Scholarships Now for Service Later: Meeting the Health Manpower Needs of Medically Underserved Areas

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THE FEDERAL GOVERNMENT HAS A LONG HISTORY of involvement with the health industry—its oldest and most familiar tradition being the provision of major public health services, particularly in disease control. Since 1963, the Federal Government has become progressively involved in financing the training of health manpower, an involvement justified by the premise that a serious shortage existed in the supply of physicians and other health professionals. Now, however, it is generally recognized that in response to Federal legislation and Federal funds for the education of health professionals, the total supply of health manpower is approaching a balance with the need. The chronic geographic maldistribution of health manpower, however—especially of physicians—has yielded only very slowly to this intervention.

Beginning in 1970, Congress enacted legislation that was specifically aimed at assisting medically underserved communities in obtaining needed health professionals and at the same time would provide health professionals with incentives to locate and practice in identified health manpower shortage areas. This legislation indicates the concern of Congress with the twin problems of the unavailability of needed health care and the lack of public access to health care services that exist in a significant number of rural and urban areas across the country. Although other factors also affect the availability of and access to health care, the dominant factors are clearly the poor geographic distribution of health personnel and an inadequate supply of health personnel trained in the primary care disciplines.

Two of the larger and perhaps better known health programs enacted and extended in the period 1970–78 are the National Health Service Corps (NHSC) and its companion, the NHSC Scholarship Program. Upon establishment of the NHSC on December 31, 1970, the Congress charged the Public Health Service with a major responsibility for alleviating the geographic and specialty maldistribution of physicians and other health practitioners in the United States. One step in fulfilling this responsibility was the designation of critical health manpower shortage areas, to which NHSC physicians, dentists, and other health professionals could be as-

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signed to improve the delivery of health services therein. Further refinements in identifying geographic areas, population groups, medical facilities, and other public facilities as health manpower shortage areas were mandated by Public Law 94-484 of October 12, 1976, and criteria for their designation were published in the *Federal Register* of January 10, 1978. The criteria encompass practitioner-to-population ratios, infant mortality rates, health status, access to health services, and other indicators to determine which areas, population groups, and medical facilities are eligible to apply to the NHSC for the assignment of personnel to meet their health manpower needs.

The genesis of the current National Health Service Corps Scholarship Program was the Public Health and National Health Service Corps Scholarship Training Program authorized by the Emergency Health Personnel Act Amendment of 1972 (Public Law 92-585). Beginning in fiscal year 1974, five cycles of awards were made under this program. Enactment of the Health Professions Educational Assistance Act of 1976 (Public Law 94-484, as spelled out in Sections 751-754 of the Public Health Service Act) limited the scholarship service obligation to meeting NHSC staffing needs. Participating students of medicine, osteopathy, dentistry, and other health professions receive a monthly stipend (currently $429), as well as payment for tuition and other reasonable expenses. Recipients of scholarships agree to render 1 year of clinical service in a designated shortage area for each year of support thus received, with a minimum of 2 years required.

Those persons receiving scholarships in fiscal year 1978 and later may perform their obligated service either as commissioned or civilian members of the NHSC, or they may apply to enter private practice in shortage areas that have priority for assignment of NHSC members and a sufficient financial base to sustain such private practice. Under the previous scholarship program, the recipient's obligation was only satisfied by service in a shortage area as a Federal employee in the NHSC or in certain instances, in the Indian Health Service, Public Health Service Hospitals, and Federal Prisons.

Is the NHSC Scholarship Program Succeeding?

Only a partial answer can be given at this time to the basic question as to the accomplishments of the NHSC Scholarship Program. At least two factors bear on this question. First, any effort to overcome the complex problem of geographic maldistribution of health care personnel in the United States and to improve the delivery of health services in shortage areas will be, of necessity, a long-term effort. Therefore, the story is not finished, and we can look only at the progress made so far. Second, the extent to which the NHSC Scholarship Program is meeting its goals must be judged in terms of how well it is meeting NHSC's needs each year for health professionals to place in critical health manpower shortage areas.

It has been argued that if a sufficient supply of physicians and other health professionals is available, many will find their way into the underserved areas. However, there is little, if any, evidence that this movement will occur without government assistance or incentives. On the whole, the National Health Service Corps appears to be the Federal Government's most effective means of assuring that health care personnel will be available where they are most needed.

In 1978, the NHSC assigned 1,425 health professionals (930 physicians, 220 dentists, and 275 nurse practitioners and allied health personnel) to 643 communities throughout the United States, who provided health care to approximately 1.3 million people. In 1979, a total of 1,725 NHSC-assigned professional and allied health personnel will provide heath care services to 1.6 million people in 743 communities. The approximately 1,000 areas newly designated as having a health manpower shortage will bring the total shortage areas in 1979 to about 2,800.

The increasing manpower needs of NHSC. Within broad guidelines defined by law, the total number and types of scholarship students (in medicine and osteopathy, dentistry, nursing, and allied health fields) is determined annually by the National Health Service Corps on the basis of estimates of the various types of health professionals who will be needed for assignment to shortage areas in specific future years. Recent changes in the criteria for designating health manpower shortage areas have substantially increased the number of areas, populations, or facilities that can be so designated and in which scholarship recipients may perform their obligated service. For example, it is estimated that about 25 million people live in the physician shortage areas determined on the basis of the new criteria, of whom approximately 15 million reside in inner cities and 10 million in rural areas.

Other factors influencing the need for professionals with NHSC service obligations include (*a*) new restrictions on entry into the United States of foreign medical graduates, (*b*) the increased use of nurse practitioners or physician's assistants to supplement the resources of physicians, (*c*) expanded health insurance coverage, and (*d*) new ways of organizing health services.

Based on current projections of estimated needs in rural areas, inner-city areas, and institutions, a field

strength of about 15,000 physicians will be required in the NHSC in 1990. This figure represents about 3 percent of the total estimated national supply of physicians in that year. If the scholarship program is to be the chief source of supply of health professionals for the NHSC, achievement of the desired field strength would require recruitment into the scholarship program of about 20 percent of the total U.S. medical school enrollment by 1984. A fundamental policy question, however, needs to be addressed within the Federal Government: To what extent is it a Federal responsibility to meet the total need for health care personnel in the expanded number of shortage areas across the nation? This policy question includes such issues as the appropriate size (field strength) for the NHSC, how large a population should be served, and the related resource requirements. In considering the question, account will need to be taken of the increasing number of States that require some form of service in State-designated shortage areas in return for admission to, or for educational assistance to attend, State-financed health professions schools. Although the broad policy question may receive extensive study within the Executive Branch of the Federal Government and by the Congress, current legislative authorizations and budget policy already provide for significant expansion of the NHSC and the NHSC Scholarship Program in fiscal years 1979 and 1980.

Current status of scholarship program. From its inception in 1972, the NHSC Scholarship Program has conducted five cycles of awarding scholarships for the academic years 1973–74 through 1977–78, based on appropriations for fiscal years 1974–77. A total of 14,449 applicants, primarily students of medicine, osteopathy, and dentistry, sought awards during the five application cycles. As a result, 11,099 new and continuing awards were granted to 5,719 students, of whom 12 percent were freshmen, 39 percent sophomores, 43 percent juniors, and 6 percent seniors at the time they received their first awards. Awards were given to 4,711 students of medicine, 655 students of osteopathy, 198 students of dentistry, and 155 students of other health disciplines at baccalaureate and master's degree levels.

In fiscal year 1978 (academic year 1978–79), 5,252 NHSC scholarships were awarded, of which approximately 3,346 were new awards and 1,906 were continuation awards. The distribution ranged from 4,553 for students of medicine and osteopathy to 440 for students of dentistry and 259 for students of other health disciplines. For the 1978–79 academic year, the latter category included students in baccalaureate nursing programs accredited by the National League for Nursing and in master's level programs for nurse practitioner training, nurse midwifery, community health nursing, medical social work, public health nutrition, audiology, and speech-language pathology. In making the awards, priority was given to applicants entering their first, second, or third year of professional training. Priority was also given to medical and osteopathic students who expected to enter residencies in family practice, general internal medicine, general pediatrics, or osteopathic general practice.

Projections of scholarship awards in fiscal year 1979 indicate that an estimated 5,200 will go to medical and osteopathic students, an estimated 560 to dental students, and an estimated 440 to students in nursing and other health disciplines, for an overall total of 6,200. In fiscal year 1980, it is expected that about 6,400 awards will be made in all, of which 5,200 will go to medical and osteopathic students, 600 to dental students, and up to 600 to students in other health professions.

In terms of budget, the scholarship program has grown from an appropriation of $3 million in fiscal year 1974 to an appropriation of $40 million in fiscal year 1977. For fiscal year 1978, $60 million was available for scholarship awards. For fiscal year 1979, the Congress has appropriated $75 million for the program. At this time, the proposed budget request for fiscal year 1980 is $82 million.

Currently, NHSC scholarship benefits consist of:

1. A stipend for living expenses of at least $429 a month during the 1978–79 school year, with future annual adjustments to reflect any increases in Federal salaries that may be made;
2. Payments to the school for tuition and fees that a student would otherwise pay; and
3. Payment of a student's other educational expenses such as books, supplies, and equipment.

For each year of scholarship support, recipients are required to perform a year of full-time clinical practice in a health manpower shortage area. Recipients are assigned as salaried Federal employees or officers by the NHSC and must serve a minimum of 2 years. Shortage areas—rural and urban—are located throughout the United States, Puerto Rico, and the U.S. territories. In making placements, account is taken of the specialty training and geographic preferences of the recipient (and spouse) and the needs of the Corps. The NHSC makes every effort to meet placement preferences, especially when the preferred location is one in which the recipient would be likely to remain after completion of the service obligation. Under specified conditions, scholarship recipients may be eligi-

ble to fulfill part or all of their service obligation in private practice.

Service obligations. The cumulative service obligations that were incurred in the years 1972–77 by all scholarship recipients, based on the years of scholarship support they received, total at least 11,215 man-years of health care delivery. Additional years of service obligations will accrue from the awards made in fiscal years 1978–80. Projections for these years indicate that the estimated total man-years of service obligations will increase to 16,515 as a consequence of new awards made in fiscal year 1978, to 22,715 man-years from awards made in fiscal year 1979, and to 29,115 man-years from awards made in fiscal year 1980.

Of the 5,719 students who received scholarships through fiscal year 1977, 2,456 have graduated from school and are now deferred for internship or residency training, 610 are currently in their service period, and 117 have completed their service obligations.

The following table shows the years in which the remaining 5,495 NHSC scholarship recipients began, or are expected to begin, their service periods:

Year	*Total*	*Physicians*	*Dentists*	*Nurses*	*Others*
1976.....	75	47	28	...	...
1977.....	206	167	39	...	...
1978.....	409	259	51	39	60
1979.....	941	882	59	...	...
1980.....	970	963	7	...	...
1981.....	1,092	1,092	...	...	...
1982.....	778	778	...	...	...
1983.....	489	489	...	...	...
1984.....	267	267	...	...	...
1985.....	41	41	...	...	...

Selection criteria. Applicants were selected for awards based on the following criteria, formulated by the NHSC:

1. Work experience—extent to which applicant's work background has included salaried or volunteer experience, preferably health-related, in medically underserved rural or urban areas or minority ethnic communities.
2. Community background—extent to which applicant has had personal experience in medically underserved urban or rural areas or minority ethnic communities.
3. Faculty recommendations—extent to which two faculty evaluators regard the applicant as personally suitable for primary care professional practice in an urban or rural health manpower shortage area.
4. Career goals—applicant's expressed intent to enter into a primary care practice in an urban or rural health manpower shortage area following his or her period of obligated service.
5. Academic performance—as determined by faculty evaluators.

When in any year the number of applicants for NHSC scholarships exceeded the number of awards available, these criteria were applied by three reviewers, and the average of their ratings was used to rank the applicants for selection. The financial need of the student was not a factor in selection.

Default on service obligations. As of September 1978, 376 scholarship recipients were unable, or had indicated their unwillingness, to satisfy their service obligations. Some 52 participants had left school, another 296 had received their degrees but refused to begin their service obligations, and 28 had failed to complete their service obligations. The PHS-NHSC program required that participants who had not completed their degree requirements would be liable for full repayment within 3 years of all funds paid to them or paid on their behalf. Participants who completed their degrees but refused to perform their service obligations were also liable for full repayment within 3 years at the maximum rate of interest allowed by the District of Columbia. Of the 376 recipients in default, 15 were granted waivers because of death, personal hardship, or disablement. The rest of the recipients either have paid, or are obligated to pay, a total of $6,030,000 to the United States.

Now, however, participants who breach their NHSC scholarship contracts by failing to begin or complete their service obligation for any reason other than failure to complete their academic training are liable to repay three times the amount of all scholarship funds received by them and by the school on their behalf, plus interest. The amount that the Federal Government is entitled to recover is to be repaid within 1 year of the date on which the recipient fails to begin or to complete the period of obligated service.

Summary of progress. The underlying concept of the NHSC Scholarship Program—the quid pro quo of educational support for subsequent public service—by its very nature will bear fruit only after an extended period. For example, a student who receives 4 years of scholarship support in medical school and subsequently completes a 3-year residency training program will not be available to begin service in a shortage area until some 7 years have elapsed. Whether this scholarship recipient will remain in his or her assigned area or in another shortage area for continued service cannot be determined until after 11 years have passed.

In the short run, the NHSC Scholarship Program has made significant progress, principally in building a reservoir of obligated service, whose effects in

meeting the field strength requirements of the NHSC will begin to be dramatically felt beginning in the 1980s. The buildup of increasing numbers of obligated scholarship recipients among the NHSC professionals assigned to shortage areas can already be seen in the planned increase in the number of obligated scholarship recipients from 610 in fiscal year 1978 to 1,200 in fiscal year 1979.

Within a relatively short span of years, the NHSC Scholarship Program is increasingly being seen by the Public Health Service, the Department of Health, Education, and Welfare, and the Congress as the major provider of health care manpower to the NHSC. The program is a viable mechanism for the development of health manpower and has demonstrated that it can provide the National Health Service Corps with the manpower resources that are necessary if the Corps is to have an effective impact on the populations and areas in need of health services.

Prospects for National Health Insurance

It is significant that in the National Health Planning and Resources Development Act of 1976, Congress declared that "The achievement of equal access to quality health care at a reasonable cost is a priority of the Federal Government." This statute has been widely described as providing the rational stepping stones to national health insurance. Among the major problems identified in the "Findings and Purpose" section of the act is the maldistribution of U.S. health care facilities and manpower.

In the Health Professions Educational Assistance Act of 1976, the Congress declared that "The availability of high quality care to all Americans is a national goal." In a further declaration of policy, Congress stated that "(1) Health professions personnel are a national health resource and the Federal Government shares the responsibility of assuring that such qualified personnel are available to meet the health care needs of the American people; (2) it is therefore appropriate to provide support for the education and training of such personnel; and (3) at the same time it is appropriate to provide such support in a manner which will assure the availability of health professions personnel to all of the American people."

A major assumption underlying current health planning by the Federal Government is that by 1980 some form of national health insurance will be in operation. Nevertheless, there is substantial evidence that the nation's health care system is not as yet well prepared for the advent of a comprehensive health care financing system. In absolute numbers, there are apparently sufficient manpower and facility resources to cope with national health insurance demands, but they are not integrated into a coherent health care system. Also, we have an acute shortage—both in absolute terms and particularly in distribution terms—of personnel and facilities geared to deliver primary care. These problems are being addressed through such major legislative initiatives as the two acts previously cited and through other legislation such as the Health Services Extension Act, the Emergency Medical Services Amendments of 1976, the Indian Health Care Improvement Act, and so forth. These efforts to marshal and rationalize health resources are essential whether or not national health insurance is in place, but the prospect of national health insurance heightens the sense of urgency. If the purchasing power for health services is significantly increased across the nation without preparatory changes in the system, these problems will be magnified, rather than alleviated.

Neither Congress, nor the Administration has prospectively assigned a role to the NHSC or the NHSC Scholarship Program with regard to issues of national health insurance. But President Carter, in his Principles for a National Health Plan, has noted that "The Plan should provide resources and develop payment methods to promote such major reforms in delivering health care services as substantially increasing the availability of ambulatory and preventive services, attracting personnel to underserved rural and urban areas, and encouraging the use of prepaid health plans" (*1*). In addition, the President has stated that "National Health Insurance alone cannot redistribute doctors or raise the quality of care" (*2*). It is reasonable to conclude that a necessary precondition for it should include continuance of efforts such as those of the National Health Service Corps and the NHSC Scholarship Program to overcome identified gaps in the nation's health service delivery capability.

Toward this end, officials of the Public Health Service have concluded that the most effective vehicle for directing student support to those who will serve in underserved areas, at least on a temporary basis, is the National Health Service Corps Scholarship Program. And they have further concluded that increasing capacity (the size of the NHSC) represents a significant preparatory step toward a national health insurance plan.

References

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2. Carter, J. *Quoted in* The Public Health Service strategy FY 1980–82. Office of the Assistant Secretary for Health, Washington, D.C., Mar. 21, 1978, p. 2.