely that with a reduced student body, either per student costs will rise or institutional aid will be reduced. Planning in the school of pharmacy is moving toward a possible decrease in pharmacist students and a compensating increase in the production of pharmacy-related professionals who can work in environmental and industrial fields. For schools of dentistry and medicine to adapt to produce fewer practitioners and to use their plants and faculties for other professional training was considered to be difficult.

On balance, however, state institutional aid throughout the nation continues to hold quite firm in an effort to meet perceived shortages of health professionals. Whether this factor will continue to be as powerful in the 1980s in spurring state institutional support is open to question.

EDUCATIONAL OPPORTUNITIES FOR THE DISADVANTAGED

In several states there is a strong evidence that institutional support is attempting to improve educational opportunities for disadvantaged minorities. Health professional careers are attractive and further there is a special need to bring equity and services to the disadvantaged populations. State aid to schools is often coupled with state educational master plans or even special budgetary control language to promote this objective. Thus, social policy priorities are a stimulus to state institutional aid.

BUILDING A SCIENTIFIC AND ECONOMIC BASE

Another important consideration of states in supporting health professional education is the goal of developing a broad, strong scientific and economic base. Powerful academic-health science centers, primed with state dollars, have large economic multipliers. States recognize that a core faculty, financed through institutional support, attracts federal and private research grants and contracts. Typically strong health science centers have also attracted Veterans Administration hospitals, corporate research institutes, and other enterprises that contribute to local and regional economic development.

BUILDING A COMMUNITY SERVICE CAPACITY

States have built powerful health delivery systems through their state university-owned centers. Iowa is one notable example among many. In large urban and in rural areas, the states' support of health professional education provides a direct service benefit to patients receiving care from faculties and students in the educational programs. State support of private schools in the health professions has not only preserved some schools from certain disaster but strengthened the core funding of those schools whose tertiary care or specialized services bring care to the citizens of the state. Prestige and pride are strong state incentives in health professional educational financial support.

C. FINDINGS: TRENDS IN STATE INSTITUTIONAL AID LEVELS AND THEIR RATE OF INCREASES, 1974 TO 1980

In this section of the study and the section following, we present our findings on the three basic sources of educational revenue for health professions schools—state appropriations, Federal capitation, and tuition. This section presents the findings of the study related to state institutional aid, levels of aid by profession or on per student basis, and trends in per student institutional support. The data is organized as follows:

The level of State institutional support.—per student by profession over three separate years—1974, 1978, and 1980.

The level of State support for public and private schools.—differences in aid to public and private schools.

Differences among States in the level and growth of State aid.—differences among various states.

In the following section these findings will be interrelated with tuition and Federal capitation charges.

Several preliminary notes related to these findings are indicated. (For further discussion of methodology including data limitations—see Supplement 3.)

Public health school and pharmacy school data were eliminated due to inconsistencies in reporting enrollment data and difficulties of isolating state support dollars specifically for these schools.

State institutional aid data is most useful when examined on a per student basis and when measuring the percent changes in per student support. Absolute dollars, if tallied by state or profession, are misleading since the surveys include a significant portion but not all institutions in the country. We have not totalled state institutional support either by state or nationally because some schools could not or were unwilling to furnish the data.

State support excludes state funds through bilateral contracts or interstate compacts and excludes direct program support funds (e.g., resident stipends, teaching hospital subsidies, etc.) as defined earlier in this chapter.

Enrollment figures exclude allied health students within a professional school although in some cases appropriations may include educational funds used to train personnel who are not first professional degree candidates.

By taking these precautions, we believe the trends indicated by the data presented are clear and reliable and can be useful in assisting policy makers in the further refinement of national and state health manpower policy development.

TABLE II.3.—STATE INSTITUTIONAL SUPPORT BY PROFESSION (PER ENROLLED PROFESSIONAL DEGREE STUDENT: 1974, 1978, 1980; PUBLIC AND PRIVATE)

[N = Number of non-Federal established schools as of 1980. ( ) = Numbers in parentheses are the sample of schools on which data were available]

Profession	Amount per student			Average annual percent change		
	1974	1978	1980	1974–78	1978–80	1974–80
Medicine	$9,510	$12,580	$17,650	7.2	18.5	10.9
N = 124	(79)	(79)	(79)			
Osteopathy	2,220	8,910	11,390	41.6	13.1	31.3
N = 14	(4)	(6)	(6)			
Dentistry	4,790	7,750	10,800	12.8	18.0	14.5
N = 59	(39)	(41)	(32)			
Veterinary medicine	6,830	11,120	13,380	13.0	9.7	11.9
N = 24	(10)	(16)	(16)			
Optometry	970	2,620	3,650	28.2	18.0	24.7
N = 12	(8)	(8)	(7)			
Podiatry	170	550	720	34.1	14.4	27.2
N = 5	(5)	(5)	(5)			

Source: Lewin and Associates Survey of Health Professions Schools.

1. THE LEVEL OF STATE INSTITUTIONAL SUPPORT

Table II.3 shows that state institutional support is substantial and growing for all of the health professions studied. In 1980, state support for 79 medical schools averaged $17,650 per enrolled full-time student, up $5,000 per student over 1978. Other highly supported professions are veterinary medicine at $13,380 per student, osteopathy at $11,390 and dentistry at $10,800.

Because data on total per student educational costs are not available, we are unable to relate state support figures to total education costs. However, we are able to compute the sum of Federal capitation, state support and tuition, which, with the exception of private endowment income, represent a significant portion of total educational revenue. If this sum is used as a rough surrogate for educational costs, then it is clear from Table II.11 that state support is increasing faster than these costs.

The pace at which state support is growing varies among the reported schools. All professions reveal escalations in annual average per student state support of in excess of 10 percent per year over the six years. In medicine, on a per student basis, state institutional support rose an average 7.2 percent per year between 1974 and 1978. It rose at better than twice that rate (18.5 percent) in the last two school years. A similar pattern from 1978 to 1980 is observed for dentistry, although the earlier four-year period reveals that states increased their support on an average annual increment of 12.8 percent, a higher rate of increase than that for medicine. Osteopthy grew rapidly with the advent of a well-financed new Texas school which had minimal enrollment in the first years.

We believe the increased rate of state support for most professions in the last two years is attributable in part to the precipitous increase

in general inflation of the economy that has affected all educational enterprises as well as the impact of decreases in Federal capitation. The loss of Federal funds ranged $400–$900 per student by 1978 from initial capitation levels and the unpredictability of Federal financing in the two years that followed was made up, at least in part, by compensating state support.

2. THE LEVEL OF STATE SUPPORT FOR PUBLIC AND PRIVATE SCHOOLS

Not only are there significant differences in state educational support across the health professions, but there are striking differences in the levels of state aid for public and private schools. (See table II.4.)

TABLE II.4.—STATE INSTITUTIONAL SUPPORT BY PROFESSION: PUBLIC VERSUS PRIVATE (PER ENROLLED PROFESSIONAL DEGREE STUDENT: 1974, 1978, 1980)

[N = Number of non-Federal established schools as of 1980. ( ) = Number in parentheses is the sample of schools on which data were available]

Change profession 1974-80	Amount per student			Average annual percent change		
	1974	1978	1980	1974-78	1978-80	1974-80
Private:						
Medicine	$2,390	$2,770	$2,930	3.8	2.8	3.5
N=50	(36)	(36)	(36)			
Osteopathy	1,440	1,370	1,410	−1.2	1.4	−.35
N=8	(3)	(3)	(3)			
Dentistry	1,660	3,140	5,980	17.3	38.0	23.8
N=24	(16)	(17)	(10)			
Veterinary medicine	5,010	6,080	10,770	5.0	33.1	13.6
N=3	(1)	(1)	(1)			
Optometry	140	850	1,340	57.0	25.6	45.7
N=6	(5)	(5)	(4)			
Podiatry	170	550	720	34.1	14.4	27.2
N=5	(5)	(5)	(5)			
Public:						
Medicine	15,630	20,410	29,470	6.9	20.2	11.1
N=74	(43)	(43)	(43)			
Osteopathy	7,890	38,910	38,370	49.0	−.7	30.2
N=6	(1)	(3)	(3)			
Dentistry	6,930	12,110	13,030	15.0	3.7	11.1
N=35	(23)	(24)	(22)			
Veterinary medicine	7,050	11,570	13,590	13.2	8.4	11.6
N=21	(9)	(15)	(15)			
Optometry	4,280	8,830	9,040	19.8	1.2	13.2
N=6	(3)	(3)	(3)			
Podiatry [1]						
N=0 [1]						

[1] No schools in this category.

Source: Lewin & Associates Survey of Health Professions Schools.

The findings reveal that public schools are faring considerably better in the level of state support than private schools, a result that is not unexpected. What is surprising is the very high level of per student support for medicine and osteopathy in proportion to the other disciplines in the public schools and the relatively stagnant growth in state dollars per student for private medical schools. State support for private medical education is not keeping pace with inflation showing an average increase per student over the six-year period of 3.5 percent. When coupled with the decline in Federal capitation, public support for private medical education has dropped. The sum of Federal capitation and state support per student for private medical schools was $4,428 in 1974 and $4,002 in 1980. The comparable per student figures for public schools was $17,854 in 1974 and $30,542 in 1980, an average annual increase of 9.4 percent.

In contrast with medicine, state support for private dental education is rising rapidly and, for the schools reporting, the level of support per student is twice as high as for private medical schools. The sample of ten private dental schools in 1980 is small but appears to be representative. These schools averaged an annual growth in state institutional aid of 38 percent from 1978 to 1980.

Osteopathic institutional support from states is remarkably high for the public schools, but the sample is skewed by the new Texas school. For the three private osteopathic schools, state aid has been at a steady dollar state of $1,300–1,400/student per year.

State support to veterinary medical schools follows a similar pattern to that of dentistry.

State support to private schools of podiatry is minimal in the reporting schools. Private schools of optometry appear to be benefiting from moderate state institutional aid in the few schools which reported state financing.

One way to assess the trends in levels of state aid to public and private schools within individual disciplines is to examine the ratio of state institutional support per student in public schools to the same factor for private schools within each professional group. Table II.5 presents these ratios and shows significant differences among the professions. For medicine the gap between support for public and private schools has increased dramatically since 1974. For dentistry and optometry the gap has narrowed, while for veterinary medicine, where there is only one of three private schools reporting, the difference between public and private school support is minimal.

These changes need not suggest, however, that states have embarked on a massive capitation system for private schools in dentistry, veterinary medicine, and optometry. We do not know to what extent the number of non-reporting private schools are receiving state financial aid. For example, of 24 veterinary medical schools, eight are excluded from the sample, two of which are private schools. They either did not report or reported unusable data.

TABLE II.5.—RATIO OF PER STUDENT STATE INSTITUTIONAL SUPPORT, PUBLIC AND PRIVATE: 1974, 1978, 1980 (PUBLIC TO PRIVATE)

	1974	1978	1979
Profession:			
Medicine	6.54	7.37	10.06
Osteopath	NA	NA	NA
Dentistry	4.17	3.86	2.18
Veterinary medicine	1.41	1.90	1.26
Optometry	30.57	10.39	6.75
Podiatry [1]			

[1] All schools of podiatry are private.

Source: Table II.4.

3. DIFFERENCES AMONG STATES IN THE LEVEL AND GROWTH OF STATE INSTITUTIONAL SUPPORT

As indicated earlier, the status of state budget data and incomplete responses to our own survey of health professions schools limits the validity of individual state data by profession. In most states there are usually no more than a few health professional schools and the absence of one public professional school will substantially understate state aid. Indeed, in a state with one public and one private medical

school, if only the private school reported, the data would grossly misrepresent that state's institutional support program. The cumulative national computation on a per student basis is more reliable and has been used.

Within these limitations can any judgments be made about differences among the states? We believe that where all schools within a profession in a state did report, it is valid to report the finding by state. (See table II.6.)

Within a profession, but among states, there is a wide range in per student state appropriation. Some of the reasons these occur in our view are:

Start-up costs for new schools;
Differences in faculty compensation plans;
Willingness of states to finance research or other related educational activities;
Numbers of allied health professionals trained within a professional school; and
Imperfect budgeting around the direct costs of education.

Within a single profession, but among the states, there is considerable variation in the rate of increase (and indeed some decreases) in state support per student. The rate of change appears to have little relationship to the support level itself.

TABLE II.6.—STATE INSTITUTIONAL SUPPORT PER ENROLLED PROFESSIONAL DEGREE STUDENTS FOR SELECTED STATES, 1974, 1978, 1980

				Percent average annual change		
	1974	1978	1980	1974-78	1978-80	1974-80
Medicine:						
Arizona	$33,300	$43,920	$38,770	7.0	−6.0	2.6
Colorado	12,860	16,520	20,246	6.5	10.7	7.9
Connecticut	11,500	12,900	15,130	2.9	8.3	4.7
Florida	15,440	19,410	24,060	5.9	11.3	7.7
Indiana	11,910	15,940	17,750	7.6	5.5	6.9
Iowa	10,470	17,100	21,970	13.1	13.3	13.1
Michigan	15,240	15,030	20,270	−.3	16.1	4.9
Mississippi	11,800	18,750	24,740	12.3	14.9	13.1
Nebraska	4,590	13,350	13,540	19.7	12.8	17.4
New Mexico	9,190	26,100	29,470	29.8	6.3	21.4
North Dakota	9,540	23,660	30,370	25.5	13.3	21.3
Pennsylvania	5,210	6,050	6,190	4.4	1.2	3.3
Vermont	8,570	9,110	10,250	1.5	6.1	3.0
Dentistry:						
Alabama	11,390	20,740	23,600	16.2	6.7	12.9
Colorado	23,500	19,480	23,450	−4.6	9.7	0
Connecticut	23,380	25,550	24,990	2.2	−1.1	1.1
Florida	44,400	19,440	23,230	18.7	9.3	−10.2
Indiana	4,250	5,220	8,350	5.3	26.5	11.9
Iowa	9,270	16,450	19,440	15.4	8.7	13.2
Mississippi	5,600	7,930	10,720	9.1	16.4	11.4
Massachusetts	0	0	0	0	0	0
Missouri	4,020	6,270	8,180	11.8	14.2	12.6
Oregon	6,890	10,360	12,180	10.7	8.4	10.0
Washington	8,210	13,090	16,240	12.4	11.4	12.0
Optometry:						
California	850	1,320	1,490	11.6	6.2	9.8
Illinois	30	290	390	76.3	16.0	53.3
Pennsylvania	190	400	1,440	20.5	89.7	40.2
Tennessee	330	2,740	3,040	69.8	5.3	44.8
Texas	2,800	5,250	5,530	17.0	2.6	12.0
Veterinary medicine:						
California	13,240	25,370	27,040	17.7	3.2	12.6
Colorado	1,870	5,120	5,010	28.6	−1.0	17.9
Georgia	6,990	10,080	10,080	9.6	0	6.3
Indiana	5,400	8,130	9,560	10.8	8.4	10.0
Michigan	7,330	12,774	11,930	2.6	2.1	8.5
New York	19,190	16,260	17,610	−4.1	4.1	−1.4
Ohio	6,090	6,250	8,960	0	19.7	6.6
Oklahoma	6,740	8,460	10,930	5.9	13.7	8.4
Pennsylvania	5,010	6,080	10,770	5.0	33.1	13.6

Source: Lewin & Associates Survey of Health Professions Schools.

There does not appear to be regional consistency in either the absolute dollar levels or the rate of increase.

A single state may be at the higher quadrant of the limited samples for one profession and in the middle or lower quadrant for another.

We do not place undue significance on these state-to-state comparisons for a number of reasons that have been cited. However, our visits to states confirmed the difficulties state officials have in determining equitable appropriation allocation to schools in the health professions. It is not surprising, therefore, that there are such wide differences in funding levels to schools. Variations in accounting practices, in the influence of other revenue sources, and in the organization of schools and campuses are so great that almost no convenient yardstick is available to educational financial experts on which to make purposeful comparisons across state boundaries. Thus the absence of a consistent pattern may reflect the absence of a cogent policy context as well as differences among the institutions.

D. Findings: State Institutional Support in Relation to Tuition and Federal Capitation

This section of the report emphasizes the inherent relationship among three of the primary sources of financing for health professional education: State institutional support; Federal capitation; and tuition.

As noted earlier we recognize that some schools—especially private schools—utilize other sources of funds to meet basic educational costs. Our analysis examines these three with the assumption that core educational costs are met substantially by these primary revenue sources. In the preceding section we reported findings on state institutional support, emphasizing support dollars per student, differences among the professions and among enrollees of public and private schools, and ranges in support levels among states.

In this section we will first examine changes in Federal capitation, then review tuition data, and lastly, describe the interrelation of these three revenue elements.

1. Federal Capitation: A Declining Revenue Source

Federal capitation grants were first authorized in 1972 as an integral element of the 1971 Comprehensive Manpower Training Act for the MOD (schools of medicine, osteopathy, and dentistry) and VOPP (schools of veterinary medicine, optometry, podiatry, and pharmacy) schools. The intent of the program was a Federal effort to expand enrollment, maintain non-federal financial support ("maintenance of effort"), and to emphasize certain public policy goals as prescribed by the law. Capitation was recommended as a way of assuring stability in the basic financing of health professions education and as a way of assuring a steady flow of new health professionals who were thought to be an essential national resource. Enrollment increases did occur, in fact, so that by 1974 when capitation funding had reached its peak ($185.5 million/year), enthusiasm for Federal capitation began to weaken. Appropriations subsequently were reduced, disproportionately more for some professional groups than for others.

Table II.7 illustrates changes in Federal capitation for the three school years pertinent to this study.

TABLE II.7.—FEDERAL CAPITATION GRANTS PER STUDENT BY PROFESSION FOR ACADEMIC YEARS ENDING 1974, 1978, 1980

	Amount per student			Average annual percent change	
	1974 [1]	1978	1980	1974–78	1978–80
Medicine	$2,137	$1,217	$1,072	−13.1	−6.2
Osteopathy	1,950	1,331	1,072	−9.1	−10.3
Dentistry	2,123	1,235	1,072	−12.7	−6.8
Veterinary medicine	1,530	739	591	−16.6	−10.6
Optometry	707	337	313	−16.9	−3.6
Podiatry	824	426	391	−15.2	−4.2

[1] Includes incentive enrollment grants, which were terminated after 1976.

Note: The years correspond to academic years ending that year, and should not be confused with the Federal fiscal years in which the funds were disbursed. For example, the 1980 dollars above were distributed in Federal fiscal year 1979.

Source: Department of Health, and Human Services, unpublished data..

These figures are exclusive of the special enrollment bonuses which some schools received as a small proportion of the regular capitation. The table is formed to match tables on per student support levels from states and from tuition payments. Capitation levels have always been more than twice as high for medicine, osteopathy, and dentistry as compared to the other eligible health professions. None of the authorizations has even been fully appropriated. Thus, while Federal capitation has always been a relatively modest factor in total financing for most professions, its role vis-a-vis state support has declined dramatically since 1974 as shown in table II.8.

Although not true in 1974, Federal capitation is now a relatively small factor in relation to state institutional aid for medicine, dentistry and veterinary medicine. In 1980 average capitation is only 4.4 percent of state institutional aid to veterinary medicine, 9.9 percent of state aid to dentistry, and 6.1 percent of state aid to medicine. When capitation is averaged against state institutional support to only the private school groupings, it is a significantly larger factor, since state aid is lower on average to these schools. (See table II.9.)

TABLES II.8 AND II.9.—FEDERAL CAPITATION AS A PERCENT OF STATE INSTITUTIONAL AID

	1974				1980			
Profession	Federal capitation per student	State institutional aid per student	Total	Percent Federal capitation per State aid	Federal capitation per student	State institutional aid per student	Total	Percent Federal per State aid
All schools—Public and private:								
Medicine	$2,137	$9,510	$11,647	22.5	$1,072	$17,650	$18,722	6.1
Osteopathy	1,950	2,220	4,170	87.8	1,072	11,390	12,462	9.4
Dentistry	2,123	4,790	6,913	44.3	1,072	10,800	11,872	9.9
Veterinary medicine	1,530	6,830	8,350	22.4	591	13,380	13,971	4.4
Optometry	707	970	1,677	72.9	313	3,650	3,963	8.6
Podiatry	824	170	994	484.7	391	720	1,111	54.3
Private schools: [1]								
Medicine	2,038	2,390	4,428	85.3	1,072	2,930	4,002	36.6
Osteopathy	1,963	1,440	3,403	136.3	1,072	1,410	2,482	76.0
Dentistry	2,138	1,660	3,798	128.8	1,072	5,980	7,052	17.9
Veterinary medicine	1,694	5,010	6,704	33.8	591	10,770	11,361	5.5
Optometry	709	140	849	506.4	313	1,340	1,653	23.4
Podiatry	824	170	994	484.7	391	720	1,111	54.3

[1] 1974 private school capitation figures differ from those of public schools and all schools combined due to incentive payment.

Source: Tables II.4 and II.7.

From the figures in tables II.8 and II.9 one might conclude that states have (in part) filled the void left by declining Federal capitation. However, interviews in various states suggest that this interpretation of the data is not fully justified. States appear to have taken two approaches to the loss of capitation in the funding of public schools. The first is in states where Federal capitation funds, when first authorized, became an integral part of the budget process. In effect they were fully considered in the formation of the state budget. Hence when capitation fell off, these states tended to meet the losses by substituting state dollars. Some school administrators have mentioned that state appropriations recognized the loss in Federal aid but that the decline was not fully funded to the levels needed to meet the combined effects of inflation and Federal funding reductions. State appropriations experts usually agreed with that assessment, pointing to normative state budget constraints as the underlying inhibitor.

In other states (e.g., California) finance officers simply ignored capitation in the early years allowing public schools to use the money for general purposes. Thus, as Federal capitation declined, these states have shown no enthusiasm nor have they felt a responsibility for replacing the funds.

Although school leaders have been divided on the merits of capitation, most professional school deans want to retain capitation as it represents the most flexible funds available to their schools. This is particularly true in the public health schools and in medical and dental schools which have strong department chairman systems or powerful physician and dental practice plans that do not share surpluses with the school. Deans of private medical schools with small endowments whose faculties receive new income through private practices not under the medical school's control are also highly dependent upon Federal capitation even at its more modest, current levels.

Clearly this study reveals that the decline in Federal capitation has had an uneven impact on schools within and across professions. The decline of capitation has impacted most heavily on those private schools where state aid has been minimal or nonexistant; where state aid per student is stable, and on those schools whose sources of revenue, other than tuition, are very modest.

We now turn to the third revenue source to be discussed, tuition levels and patterns of change.

2. TUITION—A GROWING SOURCE OF REVENUE FOR ALL OF THE HEALTH PROFESSIONS

The role of tuition and fees as a source of revenue has never been more important than in the current financing of health professions schools. In this section we present two brief analyses using somewhat different sources to examine:

The level of tuition per enrolled student;

The rate of changes in tuition and differences among professions;

The relative differences between public and private schools in the approach to tuition policy; and

Whether there has been an acceleration in tuition increases in the last two year period, 1978–1980.

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Mean tuition and fees on a per student basis for professions are presented in table II.10 below.

There are some expected as well as unexpected findings:

TABLE II-10.—AVERAGE TUITION AND FEES BY PROFESSION, 1974, 1978, 1980

[N= Number non-Federal established schools as of 1980. ( ) Numbers in parentheses are the sample of schools on which data were available]

Profession	Average tuition and fees			Average annual percent change		
	1974	1978	1980	1974–78	1979–80	1974–80
Medicine	$1,720	$3,290	$4,280	17.6	14.1	16.4
N=124	(79)	(79)	(79)			
Private	2,470	5,280	6,880	20.9	14.2	18.6
N=50	(36)	(36)	(36)			
Public	1,080	1,710	2,180	12.7	12.9	12.4
N=74	(43)	(43)	(43)			
Osteopathy	3,590	4,340	6,110	4.9	18.7	9.3
N=14	(4)	(7)	(8)			
Private	3,860	5,520	7,480	9.4	16.4	11.7
N=8	(3)	(3)	(5)			
Public	1,660	850	1,920	[1] −15.4	50.3	2.5
N=6	(1)	(4)	(3)			
Dentistry	2,410	3,680	4,764	11.2	13.7	12.0
N=59	(57)	(58)	(59)			
Private	3,320	5,460	7,643	13.2	18.3	14.9
N=24	(23)	(23)	(24)			
Public	1,660	2,350	2,590	9.1	5.0	7.6
N=35	(34)	(35)	(35)			
Veterinary medicine	1,620	2,120	2,430	7.0	7.1	7.0
N=24	(9)	(13)	(13)			
Private	2,840	4,520	5,320	12.3	8.4	11.0
N=3	(1)	(1)	(1)			
Public	1,470	1,860	2,090	6.1	6.0	6.1
N=21	(8)	(12)	(12)			
Optometry	2,950	4,500	5,080	11.1	6.25	9.5
N=12	(8)	(8)	(8)			
Private	2,360	3,950	5,280	13.7	15.6	14.4
N=6	(5)	(5)	(5)			
Public	5,300	6,420	4,540	4.9	[2] −15.9	[2] −2.5
N=5	(3)	(3)	(3)			
Podiatry	2,770	4,980	5,930	15.8	9.1	13.5
N=5	(5)	(5)	(5)			
Private	2,770	4,980	5,930	15.8	9.1	13.5
N=5	(5)	(5)	(5)			
Public [3]						
N=0 [3]						

[1] This negative change is attributable to a marked change in sample composition, from 1 school in 1974 to 4 schools in 1978.

[2] These negative changes are attributable to the actions of the largest school in the sample, which appeared to use a large increase in State appropriations to reduce total tuition; at the same time, enrollment increased, intensifying the reduction in tuition per student.

[3] No schools in the category.

Source: Lewin & Associates Survey of Health Professions Schools, and selected data provided by associations of health professions schools.

The gap in actual tuition dollars between public and private education continues to widen. For example, in medicine in 1980, the average tuition difference is $4,700 per year as contrasted with approximately $3,570 two years earlier. The gulf between public and private dentistry is wider—in 1980 about $5,000 per year.

Tuition for private education in the health professions now averages above $7,000 per annum in osteopathy ($7,480) and in dentistry ($7,643). Although individual tuitions in certain private schools of medicine exceed $13,000, the general average tuition for private medical schools remains lower than osteopathy and dentistry. In part medical school tuition is lower on average than osteopathy and dental school tuition for the following reasons:

Larger endowments of medical schools;

More diverse financing and revenue sources of medical schools;

Competition among private medical schools to keep tuition low in order to compete for the largest pool of talented applicants; and

Low tuition tends to be a symbol of prestige among certain private medical schools.

Tuition in private schools is not only higher but is increasing at a more rapid rate than in public schools. The differences in rates of increases are consistent and significant in size.

Average tuition rates of increase within a profession are both accelerating and decelerating, depending upon the profession. Some examples:

Average private medical school tuition rose faster (20.9 percent per year) from 1974 to 1978 than it did from 1978 to 1980 (14.2 percent). Private tuition in dentistry shows higher rates of average increase in the last two years than in the first four.

While public veterinary schools' tuition rose more quickly in the last two years than that of private veterinary schools, private schools' rose faster on average in the first four years of the study.

Tuition is clearly a large factor in financing all of the private schools even though there may be as much as three hundred percent variation in the range of annual tuition among schools within a discipline. Medicine and podiatry have had the highest average tuition increase percentage over the last six years but recent trends suggest that dentistry, osteopathy, and optometry private school tuitions are now increasing faster than other health professions in the study.

Authorities involved in public school tuitions tend to tie tuition levels of the health professions in reasonable relationship to other graduate levels although some states single out higher levels for certain health professional schools. Tuition policy for public institutions continues to be dominated by access considerations, particularly for in-state residents. There appears to be increased evidence of rapidly rising non-resident public tuition rates.

3. THE RELATIONSHIP OF TUITION, FEDERAL CAPITATION, AND STATE INSTITUTIONAL AID

We have stated that three factors should be examined together for each profession over time to determine their relative significance: Tuition; State Institutional support; and Federal capitation.

Table II.11 below draws this relationship for each profession and examines the differences, not only across professions, but by separating public and private schools. These percentages were calculated from the per student tables presented earlier for each of the major factors above. The findings are instructive. (Readers should be reminded that these proportions together add up to 100 percent and therefore do not show the proportion of revenue to schools from all sources.) Of the three factors, therefore:

Federal capitation in 1980 represents a maximum of 10.8 percent of revenue. Private medical schools and private osteopathic schools show 9.9 percent and 10.8 percent, respectively, of their revenue from Federal capitation. All other schools are well below these percentages.

State institutional support is highly significant in every public school setting, including optometry, which, with 42.9 percent of revenues from state institutional support, has the lowest percentage.

State institutional support to private health professions schools is on a mixed pathway. For medicine it represents a declining share (from 34.7 percent to 26.9 percent) in the six years.

TABLE II.11.—PERCENT CONTRIBUTIONS OF FEDERAL CAPITATION, STATE INSTITUTIONAL SUPPORT, AND TUITION BY PROFESSION: PUBLIC VERSUS PRIVATE 1974, 1978, 1980

	Federal capitation			State institutional support			Tuition and fees		
	1974	1978	1980	1974	1978	1980	1974	1978	1980
Medicine	16.0	7.1	4.7	71.1	73.6	76.7	12.9	19.3	18.6
Private	29.5	13.1	9.9	34.7	29.9	26.9	35.8	57.0	63.2
Public	11.9	5.2	3.3	82.3	87.5	90.0	5.8	7.3	6.7
Osteopathy	25.1	9.1	5.8	28.6	61.1	61.3	46.3	29.8	32.9
Private	27.0	16.2	10.8	19.8	16.7	14.1	53.2	67.1	75.1
Public	16.4	3.2	2.6	69.1	94.7	92.8	14.5	2.1	4.6
Dentistry	22.8	9.7	6.4	51.4	61.2	64.9	25.8	29.1	28.7
Private	30.1	12.6	7.3	23.3	31.9	40.7	46.6	55.5	52.0
Public	19.7	7.9	6.4	64.8	77.1	78.1	15.5	15.0	15.5
Veterinary medicine	15.3	5.3	3.6	68.5	79.5	81.6	16.2	15.2	14.8
Private	17.7	6.5	3.5	52.5	53.6	64.6	29.8	39.9	31.9
Public	15.0	5.2	3.6	70.4	81.7	83.5	14.6	13.1	12.9
Optometry	15.3	4.5	3.4	21.0	35.1	40.4	63.7	60.4	56.2
Private	22.1	6.6	4.5	4.4	16.5	19.3	73.5	76.9	76.2
Public	10.1	3.6	3.7	13.9	27.9	42.9	76.0	68.5	53.4
Podiatry	21.9	7.2	5.6	4.5	9.2	10.2	73.6	83.6	84.2
Private	21.9	7.2	5.6	4.5	9.2	10.2	73.6	83.6	84.2
Public[1]									

[1] No schools in this category.

Source: Tables II.3, II.4, II.7, and II.10.

Revenue needs of health professional schools are ordinarily indicative of cost increases as well as of changes in the available sources of income. Although costs of education have not been studied, the root problem of the 1980s may well be the escalating costs of education and how to substantially moderate these costs without damaging quality. It may turn out that schools will determine that quality in part depends upon the quality of the student attracted to the school. Attracting quality students may well hinge on providing affordable education to maintain a strong pool of candidates.

Candid discussions with several academic leaders in the health sciences suggest that the greatest threat to health professional education in the 1980s lies in the growing disparities between educational costs and affordability, between public and private school costs to students, and between costs of health professions education and other professional education.

E. The Role of Interstate Contracts in State Financing of Health Professions Education

1. INTRODUCTION

A study of state institutional support is not complete without an examination of the various interstate contracts for health professions education. These represent additional state support not heretofore accounted in our tables. Through a variety of contractual arrangements to be described in this section, many states subsidize out-of-state schools which educate their residents. In this report, such interstate agreements[5] are considered institutional support only if the student

[5] On rare occasions the receiving institution in the contract is a private school within the state. We have retained the term "interstate" because the vast numbers of students in the program cross state lines.

is not obligated to repay in any way the funds expended on his/her behalf. If the person occupying the contract seat must return to or reimburse the sending state, the contract is considered financial aid (a payback program) and is discussed in chapter III.

TABLE II.12.—PERCENTAGE OF ALL ENROLLED STUDENTS BY PROFESSION THROUGH INTERSTATE CONTRACTS, 1978 (MEDICINE, DENTISTRY, VETERINARY MEDICINE, AND OPTOMETRY)

	Total enrollment	Total contract students	Percent of total enrollment through contracts
Profession:			
Medicine	60,456	582	1.0
Dentistry	21,510	875	4.1
Veterinary medicine	7,909	976	12.3
Optometry	4,029	887	22.0

Source: Association enrollment data, tables II.17 through II.20.

Interstate contracts play a significant role in dentistry, optometry, and veterinary medicine, as shown in table III.12. They play a lesser but still important role in medicine in the aggregate, but for states without medical schools, contracts are the only means of absolutely assuring qualified state residents that can secure a place in a school.

For the remaining four professions targeted in this study (osteopathy, pharmacy, podiatry, and public health) only 70 contract seats were identified in 1980. For several states without a large investment in their own health professions schools, interstate contracts represent the dominant form of state institutional support.

The primary reasons for establishing educational contracts have been as follows:

Contracts are a mechanism through which states can provide a complete spectrum of higher education opportunities to their residents at in-state tuition rates which moderate the financial liability of the student.

Contracts are financially advantageous to the states that send students and to the institutions that receive them. Through contracts, a state may be able to provide educational opportunities at a lower cost than by establishing and operating a full in-state program itself. Receiving institutions obtain extra per-student income from the sending state that may be higher than the tuition they could charge a resident student, thereby filling seats that otherwise may not generate as much revenue.

Contracts, in effect, enlarge the pool of applicants from which to draw qualified students. They assist public universities in obtaining geographically diverse student bodies by lowering the disincentive for out-of-state students to attend.

Contracts represent a way for states to train selectively needed manpower in given areas. Where states have turned contract agreements into service payback programs, the ultimate tie between contracts and training to meet state needs is evident.

Since interstate contracts can be advantageous to both sending states and receiving institutions, it is not surprising that a market for seats at educational institutions exists. Several organizations known as "compacts" have been formed to act as brokers between states desiring seats and institutions offering them. The two largest are the Southern

Regional Education Board (SREB), with 14 member-states, and the Western Interstate Commission for Higher Education (WICHE), with 13 members.[6] The smaller New England Higher Education Board (NEHEB) serves a similar function. All three compacts match their states' demand for seats in given fields to institutional supply, usually helping to negotiate a price for the seat. The basis for these rates is discussed below.

Not all contracts are arranged through these compacts. Some are negotiated directly between a state and an institution, particularly in the midwest, where the majority of the states do not participate in interstate compacts. In the northwest, two slightly different interstate agreements exist where multiple states support a professional school according to predetermined formulae. These are WAMI, a Washington, Alaska, Montana, Idaho medical program, and WOI, a Washington, Oregon, Idaho veterinary medicine educational program. State funds flow into the University of Washington from the partner states to meet the educational costs incurred in training the out-of-state students in the program. These state dollars and the student numbers are included in the tables describing interstate contracts.

2. SALIENT CHARACTERISTICS OF INTERSTATE CONTRACTS

Although the various contracts differ considerably, there are several common threads:

Most interstate contracts are in fields where there are insufficient educational opportunities in the sending state. Since most states have public undergraduate institutions, contracts tend to be in graduate fields ranging from medicine to architecture to law. Interestingly, the majority of all contract seats are in the health professions. In 1978, 75 percent of the WICHE seats were in the eight health professions targeted in this study.

With the exception of the University of Tel Aviv, with which New York contracts for medical seats, all receiving institutions are accredited schools in the United States. Most data received from the compacts did not always indicate whether receiving institutions were public or private. It appears, however, that most contract students are enrolled in public schools.

Some states, such as Alaska, solely export students. Others, such as California, only import them. Most states receive as well as send students, depending primarily upon the availability of graduate professional programs within the state.

Access to contract seats is limited to residents of the contracting states who are accepted through admissions channels at the institution in question. However, students from a sending state are often given preference to insure that the seats purchased are filled. However, institutions have the right to reject unqualified students. With the exception of WAMI, if contract seats are not used, no support monies are paid.

The price of a seat is most frequently set by the difference between resident and non-resident tuition rate and/or the receiving institution's marginal or average cost for providing the seat. Schools, even

[6] *SREB members* (Arkansas, Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia, West Virginia). *WICHE members* (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming).

within the same profession, receive different payments. Among various professions demand-supply pressures may account for price differences as well. In some contracts, such as those between Minnesota and Wisconsin, seats are bartered with only the net flow of students in either direction accounted.

3. TRENDS IN INTERSTATE CONTRACTS

We have identified three sets of observations in interstate contract activity that are relevant to state institutional support. They are:

Trends in Numbers of Contracted Health Professions Students;
Trends in Support Dollars by Profession; and
Trends in States' Purchases of Health Professions Seats.

a. Trends in numbers of contract health professions students

Table II.13 shows that the total number of health professions students occupying contract seats is rising slowly, under 3 percent in the two years ending in 1980. Veterinary medicine represented about one-third of all health professions students with 1,126 students in 1980. Optometry students are the second largest group. Medical students represent only 12.6 percent of the total.

TABLE II.13.—TOTAL INTERSTATE CONTRACT SEATS AND THEIR VALUE FOR 1974, 1978, 1980

	1974		1978		1980	
	Students	Amount	Students	Amount	Students	Amount
Medicine	474	$2, 159, 301	582	$5, 895, 460	556	$6, 571, 748
Dentistry	734	1, 969, 626	875	5, 189, 083	872	6, 113, 397
Veterinary	915	3, 028, 333	976	6, 043, 466	1, 126	8, 032, 000
Optometry	249	414, 000	887	3, 088, 450	1, 007	3, 777, 654
Other	15	37, 000	38	177, 350	70	283, 772
Total	2, 387	7. 608, 260	3, 358	20, 393. 809	3, 631	24, 778, 571

Source: Tables II.17 through II.21.

b. Trends in support dollars by profession

Table II.14 describes the average level of support for the four professions which have significant participation in the contracts.

TABLE II.14.—AVERAGE PER STUDENT INTERSTATE CONTRACTS SUPPORT, 1974, 1978, 1980

				Average annual percent change		
	1974	1978	1980	1974–78	1978–80	1974–80
Medicine	$4, 555	$10, 129	$11, 819	22. 1	8. 0	17. 2
Dentistry	2, 683	5, 798	7, 011	21. 3	10. 0	17. 4
Veterinary medicine	3, 310	6, 192	7, 373	16. 4	9. 1	14. 3
Optometry	1. 663	3, 482	3, 751	20. 3	3. 8	14. 5

Source: Tables II.17 through II.20.

Data in 1980 show average per student support levels of $11,819 for medicine and in excess of $7,000 for dentistry and veterinary medicine. It understandable that states are willing "to buy" rather than "to make" seats when health professions educational costs are fully considered. A brief comparison of earlier findings on state institution aid (see table II.3) with the data of table II.14 is made in table II.15 below.

TABLE II.15.—AVERAGE CONTRACT VALUE AS COMPARED TO AVERAGE STATE INSTITUTIONAL SUPPORT LEVEL BY PROFESSION (PER ENROLLED STUDENT FOR 1980)

	Contract	Institutional support	Difference
Medicine	$11,819	$17,650	+5,831
Dentistry	7,011	10,800	+3,789
Veterinary medicine	7,373	13,380	+6,007
Optometry	3,751	3,650	−101

Source: Table II.3, table II.14.

With the exception of optometry, the average cost of a contract seat is less than the average state institutional support level per student for the given profession.

The price of contract seats, although substantially lower in cost than average institutional support, rose faster on average for all professions between 1974 and 1978. (See table II.16.) However, since 1978 the rate of growth of contract seat prices has been less than that of state institutional support. From table II.16, it appears that it is less expensive for a state to export its health professions students than to train them at in-state institutions.

TABLE II.16.—AVERAGE ANNUAL INCREASE IN CONTRACT VALUE AS COMPARED TO AVERAGE ANNUAL INCREASE IN STATE INSTITUTIONAL SUPPORT LEVEL BY PROFESSION (PER ENROLLED STUDENT, 1974–78 AND 1974–80)

	1974–78			1974–80		
	Contract	Institutional support	Difference	Contract	Institutional support	Difference
Medicine	22.1	7.2	14.9	8.0	18.5	−10.5
Dentistry	21.3	41.6	−20.3	10.0	18.0	−8.0
Veterinary medicine	16.4	12.8	3.6	9.1	9.7	−.7
Optometry	20.3	13.0	7.3	3.8	18.0	−14.2

Source: Table II.3, Table II.14.

c. Trends in States' purchase of health professions seats

Tables II.17–21 present data by state and by profession of interstate contract transactions. There are some important observations to report on interstate contracts. They are:

TABLE II.17.—TOTAL INTERSTATE CONTRACT STUDENTS AND STATE EXPENDITURES: 1974, 1978, 1980

	1974		1978		1980	
	Number of students	Amount	Number of students	Amount	Number of students	Amount
MEDICINE						
Alabama	16	$44,000	16	$60,000	14	$59,500
Alaska	19	87,634	60	1,047,491	46	1,183,300
Arizona	20	93,333	14	172,000	8	104,000
Florida	11	30,250	14	52,500	9	38,250
Georgia	65	370,000	100	799,600	137	1,007,925
Hawaii	14	70,000	0	0	0	0
Idaho	74	370,000	110	1,375,328	80	1,519,124
Louisiana	6	24,750	13	48,750	15	63,750
Maine	43	200,000	91	568,180	137	925,400
Maryland	8	22,000	10	37,500	6	25,500
Mississippi	16	44,000	10	37,500	13	55,250
Montana	60	293,334	115	1,374,411	120	1,788,886
Nevada	27	135,000	9	108,000	0	0
New Hampshire	5	25,000	5	71,380	15	112,500
North Carolina	17	55,250	20	85,000	19	80,750
Tennessee	15	41,250	39	146,250	40	165,250
Virginia	14	38,500	9	33,750	9	38,250
Wyoming	44	215,000	38	446,000	25	329,333
Total	474	2,159,301	673	6,463,640	593	7,496,948
Average per student		4,555		9,604		10,818

Source: New England Board of Higher Education, Southern Regional Education Board, Western Interstate Commission on Higher Education, and Lewin & Associates Survey.

TABLE II.18.—TOTAL INTERSTATE CONTRACT STUDENTS AND STATE EXPENDITURES: 1974, 1978, 1980

	1974		1978		1980	
	Number of students	Amount	Number of students	Amount	Number of students	Amount
DENTISTRY						
Alabama	7	$19,250	7	$26,250	7	$29,750
Alaska	0	0	11	105,000	15	171,364
Arizona	0	0	68	711,000	83	963,517
Arkansas	87	239,182	100	435,750	112	517,083
Colorado	17	68,000	0	0	0	0
Florida	220	605,000	103	386,250	96	408,000
Hawaii	0	0	39	393,000	31	329,797
Idaho	0	0	45	376,000	57	511,429
Kansas	140	73,295	79	187,000	80	220,000
Louisiana	2	5,500	4	15,000	3	12,750
Maine	25	125,000	25	171,000	22	197,000
Maryland	2	5,500	0	0	1	4,250
Mississippi	89	245,666	94	250,000	26	119,000
Montana	0	0	37	389,000	37	394,463
Nevada	0	0	21	222,000	37	433,259
New Mexico	68	292,733	110	773,583	104	847,104
North Dakota	15	36,750	45	174,250	37	159,250
South Dakota	45	207,000	55	118,000	51	315,000
Tennessee	14	38,500	12	45,000	13	55,250
Utah	0	0	17	165,000	20	210,165
Virginia	3	8,250	2	7,500	3	12,750
Wyoming	0	0	46	409,500	41	401,216
Total	734	1,969,626	920	5,360,083	876	6,312,397
Average per student		2,683		5,826		7,206

Source: New England Board of Higher Education, Southern Regional Education Board, Western Interstate Commission on Higher Education, and Lewin & Associates Survey.

TABLE II.19.—TOTAL INTERSTATE CONTRACT STUDENTS AND STATE EXPENDITURES: 1974, 1978, 1980

	1974		1978		1980	
	Number of students	Amount	Number of students	Amount	Number of students	Amount
VETERINARY MEDICINE						
Alaska	3	$12,000	7	$63,000	10	$102,500
Arizona	42	168,000	48	432,000	73	748,250
Arkansas	28	84,000	58	260,000	62	341,000
Connecticut	NA	NA	NA	NA	35	339,000
Florida	105	315,000	56	280,000	0	0
Georgia	5	15,000	8	40,000	7	38,500
Hawaii	10	40,000	23	204,000	26	262,250
Idaho	30	120,000	5	45,000	0	0
Kentucky	67	200,000	86	428,333	129	808,500
Louisiana	44	148,000	0	0	0	0
Maryland	49	147,000	71	355,000	91	500,500
Maine	0	0	11	72,000	14	135,500
Massachusetts	0	0	0	0	55	393,000
Mississippi	73	219,000	61	305,000	28	181,500
Montana	47	188,000	43	382,500	46	471,500
Nevada	15	60,000	15	135,000	17	174,250
New Hampshire	1	5,000	19	128,500	19	179,500
New Mexico	30	120,000	31	270,000	48	478,500
North Carolina	79	236,000	103	515,000	154	847,000
Oregon	43	172,000	23	207,000	5	51,250
South Carolina	44	132,000	52	260,000	63	346,500
South Dakota	4	16,000	31	186,000	35	332,000
Tennessee	70	210,000	45	225,000	6	33,000
Utah	23	89,333	44	396,000	49	502,250
Vermont	0	0	9	73,500	13	114,500
Virginia	63	189,000	87	435,000	104	572,000
West Virginia	17	51,000	25	123,333	8	44,000
Wyoming	23	92,000	32	288,000	43	440,750
Total	915	3,028,333	787	6,109,166	1,140	8,437,500
Average per student		3,310		7,763		7,401

Source: New England Board of Higher Education, Southern Regional Education Board, Western Interstate Commission on Higher Education, and Lewin & Associates Survey.

TABLE II.20.—TOTAL INTERSTATE CONTRACT STUDENTS AND STATE EXPENDITURES: 1974, 1978, 1980

	1974		1978		1980	
	Number of students	Amount	Number of students	Amount	Number of students	Amount
OPTOMETRY						
Alaska	5	$16,000	4	$16,800	7	$31,500
Arizona	9	10,800	23	96,600	25	112,500
Arkansas	13	26,000	55	178,750	53	198,750
Colorado	0	0	0	0	18	81,000
Connecticut	NA	NA	NA	NA	15	62,000
Florida	0	0	80	260,000	78	292,500
Georgia	10	20,000	51	165,750	55	206,250
Hawaii	0	0	20	84,000	23	103,500
Idaho	0	0	16	67,200	16	72,000
Kansas	0	0	39	126,750	40	130,000
Kentucky	0	0	47	149,500	59	221,250
Louisiana	12	24,000	52	169,000	62	232,500
Maine	0	0	2	8,000	6	26,000
Maryland	5	10,000	26	84,500	31	116,250
Massachusetts	NA	NA	NA	NA	28	129,654
Mississippi	9	18,000	37	120,250	35	131,250
Montana	21	25,200	34	142,800	34	153,000
Nevada	16	19,200	17	71,400	17	73,500
New Mexico	10	12,000	26	104,100	31	132,000
North Carolina	14	28,000	64	206,375	70	262,500
Oklahoma	56	112,000	56	182,000	56	210,000
Oregon	32	38,400	38	159,600	36	162,000
South Carolina	7	14,000	37	118,625	37	138,750
South Dakota	NA	NA	NA	NA	8	32,000
Tennessee	12	24,000	69	221,000	67	251,250
Utah	0	0	10	42,000	18	81,000
Virginia	0	0	19	61,750	20	75,000
Washington	0	0	43	180,600	39	175,500
West Virginia	6	12,000	22	71,500	19	71,250
Wyoming	12	14,400	21	8,400	0	0
Total	249	414,000	908	3,097,250	1,003	3,964,654
Average per student		1,663		3,411		3,953

Source: New England Board of Higher Education, Southern Regional Education Board, Western Interstate Commission on Higher Education, and Lewin & Associates Survey.

TABLE II.21.—TOTAL INTERSTATE CONTRACT STUDENTS AND STATE EXPENDITURES: 1974, 1978, 1980

	1974		1978		1980	
OTHER PROFESSIONS	Number of students	Amount	Number of students	Amount	Number of students	Amount
Osteopathy	0	0	0	0	19	$90,000
Pharmacy	0	0	13	$36,400	13	39,150
Podiatry	15	$37,500	21	128,000	29	147,224
Public health	0	0	4	12,950	14	44,898
Total	15	37,500	38	117,350	75	321,272

Source: New England Board of Higher Education, Southern Regional Education Board, Western Interstate Commission on Higher Education, and Lewin & Associates Survey.

For each of the four professions there are a few states which are extremely large purchasers of out-of-state places. For example, North Carolina purchases 154 veterinary medicine posts, Kentucky 129. Arkansas, New Mexico, and Florida are large buyers of dentistry slots; respectively, 122, 104, and 76 in 1980. Montana and Georgia are the largest contract spenders for medical student places, purchasing over half of the posts in the contract pool.

A state which is a large purchaser of one professional discipline may be out of the market in another. Nebraska purchases educational

posts for dentists, but not for physicians. Georgia buys physician slots, but not dental seats.

Optometry and veterinary medicine posts are sought by the largest number of states and, as noted earlier, optometry is the most dependent upon interstate contracts. This reflects the fact that only 12 schools exist across 50 states at present. Optometry seats are quite dispersed across 30 participating states.

States do opt out or substantially decrease their support if circumstances change. In 1974, for example, Florida had 105 residents placed in out-of-state veterinary colleges; by 1980, with the development of its own school, Florida had left the contract market in veterinary medicine. In dentistry, by 1980 Florida had halved its 1974 commitment of 220 students but was still acquiring dental places.

In medicine and dentistry, very few states appear to be increasing their purchase of seats. This may be a reflection of rising contractual costs, of greater satisfaction with the in-state supply of student places or practitioners, or of a strong preference in receiving states for allocating more posts to in-state residents. Whatever the case, these two professions do not resemble the more variable behavior of states that seem more willing to increase their contracting for veterinary medicine and optometry places.

Lastly, it appears that some states, even some whose populations are growing rapidly, are highly content to purchase places rather than to create new schools in the health professions.

Interstate contracting reflects a rather genuine market in education and should be watched carefully. Such contracts, with their patterns of growth and shrinkage, may be, in the years ahead, one of the most sensitive barometers for measuring general state attitudes toward financing health professions education.

Chapter III. The State Role in Student Aid Financing

A. Introduction and Background

1. OVERVIEW

Chapter II described the increasingly important role played by direct institutional support which states are providing to health professions schools. Institutional support increased faster than the other two major sources of educational income—Federal capitation and tuition—in all six professions studied between 1974 and 1980. By the last year, state institutional support had reached 74 percent of the three sources for schools of medicine. Tuition, while increasing more slowly than state institutional support in all professions except medicine, nevertheless rose significantly. This was especially true for students in private schools who for the most part were not able to benefit from the efforts of state governments to subsidize tuitions at public universities.

This chapter examines the ways in which state governments have sought to help health professions students at both public and private schools meet their educational costs through financial aid. Of particular concern in this study is the extent to which state governments are using state-sponsored student financial aid programs to achieve specific health manpower policy goals, and to examine the mechanisms that they employ to these ends.

Three major categories of state student aid—scholarships, loans, and state service payback programs—will be described with particular reference to trends in their respective roles in the state student financial aid picture. While surveying the states, little quantitative data on state grants and loans was found. Much of what is used here is secondary data from associations rather than primary data from the state offices that distribute financial aid. Therefore, state scholarships, grants, and loans are treated briefly in Part B of this chapter, which also includes a section with qualitative findings entitled "General Health Professions Student Financial Aid Problems." The findings on state service payback programs are more complete than those on either grants or loans. Therefore, these programs are accorded a discussion by themselves in Part C of this chapter. However, before proceeding to Parts B and C, it is useful to place state financial aid programs in the context of the overall financial aid picture by discussing other sources of student assistance.

2. RECENT TRENDS IN THE AVAILABILITY OF FINANCIAL AID FROM SOURCES OTHER THAN STATES

For some years, the Federal government, states, private schools, organizations, and foundations have made efforts, through the vehicle of financial aid to students, to keep health professions education within the reach of promising students regardless of their financial

status. This section discusses the role of Federal and private sources of scholarships and loans.

a. The Federal role

The Federal government supports health professions education directly (as opposed to indirect support through sponsored research or clinical services) through institutional support in the form of capitation grants, and through a variety of student financial aid programs. Federal institutional support is discussed above in chapter II, and a description of Federal student aid programs may be found in Supplement 2 to this report. Among the more significant trends in Federal student aid financing are the following:

The Federal Health Professions Scholarships Program (HPS) has declined since 1973, when 22,782 health professions students received $15,500,000 in awards. In 1976 this program was extended, only to allow students receiving assistance at the time of enactment of the Health Professions Educational Assistance Act of 1976 to continue to receive HPS scholarship assistance. By 1977 only 4,945 scholarships were awarded, according to the Bureau of Health Manpower, having a total value of $3,500,000. (See Supplement 2). While HPS scholarships were being phased out, funding of the Health Professions Student Loan Program (HPSL) was also reduced (Supplement 2). In fiscal year 1979, HPSL appropriations were cut to half of the fiscal year 1978 total (from 20 million to 10 million) causing many students to seek other channels of assistance. One significant alternate source has been the National Direct Student Loan (NDSL), for which there has been increasing competition from health professions students. (Supplement 2).

The much smaller and more specific Exceptional Financial Need (EFN) program was enacted in 1976, but appropriations did not come until 1978. 506 awards were made in 1978–1979 amounting to $4,998,509. (Supplement 2).

The Middle Income Student Assistant Act of 1978 expanded eligibility for the Guaranteed Student Loan (GSL) Program to students in the health professions whose families have incomes above $25,000. (Supplement 2).

The Health Education Assistance Loan (HEAL) authorized by Public Law 94–484 of 1976, and introduced in fiscal 1978–1979, has no Federal subsidy, only a guarantee. As of September 30, 1979, the Office of Education reported that 105 of 319 eligible schools were participating. 801 awards totalling $6.1 million had been made. Twenty-five percent of the loans had been made to podiatry students. (Supplement 2).

The National Health Service Corps Scholarship Program (NHSC), which is a service payback program, has been expanded dramatically. In fiscal year 1975, 2,549 National Health Service Corps Scholarships were awarded. By 1980 the number had grown to almost 6,500. (Supplement 2).

The underlying policy theme revealed in these changes reflects a 1976 decision by Congress to require health professions students, to the extent possible, to bear an increased portion of their educational costs, unless they were willing to return the public investment through public service in areas and activities of genuine need.

b. The private role

Aside from financial support provided by students' families and friends, there are three major sources of private financial aid: private health oriented foundations, institution endowment funds either earmarked for or channeled to student assistance, and private lenders.

Private health-oriented foundations and organizations such as the Robert Wood Johnson Foundation, the American Medical Association, and certain state medical associations are suppliers of financial aid, in the form of both grants and loans, either directly or through the schools. Foundation data are available but it was beyond the scope of this study to analyze the student-finances component of these foundations. However, there is strong evidence that the resources of these groups, principally income from endowments and private contributions, cannot keep pace with increases in the costs of education and the costs of living. It appears that their role in providing student financial aid and its relative contribution to the aggregate outstanding health professions loans from all sources is declining.

Endowment-based resources of health professions schools also are no longer keeping pace with increases in costs. Earlier this century, such endowments were the most significant source of financial aid.

Loans from private lenders, such as banks and state higher educational assistance authorities, represent a major share of all sources of student financial aid. They are by far the largest source of non-governmental funds, except for the personal income of students and their families' resources. Private lenders operate in a variety of ways, including: direct loans to individuals; participation in state and Federal guaranteed loan programs, such as GSL and HEAL; and through the purchase of public or special authority bond issues, the proceeds of which state agencies or statutory commissions then use for student loans.

It was clear from our interviews with student financial aid officers that guaranteed student loans, and especially those with interest subsidies such as GSL and NDSL, were the fastest growing and most significant source of student aid. Data provided to us by the School of Dentistry at the University of Washington, Seattle, illustrate this point. During the academic year 1977–78 their students received $1.216 million in scholarships and loans. Of this amount, $981,000, or 81 percent, was in the form of loans, of which $533,000, or 54 percent, was attributable to the Guaranteed Student Loan Program.

We have noted in chapter II that the rising costs of educating health professionals have been accompanied by a decline in Federal capitation support. This decline has forced state institutional support and tuition to play increasingly important roles. While state institutional support to private and especially public schools has succeeded somewhat in moderating tuition increases, the costs students and their families must meet has risen significantly in recent years. Financial aid in the form of privately financed loans—buttressed by Federal and state guarantees and interest subsidies—have been the primary means by which students with need have been able to meet these costs. However, as the loan volume increases, and as students reach the ceilings that have been placed on most loan programs, state scholarship grants

and service payback programs increase in their importance. State grant and loan programs are discussed in the following two sections.

B. State Grant and Loan Money

Data collected on state grant and loan programs proved to be limited, for reasons which will be enumerated. Therefore, findings for both of these two types of programs are condensed into Part B of this chapter. Service payback programs, for which data is more extensive, are discussed separately in Part C afterwards. In Part B, extensive use is made of state financial aid data collected by professional school associations. This information is a less than ideal surrogate for data collected from the states, because it does not permit comparisions across professions. Nevertheless, it provides a useful indicator of trends in state financial aid to the health professions, as well as a measure of the overall significance of these programs.

1. STATE GRANTS

With respect to student financial aid the terms "grants" or "scholarships" tend to be used interchangeably. Furthermore, grants and scholarships are often in the titles of programs that have a service obligation. In this part of the report, however, the terms "grants" and scholarships are used to denote funds provided to students for which there is no repayment requirement, including service. Such awards are merit-based, need-based, or are tuition exclusions.

The study has attempted to determine the levels and changes of state grant and scholarship aid to the health professions under study. Four sources of data were examined for identifying such aid:

State budget offices or commissions on higher education;

Schools, through their student financial aid records;

Associations, through annual fiscal reports collated and analyzed by the association but prepared by the member schools; and

Survey questionnaires to schools in which Lewin and Associates requested figures for state scholarship aid.

Supplement 1 to this report describes the individual service payback programs and statewide scholarship or loan programs which we were able to identify through telephone surveys and, in 13 states, through on-site review. Among the difficulties we encountered in developing a total and consistent picture for all grant and scholarship aid for all professions within the time alloted were the following:

Since state grant programs by definition require no repayment on the part of the student, schools generally assign a low priority to record keeping in this area.

Although some grant programs are statewide, many (particularly tuition remissions) are institution-based. Collecting consistent data from a single source in the state is not possible; for such information each institution must be contacted.

Institution-based grant programs often derive their funds from multiple sources—private contributions, state funds, and internally allocated tuition remissions. It is therefore difficult to break out state grants by source at the professional school or at the university level.

With statewide or university-wide financial aid programs covering many schools, records often do not specify to which health professions school at a health science center financial aid funds are going.

State undergraduate grant programs often do not collect data by the student's major, making it difficult to assess the extent of participation by undergraduate pharmacy students.

Despite the limitations inherent in obtaining precise information about all programs, there exist data from national associations in medicine, dentistry, and optometry. The associations were able to provide annual reports of state financial aid to their students. However, it is not possible to make comparisons of state financial aid across professions with this data, because the various professional associations use differing definitions and survey techniques.

a. Characteristics of State grants

In general, state grant programs have the following characteristics:

The size of awards tends to be comparatively low, as compared to the average annual student loan. Tuition waivers are among the major sources of grant support but are, of course, limited to tuition levels of public graduate health professions schools, and do not cover students' living expenses. In addition, there is no state program that is comparable in the size of its grants with the Federal EFN awards. These are sizeable grants—including tuition, fees, and a stipend for living expenses.

Almost all state grant and scholarship funds are need-based. Merit-based grants do remain, although in some cases this is only because statutes or trusts specify how they are to be awarded. Some Regents Scholarship programs (e.g., New York) use merit as a basis to select among students with proven need.

More grant money appears to be available for undergraduates than for graduate students on the statewide level. Some financial aid officers pointed to the fact that without undergraduates there can be no graduates. Others remarked that the State Student Incentive Grant Program, with its matching Federal dollars, was an incentive for states to supply undergraduate grant funds.

In only five [1] cases were data available through the survey for fiscal years 1974, 1978, and 1980 for state grant programs. Although far too small a sample from which to draw any conclusions, it is worth noting that among the five, the number of health professions awardees in three programs remained unchanged, and in one dropped off sharply. The remaining one that has increased in number of participants and dollar value of awards is a tuition waiver program at a newly created medical school with expanding enrollment.

b. State scholarship aid for three health professions

1. Medical students.—The best source of data on scholarship aid received by medical students is the annual survey of the Liaison Committee on Medical Education (LCME) prepared by all medical

[1] The five programs, listed in Supplement 1, are: California (1), Colorado (2), Massachusetts (3), Nebraska (2), and Oklahoma (4). Numbers in parentheses indicate sequence of programs in individual state inventories.

schools. At our request the Association of American Medical Colleges (AAMC) staff prepared a special analysis of 1978 data from this survey (1980 was not yet available) to identify those schools whose students were receiving scholarship aid from state and from other sources. Because the data reported by the schools covered only those scholarships administered by the school, Federal and other scholarship grants directly to students were not included, thereby understating the "aid from other sources" category.

Of the 117 reporting medical schools, only thirteen, one in each of thirteen states, reported having awarded state scholarships to their students. These schools and the amount of state scholarship aid reported are shown below in table III.1.

TABLE III.1.—MEDICAL SCHOOLS REPORTING STATE SCHOLARSHIP GRANTS IN 1978

School	State	Amount
Buffalo [1]	New York	$203,000
Chicago Medical	Illinois	23,200
Duke	North Carolina	67,000
Kentucky [1]	Kentucky	500
Minnesota [1]	Minnesota	191,300
Nebraska	Nebraska	2,200
Oregon [1]	Oregon	20,100
Southwest [1]	Texas	5,800
New Jersey [1]	New Jersey	112,700
University of Virginia [1]	Virginia	62,500
Wayne [1]	Michigan	334,900
University of Connecticut [1]	Connecticut	31,000
University of Massachusetts	Massachusetts	1,222,000

[1] Denotes public school.

Source: Association of American Medical Colleges.

The same data show that state scholarship aid is a small proportion (3 percent) of total scholarship aid flowing through the schools (see table 111.2 below). While nearly 10 percent of all scholarship aid at public schools comes from state government, state scholarship funds account for less than 1 percent of scholarship monies at private schools. The data also show that the total amount of scholarship aid available per school is nearly 2½ times greater in the private schools, reflecting the role played by private philanthropy and intra-university scholarship allocations.

TABLE III.2.—COMPARISON OF AVERAGE STATE AND OTHER GRANT AID PER SCHOOL FOR MEDICAL STUDENTS IN 1978

	State scholarship Aid	Aid from other sources [1]	Total reported	States' percentage of total
Category:				
All medical schools	$10,200	$282,000	$292,200	3.4
Public medical schools	16,100	166,000	182,100	8.8
Private medical schools	1,900	447,000	448,900	.4

[1] University based grants only.

Source: Association of American Medical Colleges.

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2. Scholarship aid to dentistry.—The dental schools have perhaps the most complete statistical file on sources of state scholarship and loan funds of any health profession.

As table 111.3 shows, state scholarships to dental students were extremely small when spread across all dental students and these per student amounts of state scholarship aid increased more slowly than the rise in tuition and fees.

TABLE III.3.—COMPARISON OF INCREASES IN AVERAGE TUITION AND AVERAGE STATE SCHOLARSHIP AID PER DENTAL STUDENT, 1974–77

	1974	1977	Average annual percent change
Average tuition:[1]			
Resident	$1,744	$2,615	14.4
Nonresident	2,338	3,348	13.7
Total State scholarship dollars	1,054,594	1,437,768	10.9
Total dental student dollars	19,369	21,510	3.6
State scholarship funds per student	54	67	7.4

[1] Excluding fees.

Source: American Dental Association, Annual Report: Dental Education, 1973–74, 1977–78.

State scholarship dollars were identified by only 45 percent of the 58 reporting dental schools in 1974; by 1977 this proportion had declined to 41 percent of the 59 reporting schools. (See table 111.4.)

TABLE III.4.—MEAN STATE SCHOLARSHIP FUNDS FOR SCHOOLS OF DENTISTRY, 1974 AND 1977

	1974	1977
Number of schools reporting	58	59
Number of schools reporting State scholarship funds	26	24
Percent of schools receiving funds	44.8	41
Total State scholarship dollars	$1,054,594	$1,437,768
State dollars per school aided	$40,561	$59,907

Source: American Dental Association, op. cit.

From our state interviews it was learned that the University of Washington, Seattle, appears to have recognized the financial problems faced by students in schools of dentistry. In 1980, 23 percent of a total of 513 dental students received $11,800 in tuition exemptions in contrast to 3.7 percent out of a total of 729 medical students who received $27,800 in exemptions. Exemptions are allocated on the basis of most serious financial aid need. This difference reflects the particularly severe problems faced by dental school students and their schools which have less private support, smaller alumni giving, and less endowment than medical schools. When fees are added to tuition, the dental student has, on average, very high out-of-pocket educational costs.

3. State scholarship aid to optometry.—In contrast to dentistry, association data for optometry shows that state scholarship aid increased faster than average tuition but that this state aid did not make up for the drop in Federal scholarship aid. (See table 111.5) State scholarship assistance in total in 1978 was $334,791 or $80 per each of the 4,209 enrolled optometry student throughout the nation.

TABLE III.5.—AVERAGE ANNUAL INCREASES IN STATE AND FEDERAL GRANT AID TO OPTOMETRIC STUDENTS, AS COMPARED TO TUITION, 1974-78

	1974	1978	Average annual percent change
Average tuition (excluding fees):			
Resident	$2,234	$3,613	+12.8
Non-resident	2,746	4,597	+13.8
Scholarships:			
Federal	508,470	224,676	−69.2
State	172,031	334,791	+18.1
Total	749,420	660,317	−3.1

Source: Association of Schools and Colleges of Optometry, Annual Survey of Optometric Educational Institutions, 1973-74, 1977-78.

For the remaining health professions, state scholarship funds exist but no information on awards is available from professional associations. In addition, schools were not able to identify nor easily isolate state grants from other scholarship sources. Supplement 1 describes state grant programs, but data concerning these programs gathered during the telephone survey and site visits is insufficient for tabulation.

Results of all surveying suggest that unconditional state scholarship aid is neither a primary nor growing source of student aid in most states.

2. STATE LOANS

The study findings on state loan activity are sparse. Our inventory has identified only a limited number of loan programs. See Supplement 1, under California, New Hampshire, and Oregon. All three of these programs are relatively small, and two of them are university-based. In interviews, large university-based loan programs were identified in several other states, including Pennsylvania and Michigan. As noted earlier, service payback and federally backed and state-guaranteed loans programs are not, for the purpose of this study, counted as state loan programs. It should be noted that some states, such as Florida, are withdrawing state aid programs and relying instead on Federal loan programs. On additional data were gathered on state loan programs for several reasons:

The degree of effort necessary to track institutionally based state financial aid programs was beyond the scope and timeframe of this study.

In public schools, it is difficult to separate state loan funding from public university loan funds.

It is unclear whether the proportion of state funds being lent by institutions can be meaningfully isolated, particularly if revolving pools of funds assembled from multiple sources were being used as principal.

For the most part, states have avoided using state appropriations for health professions loans. Even the medical schools, in collecting extensive student aid data, do not have a line entry for state loan programs other than those which are guaranteed by the state.

The dental schools have reported state loan programs for 1974 and 1977 as follows:

TABLE III.6.—AVERAGE ANNUAL CHANGE IN STATE LOANS TO ALL DENTAL STUDENTS COMPARED TO AVERAGE ANNUAL INCREASE IN AVERAGE TUITION: 1974–77

	1974	1977	Average annual percent change
Average tuition (excluding fees):			
Resident	$1,744	$2,615	+14.4
Nonresident	$2,338	$3,348	+13.7
Total State loans all schools	$2,839,334	$500,011	−43.9
Total dental student enrollment	19,369	21,510	3.6
Loan funds per student	146	23	−46.0

Source: American Dental Association, op. cit.

TABLE III.7.—DENTAL SCHOOLS RECEIVING STATE LOAN FUNDS: 1974 AND 1977 TOTAL LOAN DOLLARS AND AID PER SCHOOL

	1974	1977
Number of schools reporting	58	59
Number of schools reporting State loan funds	22	10
Percent of schools receiving funds	38	17
Total State loan dollars	$2,839,334	$500,011
State dollars per school aided	$129,061	$50,001

Source: American Dental Association, op. cit.

The number of dental schools reporting state loan assistance declined in 1977 from 1974, as did the total dollars and average state loans total available to each dental school, as shown in table III.7. We believe this is indicative generally of state policy toward special state loan funds for the health professions. Such funds do not appear to be a promising source of increased student aid based on the limited information available.

Discussions with student financial aid officers reveal that state loan programs are not a major element in financing student assistance. The major student loan volume appears to be federally insured guaranteed student loans to the extent that graduate students have not exceeded the cumulative $15,000 allowed for aggregate undergraduate and graduate borrowing. The HEAL program, although it has higher ceilings of $60,000, has had less participation than anticipated, apparently because of its high interest rates.

3. GENERAL HEALTH PROFESSIONS STUDENT FINANCIAL AID PROBLEMS

The limited data presented here underrepresents the amount determined in the course of this study about state financial aid in general, and financial aid to health professions students in particular. Most of the information collected was qualitative, and came from interviews with state and school financial aid officers. It is summarized in the next sections. Before entering into this discussion, however, it must be emphasized that no scientific polling techniques were used, thus the findings presented are strictly impressionistic.

a. Students need for and access to aid

Overall, the financial cost of a health professions education differs significantly from that of most other professions. These training programs are among the most expensive offered. Their high cost is reflected in the tuition students must pay, and these payments are

probably, more than anything else, the main reason for the need shown by many health professions students. It should be noted, however, that not all types of health professions training are equally expensive. There is a great deal of variation among professions involved in this study. Differences can be attributed to the level of tuition and fees; to the duration of the educational process; to whether professional training takes place on the baccalaureate level, as in pharmacy, or at the graduate level, as in most of the other health professions; and to the prospects, timing, and certainty of earnings once the professional begins his or her practice.

Graduate students in the health professions face certain conditions that contribute to their need for financial aid:

Many health professions students must pay high private tuitions or non-resident charges at out-of-state public institutions. While the majority of states provide a broad range of undergraduate educational opportunities within the state, the spectrum of graduate health professions training offerings at public institutions is more limited. Interstate compacts relieve this problem, but only to a limited extent.

Health professions students are often among the oldest on campuses since graduate health professions training usually follows several years of undergraduate preparation, and in many cases, work experience. Financial aid officers also have mentioned that veterinary medicine and particularly public health students are older than other health professional students. Older students are more likely to have families to support, and therefore greater financial needs during their years of graduate study.

Curricular demands make it difficult for many graduate health professions students to hold jobs outside school. Financial aid officers, when asked about the role of work-study or other jobs in meeting expenses, frequently replied that students had no time. Nor is there time during summers for remunerative work. In addition, interrupting these educational programs to work and renew one's financial resources is often not possible and rarely advisable.

Often health professions students face high incidental expenses while in school. Dental students must begin purchasing equipment in their first year. Dental school fees, above and beyond tuition, primarily to pay for such equipment, must be met years before earnings are realized. Fees averaged $2.216 for first-year dental students in 1977–78. For 1978–79 the average dental student can expect to pay special fees of $4,847/student in dentistry over a four-year program, according to the American Dental Association.

Not all health professions require as long periods of education plus residency as medicine, but there are other financial barriers to be faced for those students who enter practice upon graduation. Start-up costs for office practice are high. Opening a dental office, for instance, is reported to cost $40,000–$60,000.

Not only do health professions students have high expenses due to tuition and the factors mentioned above, they also have decreased access to certain types of financial support because they are graduate students. First, often parental and personal savings have been exhausted in meeting the costs of an undergraduate education, and little is left for the graduate years. Second, many state, Federal, and private sources of aid are not available to graduate students, regardless of profession.

Debts of health professions students are increasing. The most recent AAMC study of student financing shows that in 1975 the average indebtedness of graduating medical students was $9,000. As of 1979, this figure had risen to $15,800, which represents an average annual increase of 15.1 percent over this four-year period.

In summary, health professions students have high financial needs for a variety of reasons, and reduced access to certain types of support. In addition, in recent years two demographic changes in the student body—increased overall enrollment and increased enrollment of minority students—have tended to raise the need levels of not only health professions but all students. Minority students have lower personal financial resources, and consequently need more aid. In addition, as a higher number of children in a family, both male and female, pursue higher education, the family's funds are necessarily spread more thinly. Rising tuitions, coupled with these demographic changes, have exacerbated the gap between students' personal resources and what they must pay. This gap ostensibly is filled by a variety of financial aid. The next section discusses how states and their universities and colleges attempt to match available aid with health professions student financial needs.

b. The planning and design of financial aid "packages"

A fundamental problem faced by health professions students in need of financial aid arises from the timing and the manner in which aid "packages"—often composed of both loan and grant money from multiple sources—are planned and assembled. The planning problem is complicated by the fact that most of the arrangements for financial aid are made through the student financial aid office of the school. The result is that entering students must apply, be admitted, and agree to attend a school before they can be fully advised how much financial support the school will provide to them. Given the wide variation in available aid from school to school, and the great range in tuition cost particularly in private schools and the changing policies and appropriations of government, students are greatly handicapped in their ability to appraise student aid availability when choosing schools.

Since financial aid arrangements are made at the institutional level, students may set career goals and may make school choices without complete information on their prospects for essential student aid. It is difficult to gauge whether students choose not to enter the applicant pool, or to know how many students do not attend the institution of their choice because of financial aid uncertainty. However, during the survey interviews, both students and financial aid officers agreed that such instances do occur. Some schools now require that students specify their financial need on their applications. It is not known whether admissions committees are influenced by the inclusion of such student financial need information. We learned of one practice where a school counsels students with high financial needs to consider other schools which are either lower cost or have more student aid resources.

Schools are handicapped as well because available financial aid budgets often cannot be tallied until Federal policy is firm and state budgets for public schools are passed. Federal financial aid programs are reauthorized periodically and subject to fluctuating appropriations yearly. Students plan for four years in most professional schools. At the time of most admission notices and student acceptances in the late

winter and early spring, neither party can be exactly sure of what aid will be available. Private schools with increasing tuitions stand to lose excellent candidates unless they can commit aid early and unless they have significant income to assign to student aid.

In sum, it appears that much of the preliminary "matchmaking" by both students and aid offices is done with uncertain financial aid information. One effect of this phenomenon is that students with low financial resources are more likely to select public institutions, and private institutions are more likely to select students with higher resources than might be the case if financial aid were not so complex and uncertain.

Financial aid officers draw on multiple sources of assistance in "packaging" aid for students. The first step is assessing a student's need by examining his personal resources and generally those of his parents. The latter raises the issue of the financial dependence versus independence of students from their families. Despite the increase in the average age of health professions students, financial aid officers are inclining towards treating such students as financially dependent on their families for purposes of computing financial need.[2] In schools where the policy is not rigidly defined, it is frequently a point of contention between students and aid officers. Many financial aid officers feel that students who have not received money from their parents for some time, or who are already married and have families of their own, can justify claims of independence. Most agree, however, that considering all students independent would be unworkable. In fact, increasing numbers of schools have a firm policy that no student will be considered independent of his or her parents in calculating available resources.

Following a determination of personal liability schools vary in their approach to packaging. Some attempt to divide available scholarship funds and tuition remission funding (if they are calculable in advance) before assembling low interest loans. Others build on a base of low interest loans such as the limited Health Professions Student Loan funds, NDSL, and other available guaranteed student loan programs. Most universities also have modest loan and scholarship resources from small revolving funds, gifts, and endowments. Students interested in the National Health Service Corps (NHSC), Armed Forces, Veterans Administration, or state payback programs are also counseled although the Federal programs are not generally considered need-based, with the exception that the NHSC gives priority to recipients of one-year Exceptional Financial Need (EFN) awards.

During survey interviews, financial aid officers were quick to point out the drawbacks of financing options such as the Health Education Assistance Loans (HEAL), which have no interest subsidy (i.e., an annual HEAL loan of $8,000 for four years with a 15-year repayment schedule would end up costing a student $148,000). Some spoke of HEAL as a "last resort," and certain health professions schools have not even agreed to participate. Service payback programs are seen as a different aid alternative altogether, quite apart from all other forms of assistance. Several financial aid officers mentioned that these programs previously had had a more tangential relationship to financial

[2] It is worth noting that all Department of Education and Bureau of Health Manpower sponsored grants and programs relevant to the health professions (see Supplement 2) require the student to file an application indicating parental income.

aid, and that only in the past few years had they come into sharp focus as options for students to finance their education. There was relatively widespread agreement that students arrived at the institution's financial aid office with their minds more or less made up on whether or not they were interested in payback programs.

Service payback programs, which will be defined shortly, are administered by both the Federal Government and states. In addition, a small number are sponsored by state medical associations, insurance groups, and communities and counties in need of health professionals. These financial aid programs, more than any others, directly forge the link between public funding of health professions education and the principle that the public's investment must be repaid either directly in cash or through the provision of needed services. This link places service payback programs on the cutting edge of public policy in the area of aid to health professions education. Part C of this chapter is devoted to a discussion of state service payback programs. Fortunately the data available on these programs are more complete than that for state grants and loans.

C. State Service Payback Programs

1. Definitions and Introduction

For the purposes of this study, a service payback program is defined as any sort of scholarship, grant, tuition waiver, loan, or promissory program through which, in return for support, a health professions student incurs an obligation to serve in a specified capacity. Under this definition, Federal programs such as the National Health Service Corps (NHSC) are service payback programs, as are programs through which a student can receive service-conditional aid from a community, county, professional association, or insurance concern. The above types of service payback programs are described elsewhere, however, as this chapter is devoted to state-based service payback programs. Federal and local programs will be discussed only as they pertain to state program.

A service payback arrangement is considered a state program if the financial support for which the student is obligated represents funds from state general revenues, bond issues, or independent revolving accounts. Sometimes states make students financially responsible for funds spent on their behalf in operating a public health professions school, or in securing seats at out of state institutions. Under the above definition, such arrangements constitute service payback programs if the students can reduce their obligations to the state through service. Although recipients usually must agree to serve before they accept aid, they can not be physically forced to do so. It is usually possible to buy out of all obligations. Sometimes the penalties are high, but in other programs cash repayment is simply one of the options for retiring the debt, with service payback being another. In this sense, service payback programs can be considered a special class of loans.

This section on state service payback programs begins with a summary on the collection and presentation of data. Then the salient features of state service payback programs are discussed, followed by an analysis of trends in the growth of these programs and an outline of their relationship to the NHSC.

2. DATA COLLECTION AND PRESENTATION

Two steps were taken to identify programs. First, the status of state payback arrangements identified in the 1977 National Health Council, Inc., "Listing of Financial Incentives" was investigated. Unless changes had been made in programs, their descriptions formed the information base. Second, state and health professions schools' financial aid officials in all 50 states and the District of Columbia were contacted by telephone or selectively at site visits in order to identify programs developed since 1977. These program officers supplied information specifying the rules governing the program, usually in the form of the enabling legislation. These details are listed by state and by program on the narrative pages of the attached "Inventory of State Financial Aid Programs" (Supplement 1). State service payback programs are designated by an asterisk. Numerical data for these programs is similarly marked on matching pages. In certain cases the figures we requested, namely the number of students and dollar value of their support for the fiscal years 1974, 1978, and 1980, were not available. Programs for which the data was erratically reported have been omitted from tabulations aimed at showing national trends.

3. SALIENT CHARACTERISTICS OF STATE SERVICE PAYBACK PROGRAMS

As of February 1980, 39 state service payback programs for the eight health professions in active operation in 29 states have been identified. In addition, three programs that have been discontinued, but that were active during the target years of this study, bring the total to 42. They appear to represent states' efforts directed primarily at acquiring and retaining health professional manpower and influencing specialty and geographic distribution. The numbers of states having such programs are indicated in parenthesis for the following professions: medicine (29), osteopathy (11), dentistry (11), veterinary medicine (5), optometry (7), pharmacy (1), public health (1). (See table III.8.) Many program directors we interviewed insisted that supplying financial aid to needy students is a secondary priority of their programs, if not a by-product. The fact that every one of these forty-two programs requires at least in-state service for forgiveness of debt confirms the contention that acquiring health manpower is a major motive behind their creation.

In addition, twenty-three states specify that this service must be in primary care (usually encompassing family practice, sometimes obstetrics/gynecology, pediatrics and internal medicine as well, and general practice in the case of other health professions). In fact, students are allowed a grace period for post-graduate training, in order to take training residencies in these fields, before they are required to begin service.

The states with payback programs are not solely aiming to produce and retain health manpower. In addition they are seeking to channel health professionals toward practice in underserved areas. Thirty of the forty-two programs specify that this service be in areas where there is a scarcity of health manpower, such as rural communities, state agencies, or state-operated and inner city hospitals. In five of the programs there is a sliding scale of cancellation, with an incentive for practice in an underserved area, which yields quicker cancellation.

Only seven of the forty-two payback programs in our inventory merely require that the student practice within the state. (See table III.8.) As is true for the NHSC, most state programs allow no other monies to be accepted that require a service commitment, unless that commitment is held in abeyance until service to the state is completed.

TABLE III.8.—TERMS OF STATE SERVICE PAYBACK PROGRAMS BY STATE

State [1]	Type of service [2]	Fiscal year program initiated [3]	Professions eligible [4]	Maximum level of support, 1980 [5]
Alabama	S	1965	M,O	3,000.
Alaska				
Arizona	U	1980	M	6,000.
Arkansas	U	1949	M	5,000.
California				
Colorado	U	1973	O	87½ percent tuition.
Connecticut				
Delaware				
District of Columbia				
Florida				
Georgia (1)	U	1969	D, V, OP	2,500.
Georgia (2)	U	1969	M, OS	
Hawaii				
Idaho				
Illinois	U	1979	M	Tuition plus $400 per month.
Indiana	U	Not available	M, OS	5,000.
Iowa	U	1966–1974	M	
Kansas (1)	U	1976	OS	6,000.
Kansas (2)	U	1976	OS	6,000.
Kansas (3)	U	1980	M	Tuition plus $500 per month.
Kentucky (1)	U	1954	M	4,000.
Kentucky (2)	U	Not available	O	4,500.
Louisiana				
Maine	I	1977	M, OS, O, V, OP	Contract.
Maryland (1)	U	1972	M	1,500.
Maryland (2)	U	1972	M	1,500.
Massachusetts	I	1980	M	2,400.
Michigan				
Minnesota (1)	U	1972	M, OS	6,000.
Minnesota (2)	I	1978	OS, OP	Contract.
Mississippi	U	1975	M, O	6,000.
Missouri	U	1980	M, OS	6,000.
Montana				
Nebraska	U	1980	M	7,000.
Nevada	S	1978	O, V	Contract.
New Hampshire	I	1972–1979	M	7,500.
New Jersey				
New Mexico	U	1975	M	6,000.
New York	U	1971	M	4,000.
North Carolina	U	1945	M,OS,O,V,OP,PH,PU	4,000.
North Dakota (1)	U	Not available	M, O	2,500.
North Dakota (2)	I	....do	O, O, V	Contract.
Ohio				
Oklahoma (1)	U	1975	M, OS	7,000.
Oklahoma (2)	U	1975	M, OS	10,000.
Oregon				
Pennsylvania				
Rhode Island	S	1980	M, V, OP	Contract.
South Carolina	U	1975	M, O	6,200.
South Dakota (1)	S	1969	M, OS, O, V, OP	1,500.
South Dakota (2)	S	Not available	M	3,500.
Tennessee	U	1972–1978	M, OS	6,500.
Texas (1)	U	1975	M, OS	4,000.
Texas (2)	U	Not available	M	5,000.
Utah				
Vermont				
Virginia	U	1943	M, O	2,500.
Washington				
West Virginia	I	Not available	OP	Contract.
Wisconsin				
Wyoming	I	1975	M	0o.

[1] If more than 1 administratively separate program exists in a State, separate lines of data are presented under the State.
[2] Type of service: U = Work in an underserved area is required. I = Work required in any area in-state. S = Sliding scale on forgiveness dependent of type of work, with higher rate of cancellation for service in an underserved area.
[3] Single year indicates when first students admitted to program. Years connected by desh indicates when program was initiated = terminated (1971 = 1978).
[4] M = medicine, OS = osteopathy, O = dentistry, V = veterinary medicine, OP = optometry, PH = pharmacy, PO = podiatry, PU = public health.
[5] When levels of support are based on tuition or contract agreements, both of which vary according to school; no figure is given.

Eligibility rules for state service payback programs vary, although the underlying rationale behind most of them stems from the states' desire to place recipients permanently in underserved areas. Some of the most frequent criteria are as follows:

State residency.—In nearly all cases, this is an inflexible criterion. Many service payback programs have residency requirements that exceed legal definitions (e.g., as long as five years).

Matriculation requirements.—These programs often specify that students must be enrolled in in-state schools. In the case of service conditional tuition waiver programs, the individual institution is specified. Some students must enter service payback programs if they wish to study at a particular school, a topic that will be discussed later. However, many of the programs only specify accredited U.S. health professions schools, and some even allow state residents studying overseas to participate.

Financial need.—Very few programs rigidly require that recipients be needy, although many use need as one of their criteria for choosing among students.

Students' geographic origin.—Certain programs have quotas for students from underserved areas or give them priority. Doubtless such rules, although not common, are designed to select students who will work permanently in rural areas. More frequently, programs stipulate that candidates' desire for and adaptability to a primary care practice in an underserved area will be used in selection.

Academic standing.—New York's service payback program selects candidates from those who scored well on professional school entrance examinations who also show need. Academic achievement is also considered in other states, but is not among the most important criteria.

Guarantee requirements.—North Carolina specifies that the service payback agreement must have two co-signers who are North Carolina residents. A few other states have such requirements.

Once these requirements are met and a student is selected, the next set of conditions he/she is likely to encounter involve the service payback period. Some common threads in all programs are as follows:

Students are allowed a grace period for post-graduate training. Sometimes this is on the condition that it be in primary care. In many cases grace periods also apply to military service. In older programs, interest frequently did not accrue during either the schooling or grace period. In new programs, the trend is toward placing interest on the obligation from the date of issue, not as a means of earning income on the investment, but rather as a mechanism to reduce the attractiveness of buying out.

With regard to service in underserved areas, it should be noted that some states have a sliding scale of forgiveness, where the more pressing the need for a given type of manpower, the quicker the debt cancellation for those who meet that need. The predominant formula, however, remains one year's aid forgiven for each year's service, much like the NHSC.

Certain programs grant only partial forgiveness, such as 75 percent through service, with the balance to be repaid. Others pro-rate forgiveness in such a way that it is financially unattractive to break a service committment midway through the obligation period.

Buy-out provisions vary with the most typical formula being (sometimes immediate) repayment of principal plus reasonable interest. However, penalty provisions are on the rise.

These are just some of the salient characteristics of state service payback programs. Little can be safely generalized about them except that one will rarely find any two alike.

State service payback programs, with certain notable exceptions that will be mentioned later, tend to be well-subscribed. Therefore, the responsible boards that operate these programs must choose among competing applicants. The most frequently used selection criteria, in order of importance, are:

State residency—this is an absolute must in nearly every case, and often program residency requirements exceed legal ones;

Candidates' motivation for and adaptability to a rural health career;

Financial need; and

Academic achievement.

It is likely that both interest in rural primary care careers and concern over the rising cost of education make these programs desirable to health professions students.

The financial attraction is underscored by the fact that the few programs that have insufficient applicants to fill available spaces offer comparatively low levels of aid in return for the commitment they seek. Moreover, new payback programs offer comparatively high support, and many older programs have been amended to raise award levels in exchange for future in-state service commitments.

In general state programs provide lower levels of assistance than the NHSC, which pays a student's full tuition as well as a stipend of $453 per month (see table III.8). State programs in total are not as extensive as the NHSC in either dollar or student terms. Considering the total number of health professions students, these are small-volume programs, but they are significant in terms of roles they play in meeting manpower needs within their given states.

TABLE III.9.—TOTAL STUDENT PARTICIPATION AND AWARDS FOR STATE SERVICE PAYBACK PROGRAMS FOR THE HEALTH PROFESSIONS AS COMPARED TO THE NHSC FOR 1980

	Number of students	Total value
State service payback programs	3,240	[1] $18,800,000
NHSC	6,408	85,500,000

[1] Rounded

Sources: Table III.11; supplement 2, table 8.

Unlike the NHSC, the majority of participants in state service payback programs attend public rather than private health professions schools. There are two probable reasons for this. First, the comparatively lower support levels (see table III.10) of state programs are geared towards in-state public schools' tuition rates. In fact, part of the aid may be a tuition remission at such institutions. For students who choose to attend private schools, the provision that the NHSC will pay full tuition, no matter what the level, is doubtless attractive. Second, public schools are attended almost entirely by in-state residents, and nearly all state service payback programs list state residency as an eligibility criterion. In addition, many of these programs are not applicable to students at out-of-state schools or even at private schools, making high participation by public school students inevitable.

In short, it might be said that there is a better "fit" between state student service payback programs and students at public institutions than between these programs and students at private institutions.

4. TRENDS IN STATE SERVICE PAYBACK PROGRAMS

The strong desire of states to supply health manpower to shortage areas and the growing financial pressures on health professions students appear to be reasons why these programs have grown rapidly (see table III.10).

There is a long lag-time between investment and return in a service payback program, sometimes as much as eight years. Before rural placements can be made, several processes must be completed successfully, and difficulties may arise. Initially, students must be attracted to the program. Although most programs were reportedly well subscribed, some are not. Maryland initiated a program in 1972 that provided $1,500 annually and required a year's service for each year's loan. It has never been utilized, most likely due to its low support level, and is likely to be terminated. With the availability of NHSC, loan programs, and other sources of financial aid there appears to be some disincentive for certain students to participate in payback programs with lesser support levels. The question of program selection, however, will be treated in detail later.

TABLE III.10.—TRENDS IN STUDENT PARTICIPATION IN, AND VALUE OF, STATE SERVICE PAYBACK PROGRAMS OVER TIME[1]

	1974		1978		1980	
	Number of students	Total value	Number of students	Total value	Number of students	Total value
Alabama	89	$178,000	199	$597,000	241	$723,000
Arizona					10	60,000
Arkansas			41	205,000	60	300,000
Colorado	25	202,175	99	1,245,915	101	1,613,778
Georgia	136	224,000	150	326,000	173	381,400
Illinois					25	188,428
Indiana			42	210,000	44	220,000
Kansas					544	3,619,084
Kentucky	28	98,000	75	310,000	75	310,000
Maine			129	691,900	184	1,238,100
Maryland					6	9,000
Massachusetts					210	464,000
Minnesota	40	232,300	79	523,000	99	629,000
Mississippi[2]	NA	NA	NA	NA	67	1,159,408
Missouri					25	150,000
Nebraska					7	49,000
Nevada			15	143,000	18	171,000
New Hampshire	5	11,850	15	75,000		
New Mexico			13	83,564	20	107,532
New York[2]	NA	NA	NA	NA	169	687,245
North Carolina	110	201,000	66	216,000	216	834,000
North Dakota	58	171,068	156	502,854	160	1,104,564
Oklahoma			56	291,248	61	308,603
Rhode Island	NA	NA	NA	NA	50	459,600
South Carolina			66	409,200	66	409,200
South Dakota	121	314,600	297	888,000	273	809,200
Tennessee	47	195,965	69	394,250	21	99,250
Texas			70	282,500	109	524,000
Virginia	70	175,000	70	175,000	80	200,000
West Virginia			18	64,450	18	66,000
Wyoming			64	876,891	108	1,366,469

[1] No effort has been made to aggregate these figures, since the absence of some data from 1974 would tend to skew the totals so that the growth of these programs would appear artificially rapid.
[2] 1978-79 data.

Note: States in which no programs were idenified: Alaska, California, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Illinois, Iowa, Louisiana, Michigan, Montana, New Jersey, Ohio, Oregion, Pennsylvania, Utah, Vermont, and Wisconsin.

Source: Lewin & Associates survey.

TABLE III.11.—STATE SERVICE PAYBACK PROGRAMS: NUMBER OF MEDICAL STUDENT RECIPIENTS AND TOTAL VALUE OF THEIR AWARDS, AWARDS BY STATE—1974, 1978, 1980

	1974		1978		1980	
	Number of students	Total value	Number of students	Total value	Number of students	Total value
Alabama	57	$114,000	144	$432,000	186	$558,000
Arizona					10	60,000
Arkansas			41	205,000	60	300,000
Georgia	30	75,000	32	96,000	33	123,750
Illinois					25	188,428
Indiana			31	155,000	35	175,000
Kansas					499	3,349,084
Kentucky	28	98,000	55	220,000	55	220,000
Maine			91	519,000	137	883,400
Maryland					6	9,000
Massachusetts					210	464,000
Minnesota [1]	40	232,000	64	375,500	78	463,000
Mississippi [2,3]	NA	NA	NA	NA	67	1,159,408
Missouri					6	36,000
Nebraska					7	49,000
New Hampshire	5	11,850	15	75,000		
New Mexico			13	83,564	20	107,532
New York [3]	NA	NA	NA	NA	169	687,245
North Carolina	53	106,000	28	112,000	103	412,000
North Dakota	39	79,950	46	90,420	38	78,500
Oklahoma			32	132,071	34	177,444
Rhode Island	NA	NA	NA	NA	26	293,800
South Carolina			50	310,000	49	303,800
South Dakota	48	130,000	193	554,000	164	567,000
Tennessee [1]	47	195,965	69	394,250	21	99,250
Texas [1]			70	282,500	109	524,000
Virginia	60	150,000	60	150,000	70	175,000
Wyoming			64	876,891	108	1,366,469

[1] Data include some osteopathy students.
[2] Data include some dentistry students.
[3] Data is for 1978–79.

Note: States in which no programs were identified: Alaska, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Iowa, Louisiana, Michigan, Montana, Nevada, New Jersey, Ohio, Oregon, Pennsylvania, Utah, Vermont, Washington, West Virginia, and Wisconsin.

Source: Lewin & Associates survey.

TABLE III.12.—STATE SERVICE PAYBACK PROGRAMS: NUMBER OF OSTEOPATHY STUDENT RECIPIENTS AND TOTAL VALUE OF THEIR AWARDS BY STATE—1974, 1978, 1980

	1974		1978		1980	
	Number of students	Total value	Number of students	Total value	Number of students	Total value
Georgia	1	$2,500	1	$3,000	3	$11,250
Louisiana					5	35,000
Minnesota			9	121,500	8	108,000
Missouri					19	114,000
Oklahoma			24	162,677	27	131,159
South Dakota	5	14,500	8	18,500	5	12,000

Note: States in which no programs were identified: Alabama, Alaska, Arkansas, Arizona, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee,*, Texas,* Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

*Certain osteopathy students in these States participate in service payback programs earmarked for M.D.s. It was not possible to break out data relating to them specifically.

Source: Lewin & Associates survey.

TABLE III.13.—STATE SERVICE PAYBACK PROGRAMS: NUMBER OF DENTISTRY STUDENT RECIPIENTS AND TOTAL VALUE OF THEIR AWARDS BY STATE—1974, 1978, 1980

	1974		1978		1980	
	Number of students	Total value	Number of students	Total value	Number of students	Total value
Alabama	32	$64,000	55	$165,000	55	$165,000
Colorado	25	202,175	99	1,245,915	101	1,613,778
Florida	50	75,000	50	125,000	54	135,000
Indiana			11	55,000	9	45,000
Kansas					45	270,000
Kentucky			20	90,000	20	90,000
Maine			25	157,000	22	123,700
Nevada			13	125,000	13	126,000
North Carolina	38	76,000	24	96,000	103	412,000
North Dakota	2	45,000	44	314,600	59	443,100
South Carolina			16	99,200	17	105,400
South Dakota	49	123,150	67	150,000	49	114,200
Virginia	10	25,000	10	25,000	10	25,000

Note: States in which no programs were identified: Alaska, Arizona, Arkansas, California, Connecticut, Delaware, District of Columbia, Georgia, Hawaii, Idzho, Illinois, Iowa, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, Wisconsin, and Wyoming.

Source: Lewin & Associates survey.

TABLE III.14.—STATE SERVICE PAYBACK PROGRAMS: NUMBER OF VETERINARY MEDICINE STUDENT RECIPIENTS AND TOTAL VALUE OF THEIR AWARDS BY STATE—1974, 1978, 1980

	1974		1978		1980	
	Number of students	Total value	Number of students	Total value	Number of students	Total value
Georgia			17	$25,500	17	$25,500
Maine			11	72,000	14	122,000
Nevada			2	18,000	5	45,000
North Dakota	17	$46,118	48	393,934	40	447,164
Rhode Island	NA	NA	NA	NA	14	123,000
South Dakota	19	46,950	29	64,500	35	76,500

Note: States in which no programs were identified: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Source: Lewin & Associates survey.

TABLE III.15.—STATE SERVICE PAYBACK PROGRAMS: NUMBER OF DPTOMETRY STUDENT RECIPIENTS AND TOTAL VALUE OF THEIR AWARDS BY STATE—1974, 1978, 1980

	1974		1978		1980	
	Number of students	Total value	Number of students	Total value	Number of students	Total value
Georgia	7	$9,100	15	$22,500	24	$35,500
Maine			2	8,000	6	24,000
Minnesota			[illegible]	26,000	13	58,000
North Dakota			18	97,600	23	135,800
Rohode Island	NA	NA	NA	NA	10	42,800
South Dakota					20	39,500
West Virginia			18	64,450	18	66,000

Note: States in which no programs were identified: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklatoma, Orgeon, Pennsylvania, South Carolina, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming.

Source: Lewin & Associates survery.

TABLE III.16.—STATE SERVICE PAYBACK PROGRAMS: PHARMACY, PODIATRY[1] AND PUBLIC HEALTH,[1] STUDENT RECIPIENTS AND TOTAL VALUE OF THEIR AWARDS BY STATE—1974, 1978, 1980

	1974		1978		1980	
	Number of students	Total value	Number of students	Total value	Number of students	Total value
Georgia	48	$62,400	45	$54,000	42	$54,000
North Carolina	19	19,000	4	8,000	15	30,000

[1] Both listings above are pharmacy; no podiatry or public health were identified.

Note: States in which no programs were identified: Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming.

Source: Lewin & Associates survey.

Once the first professional degree is earned, the recipient may decide that a specialty career or an urban practice in a non-shortage area is preferable to the service required. He/she may simply elect to buy out of the program. In many cases, all that may be required is payment of the principal plus interest, often quite low by today's standards. If the program offers a low level of support, coupled with a low default penalty, students may simply buy out and no rural placements will be made. Thus, where there is a low support level and easy buy out, the program takes the form of a low interest loan. In our interviews with Iowa officials, this frequently was cited as a source of disenchantment with their service payback program, which was phased out except for renewals in 1974.

Several other programs, such as those in Tennessee and New Hampshire, have also been phased out. Proposed service payback arrangements, such as Pennsylvania's, have faced uphill battles in the state legislature. Reasons given for opposition to state payback programs include:

Their fiscal impact on the state budget is simply too great, especially in a climate of tax control initiatives.

The buyout rates are too high in some states; in effect cancelling the objective of such programs.

The perception that there is a crisis shortage of rural health manpower within the state has diminished.

States are beginning to relate high medical care costs to the presence of health manpower.

Physicians tend to settle where they do residencies rather than where they attend medical school, a finding that has led to increased reliance on state aid for residency training as a substitute for payback.

Another factor influencing state policy toward payback programs is the growth of interest by health professional students and states in furthering primary care specialty training. As stated by Peter Butler in a 1979 American Association of Medical Colleges (AAMC) report, "State Funding for Graduate Medical Education," "the extent of funding nationwide is unquestionably widespread" for state primary care residencies which attract out-of-state as well as in-state students. Butler cited the following evidence:

> Nine states have passed legislation that urges or requires training of family physicians at the graduate or undergraduate level;

20 states have passed a total of 40 bills which support or fund family practice programs;

30 states have appropriated funds to family practice programs through line items in the state or medical school budgets; and

At least three states have passed legislation for the funding of "primary care" programs, with a portion of those funds being directed to family practice. A number of other states provide line item appropriations without any separate legislative mandate.

However, the reservations towards state payback programs cited above, among them the notion that they should be superseded by primary care residencies, are not universal. During the past six years while a few states were scuttling payback programs, other state legislators were enacting new service payback arrangements and amending old ones. The efforts by these lawmakers to design programs that overcome the obstacles that have been described above have followed three major strategies.

5. STATE STRATEGIES TO IMPROVE PAYBACK PROGRAM ALTERNATIVES

First, certain states are making significant efforts to make the programs more attractive to students by increasing levels of support. Illinois initiated a program in 1979, which like the NHSC, offers full tuition and a stipend of $400 per month. In addition, students committed to this rural service program are given preferential treatment in admissions to Illinois dental schools. The ceilings on other payback program awards have been lifted as well.

A second major strategy, developed in Massachusetts and Colorado, ties the opportunity to matriculate at health professions schools to future service commitments. All students entering the University of Massachusetts Medical School as of September 1980, in addition to paying $1,100 tuition, are required to sign a promissory note for $2,000, which is cancelled if the student serves in-state for one year following completion of his education. Since the state heavily subsidizes students' tuition, officials point out, this program is not unreasonable. A more extreme version of this philosophy is the Colorado Dental Tuition Policy, where tuition is set at average annual cost per student for the dental school, which is $18,258 in 1979–1980. Students pay 12.5 percent of this sum and sign a promissory note for the remainder. Each year's note is forgiven for each year of service in an underserved area of Colorado.

States without health professions schools can not, of course, use this strategy. Since they are exporters of health professions students, they are particularly eager to insure that these students return. These states are frequently contracting for out-of-state school slots and pay considerable sums to secure them. Recently, Arizona, Maine, Nevada, North Dakota, Rhode Island, West Virginia, and Wyoming have decided that certain students studying out of state must return to practice in-state, sometimes in underserved areas, or repay substantial funds expended on their behalf.

Once students have entered a payback program, the next obstacle to successful in-state placement is the chance that students will renege on their service obligation and cash out. Thus a third major strategy for insuring the success of payback programs has been to raise the cost

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of buying out. There are several ways in which this has been done. First, by increasing the support level, the student's liability upon default is increased. Buying out of the Colorado Dentistry or the Illinois Medical program could cost over $50,000 in principal alone if funding were received for four years. Second, financial penalties for default are imposed as a barrier to reneging on service obligations. In South Carolina the buyout penalty is three times the principal, in Illinois two times the balance owed, and in Mississippi an extra $5,000 per annual loan in addition to the loan balance.

Since service obligation defaults jeopardize payback programs' budgetary allocations, the loss of which could harm certain students and schools in the future, some state professional associations and boards are said to discourage such actions on the part of their members. For example, a Kentucky dental student who defaulted on his obligation was denied a license to practice in that state.

Positive incentives can also be used to increase the attractiveness of working in a rural area, such as the tax credits offered by Oregon [3] to physicians, or the first-year income guarantee offered by Hawaii. [3]

Several state payback programs are achieving their goals. One of the first programs (1945), that of North Carolina, reports quite favorable retention rates of program participants in shortage areas as follows: M.D.—58.9 percent have returned to shortage areas; D.D.S.—74.0 percent have returned to shortage areas; and pharmacists—69.2 percent have returned to shortage areas.

These were accomplished during a period when cash buy-out was relatively inexpensive.

In summary, there are many difficulties States may encounter in operating service payback programs for health professionals. States are trying to solve these problems through a wide range of innovations that include both incentives and penalties.

6. ISSUES CONCERNING STATE SERVICE PAYBACK PROGRAMS AND FEDERAL SERVICE PAYBACK PROGRAMS

This section represents a sampling of opinions collected during site visits to thirteen states. The section is divided, according to the source of the comments, into three sections: The States' View; the Students' View; and the Health Professions Schools' View.

These three perspectives represent a collage of opinions collected during interviews in thirteen site visit States. No scientific polling techniques were used. Therefore it must be underlined that the following three sections are anecdotal, although hopefully they will help shed light on some important issues.

a. The States' view

In interviews, certain state officers responsible for payback programs complained that Federal programs such as the NHSC, and to a lesser extent the Armed Services and Veterans Administration scholarships, compete for home-grown potential health manpower. The majority of these federally supported students are removed from the

[3] Since these physicians are under no service obligation, these programs are not, strictly speaking, service payback programs. Moreover, the financial incentives are offered not during the physician's education, but when he/she begins to practice.

state during their postgraduate training and their early practice years, two critical periods that determine where health professionals permanently settle. As a result, some State representatives feel that local youth who would have been ideal for their programs and communities may be lost. This exodus is offset in part by NHSC students who may eventually settle in that state, although certain state officials suspect NHSC personnel will not practice permanently in their assigned shortage areas.

Some members of state commissions and boards that screen payback program applicants contend that their state programs are more sensitive to the state's needs and individual candidates' desires. Thus, state programs can make more permanent placements than can the Federal programs because states are better "matchmakers." This easier fit of manpower and geography may result from less stringent state guidelines for "underserved areas." They are often more flexible than Federal specifications. Bending state guidelines to allow a student to return to his home town may place fewer students in areas of severest need, but may in fact contribute to a more permanent dispersion of health resources in areas of moderate need.

One area with which some state service payback programs have had difficulty is in efforts to place students in areas of extreme hardship, such as sparsely settled or impoverished counties. These regions often lack the market to support a practicing health professional. State service payback programs rarely are able to help finance the practices of their graduates during their obligation period. The NHSC is able to do this through the Public Health Service. As a result many state officials feel that the NHSC may be a more appropriate vehicle for placing students in areas where there is a poor market for private or self-supporting community medical practice.

b. The students' view

What issues do health professions students see among options (including payback programs) for financing their education? For some years grant funds have not grown sufficiently to meet educational costs, especially at private institutions. Thus the gradual disappearance of scholarships, grants, and low-interest loans or their inadequacy due to low ceilings, has created a demand for service payback programs as an alternative to the potentially massive debt accumulated under high interest programs such as the Health Education Assistance Loan (HEAL). One trade-off between state and Federal payback programs in the eyes of students is that the state programs provide comparatively low levels of financial support on the one hand, but offer greater certainty of practice location on the other. As mentioned earlier, state programs are often geared to students attending public health professions institutions; thus flexibility in choice of school as well as choice of service area may enter into a student's thinking.

Federal programs are more generous, but placement is less certain. Students attending public institutions can afford more modest state programs; those enrolled at private schools often can not, and opt for Federal support. It should not be inferred by any means, however, that all students view service obligations in entirely negative terms. Many look forward to the challenge of rural primary care, and view

practice in unfamiliar surroundings as a unique and valuable opportunity to learn about themselves and to establish their lifelong career goals. Other students opting for the Armed Services may seek a military career or feel that there are special qualitative advantages in the training programs themselves.

c. The health professions schools' view

Payback programs at any level of support relieve pressure on schools' discretionary forms of financial aid. To some extent these funds allow some health professions schools to have more diverse student bodies than might otherwise be possible. Payback programs that pay full tuition channel more governmental support to those schools which are dramatically increasing tuition to meet high educational costs than they channel to low tuition enterprises. It is perhaps not a coincidence that the top ten medical and osteopathic schools in terms of number of NHSC recipients (Supplement 2, Table 18) are all private and average well above the mean in tuition, even for private schools. Federal payback programs appear to assist these schools in maintaining large applicant pools despite their often prohibitive tuition level—and perhaps state service payback programs do as well to a lesser extent. Although it is difficult to gather evidence that points to such a trend, it is possible that payback programs that require primary care training are having an effect on postgraduate health professions training, and possibly in turn, that graduate health professions in schools' curricula are being affected as well.

SUPPLEMENT 1.—INVENTORY OF STATE FINANCIAL AID PROGRAMS AVAILABLE TO STUDENTS IN EIGHT SELECTED HEALTH PROFESSIONS FOR FISCAL YEARS 1974, 1978, AND 1980, INCLUDING "SERVICE CONDITIONAL" FINANCIAL AID PROGRAMS

FORMAT

There are two formats in this inventory: state financial aid program descriptions, which are vertically inserted, and accompanying data sheets, which are horizontally inserted. All 50 states and the District of Columbia have program description sheets. However, if no significant data were collected, there may not be an accompanying data sheet. If this is the case, the General Description section of the narrative page will conclude "there is no accompanying data sheet for this state." When single years are given (1978) this refers to the fiscal year, which corresponds to the academic year ending that year (i.e., 1977–8).

GLOSSARY OF SYMBOLS

Asterisk (*) denotes service conditional programs (programs with "payback" or forgiveness provisions).[1]

NA means data for an operational program was not available.

(—) means a program was not operational that year, or that no awards were made.

SOURCES

For a complete discussion of the method used to assemble this inventory, please turn to the Methodology Section of the final report. Sources for the following descriptions were those state and other officials directly responsible for the programs described.

STATE STUDENT FINANCIAL AID PROGRAMS: HEALTH PROFESSIONS STUDENTS

ALABAMA

Program: (1) State of Alabama Medical Board of Scholarship Awards and Board of Dental Scholarship Awards.

1. General description: This loan scholarship program was enacted in 1965 and enlarged in 1977 to open eligibility to more students. The loan portion of the program has payback provisions, the merit scholarships have no such requirements. Funding for both programs comes from the Alabama Education Trust Fund.
2. Professions covered: Medicine and Dentistry.
3. Criteria for eligibility: Loans are open to residents of Alabama who have been accepted to a U.S. Medical School and in need of assistance. Dental students are also evaluated on their scholastic ability. Students applying for loans must agree to serve in an underserved area, after completion of their studies. Merit scholarships are on the basis of financial need and academic excellence.
4. Level of assistance: Maximum $3,000 a year for four years.
5. Payback/forgiveness conditions: Payback conditions apply to both dentists and doctors and vary according to size of community selected for practice. Inactive sites must be approved by the Board:

[1] State "service conditional" programs are contractual agreements between students in certain health professions and a state agency or state university. In general, the state agrees to underwrite all or part of a student's tuition and/or living costs during training in exchange for a commitment to practice in either a state underserved area, an underserved specialty, or simply in the state, depending upon the specific "service payback" provisions. In the case of students who wish to "buy out" their obligations, that is, not honor the service requirement, some states' contracts impose heavy penalities, well in excess of the initial levels of direct subsidy.

All loans cancelled after four years of practice in community of 5,000 population.

All loans cancelled after five years of practice in community of 15,000 population.

Fifty percent of loans cancelled after five years of practice in community of 100,000 population.

All loans cancelled after four years of work in public health or state institution approved by Board of Medical Scholarship Awards.

Dentists can also work five years, in public health or state institutions approved by Board of Dental Scholarship Awards for total cancellation. Those students who choose to buy out must begin repayment one year after starting practice and extends for eight years. Amount due is outstanding loan plus six percent interest.

ALABAMA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Finapcial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Board of medical scholarship awards—Medical scholarship loan program:* Medicine:							
Loans	57	$114,000	144	$432,000	186	$558,000	$3,000
Scholarship	8	16,000	36	72,000	46	92,000	3,000
(2) State of Alabama dental scholarship loan program:* Denistry:							
Loans	32	64,000	55	165,000	55	165,000	3,000
Scholarship	8	16,000	16	32,000	16	32,000	3,000

Source: Survey of State financial aid program offices, January 1980.

ALASKA

Program: (1) Alaska State Student Loan Program.

1. General description: Alaska loans funds to students at institutions of higher education, the majority of whom are studying out-of-state. The loans are partially forgiven if the student returns. No data can be broken out for health professions students, thus there is no accompanying data sheet for this state.

2. Professions covered: All.

3. Criteria for eligibility: Open to Alaska residents studying at institutions of higher learning.

4. Level of assistance: Maximum $5,000 per year for graduates, $3,000 per year for undergraduates.

5. Payback/forgiveness conditions: Interest is imposed on the loan from issue. If the student returns to Alaska, 10 percent of the loan plus interest is forgiven per year for up to four years. Thus a maximum of 40 percent of the loan and interest can be cancelled, and the remainder of the loan and interest must be repaid.

ARIZONA

Program: (1) Arizona Medical Student Loan Payback Incentive Program.*

1. General description: This service program was enacted in 1977 but has been adequately funded only as of 1980. The program will eventually have an enrollment of 40 students, it has funded only 10.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to Arizona residents attending the University of Arizona College of Medicine and who promise to work in an underserved area in the state after completion of their studies.

4. Level of assistance: Maximum $6,000 a year for four years.

5. Payback/forgiveness conditions: One year of service is an underserved area must be given for each year of support. Since the program is so new specific payback conditions are not final as of the time of this study, but the program will impose steep financial penalties for students who select to buy out.

ARIZONA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Arizona Medical Student Loan Payback, Incentive Program: * Medicine	(—)	(—)	(—)	(—)	10	$60,000	$6,000

Source: Survey of State financial aid program offices, January 1980.

ARKANSAS

Program: (1) Medical Loan Program.*

1. General description: This loan/service program was enacted in 1949 but not very active until the early 1970s. In 1980 it had an enrollment of 60 students.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to state residents attending the University of Arkansas who meet certain academic standards and who plan to take a residency program that is three years or less. Applicants must indicate intention of serving in an underserved area in Arkansas upon completion of residency training.

4. Level of assistance: Maximum $5,000 a year for four years.

5. Payback/forgiveness conditions: Those in the program must serve in a town with a population of less than 6,000 for a minimum of two years. Students who buy out must pay back the entire loan plus 10 percent interest immediately.

Program: (2) Undergraduate Scholarships.

1. General description: This scholarship program for undergraduate study provides some monies for students in the field of pharmacy. The program was begun in 1975 but third and fourth year undergraduate students were eligible for such scholarships only as of last year. Some pharmacy students now receive a scholarship under this program.

2. Professions covered: Pharmacy.

3. Criteria for eligibility: Open to state residents in financial need.

4. Level of assistance: Between $200 and $600 a year or half the tuition, whichever is less. Average award given in 1980 is $274.

ARKANSAS

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Arkansas rural practice loan program: * Medicine	(—)	(—)	41	$205,000	60	$300,000	$5,000
(2) Arkansas State scholarship program	(—)	(—)	NA	NA	8	2,192	600

Source: Survey of State financial aid program offices, January 1980.

CALIFORNIA

Program: (1) California Student Aid Commission Scholarships.

1. General description: This statewide grant program includes special categories for undergraduates, minorities, and graduate students. Information is not available on a statewide basis by profession. In four cases figures were provided by individual schools themselves, and these are listed in the data sheet.

2. Professions covered: All professions targeted by this study.

3. Criteria for eligibility: Open to California residents attending state schools. Awards are based on need and merit for the undergraduate and minority programs. For the graduate programs, the need for manpower in the sector in which the student is training is considered as well.

4. Level of assistance: Variable: Undergraduates, $750; minorities, $1,800; graduates, $700.

Program: University Based Loans (2), Grants (3), and Fee Deferments (4).

The University of California puts $40 million a year into student aid. Of that $40 million, the amount going to health professions students is not known at the system-wide University level. Each school must be contacted directly for such information. The U.C. funds (which come from private sources, some federal sources, and student educational fees collected by the Board of Regents) are allocated to the nine University campuses on an enrollment basis. UCSF is considered a separate campus and only conducts health professions (broadly defined) educational programs. In this respect UCSF is unique and was assumed in this discussion to offer its health professions students a more advantageous position than health professions students on other U.C. Campuses who must compete for financial assistance against larger and more diversified student bodies.

All nine campuses administer financial assistance programs through a centralized application process. All financial aid awards are authorized to be dispensed by one unit within the campus administration (usually the financial aid office, although it may delegate responsibility for graduate fellowship funds to the Graduate Division). Schools of Medicine and Dentistry tend to have more to say about who receives financial assistance than do other University departments.

The U.C. portion of funds available for student aid (the portion that comes from educational fees) is dispersed through several types of programs:

Regents fellowships for graduate students (based on merit);
Undergraduate scholarships (based on merit);
Grants;
Work/Study; and
Loans (with three percent interest).

In this study the University of California at San Francisco, with Schools of Medicine, Dentistry and Pharmacy, was chosen for examination. Data on the number of recipients by source is shown for 1979–80. Data on the dollar value of these awards was not available for 1980 but could be supplied in two cases for 1978.

CALIFORNIA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) California Student Aid Commission scholarships							(1)
Medicine	191	$599,032	534	$1,543,697	190	$487,343	
Dntistry	47	114,560	65	225,648	61	223,676	
Pharmacy	NA	NA	NA	NA	NA	NA	
(2) University of California loans							$5,000
Medicine	NA	NA	NA	NA	153	NA	
Dentistry	NA	NA	NA	272,257	130	NA	
Pharmacy	NA	NA	NA	NA	83	NA	
(3) University of California grants							2,000
Medicine	NA	NA	NA	NA	159	NA	
Dentistry	NA	NA	NA	NA	149	NA	
Pharmacy	NA	NA	NA	NA	135	NA	
(4) University fee deferments:							
Medicine	NA	NA	NA	NA	153	NA	
Dentistry	NA	NA	NA	56,400	130	NA	
Pharmacy	NA	NA	NA	NA	93	NA	

[1] Undergraduates, $750; minorities, $1,800; graduates, $700.

Source: Survey of State financial aid program offices, January 1980.

COLORADO

Program: (1) Dental Tuition Policy.*

1. General description: In 1973 the Colorado legislature mandated that tuition of the new University of Colorado Dental School be set annually at the cost of educating a student. State residents would only have to pay a fraction of this

cost while in school, but they would have to sign promisory notes for the amount of the tuition reduction. These notes can be forgiven through service.

2. Professions covered: Dentistry.

3. Criteria for eligibility: All students at the University of Colorado Dental School participate.

4. Level of assistance: 87.5 percent of tuition is deferred on the condition the student fulfills the service obligation. The remaining 12.5 percent of the tuition the student must pay. Tuition levels have been as follows:

	1974	1978	1980
Students share (12.5 percent)	1,155	1,798	2,082
Tuition reduction (87.5 percent)	8,087	12,585	16,176
Full cost tuition	9,242	14,383	18,258

5. Payback/forgiveness conditions: Deferment of service commitment allowed for military service or residency period. If students practice in an area of the state designated by the Board of Regents as being in need of a dentist, one year's tuition reduction is forgiven for each year's service. Buyout requirement is repayment of balance of 87.5 percent tuition reductions within 10 years.

Program: (2) State University Graduate Grants Program, State University Graduate Fellowships.

1. General description: Colorado has two grant programs that assist students in the graduate health professions. Data is available only for veterinary medicine.

2. Professions covered: All graduates.

3. Criteria for eligibility: Colorado resident, graduate student, at least half time enrolled—need based—no student may obtain more than one-half of his/her needs' budget—maximum grant/student $3,000 year cumulative maximum per student $10,000.

4. Level of assistance: For all of University of Colorado:

	Appropriations
Grants:	
1977–78	$602,350
1979–80	483,048
Fellowships:	
1977–78	437,150
1979–80	437,150

COLORADO

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Dental tuition policy *	25	$202,175	99	$1,245,915 *	101	$1,613,778	$16,176
(2) State university grants plus fellowships:							
Veterinary medicine	37	16,218	82	66,216	15	13,600	----------
Other disciplins	NA	NA	NA	NA	NA	NA	----------

Source: Survey of State financial aid program offices, January 1980.

CONNECTICUT

Program: (1) Graduate Scholarship Program.

1. General description: This general scholarship program for graduate study offers 1,000 one-time grants to students seeking an advanced degree. Eligibility is based on academic excellence and financial need. It was not possible to estimate how many of the 1,000 scholarships went specifically for students in the health professions. Therefore, there is no accompanying data sheet for this state.

DELAWARE

Program: (1) Delaware Institute for Medical Education and Research (DIMER) Grants.

1. General Description: Delaware has no in-state health professions schools pertinent to this study. DIMER serves two functions: to contract for out-of-state slots for Delaware students, and to provide grant monies to help students who occupy these slots to meet their education expenses.

2. Professions covered: Medicine.

3. Criteria for eligibility: All DIMER participants must be Delaware residents. Medical students occupying DIMER seats are eligible for grant funds.

4. Level of assistance: Grant funds vary according to need.

Program: (2) Optometric Institutional Aid Program.

1. General description: Delaware contracts for out-of-state seats in Optometry. Students occupying these seats are obliged to repay a portion of the funds expended on their behalf. The program is administered by the Delaware Postsecondary Education Commission.

2. Professions covered: Optometry.

3. Criteria for eligibility: Delaware residents accepted through normal channels who occupy contract seats are obliged to participate.

4. Level of assistance: Varies according to negotiated rate for a seat at a given school.

5. Payback/forgiveness conditions: Students must repay ¼ of the funds expended to secure their seats over a ten year period beginning one year after graduation. There is no forgiveness provision.

Program: (3) Delaware Institute for Veterinary Medical Education.

1. General description: This program is identical to Optometry but administered through the University of Delaware College of Agriculture.

DELAWARE

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Delaware Institute for Medical Education and Research (DIMER)							
Medicine (difference due to change in support level from $7 500 a year to $9 000)	20	$150, 000	20	$150, 000	20	$180, 000	.....
Scholarship portion under DIMER	NA	NA	20	48, 000	20	64, 000	.....
(2) Dptometric Institute Aid program	(—)	(—)	8	32, 000	9	32. 000	.....
(3) Delaware Institute for Veterinary Medicine Education	(—)	(—)	1	7, 500	4	36, 000	.....

Source: Survey of State financial aid program offices, January 1980.

DISTRICT OF COLUMBIA

Program: None.

1. General description: The peculiar political situation of the District of Columbia and its related financial difficulties have prevented D.C. from allocating special monies for support of education in the health professions. Over the past several years, legislation has been proposed that would set up a public health service for the District but to date little action on such a plan has been taken. Georgetown University Medical School set up its own scholarship payback program in 1978. Scholarship/loans at $5,000 a year are available to six medical students who agree to serve in an underserved area in D.C. one year for each year of scholarship. The University would like to increase the stipend to cover full tuition. There is no accompanying data sheet for this state.

FLORIDA

Program: (1) Florida Student Assistance Grants.

1. General description: These undergraduate scholarships are awarded to needy Florida residents and the current maximum is $1,200. It was not possible to establish how many pharmacy students participated.

Program: (2) Florida Insured Student Loan.

1. General description: This program was active during the first two target years of this study, 1974 and 1978. Starting January 1, 1980, it was phased out and replaced by the Federally Insured Guaranteed Student Loan Program. Its terms correspond almost precisely to those of the Federal program, the only difference being that the State of Florida was the Guarantor. No data was available on loans to health professions students.

Since data was not available on either program, there is no accompanying data sheet for this state.

GEORGIA

Program: (1) Georgia Direct Student Loans for Health Careers.*

1. General description: This program is available for state residents studying in and out of state, in health career fields in need of personnel. The program was initiated in 1969 and in 1980 has an enrollment of 137 students.

2. Professions covered: Dentistry, Veterinary Medicine, Optometry, Pharmacy.

3. Criteria for eligibility: Open to students who are residents of the state, document financial need and promise to work in an underserved area.

4. Level of assistance: Maximum $2,500 a year. While average grants for dentistry are $2,500, grants for veterinary medicine, optometry, and pharmacy, are closer to $1,500.

5. Payback/forgiveness conditions: A student may cancel one year's loan with one year of service in an approved underserved location in Georgia. Those choosing not to serve must begin repayment 9–12 months after graduation. Minimum payment is $30 a month, student must repay principal plus seven percent interest.

Program: (2) State Medical Education Board Program.*

1. General description: This loan/payback program seeks to attract students in medicine and osteopathy who upon graduation agree to practice in an underserved area in Georgia as defined by the State Scholarship Commission. The program was enacted in 1969 and in 1980 had 36 enrollments.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility: Open to students who are residents of the state, document financial need and promise to work in an underserved area. Preference is given to students who will commit themselves to practice for four years.

4. Level of assistance: As of 1979–80 maximum yearly assistance level is $3,750 for four years.

5. Payback/forgiveness conditions: After five years of service in a commission-approved site, the total loan is forgiven. Those opting to buy out must repay the entire loan within 30–90 days following completion of training. Students who buy out must repay principal plus nine percent interest.

GEORGIA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Georgia direct student loans for health careers.*							
Dentistry	50	$75,000	50	$125,000	54	$135,000	$2,500
Veterinary	(—)	(—)	17	25,500	17	25,500	2,500
Optometry	7	9,100	15	22,500	24	35,500	2,500
Pharmacists	48	62,400	45	54,000	42	50,400	2,500
(2) State medical education board program.*							
Medicine	30	75,000	32	96,000	33	123,750	3,750
Osteopathy	1	2,500	1	3,000	3	11,250	3,750

Source: Survey of State financial aid program offices, January 1980.

HAWAII

Program: None.

1. General description: No statewide financial aid programs pertinent to the health professions targeted in this study were identified. Therefore there is no accompanying data sheet.

IDAHO

Program: None.

1. General description: Idaho has no in-state schools in the 8 health professions budgeted in this study. All health professions education is contracted in one way or another out-of-state. There is no accompanying data table for Idaho.

ILLINOIS

Program: (1) Department of Public Health: Family Practice Residency Program—Scholarships to Illinois Medical Students.

1. General description: The Illinois Department of Public Health initiated in 1978 a Family Practice Program which supports both residents and medical students. It provides scholarships to medical students interested in Family Practice in return for a service commitment. In 1979–80 the program aided 25 students.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility: Open to Illinois residents studying at in-state Medical or Osteopathic Schools who agree to the service commitment below.

4. Level of assistance: The scholarship includes tuition and fees plus a stipend of $400 per month. Students geographic origin, academic qualifications, and interest in rural service is considered.

5. Payback/forgiveness conditions: Deferral of service commitment permitted during an approved primary care residency program, or other residency program approved by of the Department of Public Health. Student must begin work in a shortage area designated by the State Department of Health within 30 days of completion of training. One year's support is forgiven for each year of service. Buyout requirement is repayment of all funds expended by the Department, plus a penalty of twice this amount. For each year the student served prior to breaking the contract, there is a 50% reduction in the penalty.

ILLINOIS

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Department of public health family practice residency program: * Scholarships to Illinois medical students	(—)	(—)	(—)	(—)	25	$188,428	(1)

[1] Tuition and $400 per month.

Source: Survey of State financial aid program offices, January 1980.

INDIANA

Program: (1) Indiana Medical Distribution Loan Program.*

1. General description: This service payback program was enacted in 1974, but did not go into operation until a few years later. In 1980, 44 students took advantage of the program.

2. Professions covered: Medicine/Osteopathy.

3. Criteria for eligibility: Open to residents who agree to practice primary care in Indiana shortage areas.

4. Level of assistance: Maximum: $5,000 a year for four years.

5. Payback/forgiveness conditions: A year's loan is forgiven for each year of service, but students must serve a minimum of two years. If recipient chooses

to buy out, the loan must be repaid immediately and 10 percent interest is charged. Installment arrangements for repayment can be negotiated in some cases.

Program: (2) Indiana Educational Grant/Scholarship Program.

1. General description: This scholarship program offers grants of $1,000 a year for undergraduate study. Some of these monies go to pharmacy students or students who begin medical or dental school after three years of undergraduate study. It was not possible to get information on how many of these scholarships went to students in these health professions.

INDIANA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Indiana medical distribution loan program:*							
Medicine	(—)	(—)	31	$155,000	35	$175,000	$5,000
Osteopathy	(—)	(—)	11	55,000	9	45,000	5,000
(2) Indiana educational grant/scholarship program: Pharmacy			NA	NA	NA	NA	1,400

Source: Survey of State financial aid program offices, January 1980.

IOWA

Program: None.

1. General description: From 1966 to 1974 Iowa had a service/payback loan program, known as the Iowa Medical Tuition Loan Program. During its lifetime, 256 students participated. Recipients are required to practice 10 years in general practice, thus in one sense the program is still operative. Awards were made during only one target year of this study, but no data was available on them. Thus there is no accompanying data sheet, and this program is not considered in data totals. The reasons why it was rescinded are discussed in the section on service payback programs.

KANSAS

Program: (1) Seat Purchase Contracts.*

1. General description: Kansas legislation authorizes purchase of seats for Kansas residents studying in the field of osteopathy. The first transfer of funds to institutions were for the 1975–76 academic year.

2. Professions covered: Osteopathy.

3. Criteria for eligibility: Agreement to practice in a medically underserved area in Kansas for two years upon completion of training.

4. Level of assistance: $6,000 is paid to the institution annually from which the seat is purchased.

5. Payback/forgiveness conditions: The entire value of the seat purchase is forgiven a student for fulfilling a two-year practice obligation in a Kansas medically underserved area.

Program: (2) Service Conditional Loan Program for Osteopathy.*

1. General description: Legislation for this loan program was first passed in 1975, and funding began in the 1976–77 academic year. Loans can be forgiven by the practice in a medically underserved area. The program has 45 participants in 1979–80.

2. Professions covered: Osteopathy.

3. Criteria for eligibility: Agreement to serve in a designated Kansas medically underserved area. One half of the recipients must be Kansas residents.

4. Level of assistance: Awards are to students at the rate of $6,000 per year.

5. Payback/forgiveness conditions: The loan is forgiven for one year of practice in a medically underserved area in Kansas on a year-for-year basis. Each year a student receives a loan requires a year of service on top of set purchase obligation. If service is not provided the value of the loan must be repaid.

Program: (3) Service Conditional Scholarship Program for Medicine.

1. General description: Service conditional scholarship program for students at the University of Kansas Medical Center. Program initiated in 1979–80 and had 499 students in its initial year, making it the largest service payback program in the country.

2. Professions covered: Medicine.

3. Criteria for eligibility: Enrollment at the University of Kansas Medical Center and agreement to provide service in Kansas.

4. Level of assistance: Tuition and fees plus $500 a month for nine months for one-year obligation to practice in a Kansas medically underserved area. Tuition and fees provided for those agreeing to one year's service obligation in Kansas.

5. Payback/forgiveness conditions: Students failing to provide service must begin repayment of the value of the award immediately with interest.

KANSAS

Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Seat purchase contracts: Osteopathy	(–)	(–)	18	$84,000	30	$180,000	$6,000
(2) Service conditional loan:							
Osteopathy *	(–)	(–)	(–)	(–)	45	270,000	6,000
Medicine *	(–)	(–)	(–)	(–)	499	3,349,084	(1)

[1] Tuition and fees.

Source: Survey of State financial aid program offices, January 1980.

KENTUCKY

Program: (1) Rural Kentucky Medical Scholarship Fund.*

1. General description: The Rural Kentucky Medical Scholarship Fund, established in 1954, provides loans for students, thus the term "scholarship" is a misnomer in the context of this study.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to Kentucky residents accepted for enrollment in an accredited state medical school who agree to practice in an approved rural Kentucky county.

4. Level of assistance: Awards average the maximum of $4,000 per year.

5. Payback/forgiveness conditions: Recipients agreeing to practice in one of 30 counties designated as critical shortage areas may be forgiven one loan for each year of practice in such a county. Two recipients each year may practice in the Kentucky Public Health Service with the same conditions. All other loan recipients have four years before they must begin repayment. These loans are to be repaid at 5.75 percent interest until payment period begins and at 8.5 percent thereafter.

Program: (2) Rural Kentucky Dental Scholarship Fund.*

1. General description: The Rural Kentucky Dental Scholarship Fund awards scholarships to applicants selected by the Kentucky Board of Dentistry. The program began in 1975 and in 1979–80 had 20 participants.

2. Professions covered: Dentistry.

3. Criteria for eligibility: Whenever possible, these scholarships are awarded to applicants with the greatest financial need. Applicants must demonstrate they possess qualities that provide reasonable assurance of successfully completing the course of study in dentistry. Recipients must agree to practice for one year in a designated rural area for each year a scholarship is awarded.

4. Level of assistance: The maximum award is $4,500 per year with no recipient eligible to receive more than $18,000.

5. Payback/forgiveness conditions: The scholarship need only be repaid in the event that the recipient does not practice in a designated Kentucky rural area. In such case the full value of the award must be repaid at 6 percent interest. The

only student in the history of the program who reneged on his obligation had his Kentucky license revoked.

Program: (3) KHEAA State Grants.

1. General description: Kentucky Higher Education Assistance Authority (KHEAA) grants are general awards for students in higher education programs.

2. Professions covered: All non-religious degree programs.

3. Criteria for eligibility: Demonstration of financial need and full-time enrollment in an eligible Kentucky institution.

4. Level of assistance: Grants range from $200 to $850, not to exceed the cost of tuition and fees.

KENTUCKY

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Rural Kentucky medical* scholarship fund	28	$98,000	55	$220,0000	55	$220,000	$4,000
(2) Rural Kentucky dental*scholarship fund	(—)	(—)	20	90,000	20	90,000	4,500
(3) KHEAA State grants	NA	NA	NA	NA	NA	NA	850

Source: Survey of State financial aid program offices, January, 1980.

LOUISIANA

Program: None.

1. General description: Outside of the Board of Regents Scholarships, for which data is unavailable on a statewide basis for the health professions, there are no Louisiana state financial aid programs pertinent to the target groups of this study. Therefore there is no accompanying data sheet for this state.

MAINE

Program: (1) Maine Contracts Program, State Capitation Funds.*

1. General description: Maine has for some years contracted for seats for health professions students with out of state schools. All students occupying these seats after Fall 1977 entered into a promissory agreement with the state for funds expended on their behalf that has a service payback option. In 1980 there were 184 participants.

2. Professions covered: Medicine, Osteopathy, Dentistry, Optometry, Veterinary Medicine.

3. Criteria for eligibility: Maine residents who are enrolled in out-of-state educational programs, for which the state has expended funds in order to make the seats available, must enter this program in order to matriculate.

4. Level of assistance: Varies according to negotiated agreement between Maine and the school in question.

5. Payback/forgiveness conditions: ¼ of total indebtedness is forgiven for each of the first two years of practice. The remaining half must be repaid in 10 equal installments. Buyout is payment of funds expended on students' behalf plus 6 percent interest over 10 years.

Program: (2) Maine Contracts Program, Tuition Grants.

1. General description: Students occupying Maine contracts seats can receive need-based grants to help them meet tuition expenses. The grants were first awarded in 1977. Data on dollar volume is available. Data on numbers of recipients is not.

2. Professions covered: Same as above.

3. Criteria for eligibility: Same as above.

4. Level of assistance: Varies according to need, but in no case can exceed the amount of the state tuition charge to the student. Since part of the contract capitation funds are a tuition subsidy, there is a ceiling on tuition grants of $2,000. No ongoing appropriation is made. Only funds left over after seats have been purchased are available for tuition grants.

MAINE

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Maine contracts program:							
State capitation funds: *							
Medicine	(—)	(—)	91	$519,700	137	$883,400	----------
Osteopathy	(—)	(—)	(—)	(—)	5	35,000	----------
Denistry	(—)	(—)	25	157,000	22	173,700	----------
Optometry	(—)	(—)	2	8,000	6	24,000	----------
Veterinary medicine	(—)	(—)	11	72,000	14	122,000	----------
Tuition grants:							
Medicine	(—)	(—)	NA	49,480	NA	73,500	$2,000
Osteopathy	(—)	(—)	NA	(—)	NA	3,000	----------
Denistry	(—)	(—)	NA	14,000	NA	24,000	----------
Optometry	(—)	(—)	NA	(—)	NA	2,000	----------
Veterinary medicine	(—)	(—)	NA	(—)	NA	9,000	----------

Source: Survey of State financial aid program offices, January 1980.

MARYLAND

Program: (1) Maryland Higher Education Loan Corporation Service Program.*

1. General description: Students have shown little interest in this loan program with a service payback option. It was initiated in 1972 and has never been used, perhaps because of the low level of support offered. It is likely to be phased out.

2. Professions covered: Medicine.

3. Criteria for eligibility: State residents of 5-years attending medical school who agree to service commitment.

4. Level of assistance: $1,500 per year for four years.

5. Payback/forgiveness: Students must work, following residency, in a general practice in an area of need. One year's loan is forgiven for each year's service. Buyout is immediate payment of balance plus 7 percent interest.

Program: (2) University of Maryland Family Practice Loans.*

1. General description: The University of Maryland since 1972 has been allocated funds for 10 service-conditional scholarships of $1,500 per year. Little interest has been shown in the program, which in 1980 had 6 participants.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to 5-year state residents attending the University of Maryland Medical School who agree to the service obligation below.

4. Level of assistance: $1,500 per year for four years.

5. Payback/forgiveness conditions: All students must serve in general practice for 3 years in an underserved area or a state health agency serving a needy population. To buy out, physicians must pay back triple the amount received.

Program: (3) Professional Scholarship Program—Maryland residents.

1. General description: These need-based scholarships are available to students in medicine, dentistry, and law. The 1980 allocation was $150,000, roughly two thirds of which went to 117 Maryland students in the health professions.

Program: (4) University of Maryland, Allocated Funds for Scholarships.

1. General description: The University of Maryland Health Sciences Center in Baltimore receives an allocation for financial aid, the majority of which goes to students in medicine, dentistry and pharmacy, based on need. In 1979–80 408 students in these fields received awards averaging $1,600. In most states data on such university based programs can not readily be broken out. This program is presented as an example of one state's efforts. This inventory is by no means comprehensive as far as university based programs are concerned, and should not be construed as such.

Program: (5a) General State Scholarships, (5b) Senatorial Scholarships.

1. General description: These two general undergraduate grant programs were taken advantage of by 37 pharmacy students in 1979–80.

MARYLAND

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–79, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Maryland Higher Education Loan Corp. service payback program:* Medicine	(—)	(—)	(—)	(—)	(—)	(—)	$1,500
(2) University of Maryland Medical School family practice loans *	(—)	(—)	(—)	(—)	6	$9,000	1,500
(3) Professional scholarship program:							
Medicine	73	$64,300	NA	$31,700	57	44,400	800
Dentistry	54	26,750	NA	NA	60	43,500	
(4) University of Maryland allocated funds for scholarships:							
Medicine	86	79,250	NA	NA	190	286,125	(1)
Dentistry	98	87,250	NA	NA	161	302,600	
Pharmacy	NA	NA	NA	NA	57	53,500	
(5a) General State scholarships: Pharmacy	NA	NA	NA	NA	24	11,300	
(5b) Senatorial scholarships: Pharmacy	8	3,100	NA	NA	13	4,900	

[1] Variable.

Source: Survey of State financial aid program offices, January 1980.

MASSACHUSETTS

Program: (1) University of Massachusetts Medical School Learning Contracts.*

1. General description: As of September 1979, students at University of Massachusetts Medical School were required to enter into a promissory agreement with the state. This debt can be forgiven for in-state service.

2. Professions covered: Medicine.

3. Criteria for eligibility: Medical students enrolled as of September 1979 and thereafter are obliged to participate. Only Massachusetts residents are eligible to attend the school.

4. Level of assistance: Students must sign a note for $2,400 their first year and $2,000 their second, totalling $4,400 per career. These figures will be raised in 1980–81, but will continue to apply only to first and second year students.

5. Payback/forgiveness conditions: The total debt is excused by one year's practice in state. If the student chooses not to work in state, he/she must repay the loan.

Program: (2) University of Massachusetts Medical School Tuition Waivers.

1. General description: Each year the University of Massachusetts allocates a certain number of tuition waivers to the medical school. These are awarded on the basis of need. In 1980 47 students were assisted. Such programs doubtless exist at many other state health professions schools. However, this is one of the rare cases where data was available.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to U. Mass. Medical students showing need.

4. Level of assistance. Awards averaged $1,085 in 1980.

Program: (3) University State Scholarships, University of Massachusetts Medical School.

1. General description: These are allocated to the medical campus of the University of Massachusetts, the only state health profession school of interest in the context of this survey, by the University's Central Administration. An allocation in addition to tuition waivers is made each year by the legislature to the university as a whole. 127 students were assisted in 1980.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to University of Massachusetts Medical students showing financial need.

4. Level of assistance: Awards averaged $1,300 in 1980.

Program: (4) Massachusetts Board of Higher Education Scholarships.

1. General description: The Board administers two need based grant programs. First, the General Scholarship program, which is open to undergraduates and

therefore assists certain pharmacy students. Second is the Medical, Dental and Nursing Scholarship program. These programs began in 1957 and in 1980 assisted roughly 500 students in the health professions below.

2. Professions covered: Medicine, Dentistry, Pharmacy.

3. Criteria for eligibility: Open to Massachusetts students attending accredited schools in the professions above who show need.

4. Level of assistance: Fixed Awards: $900 per year for students attending private institutions, $600 per year for students attending public institutions.

Program: (5) Massachusetts Contracts Scholarship Program.

1. General description: Beginning Fall 1977, Tufts and Boston University Medical Schools were authorized to select each year 7 highly needy Massachusetts residents for whom the state would pay full tuition. As of Fall 1979 only continuations were funded, of which there were 42. The program will end in June 1983, when the last of these students graduates.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to highly needy Massachusetts residents accepted to Tufts and B.U. Medical students.

4. Level of assistance: Average level of assistance $7,500 for 1980.

MASSACHUSETTS

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) University of Massachusetts Medical School learning contracts*	(—)	(—)	(—)	(—)	210	$464,000	$2,400
(2) University of Massachusetts Medical School tuition waivers	(—)	(—)	32	$26,080	47	51,700	1,100
(3) University State scholarships, University of Massachusetts Medical School	14	$6,000	76	92,732	127	165,570	(1)
(4) Massachusetts Board of Higher Education scholarships (1980 figures as of January 1980, further awards will be made):							
Medicine	NA	NA	338	259,500	264	196,554	(2)
Dentistry	NA	NA	128	113,850	99	88,900	(2)
In-State pharmacy	NA	NA	156	139,700	126	113,400	(2)
(5) Massachusetts contracts scholarship program (payments estimated)	(—)	(—)	14	105,000	42	315,000	(3)

[1] Variable.
[2] $900 private, $600 public.
[3] $900 for students in private schools. $600 for students in public schools.

Source: Survey of State financial aid program offices, January 1980.

MICHIGAN

Program: (1) Tuition Grant Program.

1. General description: This grant program for students at private in-state schools received an allocation of $14.5 million in 1979–80. On their applications 13.2 percent of recipients checked "Health and Medicine" as their course of study. No other data is available, therefore there is no accompanying data page for this state.

2. Professions covered: All Michigan private schools.

3. Criteria for eligibility: Open to Michigan residents attending in-state private institutions of higher learning, both undergraduate and graduate. In the context of this study, the only students of interest are those attending the University of Detroit School of Dentistry. Data on them could not be broken out by the state or the school.

4. Level of assistance: Up to $13,000 per year for 3 years (4 years for dentistry).

Program: (2) Michigan Competitive Scholarship Program.

1. General description: This undergraduate merit-based grant program had a 1979–80 allocation of $12 million. On their applications 18.2 percent of the

recipients indicated "Health Professions" as their majors. However, no break out of data for pharmacy students was available.

2. Professions covered: Pharmacy.

3. Criteria for eligibility: Open to Michigan residents attending state public undergraduate institutions who have scored above a certain level on the ACT test and show financial need.

4. Level of assistance: Maximum $1,200 per year.

MINNESOTA

Program (1) State Medical and Osteopathy Loan Program.*

1. General description: These loans are based on a pledge to practice in a rural area of Minnesota. The program was initiated in 1972, and 78 students participated in 1980.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility: Open to Minnesota residents, and priority is given to students studying in-state. Selections are based on need and interest in rural practice.

4. Level of assistance: Maximums are $6,000 per year, $24,000 per career. Average loan value $4,153.

5. Payback/forgiveness conditions: Loan plus 8 percent interest will be cancelled at the rate of year's debt for each 18 months practice in a needy rural area. These are defined as follows: communities of 5,000 or less more than 15 miles from a primary care hospital, and with fewer than 3 physicians of under 60 years practicing in the area. Buy out requirement is immediate repayment of amount borrowed plus interest.

Program: (2) Contract Program for Osteopathy and Optometry.*

1. General description: The Minnesota Optometry/Osteopathy Contract Program procures positions for students at out-of-state schools. The students in turn are obligated to return to Minnesota or reimburse the state. The program began in 1978 with the Minnesota Higher Education Coordinating Board being authorized to contract 10 new osteopathy and 13 new optometry seats per year.

2. Professions covered: Osteopathy, Optometry.

3. Criteria for eligibility: Open to Minnesota residents who have been accepted through normal application procedures at schools with which contracts have been negotiated.

4. Level of assistance: Minnesota reimburses the participating institutions for educational costs over and above those which are covered by the students' tuition and fees. In 1980 this averaged for osteopathy students $13,500 and for optometry $4,500.

5. Payback/forgiveness conditions: The contract between the student and the Minnesota Higher Education Coordinating Board stipulates that students will complete their professional program and will return to Minnesota to practice for at least three years (unless extentuating circumstances or continuing education indicate reconsideration of those contractual terms). If that agreement is not upheld, the student is obligated to reimburse the State of Minnesota for any contract expenses it has incurred.

MINNESOTA

[Number of students receiving State student financial aid and total awards by program and profession for academic year 1973–74, 1977–78, and 1979–80]

Financial aid prorgam profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Minnesota medical and osteopathic loan program* (data for medicine and osteopathy combined)	40	$232,300	64	$375,500	78	$463,000	$6,000
(2) Contract program for osteopathy and optometry* (1978–79 data supplied in place of 1977–78):							
Osteopathy	(—)	(—)	9	121,500	8	108,000	13,500
Optometry	(—)	(—)	6	26,000	13	58,000	5,000

Source: Survey of State financial aid program offices, January 1980.

MISSISSIPPI

Program: (1) State Medical and Dental Education Loan Program.*

1. General description: This program offers financial aid to health professions students in return for a service commitment. The program was initiated in 1975 and in 1980 had 67 participants.

2. Professions covered: Medicine, Dentistry.

3. Criteria for eligibility: Open to Mississippi resident enrolled in an accredited U.S. medical or dental school who agree to practice in Mississippi for 5 years according to the terms below.

4. Level of assistance: Maximum loans $6,000/year.

5. Payback/forgiveness conditions: Students have two options for fulfilling their 5 year obligation:

(1) Practicing in a state mental institution, charity hospital or other state agency approved by the Board. Under this option total loan is forgiven and no interest is assessed.

(2) Practicing in a community of under 7,500 in population. Under this option 4/5 of the total amount borrowed plus interest must be repaid, and one-fifth is forgiven.

The Board may approve combinations of the two options. To buy out student must repay amount borrowed, 6 percent interest, plus a penalty of $5,000 per year loan granted.

Program: (2) Graduate and Professional Grant Program.

1. General description: Students who have no choice but to study out of state are eligible for grant money from Mississippi. In some cases these students hold Mississippi's Southern Regional Education seats, and therefore pay in-state rates, which explains why the awards are small. In 1979, 111 students participated.

2. Professions covered: All eight selected professions.

3. Criteria for eligibility: Mississippi residents who are pursuing studies not offered in state, or who have been denied acceptance at in-state schools, are eligible to receive aid.

4. Level of assistance: Depends on out-of-state school's tuition. Students are reimbursed for the differential between resident and non-resident rates. With private schools a comparable formula is used.

MISSISSIPPI

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) State medical and dental * education loan program (1978–79 data, medicine and dentistry combined)	NA	NA	NA	NA	67	$1,159,408	$6,000
(2) Graduate and Professional Grant Program (1978–79 data)							
Medicine	NA	NA	NA	NA	20	19,467	(1)
Osteopathy	NA	NA	NA	NA	26	34,452	(1)
Dentistry	NA	NA	NA	NA	18	22,509	(1)
Veterinary medicine	NA	NA	NA	NA	7	1,200	(1)
Optometry	NA	NA	NA	NA	31	19,952	(1)
Pharmacy	NA	NA	NA	NA	2	1,050	(1)
Podiatry	NA	NA	NA	NA	7	1,200	(1)

[1] Variable.

Source: Survey of State financial aid program offices, January 1980.

MISSOURI

Program: (1) Student Loan Program, Department of Health.*

1. General description: In fall 1979 Missouri began offering 25 service conditional loans per year aimed at relieving a shortage of rural physicians.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility: Open to Missouri residents studying at one of the 4 in-state medical schools or 2 in-state osteopathy schools who agree to the service

commitment below. Students with financial need are given priority, and at least ½ of the loans must be to students from rural areas.

4. Level of assistance: Standard level of assistance: $6,000 per year to a maximum of $24,000 per career.

5. Payback/forgiveness conditions: Interest of 9½ percent accrues from the date of issue of the loan. However, repayment is held in abeyance while the student takes a Family Practice or rotating Internal Medicine Residency. Then the student must practice in an area of need as defined by the State Board of Health. One quarter of total loan is forgiven for each year's service, and the rate is the same even if the student only received 1 year's loan. Buyout is total repayment of principal plus 9½ percent interest within one year.

Program: (2) Missouri Student Grant Program.

1. General description: This undergraduate grant program began in 1973. It did not prove possible to break out students by major, only by institution. Thus the data on pharmacy student participation comes from the only free-standing pharmacy school in the state. Doubtless students at university-based pharmacy schools participate as well, thus the data picture is not complete.

2. Profesions covered: Pharmacy.

3. Criteria for eligibility: Open to Missouri residents studying at in-state undergraduate institutions who show financial need.

4. Level of assistance: Maximum $1,500 per year for five years. Average level of support: public $179 per year, private $709 per year, overall $355 per year.

MISSOURI

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Student loan program, department of health:*							
Medicine	(—)	(—)	(—)	(—)	6	$36,000	$6,000
Osteopathy	(—)	(—)	(—)	(—)	19	114,000	6,000
(2) Missouri student grant program (St. Louis College of pharmacy data for 1979)	NA	NA	NA	NA	129	89,445	1,500

Source: Survey of State financial aid program offices, January 1980.

MONTANA

Program: None.

1. General description: Of the 8 health professions considered, Montana has only a pharmacy school for which no student financial aid data is available. There are not statewide financial aid programs for the graduate health professions. Thus, there is no accompanying data sheet for this state.

NEBRASKA

Program: (1) Nebraska Medical Student Loan Program.*

1. General description: In 1978 and 1979 the Nebraska Legislature enacted legislation authorizing loans to medical students who plan to practice in physician shortage areas. The first seven loans were made for the academic year 1979–80.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to Nebraska residents accepted to or enrolled at either University of Nebraska or Creighton University School of Medicine. Preference given to applicants who plan a career in primary care and are motivated to practice in a physician shortage area.

4. Level of assistance: Maximum $7,000 annually for four years.

5. Payback/forgiveness conditions: Interest does not begin until medical school graduation and is one percent. Three years is allowed for residency, after which the students must serve one year in a physician shortage area of Nebraska for each year's loan provided. Repayment need not begin until this service obligation is completed and can be extended over a period of three years. Buy-out provisions are as yet undetermined.

Program: (2) University of Nebraska: Need-based Tuition Waivers.

1. General description: The University of Nebraska is appropriated funds which it can use to waive the tuition of needy students. A certain allocation goes each year to the health professions. Dental students, however, have not received any waivers to date. In 1980, 39 students were assisted.

2. Professions covered: Medicine, Pharmacy.

3. Criteria for eligibility: Students must be Nebraska residents enrolled in the University of Nebraska health professions schools in question and show financial need.

4. Level of assistance: Usually full tuition is waived, although if need is less an award may be partial.

Program: (3) Nebraska Regents Scholarship Program.

1. General discription: This program closely parallels the program above, except that the tuition waivers based on merit rather than need in this program.

2. Professions covered: Medicine, Dentistry, Pharmacy.

3. Criteria for eligibility: Students must be Nebraska residents enrolled in the University of Nebraska health professions schools in question who show academic merit.

4. Level of assistance: Full tuition is waived.

Program: (4) Nebraska Matching Funds for Federal Programs.

1. General description: Nebraska is one of the few states that was able to provide data on state funds used to match federal financial aid on a one-to-one basis, although not by specific federal program.

NEBRASKA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximun available level o aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Nebraska medical student * loan program	(—)	(—)	(—)	(—)	7	$49,000	$7,000
(2) University of Nebraska tuition waivers:							
Medicine	16	$14,137	20	$27,300	20	33,750	(1)
Pharmacy	(—)	(—)	10	4,028	6	3,022	(1)
(3) Nebraska regents scholarship program:							
Medicine	21	10,080	24	33,600	24	40,500	(1)
Dentistry	9	8,100	9	10,400	9	11,800	(1)
Pharmacy	16	9,216	14	10,740	15	15,330	(1)
(4) Nebraska matching funds for Federal loans:							
Medicine	NA	19,169	NA	11,070	(—)	8,816	----------
Pharmacy	NA	9,256	NA	5,872	NA	7,725	----------

[1] Full tuition.

Source: Survey of State financial aid program offices, January 1980.

NEVADA

Program: (1) Contract Student Promissory Agreements.*

1. General description: As of 1977, all health professions students occupying out-of-state seats for which Nevada contracts must sign a document promising that they will return to practice in-state. These seats are arranged privately, not through the Western Interstate Commission on Higher Education.

2. Professions covered: Dentistry, Veterinary Medicine.

3. Criteria for eligibility: Nevada residents occupying contract seats at health profession schools are obliged to participate.

4. Level of assistance: Varies according to contracted prices for seats in academic institutions.

5. Payback/forgiveness conditions: Students are obligated to repay 25 percent of funds on their behalf in all cases. The remaining 75 percent can be forgiven at 33 percent per year for in-state service (3 years=complete cancellation). Rate of forgiveness is higher for rural service, 50 percent of the balance per year (2 years=complete forgiveness). If the student does not return, the entire sum must be repaid.

NEVADA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Contract student promissory agreements * (dollar totals estimated from average per student):							
Dentistry	(—)	(—)	13	$125,000	13	$126,000	(1)
Veterinary medicine	(—)	(—)	2	18,000	5	18,000	(1)

[1] Variable.

Source: Survey of State financial aid program offices, January 1980.

NEW HAMPSHIRE

Program: (1) Loans to Dartmouth Medical Students. Veterinary Students.*

1. General description: New Hampshire provides loans to five individuals per class at Dartmouth Medical School. The program was initiated in 1971 and in 1979 its service payback clause was phased out and veterinary students were added to the program.

2. Professions covered: Medicine, Veterinary Medicine.

3. Criteria for eligibility: New Hampshire residents studying medicine at Dartmouth. or veterinary medicine at an out-of-state school with which New Hampshire has a contract.

4. Level of assistance: Loans averaged $5,200 per student in 1980 with a maximum of $7,500.

5. Payback/forgiveness conditions:

For students who borrowed before Fall 1979: No interest on loan while student is in school. or during payback period. One year's loan forgiven for each two years service in New Hampshire.

Beginning Fall 1979: Interest changed from day of issue, rate of which is tied to state bond issues. No forgiveness provisions

NEW HAMPSHIRE

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Loans to Dartmouth medical students (payback option eliminated in 1979) *	5	$11,850	15	$75,000	5	$116,675	$7,500
Veterinary medicine	(—)	(—)	(—)	(—)	19	62,517	7,500

Source: Survey of State financial aid program offices, January 1980.

NEW JERSEY

Program: (1) State Grant Programs.

1. General description: Three grant programs are available to New Jersey residents: Tultion Aid Grants (TAG). Educational Opportunity Fund Grants (EOF), and Garden State Scholarships (GSS). Data for grants specifically to students in the health professions were not available. Thus, there is no data page for this state.

2. Professions covered: All New Jersey schools.

3. Criteria for eligibility: All three programs are open to students who have been New Jersey residents for 12 months, and are enrolled in New Jersey undergraduate institutions. EOF grants are also available to graduate students. Students are eligible for grants from all three sources.

4. Level of assistance: TAG: $100–$1,200 per year. EOP: undergraduates: $200–$1,200 per year, graduates: up to $4,000 per year. GSS: $200–$500 per year in exceptional cases up to $1,700 per year.

NEW MEXICO

Program: (1) Medical Student Loan Program.*

1. General description: The New Mexico Medical Student Loan Program has a service payback provision. The program began in 1975 and in 1980 assisted 20 students, all of them at the University of New Mexico Medical School.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to New Mexico residents enrolled in an accredited U.S. medical school. Preference is given to students who show financial need.

4. Level of assistance: The size of the loan is based on need, with a ceiling of $6,000/year and $30,000 per career. Loans averaged $5,375 in 1980. Awards are based on need and appropriations.

5. Payback/forgiveness conditions: If recipient serves in designated shortage area of the state for a minimum of two years, 20 percent of principal and interest forgiven for each of the two years as well as each subsequent year. However, no forgiveness is granted for service of under 2 years. If recipient chooses to buy out, total loan plus interest must be repaid within 2 years after completion of training.

NEW MEXICO

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Medical student loan program *	NA	NA	13	$83,564	20	$107,532	$6,000

Source: Survey of financial aid program offices, January 1980.

NEW YORK

Program: (1) Regents Physician Shortage Scholarship Program.*

1. General description: This program provides financial aid to medical students in return for a service commitment. The program was initiated in 1971, and in 1979 there were 240 awards. Mysteriously, there were only 169 payments, a discrepancy New York officials were unable to explain. Thus, here are separate line entries awards and payouts.

2. Professions covered: Medicine.

3. Criteria for eligibility: A prerequisite for an award is a given level of success on the professional school entrance examination, the MCAT (Medical College Admissions Test). Students are then categorized according to need and residence in physician shortage areas with those areas, meeting both criteria having highest priority to receive an award.

4. Level of assistance: Awards range from $1,000 to $4,000.

5. Payback/forgiveness conditions: After completing residency, students are required to serve in an area designated by the State Department of Health as having a shortage of physicians. Loans are cancelled at the rate of one year's debt for each nine months practice. Buyout requirements are repayment of balance and seven percent interest.

Program: (2) Tuition Assistance Program (TAP).

1. General description: Both gradnates and undergraduates receive aid from this non-specialized grant program which began in 1974.

2. Professions covered: All health professions.

3. Criteria for eligibility: Open to New York residents at in-state institutions of higher learning, or the University of Vermont and University of Tel-Aviv Medical Schools. Awards are need based.

4. Level of assistance: Up to $1,800 per year.

Program: (3) Regents Scholarships for the Health Professions.

1. General descritpion: The New York Board of Regents makes scholarship awards to health professions students based on their success on entrance examinations. The level of the awards, however, is need based.

2. Professions covered: Medicine, Osteopathy, Dentistry, Optometry.

3. Criteria for eligibility: Scores on the professional entrance examination in question (Medical College Admissions Test, Dental Admissions Test, etc.) are used on the basis of selection.

4. Level of assistance: Awards range $350–$1,000, depending on need. Students who do not submit a need form still receive the minimum $350.

Program: (4) Combined Data on (2) TAP and (3) Regents Scholarships.

1. General description: Data for only a fraction of the TAP and Regent scholarships was available by individual health profession. The remainder could only be given by public/private institution. However, the ratios of the respective professions can be roughly estimated by extrapolating from the non-combined data.

NEW YORK

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Regents physician shortage scholarship program: Medicine: *							
Awards	65	NA	240	NA	240	See below	$4,000
Payouts (1978–79 data)	NA	NA	NA	NA	169	$687,245	.....
(2) Tuition assistance program grants (1978–79 data):							
Medicine	NA	NA	NA	NA	162	45,641	1,800
Osteopathy	NA	NA	NA	NA	2	600	1,800
Dentistry	NA	NA	NA	NA	64	16,622	1,800
Optometry	NA	NA	NA	NA	8	1,669	1,800
(3) Regents scholarships for the health professions (1978–79 data):							
Medicine	NA	NA	NA	NA	161	98,863	1,000
Osteopathy	NA	NA	NA	NA	2	1,350	.....
Dentistry	NA	NA	NA	NA	63	39,248	.....
Optometry	NA	NA	NA	NA	8	4,750	.....
(4) Combined data on (2) TAP and (3) regents scholarships for health professions that cannot be broken out by profession (1978–79 data):							
Public graduate health professions schools	NA	NA	NA	NA	2,115	1,146,512	.....
Private graduate health professions schools	NA	NA	NA	NA	2,758	1,125,516	.....
Public and private combined	NA	NA	NA	NA	4,873	2,622,028	.....

Source: Survey of State financial aid program offices January 1980.

NORTH CAROLINA

Program: (1) Educational Loan Program for Medical and Related Studies.*

1. General description: The North Carolina Department of Human Resources aids students on the condition they work in a shortage area of the State. Program began in 1945 and in 1979 there were 216 participants in the professions below.

2. Professions covered: Medicine, Osteopathy, Dentistry, Optometry, Pharmacy, Public Health (Physicians only).

3. Criteria for eligibility: Open to North Carolina residents enrolled in an accredited U.S. health profession school. Students are selected according to academic record and motivation to serve in a rural area. Parents or 2 other in-state loan co-signors are required.

4. Level of assistance: Depending on need—$500 to $4,000.

5. Payback/forgiveness conditions: One year's loan cancelled for each year's service in a shortage area of the state, which has been defined flexibly to include inner cities, state facilities, etc. Students must repay principal plus 7 percent interest to buy out. HSA's are consulted for placement.

Program: (2) Board of Governors Medical and Dental Scholarships.

1. General description: The Board of Governors of the State Educational Assistance Authority awards these scholarships. The program was started in the early 1970's to retain outstanding North Carolina minority students in state.

2. Professions covered: Medicine, Dentistry.

3. Criteria for eligibility: Open to North Carolina residents attending in state health professions schools. Each of the four medical schools can nominate 10 students. From the pool of 40, 17 awards are made. The State dental school can also nominate 10 students, of which 5 per year are chosen. Selections are based on both need and merit.

4. Level of assistance: In 1980 awards averaged $6,500 for medicine and $7,000 for dentistry.

NORTH CAROLINA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Educational loan program for medical and related studies (dollar figures are estimates based on average awards)*							$4,000
Medicine	53	$106,000	28	$112,000	98	$392,000	
Dentistry	38	76,000	24	96,000	103	412,000	
Pharmacy	19	19,000	4	8,000	15	30,000	
(2) Board of governors scholarships:							
Medicine	(—)	(—)	58	359,360	57	367,308	
Dentistry	(—)	(—)	(—)	(—)	8	55,917	

Source: Survey of State financial aid program offices, January 1980.

NORTH DAKOTA

Program: (1) Medical Center Loan Fund.*

1. General description: The Medical Center Loan Fund, which began in the 1950's, offers financial aid which can be repaid either monetarily or through service. 40 students participated in 1980.

2. Professions covered: Medicine, Dentistry.

3. Criteria for eligibility: Open to North Dakota residents who are medical students at the University of North Dakota or dental students at any accredited U.S. dental school. Students must have completed the first and second years of their training to be eligible for this program.

4. Level of assistance: The maximum loan is $2,000/year, unless the student agrees to serve in a North Dakota community of 5,000 or less, in which case $2,500 is available per year. This maximum is automatically available to students who agree to the service commitment.

5. Payback/forgiveness conditions: There is a 1 year grace period after completion of training which can be extended. Interest is 6 percent and applied from date of loan. The forgiveness feature is that 5 years practice in a North Dakota town of 5,000 or less completely cancels four years of loans. Since the service payback is optional, there are no special "buyout" penalties.

Program: (2) Board of Higher Education Contracts Program.*

1. General description: The State Board of Higher Education contracts for seats for North Dakota residents at out-of-state health professions schools. Students must sign promissory notes obligating them to the extent of funds spent on their behalf to secure the seats. This obligation can be forgiven by in-state service. In 1980, 116 students participated.

2. Professions covered: Dentistry, Optometry, Veterinary Medicine.

3. Criteria for eligibility: North Dakota students who occupy contract seats are obliged to participate.

4. Level of assistance: Notes are worth the difference between in-state and out-of-state tuition at public schools. At private schools the amount of the note depends on the funds expended by North Dakota to secure the seat and the school's tuition.

5. Payback/forgiveness conditions: When the students graduate, they must pay back the note in 36 months with 4 percent interest from date of issue. Grace period for military service, residency. If student returns to the state and practices for three years, the entire note is cancelled.

NORTH DAKOTA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program/profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Medical center loan fund:*							
Medicine	39	$79,950	46	$90,420	38	$76,500	$2,500
Dentistry	2	45,000	5	9,500	6	12,000	2,000
(2) Board of higher education contracts program*							(1)
Dentistry	(—)	(—)	39	305,100	53	431,100	
Veterinary medicine	17	46,118	48	393,934	40	447,164	
Optometry	(—)	(—)	18	97,000	23	135,800	

[1]Variable.

Source: Survey of State financial aid program offices, January 1980.

OHIO

Program: None.

1. General description: The state financial aid picture for Ohio students in the health professions is not extensive. There are no state programs per se, although it is conceivable that some of the financial aid given out on the campus level may include state dollars. However, it is not possible to track these funds. One program worth mentioning, even though it receives no state financing, is the Preferred Placement Program. It enables small/medium sized communities to acquire new physicians, by providing financial assistance to medical students who agree to practice in the community upon completion of medical training. Nine participants in 1980. There is no accompanying data sheet for this state.

OKLAHOMA

Program: (1) Rural Medical Education Scholarship Program.*

1. General description: The Oklahoma Rural Medical Education Scholarship Program assists Oklahoma students in return for a service commitment. The program began in 1975 and in 1980 had 34 participants.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility: Open to Oklahoma residents accepted in an accredited U.S. medical or osteopathic school who show financial need as well as an interest in rural practice.

4. Level of assistance: Medical students: first and second year, $5,000; third and fourth year, $7,000. Osteopathic students: first year, $5,000; second year, $6,000; third year, $7,000.

These standard amounts were the basis for all awards in 1978 and 1980.

5. Payback forgiveness conditions: Grace period extends throughout military obligations, and four years are allowed for residency. One year's loan forgiven for each year's practice in a rural community in Oklahoma approved by the Physician Manpower Training Commission. However, no credit is given for service of less than two years. Buyout with the approval of the Commission is repayment—principal plus 10 percent interest from the date of the loan. In the event of default, the Commission is authorized to collect up to 100 percent of the principal amount due as liquidated damages to the state in addition to the loan amount and interest due.

Program: (2) Community Physician Education Scholarship Program.*

1. General description: The Oklahoma Community Physicians Education Scholarship Program is similar to the program outlined above with the major distinction that the student is funded on 50-50 percent matching basis by the community and the state. The program was initiated in 1975 and in 1980 had 27 participants.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility:

Students: Same as for Rural Medical Education Scholarship above: Needy Oklahoma residents at appropriate institutions.

Communities. Open to rural communities which both need and are able to support a practicing physician, which have raised initial funds to be loaned to a student and show ability to continue to meet a student's expense.

4. Level of assistance: Loans ranged from $6,000 to $10,000 in 1980, with the maximum being de facto determined by the state which will match up to $5,000 per student per year.

5. Payback/forgiveness conditions: No interest accrues during any period while the recipient serves in the military, or during a primary care residency not to exceed four years, or for six months following either such period. Each year's practice in the community cancels $5,000 of the total loan, with minimum service for forgiveness being 2 years. If both the state and the community are willing, repayment can be made in cash with 10 percent interest from the date of issue of the loan. Should a community default, it receives no form of repayment, and if the student cannot be matched with another community, his/her obligation will be the same as those stipulated in the Oklahoma Rural Medical Education Program, the physician defaut terms of which also apply to this program

Program: (3) Professional Study Grant Program.

1. General description: The Professional Study Grant program assists minority professional students, principally in the health sciences, 17 of whom received granted in 1980. The program was first available in fall of 1978.

2. Professions covered: Medicine, Osteopathy, Dentistry, Veterinary Medicine.

3. Criteria for eligibility: Open to Oklahoma residents from minority groups attending Oklahoma professional schools who show exceptional financial need.

4. Level of assistance: Students receive a $3,500 grant plus a tuition waiver (1980 value approximately $1,000) and incur no obligation.

Program: (4) Optometry Student Grants.

1. General description: Optometry students, who until recently had no choice but to attend out-of-state institutions and pay non-resident rates, are aided by grants, which in 1980 averaged $1,080. Since Oklahoma now has an optometry school, the program will be phased out except for continuations. 56 participants in 1980.

OKLAHOMA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Rural medical education * scholarship program:							
Medicine	(—)	(—)	17	$115,000	20	$111,000	$7,000
Osteopathy	(—)	(—)	12	69,000	14	74,000	7,000
(2) Community physician * education (State share only; Federal share excluded):							
Medicine	(—)	(—)	15	117,071	14	66,444	5,000
Osteopathy	(—)	(—)	12	93,677	13	57,159	5,000
(3) Professional study grants program:							
Medicine	NA	NA	NA	NA	7	35,700	5,100
Osteopathy	NA	NA	NA	NA	3	15,300	5,100
Dentistry	(—)	(—)	(—)	(—)	7	35,700	5,100
(4) Optometry student grants	56	$56,000	56	56,000	56	56,000	1,080

Source: Survey of State financial aid program offices, January 1980.

OREGON

Program: (1) Medical and Dental Grant Program.

1. General description: This need based grant program aids Oregon medical and dental students. Initiated in 1977, 309 students participated in 1980.

2. Professions covered: Medicine, Dentistry.

3. Criteria for eligibility: Open to needy students enrolled at the University of Oregon Health Sciences Center.

4. Level of assistance: Awards average $1,500/year for dental students and $800/year for medical students.

Program: (2) Medical and Dental Loan Program.

1. General description: The loan program has the same eligibility criteria as the grant program. Dentistry students, who have less access to financing, use it more frequently than medical students. The program began 1978–79 and in 1980 had 68 participants.

2. Professions covered: Medicine and Dentistry.

3. Crirterla for eligibility: Open to needy students at University of Oregon Health Sciences Center.

4. Level of assistance: Maximum: $1,500/year, $7,500/career.

5. Payback/forgiveness conditions: Interest of 6 percent accumulates from day of issue. There is a one year grace period post graduation until repayment begins.

Program: (3) State Need Grants.

1. General description: This undergraduate need-based grant program is available to pharmacy students. However, the information on participation in the program by student's major is not available.

OREGON

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Medical and dental grant program:							
Medicine	(—)	(—)	42	$18,900	158	$65,259	----------
Dentistry	(—)	(—)	(—)	(—)	151	34,391	----------
(2) Medical and dental loan program:							
Medicine	(—)	(—)	(—)	(—)	1	500	$1,500
Dental	(—)	(—)	(—)	(—)	67	45,991	1,500
(3) State need grants: Pharmacy	NA	NA	NA	NA	NA	NA	----------

Source: Survey of State financial aid program offices, January 1980.

PENNSYLVANIA

Program: None.

1. General description: There are no Pennsylvania programs specifically for health professions students, nor are there any general state programs for which information on health professions students is available. However, the Pennsylvania Higher Education Assistance Authority, unlike its equivalents in most states, was able to provide data on guaranteed student loans to health professions students. Unfortunately, they could not be broken out by discipline.

RHODE ISLAND

Program: (1) Rhode Island Contracts Program.*

1. General description: The Rhode Island contracts program facilitates residents' efforts to procure positions at out-of-state health profession schools. In return, students are required to repay funds expended on their behalf, with partial forgiveness available for certain types of service. This arrangement was initiated in Fall 1975. In 1980, 50 students participated.

2. Professions covered: Medicine, Veterinary Medicine, Optometry.

3. Criteria for eligibility: Open to Rhode Island residents admitted through normal channels to schools with which the state has an agreement.

4. Level of assistance: Negotiated with school providing seat to Rhode Island student.

5. Payback/forgiveness conditions: If the student returns to Rhode Island for 3 years, 25 percent of the debt is cancelled. If the student works for the state for 3 years, 75 percent is cancelled.

Program: (2) Undergraduate Scholarship and Grant Program.

1. General description: The Rhode Island Undergraduate Scholarship and Grant program doubtless assists certain pharmacy students. However, the data is not kept in such a way that pharmacy students can be isolated.

RHODE ISLAND

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Contract program:*							
Medicine	NA	NA	NA	NA	26	$293,800	11,300
Veterinary medicine	NA	NA	NA	NA	14	123,000	(1)
Optometry	NA	NA	NA	NA	10	42,000	4,600
(2) Undergraduate scholarship and grant program: Pharmany	NA	NA	NA	NA	NA	NA	

[1] Variable.

Source: Survey of State financial aid program offices, January 1980.

SOUTH CAROLINA

Program: (1) Medical and Dental Loan Program.*

1. General description: South Carolina medical and dental students can receive assistance through the Division Health Manpower of the Department of Health and Environmental Control if they agree to practice in a shortage area. 49 medical and 16 dental students did so in 1980. Program began in 1975.

2. Professions covered: Medicine, Dentistry.

3. Criteria for eligibility: Open to South Carolina residents accepted at any accredited school for the above professions, who agree to practice in an underserved area of South Carolina upon completion of training. Financial need and academic record are weighted equally with the students adaptability to rural settings.

4. Level of assistance: Standardized award of $6,200 per year.

5. Payback/forgiveness conditions: One year's loan is forgiven for each year's service for up to three years, after which all obligation is cancelled. Four years' loans thus are forgiven by three years service. Buyout penalty: 3 times the principal plus 7 percent interest compounded semi-annually.

SOUTH CAROLINA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Medical and Dental loan program:*							
Medicine	(—)	(—)	50	$310,000	49	$303,800	$6,200
Dentistry	(—)	(—)	16	99,200	17	105,400	6,200

Source: Survey of State financial aid program offices, January 1980.

SOUTH DAKOTA

Program: (1) Health Professions Loan Program.*

1. General description: The South Dakota Health Professions Loan Program was initiated in 1969 and has a variable forgiveness clause for students who practice in-state.

2. Professions covered: Medicine, Osteopathic Medicine, Dentistry, Veterinary Medicine, Optometry.

3. Criteria for eligibility: Open to South Dakota residents attending an accredited U.S. health professional school in the fields indicated. However, in medicine, only those students who have attended the University of South Dakota Medical School and have to transfer out-of-state for the final two years are eligible. Since South Dakota has been gradually phasing in a 4 year medical school since 1974, these students are declining in number.

4. Level of assistance: Maximum loan is $3,500 per year, but average depends on students need, number of applicants and availability of funding. Average size for all professions in 1980 was $2,241.

5. Payback/forgiveness conditions: Interest, applied from date of issue is 5 percent while the student is in training and rises to 10 percent once he/she becomes eligible to practice. If the student practices in a South Dakota county in which there is no community with greater than 5,000 population, the loan is forgiven at 30 percent per year. For other in-state practice the rate is 20 percent per year. If student does not return, principal plus interest must be repaid.

Program: (2) University of South Dakota Medical School: Tuition Waiver Program.*

1. General description: This program frees students from tuition obligations in return for a service commitment. 152 of 220 students, or 69 percent, participated in 1980.

2. Professions covered: Medicine.

3. Criteria for eligibility: State resident attending the University of South Dakota Medical School willing to serve in-state.

4. Level of assistance: Full tuition (1980: $3,500/year).

5. Payback/forgiveness conditions: 10 percent interest is compounded from issue of loan, but payments are deferred until 9 months after completion of training. Interest must be paid, but if student serves in shortage area, 1 year's principal is forgiven for each 9 months practice. In non-shortage South Dakota areas, 15 months must be served per year's tuition waived. Should student default by practicing out-of-state, he/she must repay tuition waived (plus interest) as well as any court costs or damages.

SOUTH DAKOTA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Health professions loan program:*							
Dentistry	49	$123,150	67	$150,000	49	$114,200	$3,500
Medicine	48	130,000	24	63,500	12	35,000	3,500
Osteopathy	5	14,500	8	18,500	5	12,000	3,500
Veterinary medicine	19	46,950	29	64,500	35	76,500	3,500
Optometry	(—)	(—)	(—)	(—)	20	39,500	3,500
(2) University of South Dakota Medical School tuition waiver program	NA	NA	169	591,500	152	532,000	3,500

Source: Survey of State financial aid program offices, January 1980.

TENNESSEE

Program: (1) Tennessee Medical Loan Scholarship.*

1. General description: The Tennessee Medical Loan Scholarship is a service payback program that was initiated in 1972 and began to be phased out in 1978, with only renewals receiving funding thereafter. In its lifetime the program will have had 176 participants in all.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility: Open to Tennessee residents attending an accredited underserved area of the state.

4. Level of assistance: Students in 4 year programs: $5,000/year; students in U.S. or foreign medical or osteopathic school who pledge to enter primary care (Family Practice, Internal Medicine, Obstetrics/Gynecology or Pediatrics in 3 year programs: $6,500/year.

5. Payback/forgiveness conditions: Upon completion of residency, student entering rural service has loans forgiven at the rate of $5,000 per year. Buyout provisions are the lump sum payment of the principal, 8 percent interest retroactive to issue of loan, and a penalty of $2,500 (latter provision added 1974).

Program: (2) Student Assistance Award Program.

1. General description: This undergraduate grant program is primarily of interest as it pertains to pharmacy students. However, occasional graduate health

professions students who have a year remaining until they receive their undergraduate degree are assisted.

2. Professions covered: Pharmacy, pre-baccalaureate students in other health professions.

3. Criteria for eligibility: Open to financially needy Tennessee residents studying in-state who have not obtained their first degree.

4. Level of assistance: Need based. Maximum $1,200/year, average $660/year.

TENNESSEE

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Medical loan scholarship (includes both medicine and osteopathy) *	47	$195,965	69	$394,250	21	$99,250	$6,500
(2) Student assistance award program:							
Pharmacy	(—)	(—)	18	14,155	32	29,382	1,200
Veterinary medicine	(—)	(—)	(—)	(—)	5	7,000	1,200

Source: Survey of State financial aid program offices, January 1980.

TEXAS

Program: (1) Texas Rural Medical Education Board Loans.*

1. General description: The Texas Rural Medical Education Board assists students on the condition they practice in an underserved area of the state. Their program began in 1975, and in 1980 had 117 participants.

2. Professions covered: Medicine, Osteopathy.

3. Criteria for eligibility: Open to Texas residents enrolled in a world health organization approved medical or osteopathic school, although those in U.S. schools are preferred. Students are screened by Rural Medical Education Board for adaptability to rural practice in Texas, to which students must commit themselves. Financially needy candidates are given preference.

4. Level of assistance: Loans average $4,000 per year (1980) and vary according to need and marital status. The average need (1980) was calculated at $5,000, thus the program gives 80 percent funding.

5. Payback/forgiveness conditions: Interest of 5 percent accrues from date of loan. Up to 4 years deferral is allowed for residency, after which 20 percent of principal and interest is forgiven for each year of practice in a county of less than 25,000 population. Thus, five years work is required for total forgiveness. Complete buyout requires repayment of loan, interest, 10 percent penalty and legal fees. If physician has served a minimum of 2 years, default penalty is waived, but balance must be repaid.

Program: (2) Hinson-Hazlewood College Student Loans.*

1. General description: The Hinson-Hazlewood College Student Loan Program is a broad based loan program based on funds through the issuance of Texas bonds. Included are many health professions students, some of who may have their loans forgiven through service. (Originally known as TOP—Texas Opportunity Plan.)

2. Professions covered: All Texas Schools.

3. Criteria for eligibility: Open to Texas residents enrolled at any accredited non-profit institution of higher learning. Students must be needy and studying at least half-time.

4. Level of assistance: Loans are based on need. Awards average somewhat under the maximums, which are as follows: undergraduate (pharmacy): $2,500/year; $7,500 aggregate graduate (all other health professions): $5,000/year; $15,000 aggregate (including undergraduate amounts).

5. Payback/forgiveness conditions: Interest is 7 percent, and if student qualifies, the federal government will pay interest until repayment period begins. Grace period is 9 months and minimum monthly payment of $30. If doctors of medicine take employment with various designated state agencies:

1. Payment (but not interest) is waived as long as the person is employed by that agency.

2. After 2 years service, 50 percent loan plus interest forgiven, with 4 years equalling total cancellation. No forgiveness for less than 2 years service.

TEXAS

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Finajicial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Texas Rural Medical Education Board loans:[2]							
Medicine	(—)	(—)	[1] 70	$282,500	109	$524,000	[3]
Osteopathy	(—)	(—)	[3]	[3]	8	[3]	[3]
(2) Hinson-Hazelwood College student loans:							
Medicine	275	$280,625	437	767,735	173	[4] 325,503	$5,000
Osteopathy	66	99,800	49	125,531	43	[5] 113,483	5,000
Dentistry	24	33,600	82	305,600	10	[6] 28,800	3,500
Pharmacy	NA	NA	NA	NA	NA	NA	2,500

[1] Approximate.
[2] Need based.
[3] Included with medicine.
[4] Spent as of November 1979 of an allocation of $2,550,000.
[5] Spent as of November 1979 of an allocation of $600,000.
[6] Spent as of November 1979 of an allocation of $500,000.

Source: Survey of State financial aid program offices, January 1980.

UTAH

Program: Undergraduate Tuition Waiver Programs. (1) L. David Hiver Scholarships, (2) Continuing Student Scholarships.

1. General description: Two types of tuition waivers, the L. David Hiver Scholarships and the continuing Student Scholarships are available to Utah undergraduates. The volume of pharmacy student participation is described below. Therefore, there is no accompanying data sheet.

2. Professions covered: All undergraduates.

3. Criteria for eligibility: Open to Utah residents at in-state undergraduate institutions. Awards are merit based and for pharmacy students there is one new Hiver Scholarship per year, and three continuing student scholarships.

4. Level of assistance: Full tuition, value in 1980 about $595.

VERMONT

Program: (1) Incentive Grant Program.

1. General description: This state funded grant program has been in operation since 1966. In 1980 56 medical students were aided, among others.

2. Professions covered: Medicine, Veterinary Medicine, Pharmacy.

3. Criteria for eligibility: Open to Vermont residents who are studying at Office of Education approved undergraduate institutions (covering pharmacy students). Only graduate students eligible are University of Vermont Medical Students and veterinary students at any accredited U.S. school. The awards are need-based.

4. Level of assistance: Maximum in 1980: $2,250/year; average in 1980: $721; average for medical students: $1,714.

VERMONT

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Incentive grant program:							
Medicine	NA	NA	47	$61,000	56	$96,000	$2,250
Veterinary medicine	NA	NA	NA	NA	NA	NA	----------
Pharmacy	NA	NA	NA	NA	NA	NA	----------

Source: Survey of State financial aid program offices, January 1980.

VIRGINIA

Program: (1) Medical and Dental Scholarship.*

1. General description: The Virginia Medical and Dental scholarships are administered by the State Department of Health, which is authorized to give out 80 awards per year. Although both have been amended many times, the dental program has been operative since 1950 and the medical since 1942.

2. Professions covered: Medicine, Dentistry.

3. Criteria for eligibility: Open to 33 medical students at Medical College of Virginia, 27 of University of Virginia, and 10 at East Virginia Medical School, who agree to practice Family Medicine (Family Practice, Internal Medicine, Pediatrics) in an area of need in Virginia. Also available to 10 students annually at Virginia Commonwealth University School of Dentistry who agree to practice general dentistry in shortage locations. Virginia residents preferred. Financial need and adaptability of applicant to rural service are also considered.

4. Level of assistance: $2,500 per year for 4 years.

5. Payback/forgiveness conditions: After a grace period for residency (Maximum: 3 years medical, 2 years dental) practice must be initiated in an area of need. One year's assistance is forgiven for each year's service. If graduate defaults on commitment, he/she must repay loan plus 10 percent interest. However, student can withdraw at anything with immediate payment of 8 percent and principal.

Program: (2) Virginia College Scholarship Assistance Program.

1. General description: This program provides need based grants to undergraduates. Although pharmacy students do receive awards, the data on them can not be broken out.

VIRGINIA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Virginia medical and dental scholarships:*							
Medicine	60	$150,000	60	$150,000	$70	$175,000	$2,500
Dentistry	10	25,000	10	25,000	10	25,000	2,500
(2) Virginia College scholarship assistance program: Pharmacy	NA	NA	NA	NA	NA	NA	200–700

Source: Survey of State financial aid program offices, January 1980.

WASHINGTON

Program: (1) Tuition Exemption Program.

1. General description: Tuition waivers for students determined to have serious financial need.

2. Professions covered: All professions.

3. Criteria for eligibility: State Residence.

4. Level of assistance: Up to the level of tuition in 1980, this was $771 per year for graduate students, and $1,029 per year for Medical and Dentistry students.

Program: (2) Washington State Need Grant.

1. General description: A needs based program for low income undergraduate students.

2. Professions covered: Undergraduate only.

3. Criteria for eligibility: Pharmacy students—in their first and second years of training who are, residents of Washington.

4. Level of assistance: Grant assistance "nominal number available to School of Pharmacy Students in undergraduate years."

WASHINGTON

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Tuition waiver at Seattle:							
Medicine	6	$5,040	23	$22,400	27	$27,800	[1] $1,029
Dentistry	NA	NA	118	114,800	NA	NA	[1] 1,029
Other professions	NA	NA	NA	NA	NA	NA	----------
(2) Washington State need grant:							
Pharmacy	NA	NA	NA	NA	NA	NA	----------

[1] Per student.

Source: Survey of State financial aid program offices, January 1980.

WEST VIRGINIA

Program: (1) University of West Virginia Tuition Waiver Program.

1. General description: Since 1973 there has been statutory provision allowing the University of West Virginia to grant 20 tuition and fee waivers for students of dentistry and 24 for medicine, based on need. The total value of these waivers has declined since 1974 since fewer are being granted to out-of-state students who pay higher rates. The award carries no obligation.

Program: (2) Undergraduate Pharmacy Scholarships.

1. General description: West Virginia has an undergraduate scholarship program funded at $3 million per year. Some of the awards of approximately $475 (tuition and fees at University of West Virginia) doubtless go to pharmacy students. However, since records are not kept by students major, data on awards to pharmacy students is unavailable.

Program: (3) Optometry Contracts Program.*

1. General description: Students accepting seats for which the state has contracted are obligated to return to West Virginia or reimburse the state. Eighteen students participated in 1980.

2. Professions covered: Optometry.

3. Criteria for eligibility: West Virginia residents accepted at U.S. Schools of Optometry.

4. Level of assistance: Variable according to school. Averaged $3,669 in 1980.

5. Payback/forgiveness conditions: Two years practice in West Virginia upon graduation yields cancellation of the entire loan. Buyout is repayment of the value of the contract (inherent interest) within 60 days.

WEST VIRGINIA

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973–74, 1977–78, and 1979–80]

Financial aid program profession	1974		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) University of West Virginia tuition waiver program:							
Medicine	24	$9,488	24	$8,016	24	$8,016	$384
Dentistry	20	10,360	20	6,680	20	9,188	384
(2) Undergraduate pharmacy scholarships	NA	NA	NA	NA	NA	NA	475
(3) Optometry contracts program*	(—)	(—)	18	64,450	18	66,000	(1)

[1] Variable.

Source: Survey of State financial aid program offices, January 1980.

WISCONSIN

Program: None.

1. General description: No statewide financial aid programs pertinent to the health professions targeted in this study were identified. Therefore there is no accompanying data sheet.

WYOMING

Program: (1) Medical Contracts Program.*

1. General description: The Wyoming Legislature has authorized funds to insure thirty guaranteed admissions for qualified Wyoming students to medical schools on a contractual basis. The student is then obligated to serve in Wyoming or repay funds expended on his behalf. The program began in 1975 and in 1980 had 165 participants.

2. Professions covered: Medicine.

3. Criteria for eligibility: Open to 5-year Wyoming residents who sign a contract, the terms of which are described below.

4. Level of assistance: Wyoming pays the full costs of student's education, including tuition and fees but not books. In 1980 this amounts to approximately $75,000 per student career.

5. Payback/forgiveness conditions: While in school the student must pay $1,000/year tuition to Wyoming, which is credited against his debt. The student has three repayment options: (1) After a 1-year grace period, repaying monies (without interest) in even monthly installments over a period not to exceed 8 years; (2) 3 years practice in Wyoming upon completion of training; (3) taking a Family Practice Residency in Wyoming, if available.

WYOMING

[Number of students receiving State student financial aid and total awards by program and profession for academic years 1973-74, 1977-78, and 1979-80]

Financial aid program profession	19[illegible]		1978		1980		Maximum available level of aid, 1980
	Number of students	Amount	Number of students	Amount	Number of students	Amount	
(1) Medical contracts program *.....			64	$876,891	108	$1,366,469	$18,943

Source: Survey of State financial aid p[illegible] January 1980.

SUPPLEMENT 2. THE HEALTH PROFESSIONS FEDERAL STUDENT ASSISTANCE PROGRAMS 1979–80

States, with but a few notable exceptions, have tended to follow rather than lead the Federal Government in the development of specific scholarship and loan programs exclusively devoted to the health professions. Federal programs of student assistance have been clearly directed at providing access to expensive health professional training. At the Federal level there has been recognition that health professionals are a national resource, are a mobile work force, and that special Federal efforts are essential to increase the numbers of minority and less economically advantaged into the lengthy and costly educational process of the health sciences.

An understanding of current Federal program effort is necessary, therefore, since these programs underpin supplemental state student assistance programs. All forms of student financial aid—federal, state, university, and private—tend to be packaged individually as worthy students in need are matched against aggregated financial aid resources. Shifts in Federal policy for student financial assistance have occurred in recent years. The Federal Government has substantially decreased its scholarship aid to health professional students and also its subsidized interest loans administered by the Bureau of Health Manpower. States have never played the principal role in student scholarship and loan financing in the health professions although many feel that low tuition policies are a conscious effort to aid all students in meeting the costs of public school education.

Because most Federal programs in student assistance heavily influence state policy, we have prepared a special description and analysis of current Federal student assistance efforts.

STUDENT ASSISTANCE

Health professions students have access to two categories of financial assistance: 1) sources available to all graduate students, and 2) sources earmarked for health professions training (Appendices 1 and 2).

Those federal sources of financial aid which are available to all graduate students, including health professions students, are National Direct Student Loans, the College Work-Study Program, and Federally Insured or Guaranteed Student Loans. Both the National Direct Student Loan and College Work-Study programs are campus-based. The institutions apply directly to the Department of Education for funds which they then disperse to students. The financial aid office of each institution determines which students are eligible for assistance and the amount of aid each receives.

The National Direct Student Loan (NDSL) is a key source of student assistance in some schools but the amounts available are relatively small and are reserved for students least able to afford higher interest rates. The health professions students must compete with all other graduate and undergraduate students for these funds. The maximum indebtedness per student, including amounts already incurred during undergraduate years, is $10,000 (with an annual maximum award of $2,500). The interest rate is three percent and is subsidized while the student is in school, for a nine-month grace period, and for acceptable three-year deferments. Residency training is not considered grounds for deferment of interest and principal payments since residents receive a salary. With a ten-year payback period, the terms of the NDSL loans are very favorable, but the competition with all other eligible graduate and undergraduate students results in less money being available to health professions students than from some other earmarked sources.

The College Work-Study Program (CW-S) provides jobs for students who need financial aid and must have earnings to cover part of their educational expenses. The participating institutions arrange jobs for students on campus or outside in public or private non-profit agencies. The salary received is often, but not necessarily, based on the minimum wage. The financial aid office determines a maximum amount of money a student can earn in the CW-S program, and upon reaching the maximum, the student's employment under work-study ends for that academic year. Again, the difficulties with this program from the perspective of health professions students are the amounts of the awards and the fact that these students must compete with all eligible graduate and under-

graduate students for the funds. Moreover, the curricula in most health professions programs make it difficult for most students to hold jobs outside of school.

The Guaranteed Student Loan (GSL) program began in 1965. It is composed of the Federally Insured Student Loan (FISL) and the Guaranteed Agency program run by individual states. The federal government directly insures and subsidizes commercial and private lenders in the FISL program; in state-level programs, the federal government pays lenders an interest subsidy and reinsures the state agencies who manage the loan program. The federal government also allows state agencies to collect in advance an insurance premium of up to one percent each year of the total loan outstanding as an incentive for states to participate in the program. The insurance premium for loans insured by the federal government is one-quarter of one percent. States may impose strieter requirements or provide more generously than the federal limitations. If states wish to exceed federal guidelines (e.g., by increasing the loan limit), they are responsible for guaranteeing and subsidizing the additional sum. State and individual lenders must meet federal guidelines for loan repayment, deferment, and a grace period. For example, the lender is required to establish a grace period of between nine and twelve months, and a schedule for interest and principal repayment that must allow at lenst five years, but no more than ten years for full repayment. Deferment for residency training is possible only when such training occurs in a hospital that is part of a GSL–eligible medical school.

The GSL carries an interest rate of seven percent which does not accrue until the ten-year payback period begins. Prior to enactment of the Middle Income Student Assistance Act of 1978, students whose parents' annual income exceeded $25,000 did not qualify for interest subsidization and, therefore, were required to pay interest while in school. Now, all students are eligible for federal subsidization, regardless of income.

A student's need for GSL borrowing is determined by the school, which must certify the student's level of eligibility before student and lender can enter into a contract. Students may take out a Federally Insured or a state Guaranteed Student Loan, but not both. In addition, students are not eligible to borrow from the GSL and the Health Education Assistance Loan programs in the same year.[1] Since GSLs are available also for undergraduate study, students may have already borrowed up to the undergraduate limit of $7500 before entering the health professions school. The limit for graduate study is a total of $15,000 ($5000 maximum per year), but that total includes any indebtedness from undergraduate loans.

Federal financial assistance programs explicitly directed to health professions students include the Health Professions Student Loans, Health Education Assistance Loans, Exceptional Financial Need First Year Scholarships, National Health Service Corps Scholarships and the Armed Forces Health Professions Scholarships. A summary of authorizations and appropriations for programs administered by HHS appears in Table 1.

TABLE 1.—APPROPRIATIONS AUTHORIZATIONS AND ACTUAL APPROPRIATIONS FOR HEALTH PROFESSIONS STUDENT ASSISTANCE PROGRAMS, FISCAL YEARS, 1965, 1968, 1971, 1974, 1977, AND 1979

[In millions][1]

Programs	1965	1968	1971	1974	1977	1979
Student loans:						
Authorization	$10.2	$25.0	$35.0	$60.0	$39.1	$27.0
Appropriation	10.2	15.0	25.0	36.0	24.0	10.0
Scholarships:						
Authorization	NA	(2)	(3)	(3)	(4)	(4)
Appropriation	NA	7.2	15.5	15.5	1.0	----
Physician shortage area scholarships:						
Authorization	NA	NA	NA	3.5	(4)	NA
Appropriation	NA	NA	NA	2.0	0.40	NA
National health service corps scholarships:						
Authorization	NA	NA	NA	3.0	40.0	140.0
Appropriation	NA	NA	NA	0.30	40.0	75.0
Scholarships for first-year students of exceptional financial need:						
Authorization	NA	NA	NA	NA	NA	17.0
Appropriation	NA	NA	NA	NA	NA	7.0
Lister Hill scholarships:						
Authorization	NA	NA	NA	NA	0.08	0.24
Appropriation	NA	NA	NA	NA	----	----

[1] Terri Ehrenfield, Office of Financial Manarement, Bureau of Health Manpower, HHS.
[2] Appropriations for this year were made under a continuing resolution.
[3] Such sums as necessary.
[4] Funds are authorized for prior recipients.

Source: Committee on Interstate and Foreign Commerce, op. cit.

[1] Technically, this provision only exists in the language of the HEAL program. However that alone is tantamount to including the provision in the GSL program, as it makes GSL and HEAL mutually exclusive.

The Health Professions Student Loan (HPSL) program is one of two student assistance programs initiated in the original 1963 health professions training act. The 1963 Act reflected the dual concerns of increasing the supply of health professionals and providing training opportunities for students of an income levels by including authorities for both Health Professions Student Loans and Health Professions Scholarships (HPS). Eligibility criteria for participation in the programs included demonstrated need for the loans and exceptional need for the scholarships. These two programs remained key sources of financial assistance for students until recent years when the HPS authority was removed the 1976 Act: most health professions students with high income potential were tightened. These changes were consistent with the philosophy leading to the 1976 Act: most health professions students with high income potential should no longer receive public subsidies for their education expenses and if they do, the public should expect a return on the investment (as in service-connected scholarships).

Since 1963, the HPSL reasonable interest rate (currently 7 percent), interest subsidization while the student is in school, nine month grace period, a 3 to 5 year deferment period for further training or service and a ten-year payback period have allowed students to accrue a relatively manageable burden of debt. Interest is not compounded and does not accrue until the repayment period begins. Table 2 shows the cost to the student of various amounts borrowed under HPSL.

TABLE 2.—HEALTH PROFESSIONS STUDENT LOAN (HPSL) ANNUAL INTEREST RATE—7 PERCENT SIMPLE

Amount of total debt	Monthly payments		10-yr period total repayment amount (principal and interest)
	In school (interest)	During repayment (120 mo) (principal and interest)	
$5,000	None	$58	$6,415
$10,000	None	116	12,830
$15,000	None	174	19,244
$20,000	None	232	25,659
$25,000	None	291	32,074
$30,000	None	349	38,489
$35,000	None	407	44,903
$40,000	None	465	51,318
$45,000	None	523	57,733
$50,000	None	581	64,148

Note: Under the health professions student loan program, interest is not compounded. No interest is charged while the individual is in school nor while the individual is in deferment for periods of advanced professional training, active duty in the uniformed services, or service in the Peace Corps.

HPSL funds are allocated to health professions schools by the federal government; financial aid offices in the schools determine need, distribute funds and manage the loans. For medical and osteopathic students, requirements for exceptional financial need are clearly defined: the student's resources must not exceed $5000 or one-half the cost of a year's tuition, whichever is less. Other health professions schools use their own criteria for determining need. In fiscal year 1979, HPSL appropriations were cut to half of the fiscal year 1978 total (from $20 million to $10 million), forcing many students to seek other sources of assistance. Preliminary fiscal year 1980 appropriations are $16.5 million.

Until recently, students could have up to 85 percent of their outstanding debt forgiven by practicing in HHS designated underserved areas. The Department decided, however, to phase out the forgiveness option. At present and projected appropriation levels, the HPSL program must rely increasingly on graduates' repayments and on interest from outstanding loans. Failure to collect loan payments in the face of declining appropriations has led to a depletion of program resources. Consequently, although the HPSL loan limit is $2500 per year plus tuition, the average HPSL award in academic year 1978–79 was only $1200. Most health professions schools have followed the policy of helping as many students as possible by spreading the funds. When expenses were lower and funds relatively more plentiful, this practice was very successful. Now, however, it results in relatively low funds available per student and the need for students to combine sources of financial assistance, assets and earnings in order to meet expenses.

The Health Education Assistance Loan (HEAL) program is a new program in its second year of operation. It provides a source of revenue for students who are unable to qualify for lower interest loans and who are unwilling to incur a service commitment. Students of medicine, osteopathy, dentistry, veterinary medicine, optometry, podiatry and public health can borrow up to $10,000 per year, to a maximum of $50,000. This is soon to be raised to $15,000 per year up to a ceiling of $60,000, Pharmacy students may borrow up to $7,500 per year, to a maximum of $37,500. The federal government insures the HEAL loan, but does not subsidize the interest (which cannot exceed 12 percent). This aspect of the HEAL program has drawn sharp criticism as both coercing students to apply for National Health Service Corps scholarships or, in the case of medical students, causing them to incur such high debts that they will seek the most lucrative forms of subspecialty practice rather than pursue careers in primary care. Given current commercial interest rates, it is assumed that HEAL interest rates will stay at the maximum allowed. Interest begins to accrue immediately, but can be deferred until repayment of the loan begins if the lender agrees. Repayment of interest and principal can be deferred up to three years after graduation plus a nine month grace period. Repayment takes place over 10 to 15 years.

The cost of HEAL to the government is relatively low since all loans are financed with private capital. However, the student's burden with a HEAL loan is substantial. For example, on a $32,000 total loan borrowed over four years at $8000 per year, with the interest accrued and compounded throughout school, residency training and during a grace period, a medical student would pay back a total of $148,702.94 over a 15 year repayment period (or $825 per month for the first 15 years of practice). In this case, interest payments alone total $116,702.94. (Table 3).

TABLE 3.—HEALTH EDUCATION ASSISTANCE LOAN (HEAL) PROGRAM DEBT SERVICE

Years	Loans	Interest	Annual payment principal and interest	Balanced principal and interest
Freshman	$8,000	$988.80		$8,988.80
Sophomore	8,000	2,099.82		19,088.62
Junior	8,000	3,348.15		30,436.77
Senior	8,000	4,750.79		43,187.56
Residency		5,337.99		48,525.55
Residency		5,997.76		54,523.31
Residency		6,739.10		61,262.41
Grace period		7,572.02		68,834.45
Repayment period:				
1		8,166.08	9,913.56	67,085.98
2		7,944.48	9,913.56	65,117.90
3		7,694.74	9,913.56	62,899.08
4		7,413.34	9,913.56	60,398.86
5		7,096.25	9,913.55	57,581.55
6		6,738.95	9,913.56	54,405.94
7		6,336.33	9,913.66	50,829.71
8		5,882.64	9,913.56	46,798.79
9		5,371.42	9,913.66	42,255.65
10		4,795.38	9,913.66	37,138.45
11		4,146.25	9,913.56	31,371.14
12		3,414.81	9,913.56	24,872.39
13		2,590.61	9,913.56	17,549.44
14		1,661.87	9,913.56	9,290.75
15		615.35	9,913.10	0
Total repayments			148,702.94	
Principal loaned			−32,000.00	
Total interest expense			116,702.94	

Source: Committee on Appropriations (HEW-Labor), U.S. House of Representatives, Hearing Record, 1979.

Although HEAL is still more favorable than borrowing from commercial lenders without the federal guarantee, the attractiveness of the program was overestimated in its planning stages. The Office of Education predicted that 14,000 loans would be made in academic year 1979–80, for a total loan volume of $112,000,000. In fact, only 801 loans were taken out in that year for a total of about $6,062,600. (Table 4).

TABLE 4.—HEAL PROGRAM

[Number, percent, amount and average amount disbursed by discipline]

Discipline	Number of loans	Percent of total	Dollar total	Dollar percent	Average loan
Medicine	305	38	$2,209,138	36	$7,243
Osteopathy	36	5	339,665	6	9,435
Dentistry	174	22	1,374,258	23	7,898
Veterinary medicine	50	6	240,474	4	4,809
Optometry	11	1	85,904	1	7,809
Podiatry	201	25	1,705,290	28	8,484
Pharmacy	16	2	78,072	1	4,880
Public health	8	1	29,798	1	3,725
Total	801	100	6,062,599	100	7,569

Source: Bureau of Student Financial Assistance, Office of Education, Department of Health, Education and Welfare.

The Exceptional Financial Need First Year Scholarship (EFN), established in 1976 and funded in 1978, is the only federal scholarship for health professions students that does not entail a service commitment. First year students in medicine, osteopathy, dentistry, veterinary medicine, optometry, podiatry and pharmacy with practically no financial resources to pay for their education are eligible. The various health professions schools apply to the government for the funds, listing and ranking eligible students. The federal government thus far has allocated one scholarship to every school submitting an application and has distributed the remaining scholarships giving priority to needy medical, osteopathic and dental students. No repayment obligation is incurred. The amount of the award is equivalent to the National Health Service Corps scholarship, covering tuition, educational expenses and a stipend for living expenses. (Table 5).

TABLE 5.—EXCEPTIONAL FINANCIAL NEED 1ST YEAR SCHOLARSHIPS, 1979–80

Discipline	Resident		Nonresident	
	High	Low	High	Low
Medicine	$19,908	$6,519	$19,908	$7,355
Osteopathy	17,635	7,338	17,635	7,938
Dentistry	26,661	8,241	26,661	9,981
Optometry	15,629	7,339	15,629	9,264
Pharmacy	13,193	5,988	13,193	6,618
Podiatry	13,373	11,566	13,373	11,566
Veterinary medicine	22,471	6,193	22,471	11,043

Source: Ellen Tewksbury, Student and Institutional Assistance, Bureau of Health Manpower, December, 1979.

The EFN program is not very large. As shown in Table 6, 506 awards were made in academic year 1978–79 to students in all disciplines. The Bureau of Health Manpower expected to award about $7 million to 609 first year students in academic year 1979–80. Since the scholarships pay only for the first year of health professions training, students must pay or find other sources of support for additional years. The EFN recipients are, however, given priority for National Health Service Corps scholarships for the remainder of their education. Because the first EFN scholarships were awarded in 1978, no data are available on what percentage of EFN recipients have continued their training or how they have financed additional years of education.

TABLE 6.—SCHOLARSHIP PROGRAM FOR 1ST-YEAR STUDENTS OF EXCEPTIONAL FINANCIAL NEED, ACADEMIC YEAR 1978–79[1]

Discipline	Number of schools	Estimated number of eligibles	Amounts requested by schools	Number of scholarship awards	Amounts awarded to schools
Medicine	119	1,565	$14,663,534	264	$2,582,857
Osteopathy	13	176	1,841,259	28	318,852
Dentistry	57	505	5,363,489	127	1,429,935
Optometry	10	107	967,210	10	95,667
Pharmacy	52	822	5,519,361	52	358,334
Podiatry	5	161	1,799,158	5	57,127
Veterinary medicine	20	196	1,591,079	20	155,737
Total	276	3,532	31,750,090	506	4,998,509

[1] Student Assistance Branch, Bureau of Health Manpower, HHS. Sources: NHSC Scholarship Program—A Report by the Secretary of HEW to Congress, May 25, 1978; and Juan Jiminnez, NHSC Scholarship Program. Bureau of Health Manpower, HEW.

Source: Committee on Interstate and Foreign Commerce, op. cit.

The Armed Forces Health Professions Scholarship Program (AFHPS) is not considered a financing mechanism for health professions education, but rather a means to provide the Army, Navy and Air Force with necessary health personnel. The first AFHPS awards were offered in 1972, the same year the National Health Service Corps Scholarship Program (NHSCS) began. The AFHPS covers tuition, educational expenses and a monthly stipend of $453.00. Currently, eligible disciplines include medicine, optometry, clinical psychology and podiatry. The Armed Forces program supports those disciplines that are most needed in the military and most difficult to recruit from the civilian health personnel pool. Medical doctors always have received the largest proportion of the scholarship funds and, beginning in 1981, only physicians will be recruited by the program. (Table 7).

TABLE 7.—ARMED FORCES HEALTH PROFESSIONS SCHOLARSHIPS, FISCAL YEARS 1978–80

	Output—medical (M.D. and D.O.) graduates only			Input—all health professions scholarships [1]		
	1978	1979	1980	1978	1979	1980
Army	362	390	394	377	429	423
Navy	303	303	323	593	559	433
Air Force	329	341	371	387	467	465
Total DOD	994	1,034	1,088	1,357	1,455	1,321

[1] 3 yr shown represent a buildup of health personnel; figures will level off to approximately 1,250 in and out per year.

Note: Average cost of scholarship, 1978–79 academic year: Army, $10,881; Navy, $11,204; Air Force, $11,084.

The service obligation for the program includes 45 days of paid active duty each year for which support is received, plus a year of service in a military facility for each year of scholarship. Whether AFHPS recipients in medical training will undergo residency training in a civilian or a military institution is determined by the military. There are review and selection periods for the first and second years of residency training during which students may be required to pursue their residency training in a military facility. After those two reviews, students are free to complete their residency training in civilian institutions before returning to fulfill their service obligation. Residency training in a military setting does not finlfill any part of the service obligation. Department of Defense figures show that 52.6 percent of scholarship recipients graduate from medical school and go directly into the military. Of these, 87 percent do military residency training and 13 percent go into active duty. The remaining 47.4 percent defer military service for civilian residency training. The Air Force grants more students the right to civilian residency training, because it has fewer teaching facilities than either the Army and Navy.

The National Health Service Corps Scholarship Program (NHSCS) has become an increasingly important source of funding for medical and other health professions students, particularly with the restrictions on many other sources of financial assistance imposed since 1976. A major expansion of the NHSCS program was one of several key provisions of the Health Professions Educational Assistance Act of 1976. While it serves as a major source of student financial assistance, the program was intended as a means to create a pool of health professionals (particularly physicians) who will provide health care services to designated underserved populations. By attaching a service obligation to this major source of funds for meeting student educational expenses, the NHSCS program most clearly articulated the policy of requiring a return on the public investment in health professions education. The new thrust of federal policy introduced in the 1976 Act is reinforced by the elimination of most "free" scholarships, stricter eligibility requirements for existing loan programs, and the introduction of HEAL with its nonsubsidized interest rates.

A NHSCS award covers tuition, educational expenses and provides a monthly stipend of $453.00 for living expenses. Awards are not made on the basis of financial need but on the basis of students' willingness to accept a commitment to practice primary care in an underserved area or institutional setting. By law, 81 percent of the scholarships are reserved for medicine and osteopathy, nine percent for dentistry and the final ten percent for other eligible health professions students. Scholarship recipients agree to practice in medically underserved areas or institutional settings, one year for each year of scholarship support, with a minimum of two year. Medical and dental students may defer their

service for up to three years after graduation for residency or advanced clinical training. In order to assure that students meet their service obligation, the 1976 Act increased the repayment requirements to three times the total award plus interest at the maximum prevailing rate, payable in one year.

The number of new awards has fluctuated over the seven academic years the program has been in operation. (Table 8). The proportion of new awards compared with continuing awards has varied because of the change in selection policy mandated in the 1976 Act. Beginning in academic year 1978–79, priority was given to first-year health professions students. Prior to enactment of the 1976 Act, more awards were given to third and fourth-year students who would be available for service in the Corps more quickly. In 1978–79, 33 percent of the recipients were first-year students. In 1979-80, the figure was 50 percent; and in 1980-81, it will be 60 percent. In all the 1978–79 medical school graduating classes, NHSC scholarships amounted to 10 percent of total scholarship support. At some schools, the percent of students with NHSCS support is much higher. Over the years, a few schools have received the bulk of scholarships awarded, leaving the majority of schools and students with limited assistance from NHSC scholarships. (Table 9).

TABLE 9.—*Medical and osteopathic schools with the most award recipients 1973–74 through 1978–79 school years*

Meharry Medical College School of Medicine, Tennessee	298
Georgetown University School of Medicine, District of Columbia	273
Kansas City College of Osteopathic Medicine, Missouri	224
George Washington University School of Medicine, District of Columbia	208
Howard University School of Medicine, District of Columbia	193
Loma Linda University School of Medicine, California	193
Medical College of Thomas Jefferson University, Pennsylvania	176
Tufts University School of Medicine, Massachusetts	154
Philadelphia College of Osteopathic Medicine, Pennsylvania	142
Temple University School of Medicine, Pennsylvania	140

For students in public health, the Health Professions Educational Assistance Act of 1976 authorized Public Health Traineeships and Health Administration Traineeships. Between the two programs, over $11 million was authorized for fiscal year 1980. There have been several programs earmarked for medical training during the past ten years. Physician Shortage Area Scholarships were introduced in the 1971 health manpower act but were funded only briefly and eliminated in the 1976 Act except for continuation of existing awards. The 1976 Act authorized ten Lister Hill Scholarships for medical students who agree to practice family medicine in underserved areas. This program has not received funding. Finally, the special project provisions for training in family medicine, general dentistry, general internal medicine and general pediatrics all include funds for financial assistance to the residents and trainees of those programs.

TABLE 8.—NATIONAL HEALTH SERVICE CORPS SCHOLARSHIPS AWARDS, 1973-81

	School year—							
	1973–74	1974–75	1975–76	1976–77	1977–78	1978–79	1979–80	1980–81 [1]
New awards	372	1,498	871	885	2,090	3,342	2,379	1,624
M.D. and D.O			823	835	1,835	2,699	1,907	1,259
Allopathic	(343)	(1,327)	(714)	(729)	(1,596)	(2,385)	(1,719)	(1,259)
Osteopathy	(29)	(171)	(109)	(106)	(239)	(314)	(186)	
Denistry			(48)	(50)	(99)	(387)	(187)	(167)
Nursing					[2] (40)	[2] (159)	[2] (199)	[2] (65)
Other					(116)	(97)	(98)	
Continuing awards	0	365	1,678	1,764	1,481	1,907	4,029	5,035
M.D. and D.O		365	1,678	1,740	1,461	1,851	3,467	NA
Medicine		(336)	(1,492)	(1,511)	(1,257)	(1,622)	(3,045)	
Osteopathy		(29)	(186)	(229)	(204)	(229)	(422)	
Denistry				(24)	(20)	(54)	(383)	
Nursing						(2)	(107)	
Other							(72)	
Total awards	372	1,863	2,549	2,649	3,571	5,249	6,408	6,657

Note: Estimation based on $85,500,000 1980 appropriation. Figures subject to change.
[1] Applies to baccalaureate nursing only.
[2] Applies to baccalaureate nursing and VOPP only.

Source: Juan Jimenez, program analyst, National Health Service Corps scholarship program, December 1979.

APPENDIX I

FEDERAL SCHOLARSHIP PROGRAMS FOR MEDICAL AND OTHER HEALTH PROFESSIONS STUDENTS

	National Health Service Corps scholarship	Armed Forces health professions scholarships	Exceptional financial need 1st year scholarship
Statute	Public Health Service Act, secs. 751-6	Uniformed Services Health Professions Revitalization Act of 1972, ch. 105.	Public Health Service Act, sec. 758.
Year enacted	NHSC founded in 1970; scholarship program established in 1972.	1972-73	Authorized 1976; 1st money appropriated 1978.
Administered by	Health Services Administration (HSA) HHS[1]	U.S. Army, Navy, and Air Force, of the Department of Defense.	HSA, HHS.[1]
Purpose	To recruit health professionals for service in shortage areas, and to encourage specialization in primary care.	To recruit medical personnel for the Armed Forces (and ideally retain career medical officers).	To provide qualified students with no financial resources access to professional education.
Method of distribution	Student applies directly to the NHSC scholarship program.	Student applies directly to the service(s)	Money given to schools based on their application which lists and ranks qualifying students. Every school (all health professionals) gets on scholarship; then others are filled, giving priority to MOD students.
Student eligibility	U.S. citizens or nationals accepted/enrolled in an eligible school. Satisfactory academic standing. (Eligible school for all 3 programs means accredited and recognized by appropriate professional society).	U.S. citizen in accredited school who is "physically and morally qualified". Must agree to sign statement accepting commission and relinquishing right to choose residency training outside of military institutions.	Exceptional financial need, defined as having no resource to pay for medical education (including everything but summer earnings and education loans). Only for students entering 1st year of professional school.
Professions eligible	Medicine, osteopathy, dentistry, nurse practition,[2] nurse midwifery,[2] public health nutrition,[2] community health nursing,[2] baccalaureate nursing.[2] At least 81 percent must go to medical students and 9 percent to dental students. Remaining 10 percent distributed among other professions.	Fiscal year 1979 and fiscal year 1980—medicine, optometry, clinical psychology and podiatry. Fiscal year 1981 only.	MODVOPP-priority to MOD.
Target population	Students interested in primary care medicine, students whose career goals are to practice in underserved areas, and students with experience or background in rural/urban underserved areas.	Students with an interest in the military, i.e., have served in 1 of the Armed Forces. Leadership potential a factor.	Students with need so great they would not consider medical education without scholarship help. (EFN supports 1st year of training only).
Amount of scholarship	Cost of tuition and required fees plus a monthly stipend of $453 for 12 mos., plus an annual payment to cover cost of other reasonable educational expenses (stipend varies with Federal pay increases; will be $485 as of July 1980.)	Full tuition and educational expenses paid (books, lab fees, instruments, etc.). Plus $453 monthly tax-free living stipend. Full pay for 45-day active-duty tour each year ($993 per month if single, $1,040.48 per month if married (stipend increases at same rate as NHSC's).	Award covers tuition and all related educational expenses, plus $453 monthly stipend. (Stipend increases at same rate as NHSC).
Availability	1980-81 estimated awards: Allopathy, osteopathy 1,259; dentistry, 167. Master's level: Nurse practitioner, 48; community health nurse, 25; nurse midwifery, 40; public health nutrition, 20; baccalaureate nursing, 65.	Total number of people in program limited to 5,000. Each service (Air Force, Army, Navy) has roughly 400 scholarships to offer each class nationwide. Generally 1,250 total are available per year.	Difficult to obtain; based on strict need analysis. In 1979-80, 1 was awarded to each VOPP school and 2, 3, or 4 to MOD schools depending on the number of qualifying applicants.

Service obligation	1 yr full time clinical practice in health manpower shortage area for each year of scholarship support as salaried, Federal employee of NHSC. Minimum is 2 yrs of service.	For each year of scholarship, must serve 1 yr. in appropriate service of Armed Forces. Minimum is 3 yrs of service. Student must participate in a residency (and/or PG-1) in his/her respective armed service, if selected for military post graduate training position. Otherwise, may take 1 yr in a civilian institution for advanced training. Another matching process occurs for 2d year of residency (student may be called to residency position in the service, to active duty, or redefer to a civilian training program). Years spent in military postgrad training do not fulfill service obligation. Also obligated to 45-day per year active tour of duty during years of scholarship support.	None. (EFN recipients are given priority for NHSC scholarships for the 2d through 4th years of training).
Deferment	Medical students may defer service obligation for 3 yrs to complete residency training. Residencies that can be completed in 3 yrs are general internal medicine, family practice, and pediatrics. New legislation permits deferment beyond 3 yrs in some circumstances, i.e., for 4 yrs of training in ob/gyn or general psychiatry and for osteopathic students who must complete a 1 yr osteopathic internship before entering a 3 or 4 yr residency program.	Up to 2 yrs for advanced training, at discretion of appropriate service. Student relinquishes right to choose civilian residency training.	Not applicable.
Penalty for cancellation	Students failing to fulfill service obligations are liable to repay 3 times the amount of scholarship assistance, plus interest at maximum prevailing rate. All is payable in 1 yr. No relief under bankruptcy law until 5 yr after payment is due	Navy—No provision for payback. Students failing to complete medical school still must serve Navy for 3–4 yrs, depending on binding service agreement signed. Discharged if not needed. Air Force—Students failing to complete training, may be sent complete bill of moneys owed, called to active duty or released from obligation. Army—No payback provision. Students committed and still may serve in another capacity. Highly unlikely she/he would be discharged under any circumstances the student would want to be in. Obligation binding.	Do.
Authorization levels[3]	Fiscal year 1977, $40,000,000; fiscal year 1978, $75,000,000; fiscal year 1979, $140,000,000; fiscal year 1980, 200,000,000.	Authorized by number of students to be sponsored (5,000 for all 3 services). Number of students: Navy, 1,575; Air Force, 1,575; Army, 1,850.	Fiscal year 1978, $16,000,000; fiscal year 1979, $17,000,000; fiscal year 1980, $18,000,000.
Appropriation levels	Fiscal year 1978, $60,000,000; fiscal year 1979, $75,000,000; fiscal year 1980, $85,000,000 (Scholarship program only; includes all tuition, education-related expenses, and stipend).	Expenses for total number of sponsored students (amount not available).	Fiscal year 1978, $5,000,000; fiscal year 1979, $7,000,000; Fiscal year 1980, $10,000,000, (All tuition, educational expenses, and stipend included).
Number of new scholarships	1978–79, 3,342; 1979–80, 2,379; 1980–81, 1,624[4]	Total available:[5] 1977–78, 1,357; 1978–79, 1,455; 1979–80, 1,321.	1978–79, 501 awarded; 463 actually qualified and received the award, 1979–80, 644; final number receiving award not available. 1980–81, not available
Average award	1978–79, $11,332; 1979–80, $11,704; 1980–81, $12,715; Includes all tuition, educational expenses and stipened.	1978–79, $11,042.[6] (Includes all expenses, tuition, stipend, etc.).	Not available.[7]

[1] Recently transferred from Health Resources Administration (HRA).

[2] All master's levels.

[3] In 1978-79 for the 1st and only time VOPP students were given NHSC scholarships. This results from congressional p r ..., not from the Corps' manpower needs. Disciplines that have been discontinued are medical social work and speech pathology-audiology. It is expected that eligible disciplines will change as health manpower needs are identified and met (although recipients will be supported until completion of their training).

[4] In the NHSC, number of scholarships available is determined by the amount of money appropriated divided by the estimated average need which equals the number of recipients. In the AFHPS, number of scholarship recipients is authorized and cannot be exceeded. Moneys are appropriated by multiplying the number of scholarships (5,000) time the estimated average need per student which equals the dollar amount appropriated.

[5] See Table 7.

[6] See Table 7.

[7] See Table 6.

APPENDIX 2

FEDERAL STUDENT LOAN PROGRAMS FOR MEDICAL AND OTHER HEALTH PROFESSIONS STUDENTS[1]

	Health educational assistance loan (HEAL)	Health professions student loan (HPSL)	Guaranteed student loan program (GSL)	National direct student loan program (NDSL)
Statute	Public Health Service Act, title VII, part C, subpart I (1976 amendment).	Public Health Service Act, title VII, part C, subpart II.	Higher Education Act, title IV, part B, as amended.	Higher Education Act, title IV, part E, as amended.
1st year in operation	1978	1963	1965-66	1958-59.
Administered by	HSA, HHS[2]	HSA, HHS[2]	Department of Education	Department of Education.
Purpose	To encourage lenders to make loans to health professions students; to encourage service in shortage areas and insure an adequate level of trained manpower.	To enable schools to make low interest loans to health professions students; to encourage service in shortage areas and insure an adequate level of manpower.	To make low interest loans to students, through interest subsidy, insurance/reinsurance, and encouragement of state level insurance programs.	To enable colleges to make low interest loans to needy students through revolving funds. To meet national manpower needs. (Original purpose was national defense).
Student eligibility	U.S. national or permanent resident (or intending to become such). Enrolled in a full-time health professions graduate program at eligible school in United States (eligible for capitation grant).[4] May not hold GSL for same year. Only 50 percent of students in each class may take out loans as determined by the school).	U.S. national or permanent resident, etc. Enrolled full-time in eligible school.[5] Graduate or professional program. Selected by school. Medical and osteopathic students graduating after June 1979 must show "exceptional financial need" (Dental and VOPP's demonstrate usual need as determined by school).	U.S. national or permanent resident etc. Enrolled at least ½ time in an eligible school. Graduate or undergraduate. Satisfactory progress, etc. Lender may impose additional criteria. School must certify amount of need before lender can make loan.	U.S. national or permanent resident, etc. Enrolled at least ½ time in an eligible school. Graduate or undergraduate Satisfactory progress, etc. Lender may impose additional criteria. Student selected by school.
Professions eligible	MODVOPP plus public health	MODVOPP students	Any health profession	Any health profession.
Target population	Students unable to find money elswhere or who don't want a service obligation. Not a needs-based program, but helpful to professions without large endowments and to schools (especially private) without many resources.	Very needy students, with exceptional financial need meaning the student's resources do not exceed the lesser of $5,000 or ½ tuition costs. (Definition applies to medical and osteopathic students; for other programs need defined by the school).	Needy students, as determined by school and available funds; loan typically made for the amount that represents the difference between student's cost of education and what funds the student has from other sources.	Very needy, as determined by individual school (based on need analysis).
Lender	Eligible banks, schools, agencies, etc.; using private capital. Guaranteed by Federal Government.	Eligible health professions schools, using, federal and school funds (9:1 ratio) in revolving fund. Participating schools loan directly to students.	Eligible banks, schools, etc., State agencies and designated nonprofit agencies, using private capital. Guaranteed by a State or private nonprofit agency or insured by the Federal Government.	Eligible schools, using Federal school funds (9:1 ratio) in revolving fund. Participating schools loan directly to student.
Limits	Students of medicine, osteopathy, denistry, podiatry, public health and veterinary medicine may borrow up to $10,000 per year now for maximum of $50,000. Pharmacy students limited to $7,500 a year for a total of $30,000.	Tuition plus $2,500 per year. No aggregate limit.	For undergraduate/vocational, $2,500 per year and $7,500 aggregate. For graduate/professional, $5,000 per year and $15,000 aggregate. Some States may increase limits and subsidize the interest themselves. (Federal insurance and subsidy only up to $15,000).	$2,500 limit for 1st 2 yrs. of higher education. $5,000 limit for 4 yrs. of higher education. $10,000 aggregate limit for higher education, and graduate and undergraduate.
Interest rate	12 percent maximum, payable throughout life of loan, plus annual insurance premium of ½ of 1 percent. Interest can be accrued during school and 3 yr. of residency.[7]	7 percent starts to accrue 12 mos. after graduation or withdrawal from school; can be deferred with principal for advanced training.	7 percent starts to accrue 9 to 12 mos. after leaving school, depending on lender's terms for grace period. Can be deferred on same grounds as the principal. Interest subsidized on all GSL loans made after enactment of the Middle-Income Student Assistance Act of Nov. 1, 1978.	3 percent starts to accrue 9 mos. after leaving school.

Repayment	10 to 15 yrs, beginning 9 to 12 mos. after completion of training. Additional deferments for up to 3 yrs. for Armed Forces, Peace Corps, VISTA, NHSC, or full-time study at an eligible school. 23 yr. limit on life of loan.	10 yrs., beginning 12 mos. after leaving school. Deferment up to 3 yrs. for Armed Forces, Peace Corps, NHSC and up to 5 yrs. for advanced professional training.	10 yr. limit from beginning of repayment. Up to 3 yrs. deferment for Armed Forces, VISTA, Peace Corps, further full time study, and for 1 yr. unemployment, and for approved independent graduate study programs (residency training usually not included).[8]	10 yr. limit beginning 9 mos. after leaving school. Deferment up to 3 yrs. each for Armed Forces, VISTA) Peace Corps, further ½ time enrollment. Residency training not grounds for deferment (salaried).
Cancellation	Repayment by United States at maximum rate of $10,000 per year for service in NHSC or for service in designated shortage areas (must commit for 2 yrs.). Death, disability, bankruptcy.	Formerly a loan forgiveness provision for service with the NHSC or in private practice in a shortage area. Now Secretary of HEW may forgive all or part of loans if she/he determines a student has: (1) failed to complete studies leading to 1st professional degree; (2) is in exceptionally needy circumstances; (3) is from a low-income or disadvantaged family; (4) cannot be reasonably expected to reasume professional studies within 2 yrs. of termination.	Death, total and permanent disability.	For service as full time teacher in certain circumstances. Death, total and permanent disability bankruptcy.
Authorization levels	Fiscal year 1978 $1,500,000 plus sums necessary to help establish insurance fund and meet administrative costs. Fiscal year 1979 and 1980 sums necessary for administrative costs.	Fiscal year 1978, $26,000,000; fiscal year 1979, $27,000,000. Fiscal year 1980, $28,000,000. (To be allocated to schools for loans only).	(9)	(9).
Appropriation levels	Fiscal year 1978, $1,500,000; fiscal year 1979, 0; fiscal year 1980, 0; fiscal year 1978 appropriation for administrative costs; no further funds needed to guarantee loans.	Fiscal year 1978, $20,000,000; fiscal year 1979, $10,000,000; fiscal year 1980, $16,500,000.	(9)	(9).
Average loan	School year 1979-80, $7,569	School year 1978-79, $1,200 (approximately).	(9)	(9).
Number of loans	School year 1979-80, 801	School year 1978-79, approximately 300 schools received money to distribute (approximately 8,300 loans).	(9)	(9).
Dollar value loans (outlays)	1979-80, $6,062,599 (preliminary figure)	1979-79, approximately $10,000,000 to all health professions schools.	(9)	(9).

[1] The federally insured student loan (FISL) program is the part of the GSL program directly insured and subsidized by the Federal Government. The other division of GSL is the guaranteed agency program in which special State agencies (now in 47 States) run the program. Under this system, State governments insure commercial lenders while the Federal Government reinsures the State agency and pays the lender an interest subsidy.

[2] Recently transferred from Department of Education.

[3] Recently transferred from HRA.

[4] To receive a HEAL loan students must be enrolled in a school receiving or eligible to receive a capitation grant as authorized under Public Law 94-484. This does not apply to medical students whose school failed to qualify for capitation solely because it did not comply with the requirement for a 3-year enrollment increase in the 1978-79 school year.

[5] "Eligible school" for the HPSL, GSL, and NDSL means the program is accredited by the relevant professional society or board.

[6] Final regulations, issued Jan. 27, 1981, provide that a borrower, who is a MOD student, may borrow up to $15,000 per year and $60,000 total if the student's cost justifys the amount.

[7] Final regulations issued Jan. 27, 1981, provide that the interest rate shall be the current rate on United States Treasury Bills plus 3.5 percent.

[8] Most residency programs do not meet the criteria for deferment of interest and principal repayments. In order to qualify for deferment, the residency program must be affiliated with an eligible medical school whose registrar must certify as to the residency program's accreditation. (Thus programs in hospitals without medical schools are ineligible).

[9] Portion of funds allotted to health professions students/schools not separated out of total budget.

SUPPLEMENT 3. STUDY METHODOLOGY

This study on State Aid to Health Professions Education was completed under contract with the Congressional Research Service of the Library of Congress. Before describing the study methods, it is necessary to briefly review the study requirements.

A. STUDY REQUIREMENTS

Information was to be gathered regarding state institutional and state student assistance to schools and students in the following health professions: Medicine, Osteopathy, Dentistry, Veterinary Medicine, Optometry, Pharmacy, Podiatry, and Public Health.

Although many related issues were discussed in the report, answers were sought to the following specific questions:

1. State institutional support data

a. What were state appropriations, state capitation, and interstate contract support per student and per class to public and private schools in these health professions for school years 1974, 1978 and 1980? (N.B. School years correspond to ending dates of academic years, e.g., fiscal year 1980=academic year 1979–80 for the purposes of this study).

b. How do changes in state institutional support compare with trends in tuition and Federal capitation?

2. State student assistance for the health professions

a. What State-sponsored student assistance programs exist in the various states?

b. Which health profession's students are eligible for these programs?

c. What is the nature of these programs—are they scholarships, loans, or service payback arrangements?

d. Are the programs need based? What are the maximum and average levels of support per student?

e. What other eligibility requirements and terms accompany these programs?

f. Are multiple sources of support permitted under particular state program?

g. How many students received assistance under each state program in 1974, 1978 and 1980; and at what levels of assistance?

Future investigators of this subject may be interested in our decision to narrow the definition of state institutional support to school appropriations, state capitation, and interstate compacts. Initially, consideration was given to including special state expenditures for post-graduate health professions training (i.e., residency programs) under institutional support. After considering the data difficulties, we excluded these aid programs.

In addition, financial aid data by class (i.e., value of awards to first, second, third and fourth year students) was not obtained because most financial aid records were unavailable in that form.

B. DATA COLLECTION TECHNIQUES

In an attempt to gather data in the most efficient way possible, the initial phases of the study focused on secondary sources, such as state budget documents and professional association reports.

1. State budgets

Budget documents from thirty-five states were searched to determine the level of appropriations for health professions schools, and the financial aid earmarked for health professions' students. Certain limitations became apparent. States varied greatly in the format of their budget reporting. The most frequent problems encountered were:

Lack of detail: Allocations to individual health professions schools often could not be separated from overall university or health science center budgets.

Unusual accounting methods: Budget formats and definitions varied so significantly among states that consistent nationwide data could not be matched and tabulated.

Different fiscal periods: The report required data on state institutional support that matched the academic year's for which we were gathering information on tuition, Federal capitation and state financial aid. Although most states budget a July/June fiscal year which corresponds to the typical academic year, several states use the calendar year and a few appropriate for a biennium. Such budget could not have been used in this study.

Despite these difficulties, certain budgets were useful for spot-checking numbers obtained from the states and schools directly (through channels to be described below). State budgets were obtained from the library of the States Services Organization in Washington, D.C.

2. Health professions schools associations

The various associations of health professions schools were sent a letter (Exhibit 1) detailing the project's data needs. Associations proved to be a more useful secondary source for state institutional and student support than state budgets. Certain groups such as the American Association of Medical Colleges (AAMC), the Council on Dental Education of the American Dental Association (ADA), and the Association of Schools and Colleges of Optometry (ASCO), routinely collect and process detailed information on both state institutional and student support to their member schools, as well as data on tuition and enrollment.

The Association of American Veterinary Medical Colleges was able to supply nearly all data except for state financial aid. The associations representing the remaining professional schools, although they were most willing to assist, do not collect and compile all of the indicated information on a regular basis. Association data was limited by :

Availability: Most professional associations did not have all of the data requested.

Confidentiality: In one case, data could not be released by the association due to its confidentiality. Another association insisted that data was released on the condition that it be presented only in national aggregate for public and private schools.

Definitions: The definitions used by the associations for enrollment and state institutional support are inconsistent across professions.

Timing: Associations did not have data available for the 1979–80 academic year as of January 1980.

For the reasons cited above, it became evident that all the schools had to be contacted individually. However, association data was used extensively in the analysis of several professions and in the preparation of survey questionnaires. Associations are important in securing the cooperation of member institutions in studies of this type. They have the support of the schools in question, and often are collecting much of the necessary information.

3. Survey questionnaire

Preliminary site visits further confirmed the need to deal directly with the health professions schools for most institutional support information and limited state student data. In designing a survey, several criteria were taken into account:

School turn-around time had to be as rapid as possible;
Certain reliable data were already in hand; and
A telephone survey would be too expensive and subject to error.

For these reasons we designed, tested, and mailed a questionnaire to the various schools. It was tailored to collect only the essential information not yet acquired for each profession. Since the AAMC had provided a computer print-out of state institutional support and financial aid for certain years, the questionnaire to medical schools (Exhibit 2) was brief. Questionnaires to the other seven professional schools were slightly more detailed. All seven were identical except for the fact that we eliminated from the grid data available from the respective associations. Exhibit 3 is a sample questionnaire for dental schools, and Exhibit 4 is the set of instructions that accompanied the survey instrument.

Schools were advised to call their questions in by telephone as noted in the cover letter to the survey questionnaire (Exhibit 5). We received calls from about 10 percent of the schools, and contacted a number of others who sent information that did not conform with other sources, such as state budget documents.

The overall response rate was approximately 60 percent and forms the data base for much of the study (see Table 1). A few additional returns were received subsequently but not incorporated in the study.

TABLE 1.—PERCENTAGE RESPONSE TO THE LEWIN & ASSOCIATES SURVEY OF HEALTH PROFESSIONS SCHOOLS BY PROFESSION[1]

Profession	Schools surveyed[2]	Schools responding as of Mar. 19, 1980[3]	Percent response
Medicine	123	79	64
Osteopathy	14	8	57
Dentistry	59	32	54
Veterinary medicine	24	13	54
Optometry	12	8	66
Podiatry	5	5	100
Total	237	145	61

[1] Pharmacy and public health return rates were 60 and 100 percent respectively, but are not included above due to enrollment data problems.
[2] Only institutions that were active during the target years were surveyed, so that the numbers may be lower than those of other counts of health professions schools. In addition, schools in Puerto Rico, and the Uniformed Services Medical School were not surveyed, since these do not receive State support.
[3] Schools that mailed late, incomplete, or unusable questionnaires, are considered nonreporting.

The survey was mailed December 31, 1979 with a deadline of January 18, 1980. As of that deadline, we had less than thirty percent response, and many schools called the final day asking for more time to complete the questionnaire. We then requested a contract extension, which was granted, and mailed a second set of questionnaires to non-reporting schools. Non-reporting by schools may be explained by:

Study deadlines: The rapid return cycle may have discouraged some schools from attempting to fill out the questionnaire.

Failure of the questionnaire to reach the correct official: Letters were addressed to the dean of the school who was thought to be in the best position to appreciate the importance of the study to the business officer. However, we received some calls from school business offices which had not received the questionnaire until the deadlines were at hand. This occurred most often with health professions schools that are not financially independent from their parent universities.

Categorical refusal to answer surveys: A few schools sent letters explaining that they had chosen not to answer. Others said they would not respond unless a fee was remitted. Responses were sent to those schools highlighting the significance of the study and the brevity of the questionnaire (one page) with some success (Exhibit 6).

4. Site visits to selected states

The fourth data collection effort was site visits to thirteen states: California, Colorado, Florida, Illinois, Massachusetts, Michigan, Missouri, New Jersey, North Carolina, Pennsylvania, Tennessee, Texas and Washington. In consultation with the project officer, these states were selected to obtain a representative sample of states in terms of:

Geographic region;

Presence of public and private schools in the various health professions;

Rank of states in 1974 in terms of Federal and state dollars going to the health professions;

Presence of tax initiatives that might be having an impact on state support to health professions training; and

Presence of state student aid programs.

Since most institutional support data was being collected through the survey of schools, site visits focused primarily on state student financial aid programs. The packet given to site visit interviewers (Exhibit 7) however, included instruments to collect other types of information that was readily available.

The value of these site visits to the study can not be underestimated. In addition to the data collected, the visits afforded an opportunity to gain the judgments of state officials and educators most intimately involved in the financing of health professions education. The preponderance of qualitative data cited in Chapters II and III was obtained during these visits.

5. Telephone survey of nonsite visit states

The remaining 37 states and the District of Columbia were contacted to gather information on state student financial aid to the health professions. An abbreviated version of the questions for site visit interviews was used (Exhibit 8). It was discovered that financial aid officers of major in-state health professions schools were the best primary contacts. Such officials could describe the complete range of state aid programs that their students could access. State officials often were unfamiliar with programs operated outside their own agency.

C. DATA ANALYSIS

Key elements in the analysis of data are described below and follow the presentation of findings in Chapter II and Chapter III of the report.

a. State institutional support

With the exception of the 1974 and 1978 data for medical schools provided by the AAMC, and certain tuition and enrollment data provided by other associations, all findings in Chapter II result from survey data. Because data is limited to the responding schools, no aggregating of national data is presented. Data on a per-student basis was calculated using matched samples of schools over the target period. Tables in Chapter II indicate the number of schools included in each sample. Enrollment data does not include students of a school who are outside of the principal degree granting program. For example, medical school enrollees are the number of M.D. candidates, not separate Ph.D. nor allied health enrollees. Per student data was used to compare the relative roles of Federal, state and tuition funds.

Additional information used in Chapter II was collected as follows:

Data on Federal capitation was obtained from the Bureau of Health Manpower of HEW (now HHS).

Schools were requested to present total tuition assessed not tuition received. Therefore, in certain cases where tuition figures were not reported, calculations were made by multiplying tuition rates and enrollment of in and out of state residents. In the case of public dental schools, an allocation of residents and nonresidents in the class was estimated based on very limited available information.

Exhibit 4 should be closely examined by those interested in the factors included in the definitions of institutional support.

Problems arose with analyzing state institutional support data for schools of pharmacy and public health. Although most of these schools responded to the questionnaire, some were unable to present figures that were meaningfully separated from those of their parent universities, colleges or medical schools. Particular problems were encountered in the consistent reporting of enrollment. Thus, numerical information on these two professions is not presented.

b. State student financial aid

Prior to the collection of student financial aid data it became clear that certain tables such as those presenting percent of students receiving state aid by profession were not obtainable, nor could data be collected by class year, since most state financial aid program summaries only show whether an award is new or a renewal.

Data limitations are discussed further in Chapter III. No analysis was made of financial aid data on either a per student or aggregate basis. Rather, all the data collected is listed by state programs for those professions in Supplement 1 with specific samples appearing as tables in Chapter III.

D. CONCLUSIONS

We found that the secondary data base on state aid to health professions training is limited, although the school associations are potentially the ideal vehicle for gathering such information. Until the time when associations collect and compile such data, in a reasonably consistent manner across association lines, survey of the schools remain the only satisfactory source of data on state institutional support. Since such surveys inevitably yield incomplete data, per student tabulations will continue to be the most appropriate form for presenting data.

State student aid data is particularly expensive to record and collect. State funds flow through diverse channels and are combined with an array of Federal and private resources, often but not always through student aid offices. Student aid offices are likely to be the primary source of information long term, but na-

tional data collecting will continue to be hampered by differences among schools and their organizations of aid offices. State aid program managers may be able to create more detailed records and be another primary source of information.

METHODOLOGY SUPPLEMENTS—LIST OF EXHIBITS

1. Sample letter sent to Health Professions School Associations.
2. Sample Medical School Sources of Revenue Questionnaire.
3. Sample State Financial Support Questionnaire Sent to Schools of Osteopathy, Dentistry, Veterinary Medicine, Optometry, Pharmacy, Podiatry, and Public Health.
4. Instructions for Completing State Financial Support Form.
5. Original Survey Cover Letters ((a), (b)).
6. Survey Follow-up Letter.
7. Instructions to Interviewers (for Site Visits).
8. Instructions for Telephone Interviewing.

EXHIBIT 1—LETTER SENT TO HEALTH PROFESSIONS SCHOOL ASSOCIATIONS

LEWIN & ASSOCIATES, INC.,
November 12, 1979.

DEAR (name of association director): Congress has requested the Library of Congress/Congressional Research Service (CRS) to conduct a survey and analysis on the subject of state aid for health professions training and education. The study will investigate both institutional aid and student assistance programs for schools of medicine, osteopathy, dentistry, veterinary medicine, optometry, podiatry, pharmacy, and public health in all the fifty states as well as the District of Columbia.

Lewin and Associates, a Washington, D.C. based consulting firm, has been selected by CRS to assist them in this survey. An essential first step in our study is to identify existing data and sources of information about state health professions education expenditures. We would, therefore, very much appreciate your sharing with us any information you may have about the following items as they apply to schools in your profession, as well as any referrals to other sources which may have the needed data.

1. Analytic and/or descriptive materials on state government financing of these schools, both public and private, including what funds are in the form of institutional aid and student assistance, and especially the conditions or terms of such financing.

2. Descriptive data on enrollment, student demographics (especially income levels), curriculum structure, sources of financing, etc.

3. The name or names of persons and offices in state government who are most familiar with programs dealing with health education schools, student support and overall financing of higher education.

4. Any thoughts you may wish to share with us about the appropriateness of state financing for programs in your profession, collectively or specifically, including any exemplary or ill-advised programs. Your response here will be kept confidential unless you indicate otherwise. If you wish to discuss this aspect over the telephone, please call me at (202) 488-4300.

As another important component of this study, Lewin and Associates is in the process of designing a request for information which will be sent to the appropriate office in each state. This questionnaire will methodically address the specific areas of inquiry and data requirements needed for our analysis.

Because this report must be completed shortly after the first of the year, we would be most grateful if your response to the information requests outlined in this letter can be returned to us by November 21, 1979. Any assistance you can provide us would be most helpful and appreciated. If you have any questions, please don't hesitate to call.

Sincerely,

LAWRENCE S. LEWIN, *President.*

EXHIBIT 2—MEDICAL SCHOOL SOURCES OF REVENUE QUESTIONNAIRE

(Estimated for 1979-80, Current Operating Year)

NAME OF SCHOOL: _____

Use Current Budget, Please

		Total Recorded in Medical School Accounts	Not Recorded in Medical School Accounts
CURRENT FUNDS REVENUE*		(c)	(d)
Tuition and Fees, Total	(2)	_____	_____
State appropriations or state capitation	(4)	_____	_____

*Line and column numbers correspond to the first page of the Summary Section of the LCME "Annual Questionnaire on Medical School Financing 1978-79," with which your financial officer is quite familiar. For comparability, please use the same methodology you use annually for completing the LCME questionnaire.

State Student Aid

Who in your school is most knowledgeable about state student aid programs?

_____
Name Address Telephone Number

Who in your state is most knowledgeable about state student aid programs?

_____
Name Address Telephone Number

PERSON PREPARING INFORMATION: _____
Name Telephone Number

Please be sure the name of your school has been entered at the top of this page.

RETURN BY JANUARY 16, 1980 TO:

Ms. Linda LeBlanc
Lewin and Associates, Inc.
470 L'Enfant Plaza, S.W.
Suite 4100
Washington, D.C. 20024

EXHIBIT 3—STATE FINANCIAL SUPPORT OF HEALTH PROFESSIONAL EDUCATION

FOR SCHOOLS OF DENTISTRY (a similar form was sent to schools of Osteopathy, Veterinairy Medicine, Optometry, Pharmacy, Podiatry and Public Health)

NAME OF SCHOOL: _____

Source of Income	Years		
	1974 ('73-'74) Actual	1978 ('77-'78) Actual	1980 ('79-'80) Budget
(1) Tuition and fees - all students	$_____	$_____	$_____
(2) Net state appropriations (public schools)	$_____	$_____	$_____
(3) OR State capitation support and state subsidy (private schools)	$_____	$_____	$_____
(4) Earmarked state scholarships	$_____	$_____	$_____
(5) Earmarked state loans	$_____	$_____	$_____

Enrollment Information (Full-time plus part-time headcount)	1974	1978	1980
First academic year	XX	XX	XX
Second academic year	XX	XX	XX
Third academic year	XX	XX	XX
Fourth academic year	XX	XX	XX
Fifth academic year	XX	XX	XX
TOTAL first professional degree	XX	XX	____
TOTAL graduate and allied professions	XX	____	____

State Student Aid

Who in your school is most knowledgeable about state student aid programs?

Name _____ Address _____ Telephone Number _____

Who is your state is most knowledgeable about state student aid programs?

Name _____ Address _____ Telephone Number _____

PERSON PREPARING INFORMATION: _____
Name Telephone Number

Please be sure the name of your school has been entered at the top of this page.

RETURN BY JANUARY 18, 1980 TO:

Ms. Linda LeBlanc
Lewin and Associates, Inc.
470 L'Enfant Plaza, S.W.
Suite 4100
Washington, D.C. 20024

EXHIBIT 4—INSTRUCTIONS FOR COMPLETING STATE FINANCIAL SUPPORT FORM

Line (1): *Tuition and fees.*—Include all tuition and fees assessed against all enrolled students regardless of degree. Do not subtract scholarship aid offsets or uncollectible tuition and fees.

Line (2): *Net State appropriation (public schools).*—Include state restricted or unrestricted funds received for current operations by your school, including state funds earmarked for scholarships or student loan subsidies. Include state funds provided to you for services you provide to students in other schools on your campus. Exclude state monies received or appropriated for interstate compacts and exclude state grants or contracts for research or other non-educational services. Exclude as well the value of state aid provided to another health professional school on your campus which provides your school or students with services which are not credited as part of your direct revenues. Exclude Federal capitation funds, Federal distress grants, and research overhead. Subtract tuition and fee income and sales to the school which, for whatever reason, must be returned to the state and are not available to the school.

Line (3): *State capitation support or State subsidy (private schools).*—Include state aid for current operations even if some is earmarked specifically for school administered scholarships, fellowships, or specific purposes other than state grants or contracts. Exclude state aid to teaching hospitals. Exclude any interstate compact funds.

Line (4): *Earmarked State scholarships.*—If the school rather than students receives funds from the state for scholarships as a specific revenue source, this money should have been included as part of the totals in line (2) or (3). Simply identify this subtotal in line (4).

Line (5): *Earmarked State loans.*—If the school, not a student of the school, received funds for loan purposes, this amount should have been included in lines (2) and (3). Identify the amount of these school revenues, if any, on line (5).

Line (6): Where we have been unable to obtain enrollment information centrally, we are requesting accurate historic and current enrollment figures.

EXHIBIT 5—(a) COVER LETTER SENT TO SCHOOLS OF MEDICINE

LEWIN & ASSOCIATES, INC.

DEAR DEAN: We are currently completing a study of state support for medical and other health professional education for the Library of Congress Congressional Research Service. The Association of American Medical Colleges (AAMC) has been extremely helpful in providing almost all of the information we need with one exception—a few figures related to your current 1979–80 operating budget.

I am, therefore, writing to ask you to please forward to us as soon as possible the expected annual income for the 1978–1979 school year from tuition and fees for all enrolled students in the medical school and the current budgeted annual state appropriation or, in the case of a private school, your budgeted state capitation funds if any from your own state. These two sets of numbers should be derived in the same manner that you are likely to use for the year and report to the Liaison Committee on Medical Education (LCME). We have provided two enclosed forms and a self-addressed stamped envelope for your convenience. Since these numbers should be readily available and our deadline is tight, we request that you return it to us no later than January 16th.

This study is assessing trends in state aid for certain health professions and is examining not only institutional support by states but also state student aid support. To aid us in this phase of the project, we are requesting that you identify two individuals whom we might contact concerning the operation of student aid programs within your institution and at the state level.

As Dean of the medical school you may also wish to point out to us special opportunities or special problems of reliance on state financing. If you would like this opportunity, I would suggest you so indicate on your response that you would like to share certain thoughts with us either by phone or letter. Our project is taking us into 12 states for a more in-depth look at state student aid and we will make an effort, if you so request, to discuss school financing with you or your representative.

Questions concerning this request should be directed to Ms. Linda LeBlanc, Project Manager, at (202) 488–4300 here in Washington, D.C.

Thanking you in advance for your assistance.

Sincerely,

ROBERT A. DERZON, *Principal.*

EXHIBIT 5—(b) COVER LETTER SENT TO SCHOOLS OF DENTISTRY, OSTEOPATHY, VETERINARY MEDICINE, OPTOMETRY, PHARMACY, PODIATRY, AND PUBLIC HEALTH

LEWIN & ASSOCIATES, INC.

DEAR DEAN: Congress has requested the Library of Congress, Congressional Research Service (CRS) to conduct a survey and analysis of the issues on the subject of state financial support for health professions training and education. The study is investigating the impact of state institutional support, state student financial assistance programs and the numbers of students affected for schools of medicine, osteopathy, dentistry, veterinary medicine, optometry, podiatry, pharmacy, and public health in fifty states and the District of Columbia. Lewin & Associates, in Washington, D.C., has been selected by CRS to assist them in this study.

Your assistance in responding to the needs of the Congress concerning this issue is sought. Lewin & Associates has already contacted national associations of schools and other data sources and has acquired information that has been reported previously in a compatible format and is available for dissemination. We ask your help in providing only the data that cannot be acquired through such means. In some cases where you submitted financial information in confidence to your association we must ask you directly for numbers already reported but not otherwise available to us.

The CRS hopes to have the preliminary results of this study to Congress by mid-February. We therefore must ask for your prompt attention to this request, with completion and return of the enclosed questionnaire postmarked no later than January 18, 1980. If you anticipate problems in meeting this due date or otherwise encounter difficulties where we might be of assistance, do not hesitate to call (Ms. Linda Le Blanc, 202-488-4300).

With respect to state student aid support programs, we are collecting information directly from state program sources and generally not from schools or from all student aid offices. In 12 states we will be selectively discussing student aid programs and may, in fact, be in touch directly with student aid offices within your university.

In conducting this study, Lewin and Associates is interested in addressing those issues surrounding state aid to the health professions that are of special concern to you at the institutional level. We would be pleased to discuss such matters with you or an appropriate member of your staff. If you would like to participate in this phase of the project please include a note to that effect with the completed questionnaire, indicating the name, title, and telephone number of the individual prepared to address this topic.

I wish to thank you in advance for your efforts on the project. We have chosen to go directly to the health professional schools rather than to state budget sources because we believe your documentation is more accurate and that you as important health education institutions are most deeply concerned about vital financing issues.

Sincerely yours,

ROBERT A. DERZON, *Principal.*

EXHIBIT 6—SURVEY FOLLOW-UP LETTER

LEWIN & ASSOCIATES, INC.,
February 1, 1980.

DEAR DEAN: As you may recall the Library of Congress, Congressional Research Service is seeking information on state aid for institutional support and state aid to students in the form of state scholarships and loans. Shortly after the 1st of January you should have received a brief, one-page survey form asking for certain summary data for three fiscal periods.

Most of your professional colleagues have responded. We are hopeful that we will have 100 percent response since the issue of state aid is critical to a discussion of the federal role in financing health professional education.

Your Association has been helpful in providing certain informntion. We have gone to schools directly where associations could not release information, schools had more accurate information than state budget officers, or in situations where a school was the only record holder.

The Library has given us a brief extension. We urge your completion and are sending a second copy in the event the first has been misplaced.

Sincerely yours,

ROBERT A. DERZON, *Principal.*

EXHIBIT 7—INSTRUCTIONS TO INTERVIEWERS (FOR SITE VISITS), DECEMBER 31, 1979

GENERAL COMMENTS REGARDING ADDENDUM

We will not be collecting data on state institutional support, enrollments, funds for out-of-state student aid that are transferred through WICHE and SREB [1] during the field work. Those data are being acquired through other sources (schools, and the interstate education compacts). The field work will concentrate on student financial assistance and qualitative assessments of the environment in the states vis-a-vis training and education in the health professions.

The addendum represents a step-by-step guide to setting up the site visit and acquiring the information that is to be collected from state sources and from student aid officers for selected institutions.

A. Site visit set-up

1. Call state budget officer—higher education/health education analyst (may be referred to Higher Education Commission).

a. Ascertain what programs are available to provide financial assistance to students in the health professions of interest (i.e., scholarship, guaranteed student loan, tuition waiver, service based payback, special appropriations).

b. When the budget levels are set for state student aid programs, are funds available to students through Federal programs considered? How is such an analysis conducted?

c. Ascertain from budget officer if there are any programs outside of the educational system per se that receive state funds for training in the health professions (health department programs, teaching hospitals, area health education centers, etc.)

For each direct support program obtain:

Nature of program (purpose, how it operates, etc.)

Number of students for each fiscal year if available.

d. Obtain from budget officer a report on the status of tuition levels in state-supported institutions training students in the health professions. Are the levels rising, is the legislature considering increasing the tuition, have any specific factors led to changes?

e. Obtain from budget officer (for each of three fiscal years) the number of students involved in interstate exchange programs by discipline and total dollars by discipline that are not a part of WICHE or SREB contracts.

f. If budget officer has to compile information make arrangements to stop by and pick it up when in state.

2. Call public institution's student aid officer (preferably in state university system).

a. Double check on completeness of inventory of programs of state financial aid available to students training in the health professions.

b. Ask for their qualitative assessment of unmet need (in terms of number of applications, awards, shortfall, basis of shortfall) choice of solutions to any problem that exists.

c. Ask about the coordination between state and federal programs (do state regulations preclude participation in federal programs, position of the institution vis-a-vis federal/state programs when preparing aid packages for students, etc.)

d. Does the person have any data on the percent of students receiving state financial aid?

3. Call knowledgeable representative of all state student aid programs that have been identified through steps 1 and 2 above to set up appointment. Inform them as to intent of visit.

a. To obtain complete description of program (as shown on form), brochures, copy of enabling legislation.

b. Number of recipients by discipline by school for fiscal years 1974 and 1980.

[1] Western Interstate Commission on Higher Education Southern Regional Education Board.

c. Total value of awards by discipline by school for fiscal years 1974 and 1980 (if not available at level of detail requested get next closest cut and a description of that information, etc., total awards by school).

d. Number of recipients by discipline by class by school for fiscal year 1978.

e. Total value of awards by discipline by class by school for fiscal year 1978.

f. Do they know of anyone at an institution keeping good records on the percent of students receiving state aid? Follow-up on lead when in state.

g. General discussion of issues surrounding such programs (see below).

B. On-site

1. Follow-up with budget officer, if appropriate.

2. Visit state level representatives of student aid programs as arranged in A.3 above.

a. Obtain information described in A.3.

b. Ask for their qualitative assessment of unmet need (in terms of number of applications, awards, shortfall, basis or shortfall) choice of solution to any programs that exist.

c. Ask about the coordination between state and federal programs (do state regulations preclude participation in federal programs, position of the state vis-a-vis federal/state programs, etc.)

d. Talk about tax initiatives in the state that could impact on training of health professionals, new initiatives, their implications, etc.

3. Call student financial aid officer of an additional public institution plus one private institution.

a. Ask for qualitative assessment of unmet need.

b. Coordination between state and federal programs.

c. Tax initiatives and pending legislation that has implications for health professions training.

4. Follow-up by telephone with any institutions identified as having good records on the percent of students receiving state financial aid.

EXHIBIT 8—INSTRUCTIONS FOR TELEPHONE INTERVIEWING

A. State Student Financial Aid Officer:

1. Ascertain what programs are available to provide financial assistance to students in the health professions of interest. (i.e., scholarship, guaranteed student loan, tuition waiver, service-based payback, special appropriations.)

2. Determine who is knowledgeable concerning programs not operated out of the commission, get telephone numbers for follow-up.

3. For those programs under the commission's authority:

a. Complete descriptive information form for each program.

b. Ask that they also send any brochures that they might have, also copy of authorizing legislation.

c. Obtain needed data for each program:

For 3 fiscal years (1974, 1978, 1980)

Number of recipients by discipline by public/private institutions (for 1978 also ask for data by class)

Value of awards by same detail as recipients (remember these are state dollars only, excluding federal and institutional monies)

Record any qualifying information concerning the data

4. Obtain financial aid officer's assessment of:

a. The adequacy of funding.

b. The attitude of the state legislature regarding adding to these funds.

c. If there are problems, is anything being done, what?

5. Do they know of anyone at an institution keeping good records on the percent of students receiving state aid? Follow-up on lead.

B. Call knowledgeable representatives of all other state student aid programs that have been identified through Step A.2 above.

1. Obtain complete description of program (i.e., on form), brochures, copy of enabling legislation.

2. Number of recipients by discipline by school for fiscal years 1974 and 1980.

3. Total value of awards by discipline by school for fiscal years 1974 and 1980 (if not available at level of detail requested get next closest cut and a description of that information, e.g., total awards by school).

4. Number of recipients by discipline by class by school for fiscal year 1978.

5. Total value of awards by discipline by class by school for fiscal year 1978.

6. Based on your assessment of this individual's knowledge of the area, you may wish to repeat step A.4 and obtain their opinion regarding the status of financial aid programs in the state.

C. Call one public and one private institution's student aid officer (preferably in state university system).

1. Double check on completeness of inventory of program of state financial aid available to students training in the health professions. Follow-up on any new leads.

2. Ask for their qualitative assessment of unmet need (in terms of number of applications, awards, shortfall, basis of shortfall) choice of solutions to any problem that exists.

3. Ask about the coordination between state and federal programs (do state regulations preclude participation in federal programs, position of the institution vis-a-vis federal/state programs when preparing aid packages for students, etc.)

D. Budget Officer (higher education/health education analyst).

1. Ascertain from budget officer if there are any programs outside of the educational system per se that receive state funds for training in the health professions (health department programs, teaching hospitals, area health education centers, etc.)

For each direct support program obtain:

Nature of program (purpose, how it operates, etc.)

Number of students for each fiscal year if available.

2. Obtain from budget officer (for each of three fiscal years) the information on any state/interstate exchange programs that are not part of WICHE, SREB, or NEBHE contracts.

a. Number of students supported by the program by discipline, public/private institution.

b. Total dollars to support these students by discipline, public/private institution.

○