Prologue:
Over the last decade, the federal government has moved from a position of fostering a larger supply of health manpower professionals to one of sharply reducing tax based support for this purpose. The remarks of Dr. Robert Graham, acting administrator of the Health Resources Administration, in this regard are significant. Testifying April 7, 1981, before a House subcommittee, Graham said: “I think that across the board [in health manpower funding] the federal government will be the bank of last resort rather than first.” State governments, which always have played an important role in funding the training of health professionals, suddenly find themselves at greater financial risk as the federal government withdraws. Lawrence Lewin and Robert Derzon are well equipped to examine these issues and their meaning to states. Lewin is the president and Derzon a vice-president of a well-respected, Washington-based consulting firm that works closely with a number of states. Beyond that, both men have been intimately involved with the federal-state Medicaid program in several roles. Lewin directed a 1969 federal study of Medicaid that served as an important policy tool for years. Derzon has worked for New York City’s Department of Hospitals, has directed the University of California, San Francisco Hospitals and Clinics, and was the first administrator of the Health Care Financing Administration. Lewin and Derzon are pointed in their view that academic health science facilities and their administrators must undertake more vigorous efforts to reduce the costs of health professions education. The authors gratefully acknowledge the contributions of Barbara Bolling Manard to this article.
Caught in the squeeze of rising educational costs, declining federal support, and state fiscal constraints, health professional schools and their students are likely to be among the first to experience the effects of President Reagan’s broad policy thrust to reduce the cost and scope of government. Many states have helped public schools absorb the gradual phaseout of federal capitation grants, but the administration’s proposed withdrawal of federally subsidized student loans and National Health Service Corps scholarships poses a greater threat to these institutions and their students.

The trend toward a reduction of federal support for educating health professional students began in the mid-1970s but has sharply escalated under the Reagan administration. In the debate over the receding federal role in health professions education, two points are frequently overlooked. The first is that direct federal financial support is a relatively recent phenomenon; the second is that direct support in the form of capitation grants to institutions—as opposed to student loans and scholarships—has never been a substantial sum.

The financing of higher education, and of health professional education in particular, has traditionally been the province of state government, students, and their families. Health professions education was no exception until the enactment of the Health Professions Educational Assistance Act of 1963. The act, in effect, declared that assuring an adequate supply of trained health professionals was a shared national responsibility, and thus an appropriate use of federal funds.

The substantial 1968 amendments to that act, and its successors through the 1970s, were shaped by three principle federal concerns. The first concern was the perceived need to increase the number of health professionals by stimulating the schools to increase class size. The second was to promote the training of more primary care physicians to help meet the needs of underserved populations. Finally, there was a clear intent that the health professions be made financially accessible to students from moderate and low-income families, particularly minorities.

The government achieved its first policy goal in a spectacular fashion. The number of medical school graduates increased from about 9,000 a year in 1970 to more than 15,000 by 1980. In the process, the nation’s practicing physician pool increased from 155 per 100,000 population in 1970 to 202 in 1980. The government promoted this process not only through its health manpower laws, but through the increased demand fueled by Medicare and Medicaid. More extensive private insurance coverage and immigration policies which encouraged the entry of foreign medical graduates also were instrumental forces in increasing physician supply.
The second policy objective, really an amalgam of two goals, was to increase the number of primary care physicians, and to improve the access to health care in medically underserved areas using these primary care doctors. Controversial amendments in 1976 made the awarding of capitation grants contingent upon a federally determined proportion of residencies in affiliated hospitals being in primary care specialties. The principal policy instrument used to enhance geographic manpower distribution was the National Health Service Corps (NHSC). At its peak in 1979-80, the Corps awarded 2,379 new scholarships to enrolled students and 4,029 continuation grants to health professionals rendering care in medically underserved areas. Congress rejected the administration’s initial proposal to terminate all new scholarships, but scaled down the number to 500. The president’s new budget calls once again for the elimination of new scholarships.

The third policy objective, to insure that students from low-income families have opportunities to become health professionals, was attacked in a variety of ways: direct subsidy of education costs through federal capitation and state institutional support, scholarships to needy students, and student loan guarantees and interest subsidies. Additionally, the federal government provides special support to the three medical schools that serve predominantly black students—Howard, Meharry, and Morehouse. These three schools enrolled 25 percent of the black Americans in the first year of medical school in 1979-80.

The Reagan administration’s fiscal 1983 budget amounts to a devastating attack on current federal policies to support health professional education, but the trend began long before the Republicans assumed power in January 1981. Indeed, most of the health manpower policies advanced by the Carter administration reflected a viewpoint that a greater proportion of the cost of education should be borne by students and state governments.

In October 1978, Joseph A. Califano Jr., who at the time was secretary of the Department of Health, Education and Welfare, declared in a speech to the Association of American Medical Colleges that there would be a surplus of physicians in the United States by 1990. Two years later, the Graduate Medical Education National Advisory Committee agreed that by 1990 a surplus of 70,000 physicians was likely and recommended that capitation support be terminated. Health professions training had come full circle in less than seventeen years—from a perceived shortage of physicians and other health personnel to a predicted surplus; from the apparent need for federal stimuli to a plea that enough was already too much.

The federal retrenchment is most clearly reflected in the Omnibus
Budget Reconciliation Act of 1981, a new law that mandates $35 billion in budget cuts in 250 federal programs. The act authorized the spending of $218.8 million for education in the health professions in fiscal 1982. This should be compared with $325.4 million which Congress authorized for fiscal 1981. The president's new budget would provide $187 million for health professional training.

Dr. Robert Graham, acting administrator of the Department of Health and Human Services' Human Resources Administration, succinctly described the Reagan administration’s health manpower policy to the National Health Council in September 1981. Graham said:

I believe that the Administration’s position can be interpreted as follows: (1) The general supply of health professionals is adequate or the capacity of the U.S. health professionals schools to produce the needed supply is perceived to be adequate, (2) there will be a minimum federal role for investment in terms of health professions education whether we are talking about direct project grants, institutional assistance, student aid or other support, and (3) competition will sort out the major issues of distribution, specialty choice, and workforce mix.

The new policy twist of the Reagan administration is its intention to shift the financial burden dramatically to students. The administration also argues that competition will solve problems of the maldistribution of personnel and the mix of medical specialties. When considered in concert with major proposed cutbacks in the financing of health care service programs for the low income, elderly, and disabled, the future for these groups becomes decidedly uncertain.

The Role of the States: Institutional Support

In contrast to the ebb and flow of federal financing, state support for health professions education has grown steadily. Our 1980 study for the Congressional Research Service concluded that between 1974 and 1980, state support for health professions education schools increased at average annual rates in excess of 10 percent for each profession, though the level of support varies considerably among the professions, as Table 1 illustrates.

State institutional support has also varied significantly between private and public institutions, with most states favoring their public institutions by a wide margin. This is especially true for schools of medicine where public schools, on average in 1980, received state assistance of $29,470 per student compared with an average $2,930 per student for private schools. The latter figure remained virtually unchanged since 1974, while support for public medical school per student doubled.
Relating state institutional support to the cost of education is a difficult and elusive process. In the first place, health professions schools, and especially medical schools, produce not only undergraduate (first professional degree) education, but also graduate-education, research, and patient care. The 1974 Institute of Medicine study on Costs of Education in the Health Professions found that for the medical schools studied, undergraduate M.D. costs constituted less than 20 percent of total institutional costs. Isolating the costs of medical education thus entails the unraveling of costs that often are associated with jointly produced products, and only a few schools have undertaken such cost studies. A rough proxy for educational costs can be computed by summing federal capitation, state institutional support, and tuition and fees to produce “educational” revenues. This proxy excludes private endowment income used for education, and the portion of research and patient care revenues used to subsidize education. Table 2 shows the percent contribution to total “educational” revenues by each of three components and how these contributions have changed since 1974. As Table 2 illustrates, state institutional support to health professional schools has been significant and rising—from 71 percent in 1974 to 77 percent by 1978. While state support has increased as a percentage of public school revenues, it has dropped as a percentage of private school revenues.

With little relief from state support—which declined in real dollars

Table 1
State Institutional Support by Profession
(Per Student: 1974, 1980; Public and Private)

<table>
<thead>
<tr>
<th>Profession</th>
<th>Average Amount per Student</th>
<th>Percentage of Annual Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1974</td>
<td>1980</td>
</tr>
<tr>
<td>Medicine</td>
<td>$9,510</td>
<td>$17,650</td>
</tr>
<tr>
<td>N=124*</td>
<td>(79)</td>
<td>(79)</td>
</tr>
<tr>
<td>Osteopathy</td>
<td>2,220</td>
<td>11,390</td>
</tr>
<tr>
<td>N=14 (4)</td>
<td></td>
<td>(6)</td>
</tr>
<tr>
<td>Veterinary Medicine</td>
<td>6,830</td>
<td>13,280</td>
</tr>
<tr>
<td>N=24 (10)</td>
<td></td>
<td>(16)</td>
</tr>
<tr>
<td>Optometry</td>
<td>970</td>
<td>3,650</td>
</tr>
<tr>
<td>N=12 (8)</td>
<td></td>
<td>(7)</td>
</tr>
<tr>
<td>Podiatry</td>
<td>170</td>
<td>720</td>
</tr>
<tr>
<td>N=5 (5)</td>
<td></td>
<td>(5)</td>
</tr>
</tbody>
</table>

1 [N=total; numbers in parentheses signifies schools in sample]
Source: Lewin and Associates Survey of Health Professions Schools
since 1974—and the termination of federal capitation grants, private schools have increased their reliance on tuition and fees as sources of revenue. The gap between public and private tuitions has widened considerably so that private tuition, which in 1974 was just over twice public tuition, was more than three times as great in 1980, for an average difference of $4,700 per year. Average figures mask an even greater range of differences: in 1982 tuition was increased at George Washington University Medical School to $19,000 per year for entering students. Even greater differences between average private and public school tuitions existed in 1980 for dentistry ($5,400) and for osteopathy ($5,560). Table 3 illustrates the differences between public and private tuition and fees for selected years.

### Table 2

<table>
<thead>
<tr>
<th></th>
<th>Total Educational Revenue Per Student</th>
<th>Federal Capitation</th>
<th>State Institution Support</th>
<th>Tuition and Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Medical Schools</td>
<td>$13,360</td>
<td>$23,044</td>
<td>16.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Private (36)</td>
<td>6,898</td>
<td>10,882</td>
<td>29.5</td>
<td>9.9</td>
</tr>
</tbody>
</table>

Source: Lewin and Associates, Inc.

### Table 3

<table>
<thead>
<tr>
<th></th>
<th>Tuition and Fees Per Student</th>
<th>Average Annual Percent Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Medical Schools (36 of 50 Schools)</td>
<td>$2,470</td>
<td>$6,880</td>
</tr>
<tr>
<td>Public Medical Schools (43 of 74 Schools)</td>
<td>1,080</td>
<td>2,180</td>
</tr>
<tr>
<td>Ratio: Private to Public</td>
<td>2.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Difference in dollars</td>
<td>$1,390</td>
<td>$4,700</td>
</tr>
</tbody>
</table>

Source: Lewin and Associates, Inc.

### State Financed Student Aid

Most state governments have decided that their major responsibility is to provide institutional support as a means of keeping public university
tuition low. They leave loans and scholarships to the federal government, affluent families, and the private banking system. The Association of American Medical Colleges (AAMC) reported that in 1978 only thirteen states awarded some scholarships to medical students. The American Dental Association discovered only $10,200 per dental school in state funds earmarked for scholarships during that same year. State guaranteed loan funds, if available, are usually federal program funds simply administered by state authorities.

Although not strictly a scholarship program, “service pay-back” programs reduce the loan burden for those students who later practice in the state, usually in designated underserved areas. State pay-back programs were increasing in popularity throughout the late 1970s as one way of realizing a social return on the burgeoning state investment in health professional training. We found thirty-nine separate pay-back programs in twenty-nine states involving one or more of eight health professions. Each of the state programs covered physicians; eleven states included dentistry. Programs usually required delivery of primary care services in underserved areas, and awards were generally limited to state residents. Buy-out provisions (where a student substitutes cash for his service obligations) have become increasingly stiff. An extreme example is found in Colorado, where the university’s dental tuition is set annually at actual cost (over $18,000 in 1979-1980). The student pays one-eighth of that tuition cost and the remainder is forgiven on a year-for-year pay-back in an underserved area. In general, state pay-back programs, although valuable to students, have been less beneficial in real dollar terms than those offered by the National Health Services Corps (NHSC) or through the Armed Services scholarship program.

Not all states are enthusiastic about pay-back programs. The complaints are the same as those offered by congressional critics of the National Health Service Corps, namely high cost, a delayed yield, and little residual value to an underserved community unless the health professional stays beyond the mandatory service period. We concluded in our 1980 study that retention rates are likely to be higher where state pay-back programs involve more careful selection of service locations and more vigorous management by state officials. North Carolina is a good example of a well-run program.

An important dimension of state financing of health professions education is interstate compacts-agreements between a home state and one or more other states, frequently through a regional association, to purchase’ health profession education seats for home state residents in another state’s schools. Interstate contracting reflects a genuine market for education and should be watched closely as a rather sensitive indicator of how states view the priority for health professions education. In
1980 we found that 3,631 students in eight health professions (including nursing) were financed by $24.8 million in interstate support, a rise of more that 50 percent in six years. Twenty-two percent of the nation’s entire optometric student body was financed through interstate compacts as was one in eight enrollees in veterinary medicine. Invariably, the contract cost per student per year was considerably lower for out-of-state schools than costs in the home state.

Key Decisions Now Await State Action

State policies during the last decade of active federal partnership may be roughly summarized as follows:
- Substantial institutional support, primarily for public schools, to keep their tuition low and assure their financial stability;
- Reliance on the federal government to provide interest-subsidized student loans (which helps assure the financial stability of private schools);
- Reliance on loans, service pay-back programs, a small number of scholarships, and the National Health Service Corps to help meet the needs of underserved areas and to encourage enrollment of minority and low-income students.

The federal retreat from health professions education signals the need for states to consider new approaches. It appears to us that states must now decide what, if anything, they will do about the following issues: (1) containing increases in the cost of health professions education; (2) dealing with the alleged overproduction of certain health professionals; (3) raising tuition and fees; (4) determining whether to increase support for private education; (5) meeting the special financial needs of minority and low-income students; and (6) meeting the manpower needs of medically underserved areas.

Containing Cost Increases

Although it is not a popular message for academic health science facilities and their administrators, we believe that more serious efforts are needed to identify and reduce the costs of health professions education. There are cogent reasons why education in medicine, dentistry, and veterinary medicine are particularly costly. Yet the differences in cost among medical schools, for example, which produce similar professionals, appears to be quite extraordinary and are, in fact, differences that are not simply cost accounting artifacts. We do not argue that health professions training ought to be equivalent to the costs of preparing lawyers, business executives, or architects, But health professions educa-
tion costs appear to be increasing quickly on a base which is already higher than most professional schools. Medical school “educational revenue,” albeit an imperfect proxy for costs, have risen at an average annual rate of 9.5 percent per student since 1974. Since capital expenditures for program expansion were likely to be covered by other sources of revenue, this seems to be a sharp growth rate.

A variety of factors contribute to these high and growing costs, including the following:

- To attract faculty, medical schools must offer compensation packages that at least roughly compete with private practice physician incomes.
- The close supervision that clinical training requires means that faculty-student ratios are very high relative to other professions.
- The complex relationship between undergraduate education, graduate education, research, and patient care makes the sorting out and management of program costs complex and difficult.
- Faculty guard their prerogatives jealously and resist being managed.
- The departmental organization structure of most medical schools is more ideally suited to expansion minded entrepreneurs than to belt-tightening and budget cutting. Increasing subspecialization that developed during years of growth in research funding has left many departments with more tenured faculty than they need for efficient teaching programs.
- Little attention has been given to date to improving the efficiency of first professional degree education programs which, after all, represent only a small portion of a medical school’s programs.

What then can states do about education costs? While some of the above causes may reflect the inherently costly nature of medical education, we believe most can be affected by better management. Private medical schools may be pressured by continuously declining applications in response to tuition increases. The real problem lies with the larger number of public schools, which states have deliberately chosen to insulate from such pressures by subsidizing tuition. It is on these public schools, and on the private schools receiving direct state support, that states can have the greatest immediate leverage.

First, states can begin to insist on better information about, and management of, program costs and especially faculty costs in health professions schools. The costly economic studies conducted by the Institute of Medicine (IOM) and American Association of Medical Colleges (AAMC) in the early 1970s have left the impression that identifying and monitoring the cost of education and other programs is an overwhelming task. New cost-finding techniques that are less cumbersome and that also have managerial and budget applications are availa-
able and could provide school administrators and finance officers with tools to do a better job of planning and negotiating with faculty to improve efficiency.

Second, state officials, in concert with health professions educators, must get serious about seeking more efficient means of educating health professionals. New uses of video recording, computer-assisted instruction, and modern telecommunications technology have barely been tapped for these purposes. More efficient and economical use of faculty in clinical training appears possible to us as well.

Finally, states should be prepared to start cutting back on existing capacity, where warranted. The variable costs of effectively managed programs can be high, so that cutting back enrollment could save considerable sums. To this end, states should begin to look at the purchase of seats in private institutions, within and outside their state, as an alternative to maintaining enrollment in schools that are more expensive and that may be of lesser quality. We are aware, of course, of the political difficulties inherent in this approach, but believe that this kind of economic perspective could encourage schools to be more cost-conscious.

**Dealing with Overproduction of Health Professionals**

The end of capitation, recommended by GMENAC in light of a predicted 1990 physician surplus, has been adopted by the federal government. The question is whether the states should follow suit. The problem is more complex for the states than for the federal government. The states must be more sensitive to their own region’s manpower needs, and schools must consider the broader issues facing legislatures, even though these bodies often view health professional schools as a kind of political consumer good—providing access to rewarding careers for the children of their constituents. Finally, the assumption that competition will solve maldistribution and oversupply problems may work nationally, but still not solve a given state’s problem.

The first thing that states must do is to determine what their health manpower needs are, how the existing stock of providers is distributed (by specialty and geographically), whether the state is a net importer or exporter, and what the retention and return rates are for health professionals trained in the state and involved in pay-back programs. Few states currently have this information. Secondly, some conclusion must be reached about whether there is a “surplus,” whether the assumptions about future practice patterns used in estimating the surplus are valid, and whether or not a surplus is beneficial. On the latter point, the research is improving but is still inconclusive. There is increasing evidence that greater physician supply is improving geographic distribu-
There remain, however, some fifteen to twenty million people, most of whom dwell in urban areas, who Robert J. Blendon calls “the structurally underserved.” Sole dependence on the increasing supply of health providers, especially physicians, is in our view an inefficient and ineffective way of solving this problem.

A related issue is whether an oversupply of physicians will increase or decrease total health care costs. A survey of recent research suggests that increased supply may eventually lead to a decline in the real price of physician services. In the short run, however, we believe more physicians will lead to higher total expenditures, even if prices were to decline. Overproduction of personnel could thus be double expense to the state: in addition to the direct cost of education, which itself is increasing, “surplus” physicians generate more total public costs.

California, a net importer of physicians, appears ready to act. On February 18, 1982, David Saxon, president of the University of California, recommended a $6.5 million reduction in the university’s Health Science Program and elimination of 465 student positions, including forty-four medical school slots, forty-four dental school slots, seventy residency positions, and the termination of seventy full-time equivalent faculty. Further cuts of 140 student positions were threatened if the state failed to make up $2 million in federal capitation grants.

Other approaches to moderating supply might include increased use of the contract seat approach. This could introduce more flexibility into the health professions education market and help even out surpluses and shortages among the states. Maine, for example, recently altered its contract arrangements in response both to fiscal constraints and the belief that the state currently imports enough new physicians to meet its needs. In July 1981, the Maine legislature reduced the number of new contract seats from sixty-six (forty in medicine) to twenty-three (eighteen in medicine) and eliminated a pay-back provision. Previously, Maine contract medical students were required to pay the University of Vermont (the largest and now sole contractor) $7,000 in annual tuition, while the state of Maine paid the University (UVM) the per seat contract cost of $10,200 per year. The student was obliged to repay the $10,200, but could avoid the obligation by returning to practice in Maine. State officials are seeking to restore this pay-back provision reverse in the next legislative session. Since 1981, the only advantages the contract offers to Maine students are deferral of tuition payments as compared to some high cost private schools, and an opportunity to compete for a small number of seats reserved for Maine residents.
How Much Should Tuition and Fees Be Raised?

Recent changes in political thinking and new studies undertaken by economists suggest strongly that influential segments of society now believe that health professionals’ tuition costs are too heavily subsidized and could be raised significantly without creating financial obstacles to an adequate supply of qualified providers.

The political thinking began to change under the Carter administration. Its manpower policies favored a reduction in student assistance, although it placed a higher priority on maintaining support for low-income students than does the Reagan administration. Henry A. Foley, who at the time was administrator of HHS’ Health Resources Administration, testified to this policy on January 31, 1981, before the House Appropriations Subcommittee on the Departments of Labor, HHS, Education, and Related Agencies. Foley said: “The [Carter] administration feels very strongly that most of the students can find financial means to get into medical school.”

HHS Secretary Richard S. Schweiker articulated a similar viewpoint in testimony delivered on March 26, 1981, before the House Energy and Commerce Subcommittee on Health and Environment. Schweiker said: “As a part of our overall effort to reduce federal spending, we propose to eliminate those loan and scholarship programs involving a direct federal subsidy. The majority of health professions students become among the highest income earners in the country, and the federal government can no longer justify subsidizing the education of these future high wage earners.”

A recent study by Robert H. Lee and Cathy Carlson of the Urban Institute, after comparing the opportunity and cash costs of medical education with the average future earning streams, concluded that “a medical education is an investment, an excellent one at that.” The authors also concluded that medical school tuition and fees are not particularly high. Half of all first year medical students in 1979-80 paid less than $3,600, but there was a wide range in tuition ($420 to $14,435 per year) attributed primarily to state tuition subsidy policies.

Since there is, on average, considerably less direct state subsidy of private school tuitions, the tuition issue is largely applicable to public schools. There are traditionally three arguments that support such subsidies: that it is desirable to encourage students to enter the health profession; that it is important to make these professions accessible to low- and moderate-income students for whom large debt could prove a psychological deterrent; and that it is politically difficult to increase tuition at public schools. The latter point implies that there is a rationale for all taxpayers to underwrite a substantial part of the cost of producing health professionals.
Given the probable surplus of physicians and their high level of lifetime earnings, much of the rationale for subsidizing medical school tuition (especially to a greater degree than, for example, nuclear engineers or history professors) is weakened. Moreover, subsidizing public schools has created a huge differential that could bias resource allocation and student selection decisions against private schools. We believe that massive short term increases in public school tuitions are neither practical nor desirable, but that public school tuitions can and should rise. The problem this poses for low- and moderate-income students should be dealt with separately, as noted below. This group’s special need is not a sound rationale for heavily subsidizing all students.

Alternatives currently being considered in California are worth noting. Governor Brown proposed replacing the $2 million lost from capitation with state appropriations accompanied by a modest increase in student fees of about $100 per student. The Office of the Legislative Analyst countered with a proposal to institute tuition charges of $2,500 for medical students, and $2,000 for dental students, in addition to current $997 in student fees. This proposal also included a provision that 25 percent of these new tuition charges be set aside for increased student aid for the needy.

Indiana provides a further indication of the states’ willingness to increase public school tuitions. At its last session, the Indiana legislature, which in the past increased its appropriations to compensate for declines in federal capitation, raised medical school tuition 65 percent to $2,500 for residents ($6,000 for nonresidents) and dental school tuition 35 percent to $1,800 for residents ($4,500 for nonresidents). Louisiana, on the other hand, feeling less fiscal pressure as a result of oil and gas revenues, and determined to promote New Orleans as a major center of medical science in addition to developing the new Shreveport campus, is making up the loss from the state treasury.

**State Support for Private Education**

As previously noted, state institutional support for private schools has actually declined in real dollars. In 1978, however, seventeen states provided substantial capitation grants to private medical schools. Two of these, Ohio and Texas, set these grants at the same level as the state’s per capita appropriation to the state’s public schools. Private medical schools without such support—George Washington is the best example—may be approaching the upper limit of their ability to raise funds through tuition increases.

Given current budgetary problems, some states will likely reassess their contribution to private schools as they contemplate the growing physi-
cian supply. Nevertheless, we believe there are some strong reasons for assuring the vitality of private health professions education. All six of the nation’s podiatry schools, for example, are private, with students heavily dependent on the threatened Guaranteed Student Loan program. For other health professions with public and private educational options, states may find it less costly to buy seats at private schools, where the cost is shared by endowments and private sector contributions. Competition from private schools can have a beneficial effect on the public school. Finally, states have a substantial interest in the financial condition of private health professions schools which make significant contributions to a state through biomedical research, providing tertiary care in their teaching hospitals, and serving Medicaid patients. Accordingly, we believe it appropriate for states to continue support for private health professional schools in three ways: maintaining state capitation programs already in place; assuring the availability of student loan programs so that students will be able to afford the higher tuitions; and purchasing seats at private schools within and outside the state, as appropriate.

The Special Financial Needs of Moderate and Low-Income Students

Fewer than 25 percent of medical students are able to get through four years of medical school without incurring some debt. The volatility of the private loan market, and banks’ traditional reluctance to view the promise of a diploma as sufficient collateral, make some form of public guarantees essential. At issue is whether or not (and by how much) the interest on these loans should be generally and publicly subsidized. The Urban Institute study, previously cited, concluded that even if medical students borrowed $20,000 per year at 14 percent, “the loans are repayable, although onerous, and medical training continues to be a superior investment.”

No one really knows, however, what effect such a system would have on potential medical school applicants (who, we suspect, rarely calculate precisely the “net present value” of educational decisions) or their future practice plans. Some interest subsidization therefore appears warranted to us. States can provide alternatives to federal health educational assistance loans, (currently set at 16 percent interest on new loans) by making tax-exempt bond authorities accessible to universities for raising student loan funds. Some states have already instituted such programs while others are considering it.

However strong the economic evidence may be for heavy borrowing given the future benefits, students from minority and low-income families may face strong psychological obstacles to incurring heavy debt. If we are to continue our policy of making the health professions accessible to these students, special arrangements will have to be made.
Scholarships are one approach. It is notable that minority applications to medical school did not decrease, though others did, in response to tuition increases in the late 1970s. This has been attributed to greater access to scholarships by minorities.\textsuperscript{15} While states have previously done little to provide scholarships or other incentives to attract students from low-income backgrounds, the proposed end of federal exceptional need and National Health Service Corps (NHSC) scholarships calls for a more active state role.

Some workable state options include insisting that a portion of public school tuition increases be set aside for student aid (as California is considering) or that increases in capitation payments to private schools be conditional upon increased student aid targeted on low-income families. With respect to those minority students who wish to attend Howard, Meharry, or Morehouse, states can (as in Illinois) purchase seats for qualified residents directly and use the financing arrangements for such seats as a form of aid based on need. Lastly, since student loan programs are frequently administered via revolving funds, more effective state management of these programs should result in improved repayment, thereby preserving the capital base of the funds for future students.

### Assuring Health Care Providers for Medically Underserved Areas

Declining federal support for the NHSC and similar efforts to extend care to the underserved will place increased pressure on states to take the initiative where market forces fail. Few analysts doubt that some rural and particularly inner city areas will continue to need help. Achieving this policy objective requires four kinds of state action: a better job of defining medically underserved areas; incentive programs to attract providers to such areas; matching providers to areas with emphasis on those factors that will encourage physicians to remain at such sites; and ensuring that there is adequate financing to sustain a viable practice.

Since the priority for nonmarket placement of providers depends on a ranking of the areas most needing health care providers, states need improved methods for defining such priorities. In doing so, the goal must be clear. Some areas will be able to support a physician if one can be properly matched; others may need a physician but may not be able to support one without having the physician’s income subsidized; others may need and accept a qualified mid-level practitioner given the access to higher levels of care nearby. Better methods of defining underserved areas both quantitatively and qualitatively are needed and are being developed,\textsuperscript{16} but the states must be prepared in terms of data and staff to employ these methods.
Many states have relied on either their own service pay-back programs (or those of the NHSC) to attract physicians to underserved areas. In spite of continued political opposition to these programs they remain an attractive option to the states. With likely increases in tuition, fewer available NHSC slots, and less available loan financing, these programs are likely to be looked on more favorably by students as well. A principle currently adopted by Massachusetts and Colorado is that since the state subsidizes tuition for its public school students, it is reasonable to expect service in return. Thus, students entering the University of Massachusetts Medical School after September 1980, each year paid $1,100 in tuition and signed a $2,000 promissory note which was forgiven for each year of service in the state. States buying seats out-of-state are increasingly requiring students to be liable for the state’s contract cost as well as tuition unless the graduate agrees to practice in the state, and specifically in underserved areas.

While service pay-back and forgiveness programs may increase the pool of providers willing to practice in underserved areas, encouraging them to stay is a more complex problem. One important determinant of duration of stay is the quality of the original match between the provider and the community. Personal background, financial, professional and lifestyle objectives, and personality all play a role. While NHSC officials have acknowledged that they can do a better job of matching, we believe the states are better equipped to do so, especially since they are drawing from a “domestic” rather than national pool. States are also in a position to alter the economic rewards of practicing in underserved areas. National programs have relied on direct subsidies in the form of salaries (e.g., the NHSC), or practice start-up loans such as those supported by The Robert Wood Johnson Foundation. States, however, should additionally consider special Medicaid reimbursement arrangements for underserved areas. This latter approach might counter the opposition of organized medicine by offering the same benefits to all physicians willing to practice in designated underserved areas. More importantly, without such differentials, the general Medicaid cutbacks now facing most states will probably exacerbate current physician maldistribution by further lowering the purchasing power of distressed urban and rural areas.

Financing and equity issues in medical education, as we have tried to illustrate, are shifting from the federal to the state domain. States have opportunities and obligations to develop and to continue sound interventions that will assure students affordable high-quality programs in the health sciences and assure an adequate supply of well-trained health care providers. States should view the need to consider these issues with a sense of urgency because, ultimately, the size of the nation’s medical manpower pool will go a long way in determining the level of resources society invests in the delivery of health care.
NOTES


14. 47 Fed. Register 5042 (February 3, 1982).

