

LEVELING THE PLAYING FIELD

Financing the Missions of Academic Health Centers

Findings and Recommendations of
The Commonwealth Fund Task Force on Academic Health Centers

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PROLOGUE

The competitive evolution of the health care field, as evidenced by the growth of managed care and the resulting shift in payment from a fee-for-service to a capitated reimbursement system, has dramatic consequences for the social missions of academic health centers (AHCs) as well as the institutions themselves. The primary social missions of AHCs are to supply medical education, conduct biomedical research, provide highly specialized services, and pursue continuous innovation in patient care. As producers of these products and services, AHCs play a vital role in the nation's health care system. However, in today's competitive market, the ability of AHCs to continue to provide these goods and services is threatened.

Efforts by managed care organizations to secure the most competitive prices could compromise the complex web of clinical and financial relationships that AHCs have relied on to support their social missions. In the past, AHCs have subsidized the costs of their social missions through patient care revenues, primarily by charging additional amounts for their services. However, as a result of the "missions premium," AHCs are at a competitive disadvantage: managed care organizations seem unlikely to pay the higher costs of patient care in AHCs, and have negotiated contracts at discounted rates or avoided AHCs altogether.

Proposed changes in the Medicare and Medicaid programs could also threaten the financial stability of AHCs. Among the more visible are possible reductions in Medicare's support for graduate medical education. Federal budget considerations will include important changes in the Medicare program, and the results of these policy decisions could have a profound influence not only on graduate medical education but also on the other social missions of AHCs.

In response to the importance and potential vulnerability of the AHC missions and intense national attention to these issues, The Commonwealth Fund established the Task Force on Academic Health Centers. *Leveling the Playing Field: Financing the Missions of Academic Health Centers* provides a set of findings and policy recommendations that the Task Force believes will allow AHCs to compete in the marketplace. This is accomplished by removing the missions premium from the costs of patient care and, at the same time, providing a stable source of funding to support the social missions of AHCs in the future.

Given the complexity of the policy issues affecting AHCs and their missions, and the rapidity with which these institutions and their environments are changing, differences of opinion about the timing and direction of policy recommendations are inevitable. Some will want to know with greater precision the expected effects of policies advanced to protect the social missions of AHCs, and will be hesitant to act until all of the necessary data are collected. Others are concerned that if government assists AHCs at this time, the centers will not vigorously pursue necessary internal reforms. A further concern is that current proposals

for funding AHCs' social missions may not be well-received because of their costs, or because they are ill-timed from a political standpoint. As reflected in the Commentary appended to this report, the Task Force includes two members who share these concerns.

While respecting these views, the majority of the Task Force believes that, where the vital social missions of AHCs are concerned, the overriding principle should be: first, do no harm. A strong theoretical argument suggests that markets will not protect the social missions of AHCs; indeed, empirical evidence demonstrates that these missions are already starting to erode under the pressure of market forces. While it would be preferable to have more data on the benefits and risks of alternative policies, the Task Force feels that current threats to the social missions of AHCs are sufficiently pressing that we should assure those missions are protected while data collection proceeds. The Task Force recommendations would primarily redirect and target funds already being paid by public and private purchasers of health care services to support the social missions of AHCs. Thus, the net cost to society would be minimal. The report's recommendations would also assure that these funds will be used with greater accountability and responsiveness to public needs and wishes than in the past.

The Task Force is committed to further research, analysis, and reform concerning the ways in which AHCs conduct their social missions. It will undoubtedly modify some of its current recommendations in light of these planned investigations. But the Task Force does not believe that it is wise or necessary to wait for all questions to be answered before proceeding with policies that would guarantee the continued supply of these social missions.

We are grateful to The Commonwealth Fund for its support of this project; to Brian Biles, M.D., Senior Vice President of the Fund, for his leadership and insight; and to the members of the Task Force and its staff for their wisdom and hard work. In the future, we hope that the Task Force will contribute to a further understanding of how the nation can promote the effectiveness and efficiency with which it conducts the social missions of AHCs.

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EXECUTIVE SUMMARY

The nation's 125 academic health centers (AHCs)—medical schools and their closely affiliated hospitals and physician groups—perform missions that provide benefits for the society at large. As institutions, AHCs bear primary responsibility for training the next generation of health professionals, for conducting biomedical research to improve the quality and effectiveness of medical care, and for providing highly specialized health care services. In addition, many AHCs consider providing care to indigent and uninsured patients as integral to their social missions.

Carrying out these missions is costly. Until recently, AHCs and other teaching hospitals financed a significant portion of the higher costs associated with their mission-related activities through patient care revenues. Under traditional reimbursement systems, AHCs often were paid more—up to 30 percent more—than non-teaching institutions for similar services. But fundamental changes in America's health care system are under way. Managed care, with its focus on controlling costs, accounts for a growing proportion of privately insured patients. In addition, significant reductions in payments by Medicare and Medicaid have been proposed and are being actively considered. These changes pose serious threats to the financing of AHCs' vital social missions.

Many AHCs are responding to their changing environment. They are undertaking major reforms in their internal management and organizational structures and taking steps to reduce their costs. However, these changes may not be sufficient to allow AHCs to compete with community hospitals while continuing to fund their social missions out of patient care revenues. Without public attention and action, an erosion of AHCs' market share and revenues may ultimately result in a severely weakened ability to fulfill primary social missions.

This report of The Commonwealth Fund Task Force on Academic Health Centers presents recommendations on public policy related to the financing of the social missions of AHCs and other teaching hospitals. The central theme of this report is the leveling of the competitive playing field between AHCs and their community competitors. The proposed recommendations would provide explicit financing for the mission-related activities of AHCs and other teaching hospitals. By providing separate funding for these missions, these costs would no longer have to be financed by patient care revenues. AHCs could then participate in the evolving health care market on a price-competitive basis.

THE CURRENT STATUS OF AHCs AND THEIR SOCIAL MISSIONS

Over the past two years, the Task Force has examined the impact that changes in today's health care markets are having on the financing of AHCs and their contributions to society. New information is documenting the pressures that AHCs are facing, what impact pressures might have on their ability to carry out their missions, and how they are responding to change.

The key findings are:

- Revenues from clinical services contribute significantly to funding AHC mission-related activities.
- Due at least partly to the fulfillment of their social missions, costs per discharge at AHC hospitals are significantly higher than costs at community hospitals. Mission-related costs at AHCs account for 28 percent of their total costs. At other teaching hospitals this figure is 11 percent. In 1997, the higher cost of patient care at AHCs and other teaching hospitals due to their mission-related activities is estimated at \$18.1 billion.
- The uncompensated care burden shouldered by AHCs is increasing. From 1989 to 1994, the burden of uncompensated care increased from 9 to 12 percent of gross patient revenues.
- AHC hospitals depend heavily on Medicare and Medicaid funds and therefore are vulnerable to changes in public payment policies. Medicare and Medicaid account for more than half of the total inpatient revenues of AHCs. For AHCs, Medicare payments for indirect medical education, disproportionate share, and the direct costs of graduate medical education account for 43 percent of total operating payments from Medicare.
- Teaching and research missions may be affected in areas where managed care enrollment is high. AHCs in highly competitive markets are constraining the growth in expenditures for graduate medical education. In addition, AHCs in more competitive markets have a declining share of National Institutes of Health research funding, as their faculty spend more time in clinical activities.
- AHCs are responding to changes in their environment by instituting major reforms in internal operations and controlling growth in their expenditures. However, in spite of these changes, AHCs are not attracting managed care patients. In 1994, AHCs' market share of HMO patients was only 80 percent of their market share of other privately insured patients.

- Mission-related activities at all U.S. teaching hospitals, including AHCs, will cost approximately \$18 billion in 1997.

A CALL FOR PUBLIC ACTION

To provide a sound basis for the development of public policy recommendations regarding the financing of the missions of AHCs and to establish a framework for public debate, the Task Force has established four principles:

- The social missions of AHCs and other teaching hospitals have intrinsic value for society, will not be financed in a competitive market, and deserve public support.
- The goal of public policy should be to level the playing field, that is, to enable AHCs and other training institutions to conduct graduate medical education and perform other social missions, while continuing to compete on price and quality in the production of medical goods and services.
- Methods of financing the social missions of AHCs should distribute the burden of payment broadly and equitably among those who benefit from them.
- Methods of financing the social missions of AHCs should introduce as few distortions as possible into health care markets. In particular, public policy toward graduate medical education should not contribute to regional oversupply and specialty imbalance among U.S. physicians.

Leveling the playing field between AHCs and their competitors should be achieved in an equitable fashion based on sound public policy. To accomplish this, the Task Force recommends replacing the hidden cross-subsidies from patient revenues that have traditionally supported social missions with explicit public funding. Once the necessary funding for social missions is protected, society—and the marketplace—can determine how and where to perform these activities most effectively.

It should be emphasized that these recommendations are aimed at preserving the social missions of AHCs that are valued by society. The Task Force fully recognizes that AHCs must adjust to the changing circumstances in the health care market. However, policy changes are also needed to ensure that the critical elements of the social missions of AHCs are retained at a quantity and quality consistent with society's objectives.

The eleven recommendations of the Task Force are:

- **Establishment of a trust fund.** A broadly financed pool, to be called the Academic Health Services Trust Fund, should be established to provide a stable and adequate source of dollars to pay for the higher costs of patient care associated with the social missions of AHCs and teaching hospitals. The amount Medicare now pays for the direct and indirect costs of medical education should be transferred into the trust fund for distribution.
- **Funding sufficient to support the social missions.** Public policy should support the nation's current capability to produce valued public goods and services in the areas of training health professionals, biomedical research, highly specialized health care services, and innovation in patient care. In the area of training, though, support should be lowered commensurate with decreasing new trainees to 110 percent of graduates from U.S. medical schools and schools of osteopathy. The amount placed in the trust fund should be updated annually to reflect inflation and other changes in the direct and indirect costs of medical education and other social missions.
- **Financing in a broad and equitable manner.** The trust fund should be equitably financed through mandated contributions from Medicare, Medicaid, and all private payers (including health insurers and self-insured employer-based plans), or from the allocation of general revenues.
- **Redirection of payments from Medicare's adjusted average per capita cost health plan payment system.** Medicare payments to the trust fund should include the Medicare graduate medical education funds now incorporated into payments to risk contracting plans through the adjusted average per capita cost.
- **Direct and indirect payments.** Separate payments should be made for the direct and indirect costs that the social missions of AHCs and teaching hospitals impose on the costs of patient care. Payments for the direct costs of medical education should be made on a per-resident basis. Payments to hospitals for the indirect costs of medical education and other social missions should be linked to each treated case.
- **Distributions should be neutral with respect to site.** Payments from the trust fund should be neutral with respect to the site of mission-related activities, so that these activities will occur in the most appropriate location. Demonstration projects should be conducted to test and evaluate new institutional arrangements, such as consortia, that may accelerate the transition of mission-related programs into ambulatory and community-based settings.
- **Establishment of the Academic Services Payment Review Commission.** An independent commission should be established to provide advice on the amount and distribution of trust fund dollars. The commission should monitor market changes and

how the trust fund affects the social missions of AHCs. It should study direct and indirect costs associated with AHCs' social missions to ensure that trust fund support is being appropriately targeted and used. Additionally, the commission should issue an annual report that presents its research findings and recommendations.

- **Allocation of training support.** The level of trust fund support for the training mission of AHCs and teaching hospitals should reflect the nation's requirements for physicians and physician scientists. Funds should be allocated preferentially to support the graduate medical education of U.S. citizens.
- **Protection of safety net providers.** Safety net hospitals that are primary sources of care in their communities and that depend on resident physicians to supply services should be given the resources necessary to continue this role.
- **Care for indigent patients.** Adequate resources should be made available to AHCs and other safety net providers to care for indigent patients.
- **Reductions in overall Medicare funding.** Any significant reductions in current Medicare support for the direct and indirect costs of graduate medical education and other AHC social missions should be accompanied by the establishment of the recommended financing pool, with additional sources of funding.

INTRODUCTION

Academic health centers (AHCs) are a cornerstone of the American health care system. Over the last fifty years, they have played a major role in the production of public goods and services that society values, but that are not produced effectively in private health care markets. Their primary social missions are to provide medical education, conduct biomedical research, deliver highly specialized services, and pursue continuous innovation in patient care. Many AHCs also consider care to indigent and uninsured patients as integral to their social missions. Since indigent care has separate funding sources and raises distinct policy issues, this report focuses on the other social missions of these institutions.¹

The price tag for carrying out the missions of AHCs is an estimated \$18 billion for 1997.² Historically, AHCs have financed much of their teaching and research activities through transfers from patient care revenues. Medicare—and in some states, Medicaid—have made explicit payments to support graduate medical education (GME) and other mission-related activities, totaling roughly \$8.5 billion in 1997.

AHCs have traditionally covered their higher expenses through additional payments from private payers in the fee-for-service system. More recently, health maintenance organizations and other types of managed care plans have become aggressive about negotiating discounted payment rates and directing their enrollees to lower-cost providers.

The Commonwealth Fund Task Force on Academic Health Centers is reviewing the current status and future evolution of the nation's AHCs. It was formed because of concerns that the impact of transformation in today's health care system, together with possible changes in public policy, may affect the ability of AHCs to fulfill their traditional social missions.

The Task Force is concerned with maintaining the supply of public goods and services produced by AHCs, rather than ensuring the survival of these or any other particular organizations. Clearly, AHCs will have to undertake major internal reforms to continue to perform their missions or society will have to rely on other institutions to do so.

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Nevertheless, AHCs' role should not be dismantled without assurance that the unique benefits derived from these institutions will continue. In other words, where the production of vital social goods and services is concerned, public policy should first do no harm.

For this report, an academic health center is one of the 125 public or private organizations in the United States consisting of at least a medical school and its owned or closely affiliated clinical facilities and faculty practice plans.³ AHCs train more than half of the nation's residents and conduct most of the health care research that occurs outside private industry. Translating the findings of basic research into practical application through clinical research is vital to continuous innovation in patient care services and is indeed one of AHCs major thrusts. Recognizing, however, that nearly 1,000 teaching hospitals also train graduate physicians, the Task Force recommendations on funding AHCs' educational missions apply to these institutions as well.

Over the next three years, the Task Force will develop new data on the extent and characteristics of AHCs' mission-related activities, identify internal reforms to help them sustain and enhance these activities, and make recommendations concerning the role of public policy in relation to these missions. Ideally, the Task Force would have preferred completing its data collection and analysis efforts before making recommendations about the future support and organization of AHCs.

The 104th Congress passed legislation, which was not enacted, that would have significantly changed how Medicare finances the social missions of AHCs. Because of continued pressing budget issues, such changes may be considered again this year. This possibility has caused the Task Force to reconsider its timetable in order to provide its current thinking and information at this time.

In making its recommendations, the Task Force endorses no particular organization's position and no proposed legislation. The Task Force is confident of its findings and recommendations. But as more is learned about the rapidly changing status of AHCs, their ongoing responses to market pressures, and the policy options available for sustaining their valued missions, the Task Force undoubtedly will refine its recommendations. Additionally, its future work will more explicitly address other related issues critical to public policy and the future of AHCs' social missions. These areas include policies to sustain the research missions of AHCs (especially clinical research which health system restructuring threatens) and to hold AHCs accountable in conducting publicly financed missions. Also to be addressed are internal reforms that AHCs themselves must consider to perform their activities more efficiently.

Though this report recommends that federal and state governments continue to invest in AHCs' mission-related activities, the Task Force does not endorse business as usual. AHCs must demonstrate their willingness to respond to public pressures for more efficiency

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and effectiveness in conducting activities related not only to routine patient care, but also to their unique social missions. That may require far-reaching and uncomfortable changes in the organization and behavior of AHCs. Such reforms are already under way at some AHCs. Internal restructuring by AHCs may prove essential to preserving public confidence in their ability to discharge the vital missions with which they have been entrusted.

Part 1 of this report provides background on financing AHCs' social missions. Part 2 reviews the Task Force's initial findings concerning the pressures AHCs face due to market forces, how these pressures might affect their ability to carry out their missions, and what efforts they have made to restructure and adapt to these challenges. The rationale for public action to support AHCs traditional social missions is discussed in Part 3. Part 4 presents the Task Force's recommendations on federal policy related to the social missions of AHCs and teaching hospitals.

1. FUNDING OF MEDICAL EDUCATION AND RELATED ACTIVITIES

Over the last fourteen years, the fate of Medicare—and to a lesser extent, Medicaid—has become intimately intertwined with the fate of the social missions carried out by academic health centers (AHCs). This occurred because Medicare, in particular, began making explicit, targeted payments to AHCs and other teaching hospitals to cover its share of the patient-related costs of AHCs' mission-related activities.

Medicare's policies with respect to AHC missions focus on education. This is because Medicare makes explicit, targeted payments to AHCs and other teaching hospitals to cover its share of the costs of GME. Thus, it is difficult to review the history and current status of Medicare's relationships to AHCs without focusing heavily on medical education. However, Medicare's payments to AHCs were intended to support non educational social missions as well, and have done so over the years.

A physician's education begins with medical school and can last many years, depending on the level of specialization the student seeks. The initial period of medical training, called undergraduate medical education, consists of instruction in basic and clinical sciences, typically lasts four years, and takes place in medical schools. Upon completion of medical school, all physicians who intend to practice medicine must complete a residency training program.

Required residencies generally last from three to five years and consist of applied clinical training in a discipline such as internal medicine, pediatrics, or surgery. After completing a residency, physicians can voluntarily seek advanced subspecialty training (fellowships), which can last up to three more years. The time physicians spend in residency training, both required and elective, is commonly referred to as graduate medical education (GME) and historically takes place in teaching hospitals. For this report, all those in GME training programs are called interns and residents or trainees.

Funding for both undergraduate and graduate medical education comes from various sources. Medical school education is supported primarily through tuition, revenues from clinical services and—in the case of public medical schools—state appropriations. Graduate medical education is funded through a complex web of internal cross-subsidies and explicit payments from governmentally administered health care programs like Medicare and Medicaid. The vast majority of government funds dedicated to GME (\$7.1 billion of a total \$8.5 billion) comes from the Medicare program.⁴

Before 1982, Medicare reimbursed hospitals on a retrospective, cost-plus basis. Extra expenses associated with GME and other AHC missions were included in the hospital's allowable costs, of which Medicare paid its share. When higher costs in teaching hospitals

became problematic in the 1970s, Medicare began to set limits on the amount paid to hospitals for inpatient services. In the Social Security Amendments of 1983, Congress replaced Medicare's original cost-based hospital reimbursement system with the prospective payment system (PPS), which was based on a flat fee for each of 467 diagnosis-related groups.

Medicare's payments to AHCs and other teaching hospitals for GME consist of two components. The first payment, called the direct medical education (DME) payment, covers Medicare's share of costs directly associated with operating intern and resident training programs. DME payments are based on a hospital-specific, per-resident amount. Direct costs include the salary and fringe benefits of interns, residents, and teaching physicians, along with other costs that can be directly related to the training programs.

The second component accounts for the relatively higher costs of patient care in AHCs and teaching hospitals. Allowances for the indirect costs of graduate medical education (IME) were made explicit for the first time in 1980, when Medicare instituted an adjustment to hospitals' cost limits for the higher operating costs associated with treating patients in hospitals with residency programs.

In addition to teaching expenses, the IME adjustment implicitly accounts for the portion of patient costs associated with the other core social missions of AHCs and the higher costs associated with the sicker-than-average patients who are more frequently treated in teaching hospitals. However, external support does not cover the full costs of all mission-related activities. For example, clinical research, research by young investigators, and dissemination activities are chronically underfunded and sometimes not funded externally at all.⁵

The IME adjustment is a percentage add-on to the amount that Medicare would otherwise pay the hospital for each Medicare patient it treats. The IME payment is related to the ratio of the number of full-time equivalent interns and residents to the number of beds. A hospital receives approximately 7.7 percent more for each 10 percent increase in the ratio. However, the adjustment is non-linear: a 10 percentage point change for a hospital with a low ratio has a greater effect on payments than a 10 percentage point change for a hospital with a high ratio.

Under the Consolidated Omnibus Budget Reconciliation Act of 1985, Congress added an explicit adjustment for disproportionate share hospitals (DSH) to provide relief for the higher costs incurred with serving large volumes of low income patients. An institution's DSH adjustment is based on the proportion of its Medicare hospital days used by patients who also receive supplemental security income and the portion of total hospital days utilized by Medicaid patients. Presumably, DSH hospitals serve many uninsured patients as well, although this number is not figured explicitly into the formula. The Medicaid program provides DSH payments too, though not necessarily to the same hospitals as Medicare.

AHCs care for other special patients besides the poor. These include patients who are severely ill, have unusual health problems, and need highly specialized treatment. Such care for these populations is often very expensive and not profitable. Services include burn units, regional trauma centers, and state-of-the-art equipment and personnel for the diagnosis and treatment of rare diseases. Society as a whole benefits when AHCs maintain this so-called standby capacity.

It was this notion of mission-related activities—teaching, research, specialized care, and innovative services—and their associated patient costs that the Congress had in mind when it initiated the indirect teaching adjustment. In practice and in intent, the IME adjustment is mislabeled, since it is supposed to support the full array of AHCs' missions.

Support for the educational missions of AHCs and other teaching hospitals has been questioned for several reasons. First, while pockets of physician shortages exist due to geographic maldistribution, the current supply of physicians is viewed as more than adequate to meet the nation's needs. Yet the number of physicians continues to grow. Second, many think there are too many specialists and that over-reliance on the care they provide needlessly drives up costs. About half of the physicians in most other industrialized countries are in primary care, compared with a quarter of the physicians in the United States. In this country, staff model HMOs also make much greater use of primary care physicians than do the traditional fee-for-service sectors.

The open-ended support Medicare pays for GME contributes to these problems. There is no limit on the number of resident physicians, either within a hospital or in aggregate, that Medicare will support. Thus, if the marginal cost of adding a resident is less than the payment Medicare provides, hospitals have a strong incentive to create more residency positions. The combination of Medicare's IME and DME payments per resident can be quite significant, according to a recent Congressional Budget Office analysis. While the exact amount varies by hospital, depending on factors like the intern and resident to bed ratio and Medicare's share of inpatient days, in 1993 at least one-half of all teaching hospitals received over \$80,000 from Medicare for adding a single resident.⁶

Given the size of Medicare's contributions to GME, any significant changes in the program clearly would markedly affect the training of physicians, the size and shape of the physician work force, and the institutions where physicians are educated. Moreover, any changes in the indirect component of GME payments to AHCs would impact the unreimbursed costs of their other social missions. Policy formulation should consider the future of all of these missions as the debate proceeds.

2. THE EFFECTS OF CHANGES IN THE HEALTH CARE SYSTEM ON AHCs AND THEIR MISSIONS

The ongoing transformation of the health care system poses serious challenges to the nation's academic health centers (AHCs). The rapid spread of managed care is changing how they operate in today's environment, and may deprive AHCs of support—both hidden and explicit—that has sustained those activities that distinguish them from other health care institutions. In crafting future public policy, understanding the current state of AHCs is key. Equally important is awareness of the hurdles they face.

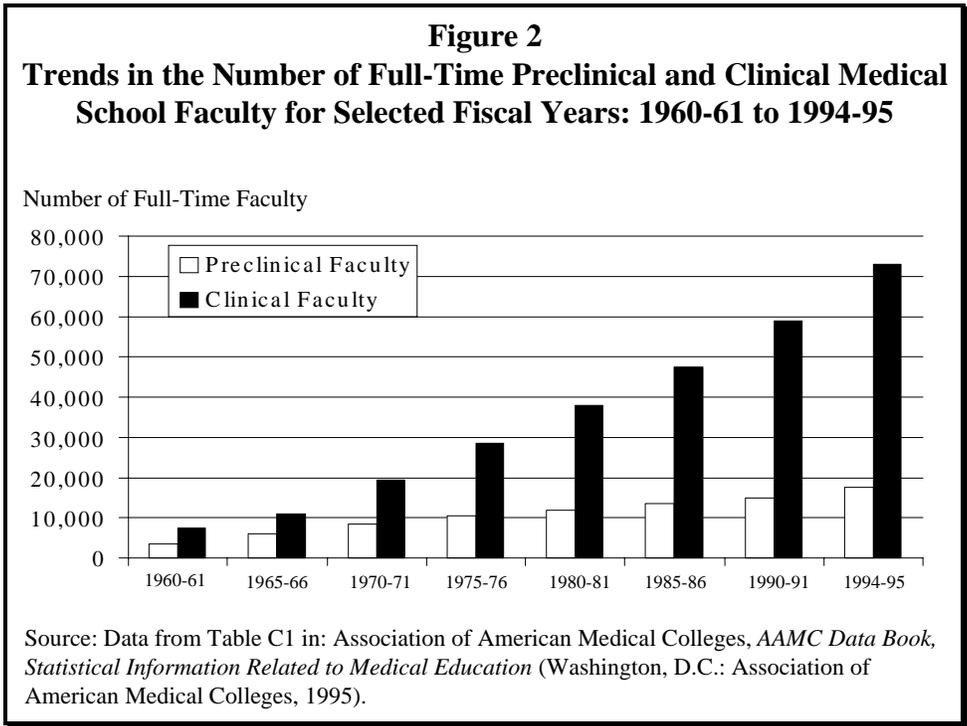
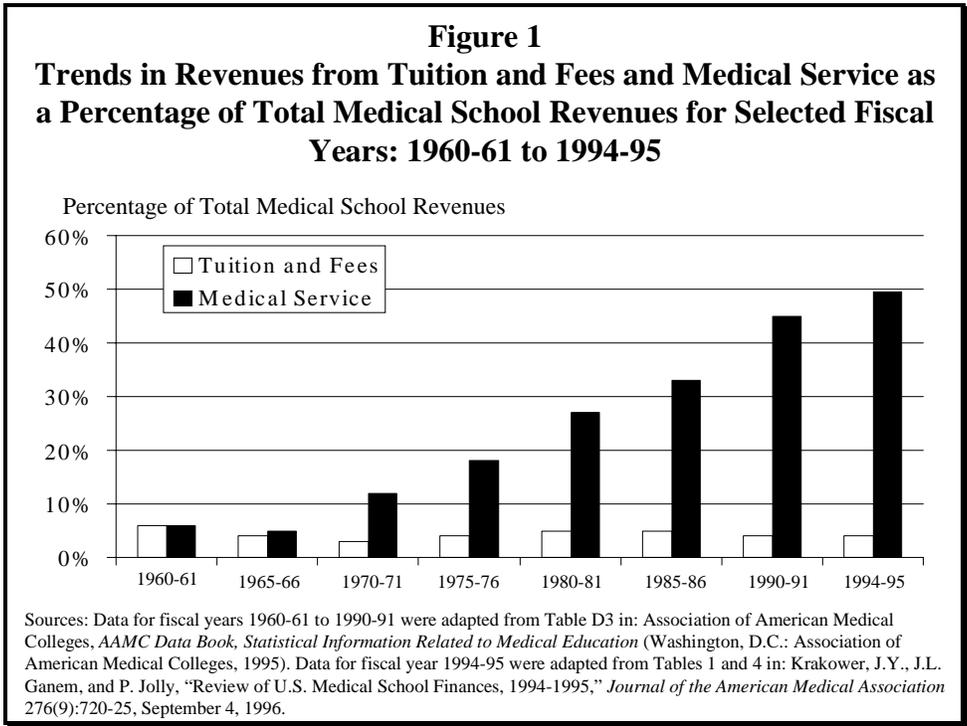
The Task Force's findings highlight the dependence of AHCs on clinical revenues to support their social missions and how these missions raise costs. The role AHCs play in serving vulnerable populations like the indigent is also an important factor in assessing their ability to compete in private markets and to carry out their social missions. Findings suggest that a greater burden of uncompensated care is making teaching hospitals and AHCs, especially those that are publicly owned, more dependent on Medicare and Medicaid, which makes pending decisions about these programs especially important to the future of their social missions.

Many AHCs are responding vigorously to their changing circumstances by undertaking major reforms in their internal management and organizational profiles. However, these responses may not be sufficient to level the economic playing field between AHCs and their non-academic community competitors as long as AHCs produce public goods and services of the type and quantity they have in the past. Thus, erosion of market share and revenue base is likely to continue to threaten the ability of AHCs to fulfill their social missions. Finally, to inform debate about the future of AHCs and their missions, the Task Force has developed new estimates of the aggregate national inpatient costs associated with AHCs' production of public goods and services.

Finding 1: Revenues from clinical services contribute significantly to funding academic health center mission-related activities.

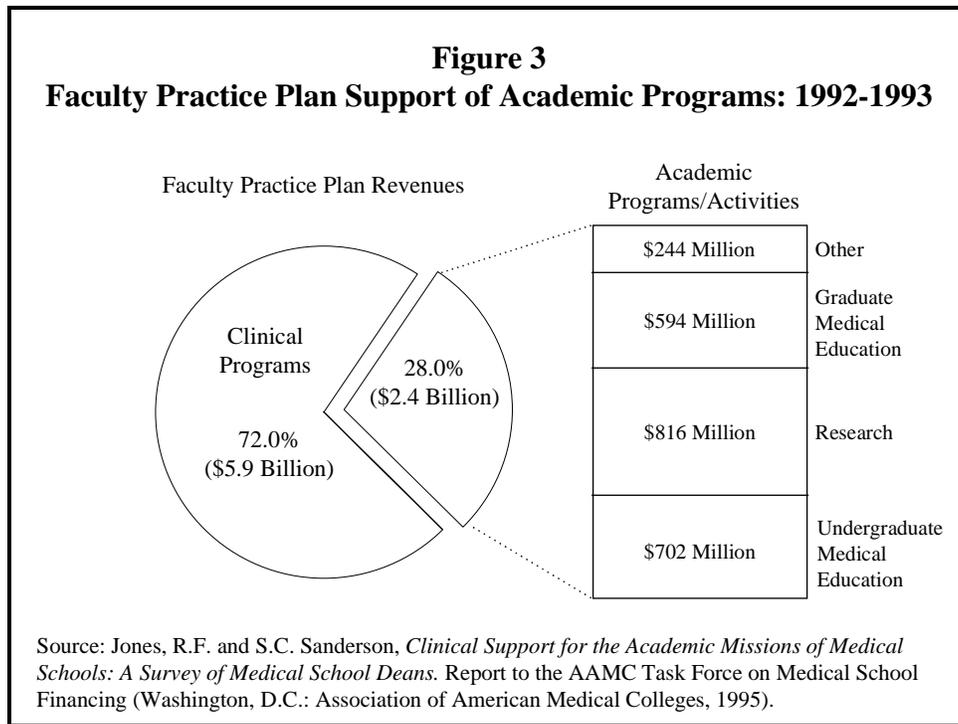
AHCs finance a significant portion of their missions through cross-subsidies from clinical revenues.⁷ The funding of the medical school component of AHCs best illustrates this point. Clinical services account for the bulk of total revenues of AHC hospitals and faculty practice plans—90 percent and 85 percent, respectively. Clinical income also accounts for a growing share of medical school revenues, increasing from almost 30 percent in academic year 1980-81 to 50 percent in 1994-95 (Figure 1). The number of clinical faculty, which

nearly doubled during this time, is primarily responsible for higher clinical revenues (Figure 2).



Nearly half of the \$30 billion in total medical school revenues is derived from three kinds of medical services. Faculty practice plans accounted for \$9.8 billion in academic year 1994-95; roughly \$4 billion came from funds transferred from affiliated hospitals; and \$1 billion came from contract services.⁸

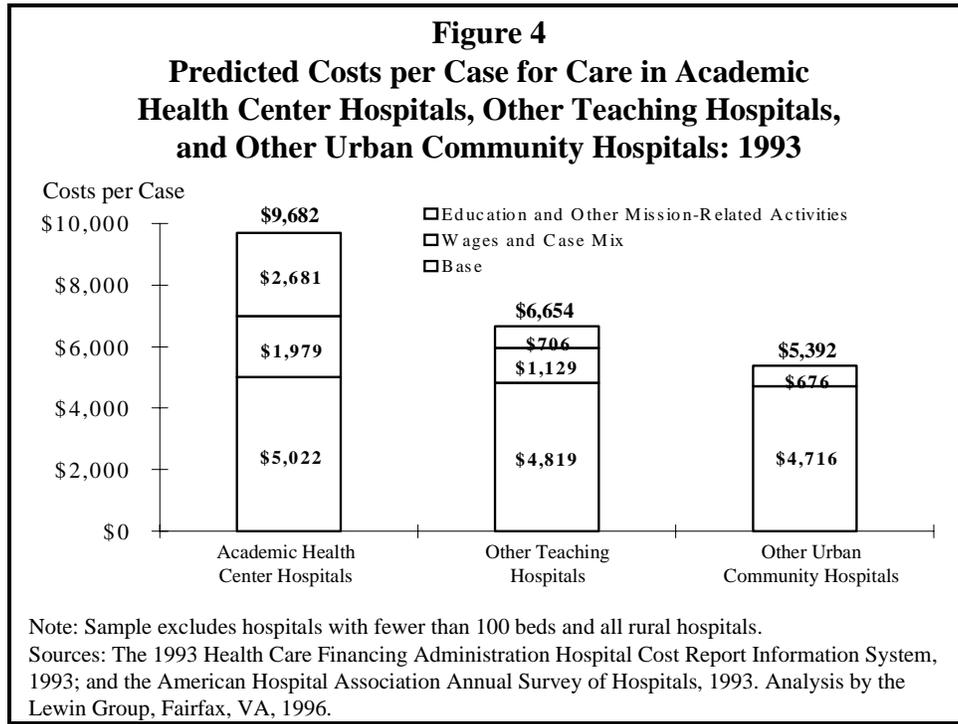
The amount of money from faculty practice plans that is used to support academic programs (as opposed to the clinical activities that occur under the auspices of medical schools) is substantial. The most recent available data are from a 1994 survey of medical school deans. They reported that about 28 percent of faculty practice plan revenues (\$2.4 billion) were diverted to academic programs in 1992-93 (Figure 3).⁹ These funds were allocated for research (\$816 million), undergraduate medical education (\$702 million), graduate medical education (\$594 million), and other academic activities (\$224 million).



Finding 2: Due at least partly to the fulfillment of their social missions, costs per discharge at AHC hospitals are significantly higher than costs at community hospitals. Medical training and clinical research create inefficiencies in the service delivery system that add expenses that cannot easily be segregated from the routine costs of care. The service-related missions of AHC hospitals—the provision of highly specialized services and innovation in patient care—impose additional costs. These expenses include the costs associated with treating more complex and severely ill patients and providing technologically advanced care. In the latter case, significant costs may be associated with maintaining standby capacity for unusual services.

Their higher costs put AHCs at a disadvantage in the competition for managed care

patients. For example, after accounting for case mix, wage differences, and other factors, the cost per case for mission-related activities averaged \$2,681 in 1993, or 28 percent of the total cost per case in AHCs (Figure 4). The higher prices AHCs charge are a disincentive for managed care organizations to use them, except for uncommon tertiary and quaternary cases, which constitute only 5 percent to 25 percent of the volume of most AHCs.¹⁰

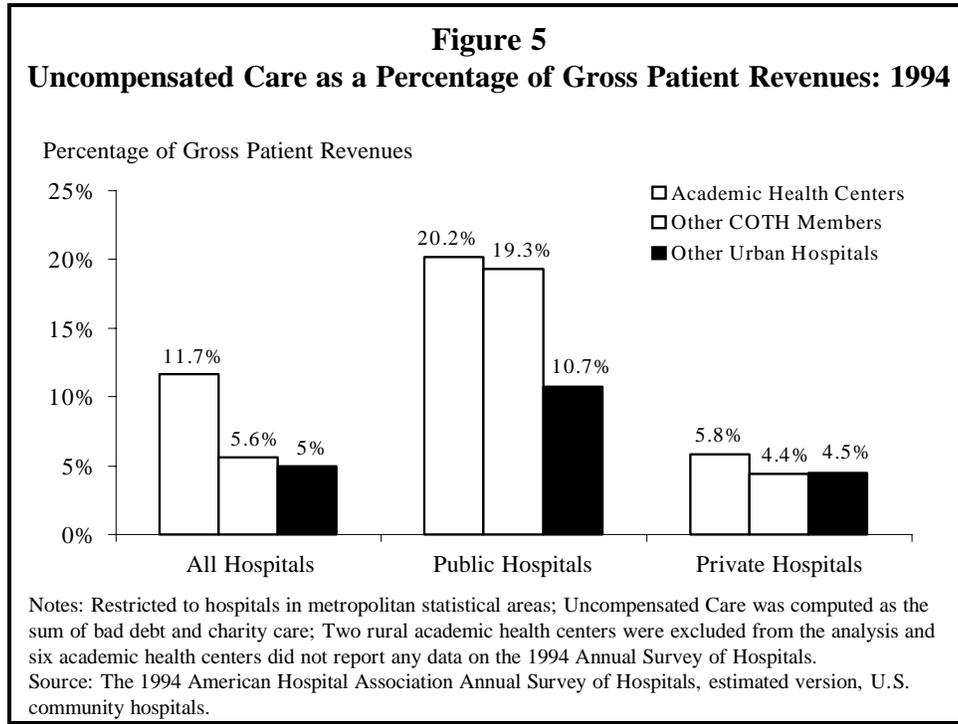


Finding 3: The uncompensated care burden shouldered by AHCs is increasing.

AHCs are shouldering a growing burden of uncompensated care (the sum of bad debt and charity care). From 1989 to 1994, uncompensated care rose by 26 percent in AHC hospitals, from 9.3 percent to 11.7 percent of gross patient revenues.¹¹ The growth in uncompensated care has not been the same in all sections of the hospital market and managed care enrollment may have been partly responsible in certain areas. In areas with high health maintenance organization (HMO) enrollment, for example, the share of uncompensated care borne by AHCs grew from 30 percent to 35 percent between 1985 and 1993, while that for AHCs in areas with low enrollment stayed constant.¹²

These changes may exacerbate the current maldistribution of uncompensated care among all hospitals.¹³ Although the figures for individual public and private AHCs vary considerably, AHCs provide more uncompensated care on average than other hospitals, regardless of ownership type (Figure 5). Public hospitals receive substantial subsidies from state and local sources, which partially offset their uncompensated care burden. Even so, the uncompensated care burden at government-owned hospitals is still higher than that of other comparable hospitals.¹⁴ Furthermore, public subsidies are shrinking. From 1980 to 1989,

government subsidies as a proportion of uncompensated care costs (for all hospitals) dropped from 29 percent to 20 percent.¹⁵

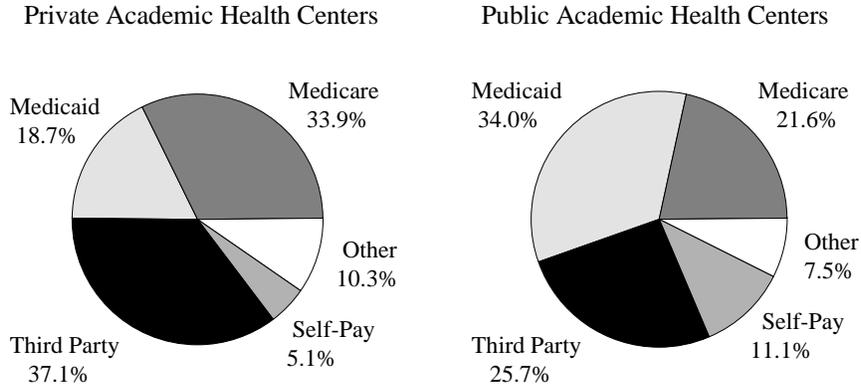


Finding 4: Academic health center hospitals depend heavily on Medicare and Medicaid funds and therefore are vulnerable to changes in public payment policies.

Over the years, AHC hospitals, like other hospitals, have grown increasingly dependent on patients with public insurance. For example, while the total number of admissions to AHC hospitals fell by 2.5 percent between 1989 and 1994, Medicare and Medicaid admissions rose by 14.3 percent. During this period, states significantly increased their Medicaid payments to hospitals through Medicaid disproportionate share policies. In 1994, Medicare and Medicaid together accounted for 47.6 percent of private AHC hospital revenues and 55.6 percent of public AHC hospital revenues (Figure 6). The proportions of Medicare and Medicaid patients discharged by other private and public community hospitals were 49.2 percent and 55.8 percent, respectively.¹⁶

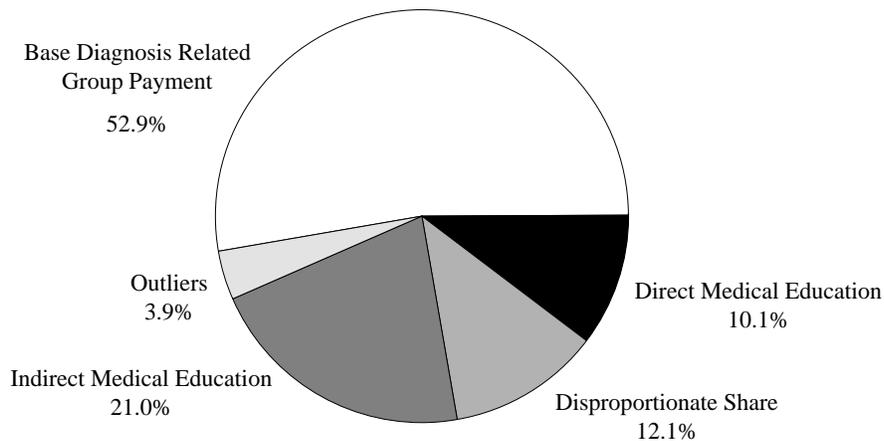
Various Medicare payment adjustments account for a significant share of the revenues that AHC hospitals receive from Medicare. Medicare operating payments are composed of the sum of regular diagnosis-related group (DRG), outlier, indirect medical education (IME), disproportionate share hospital (DSH), and direct medical education (DME) components. In 1994, the indirect medical education (IME) adjustment accounted for 21.0 percent; the disproportionate share hospital (DSH) adjustment, for 12.1 percent; and the direct medical education (DME) adjustment, for 10.1 percent (Figure 7).

Figure 6
Percentage of Net Patient Revenues for AHC Hospitals
by Source of Payment: 1994



Note: Two academic health centers were excluded from the analysis and six academic health centers did not report any data on the 1994 Annual Survey of Hospitals. Source: The 1994 American Hospital Association Annual Survey of Hospitals, estimated version, U.S. community hospitals.

Figure 7
Medicare Payment Adjustments to AHCs as a Percentage
of Total Operating Payments: 1994

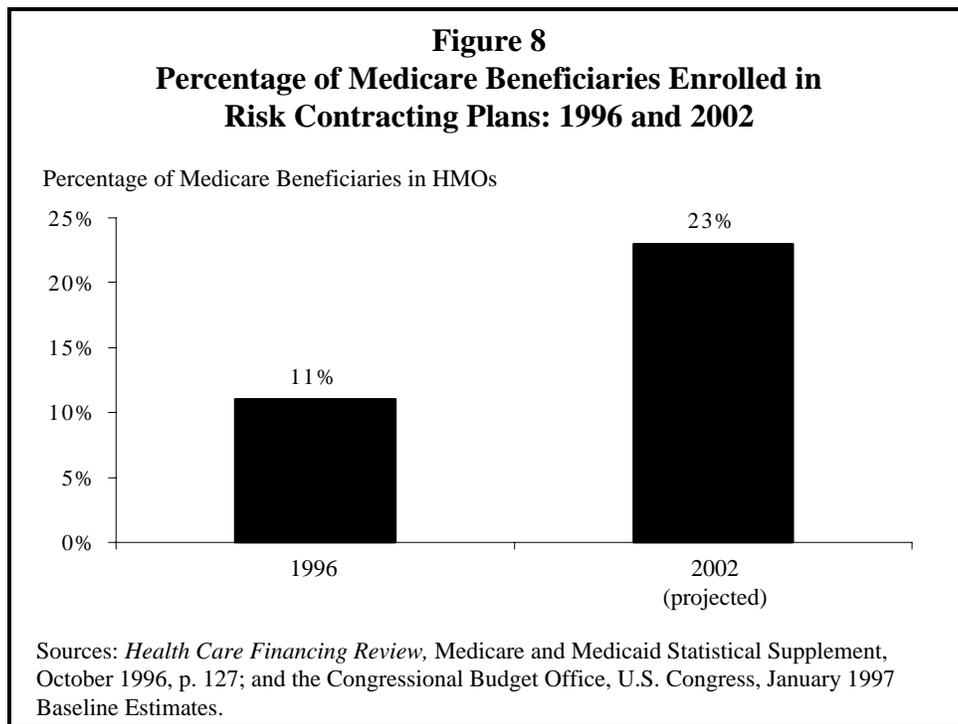


Sources: 1993 Medicare Cost Reports; and 1997 Health Care Financing Administration Impact File. Analysis by J. Reuter at the Institute for Health Care Research and Policy, Georgetown University Medical Center, 1996.

The importance of Medicare to AHCs is further illustrated by looking at hospital margins. Figures from the Prospective Payment Assessment Commission over the last ten years indicate that, of all hospital groups, major teaching hospitals (which include AHCs) have consistently had the highest margins for Medicare patients but the lowest ones for all

patients combined.^{17,18} This finding suggests that high Medicare margins have prevented chronic deficits from occurring in AHCs and other major teaching hospitals.

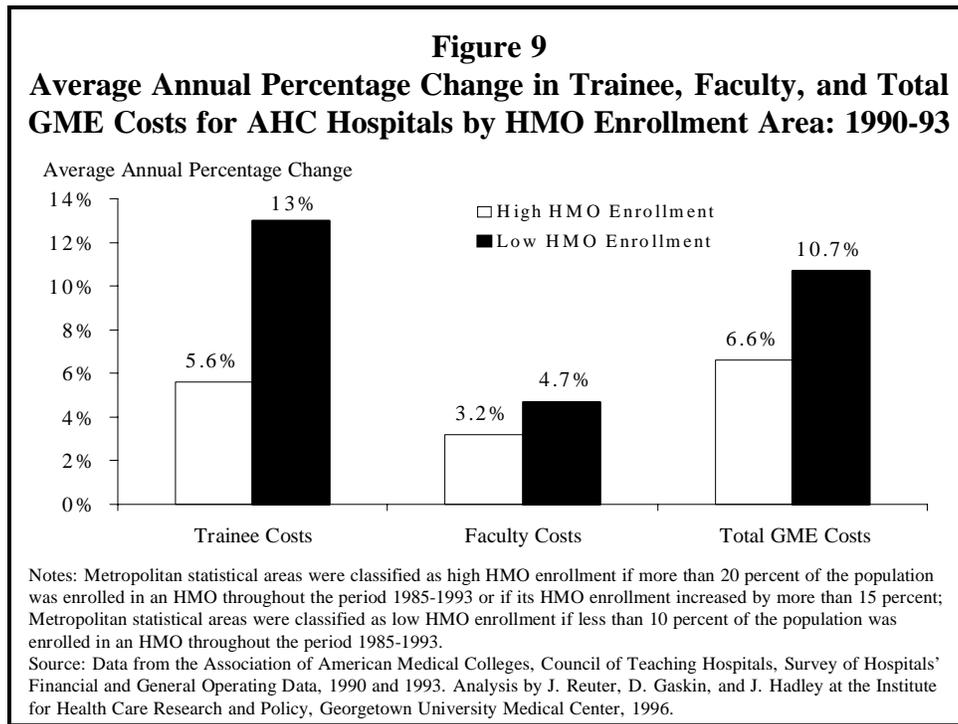
The reliance on public payers is underscored when the growth of managed care in Medicare and Medicaid results in fewer patients for AHCs. Although most Medicare beneficiaries are served by fee-for-service providers, the number of elderly people enrolled in HMOs is expected to jump dramatically during the next five years. In 1996, 4.3 million or 11 percent of Medicare beneficiaries were enrolled in a risk contracting plan. Even without a change in current policies, this figure is expected to grow to 23 percent by the year 2002 (Figure 8).



The Medicaid program has experienced similarly large increases in its managed care enrollment. From 1990 to 1996, the number of Medicaid beneficiaries in managed care plans skyrocketed from 2.3 million to 13.3 million, accounting for 40 percent of all beneficiaries.¹⁹ AHCs are concerned that managed care plans are siphoning off the profitable patients, leaving those with more complex problems to the care of teaching hospitals. In Tennessee, for example, following implementation of the Medicaid TennCare plan (the statewide initiative that enrolled most Medicaid beneficiaries and many of the uninsured in managed care), the number of annual births at one prominent AHC fell by half, from 8,000 to 4,000, leaving predominantly high-risk births at the AHC.²⁰

Finding 5: Missions of teaching and research may be affected in areas where managed care enrollment is high.

In 1993, total graduate medical education expenditures for AHCs in high HMO enrollment areas were 22 percent lower than in low enrollment areas, and the gap is widening.²¹ Between 1990 and 1993, the annual rate of growth for graduate medical education spending at AHC hospitals in markets with high HMO enrollment was 7 percent, compared with 11 percent for AHCs in markets with low HMO enrollment (Figure 9).



The ability of managed care organizations to divert patients from AHCs may be affecting the capacity of some institutions to pursue their training missions. The University of Texas teaching hospital in Fort Worth is but one example. Once the largest family practice residency program in the Southwest, the hospital recently lost its Medicaid managed care contract with the state and is being forced to cut slots. Applications to its program have dwindled. This scenario has been repeated elsewhere in the state, including at the Bexar County Hospital in San Antonio and at the University Medical Center Hospital in Lubbock, Texas. Because young mothers make up a major part of the Medicaid population, these hospitals also lost a significant portion of their obstetrical business.

It is difficult to say whether slower growth, or outright contraction, in AHCs' graduate medical education mission will have adverse societal effects. However, evidence suggests that market restructuring is affecting their institutional commitment to other missions, including research. While National Institutes of Health (NIH) research budgets at medical schools in areas with low and medium rates of managed care enrollment rose between 1990 and 1995, those at medical schools in markets with high managed care

enrollment experienced a decline in NIH awards (in constant dollars).²² As a result, their share of NIH dollars among research facilities also diminished.

Similarly, market competition seems to be affecting AHC faculty. In a 1995 survey, life science faculty at AHCs located in highly competitive markets reported lower rates of publication in peer-reviewed journals compared with their peers in less competitive areas.²³ Furthermore, young faculty at AHCs located in areas with heavy managed care enrollment reportedly had more patient responsibilities than their counterparts in less competitive markets.

Finding 6: AHCs are responding to changes in their environment by instituting major reforms in their internal operations and by controlling the growth in their expenditures.

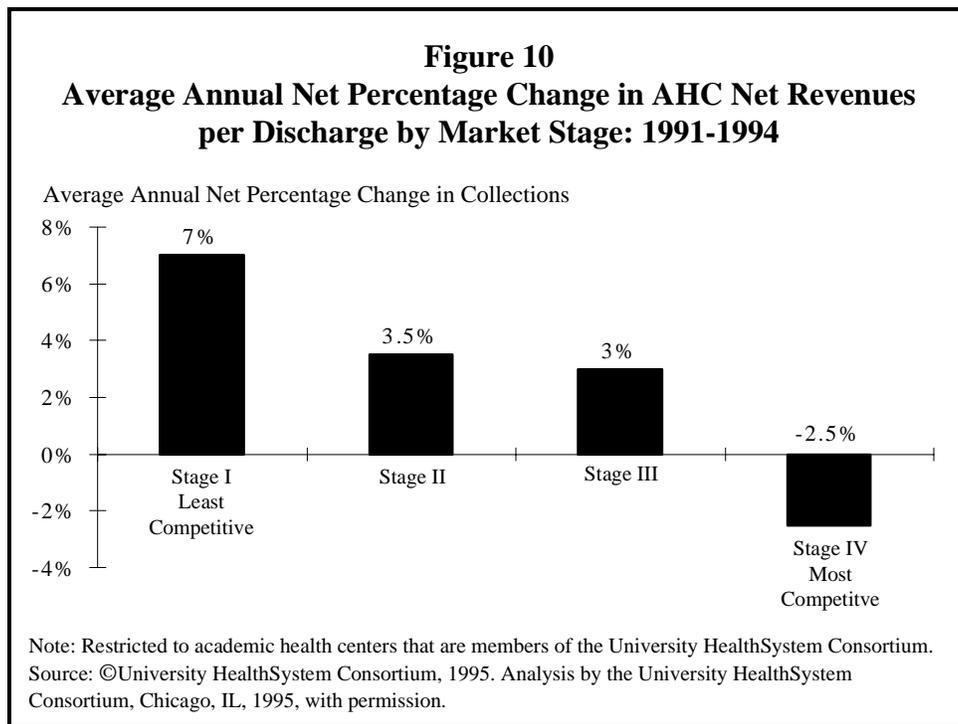
Faced with competition for patients and the pressure to reduce costs, some AHCs are overhauling the way they do business, and changing the face of academic medicine in the process.

Mergers are shrinking the number of AHCs nationwide. In Boston, for instance, the number of teaching hospitals has dropped in the last two years from seven to five, due to mergers of University Hospital and Boston City Hospital, and the Beth Israel and Deaconess Hospitals. In St. Louis, Barnes and Jewish Hospitals have merged and consolidated, creating a single teaching facility with a common campus. The teaching hospitals of the University of California, San Francisco, and Stanford University are merging. In New York City, Columbia Presbyterian Hospital (affiliated with Columbia University College of Physicians and Surgeons) is combining with New York Hospital (affiliated with Cornell Medical College).

AHCs are transforming themselves into integrated health care delivery systems with the ability to provide a full range of health care services and to bid for managed care business. From coast to coast, AHCs are building networks of community-based primary care providers and hospitals. The Partners HealthCare System in Boston (formed from the affiliation of the Massachusetts General Hospital, Brigham and Women's Hospital, and the North Shore Medical Center) illustrates this phenomenon. It now has a network of more than 700 primary care practitioners and contracts for over 200,000 capitated covered lives.

The Oregon Health Sciences University has detached itself from state government, formed a public corporation, and is recruiting primary care affiliates throughout the state.

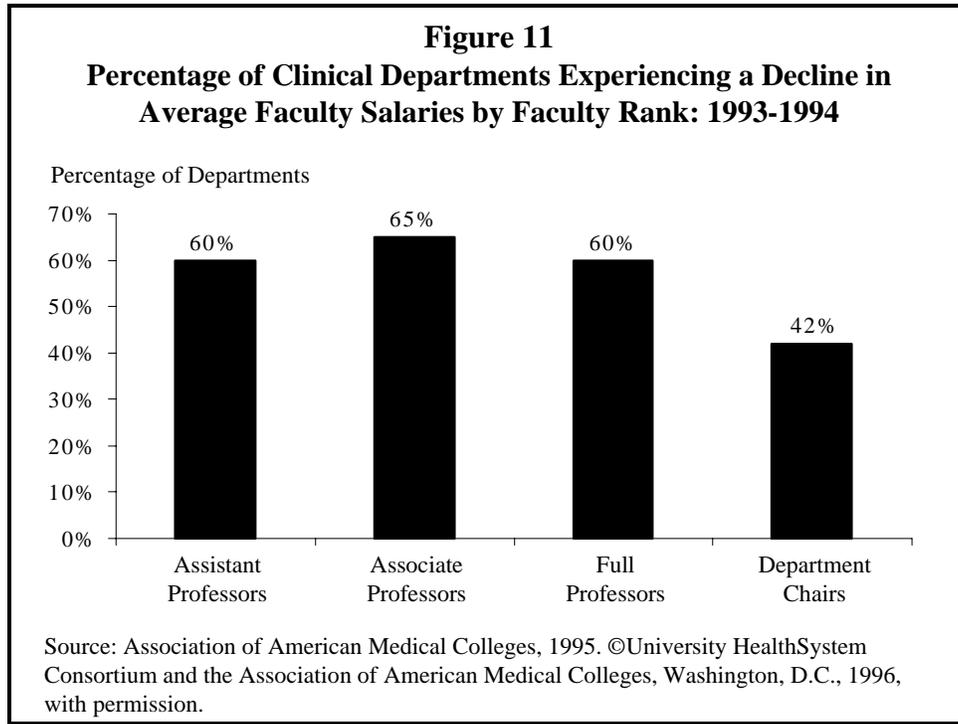
AHCs also are responding to competitive pressures by controlling expenses. That is evident in the change in their revenues per discharge (which generally track expenses closely) within markets at different competitive stages. Competitiveness can be characterized by the numbers of HMO enrollees, the rise in premiums, the consolidation of insurers, and other factors. Between 1991 and 1994, for example, revenues per discharge in AHC hospitals in the least competitive areas grew, on average, by 7 percent annually. They fell, on average, by 2.5 percent annually in the most competitive areas (Figure 10).



That teaching hospitals and medical schools are making important strides in reducing their expenses is also supported in recent case studies of 15 diverse AHCs, conducted by the Association of American Medical Colleges. Several teaching hospitals have shortened average length of stay so that it is now comparable to non-teaching hospitals, for example. Controlling costs has led to reductions in cost per discharge that in some cases are now only 10 percent to 12 percent above community hospital competitors, compared with 30 percent to 35 percent higher a few years ago.

AHCs are not limiting their cost-control strategies to the clinical arena. Strategies that were unthinkable a short time ago are being implemented to control medical school expenditures for social missions. These include reorganizing medical school and health center operations, developing new productivity standards, improving informational infrastructure,

consolidating departments, and creating interdepartmental teaching and research programs. AHCs are also not only linking salaries to performance but constraining them in general. During 1993-94, average salaries declined for at least some faculty in 65 percent of clinical departments (Figure 11).

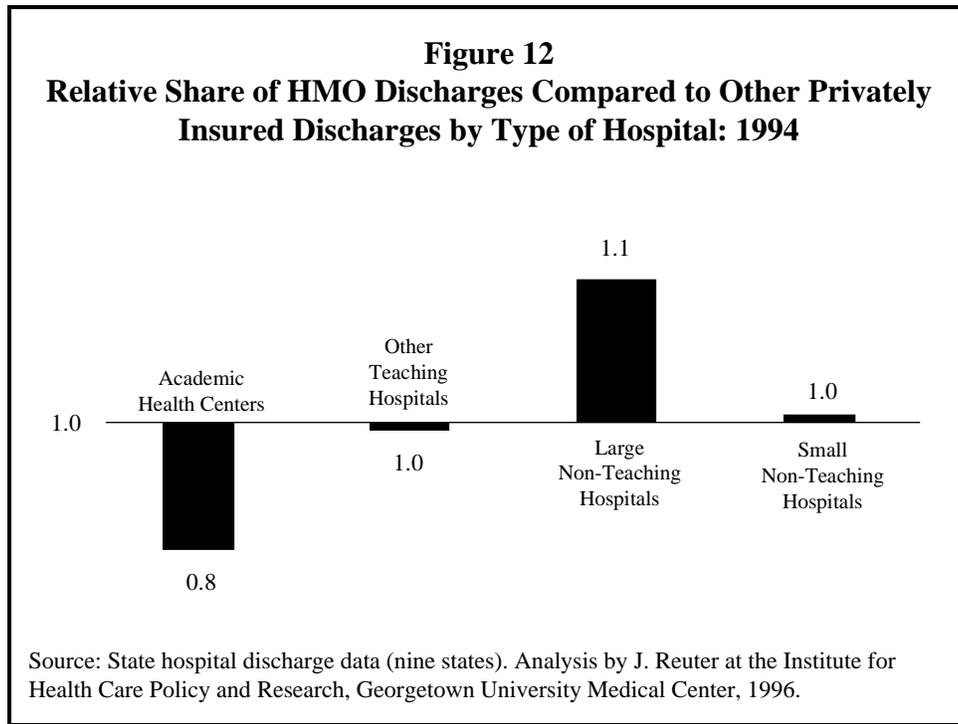


Changes like the ones discussed here may help AHCs become more competitive and enhance the efficiency and effectiveness with which they perform their mission-related activities. Many AHCs, however, will continue to be disadvantaged in the competition for patients insured by managed care. Faced with the added costs of social missions, AHCs are unlikely to lower their prices to the level of non-teaching facilities in their communities.²⁴ AHC hospitals' market share for patients insured by HMOs was only 80 percent of their share of the privately insured market generally, according to an analysis of discharge data for 24 metropolitan areas (Figure 12).²⁵ Without improving their position, some AHCs will continue to lose market share as enrollment in HMOs climbs beyond its 1996 level of 64 million.²⁶

Finding 7: Mission-related activities at all U.S. teaching hospitals, including AHCs, will cost approximately \$18 billion in 1997.

The most recent national estimate of the aggregate inpatient costs of teaching hospitals' missions is based on unpublished research by the Lewin Group. This work updates earlier

studies of 1993 hospital costs conducted for the U.S. Public Health Service and the Association of American Medical Colleges.



To estimate the added costs of inpatient care due to the participation of hospitals in academic programs, the Lewin models used data on nearly 5,000 hospitals from the Health Care Financing Administration's (HCFA) 1993 Hospital Cost Report Information System, the American Hospital Association, and the Area Resource File. The direct costs of graduate medical education were based on hospital-reported expenses.²⁷ A regression approach was used to estimate the indirect costs of graduate medical education for all inpatient hospital services. As noted earlier, the indirect costs represent a residual amount that presumably incorporates the costs associated with all social missions.

The Lewin models attempt to explain variations in costs associated with all patients, not just Medicare's, and include both payment and market-related variables. HCFA models generally incorporate Medicare case mix, wage effects, ratio of interns and residents to beds, and urban location. The Lewin models also consider the effects on hospitals' costs due to managed care enrollment, private payer case mix, staffing patterns, and other factors.

The 1993 all-payer estimates were updated to 1997 using the percentage change in the Consumer Price Index, All Urban Consumers for DME and the percentage change in Medicare estimated hospital payments between 1993 and 1997 for IME. Based on these calculations, the total cost of GME and other mission-related activities in 1997 is estimated to be \$18.1 billion (Table). The 109 AHCs incurred \$8.1 billion in total GME costs, while the

other 954 teaching hospitals accounted for the remaining \$10.0 billion.^{28,29}

Table
All-Payer Estimates of the Costs of Graduate Medical Education
and Related Activities: 1997

	Direct Costs (billions)	Indirect Costs (billions)	Total Costs (billions)
AHCs	\$2.9	\$5.2	\$8.1
Other teaching hospitals	4.3	5.7	10.0
Total	7.2	10.9	18.1

Source: Unpublished estimates by the Lewin Group, Fairfax, Virginia; 1997.

The Lewin estimate is consistent with others based directly on Medicare program payments. Using January 1997 baseline estimates from the Congressional Budget Office, Medicare will pay some \$4.6 billion for IME and \$2.5 billion for DME (including its share of the costs of allied health professions training). Medicare accounts for about 35 percent of all admissions and 43 percent of total inpatient days. Depending on whether days or admissions are used to extrapolate Medicare payments to all payers, the estimated direct and indirect costs of medical education in 1997 range from \$16.5 billion to \$20.3 billion. The Lewin estimate falls just below the midpoint of this range.

In summary, the influence of market forces on the mission-related activities of AHCs is uncertain, but worrisome. Higher costs place AHC hospitals at a competitive disadvantage when health care choices are driven by price. Managed care organizations reduce the clinical revenues of AHCs by demanding substantial price discounts, or by directing their members to less expensive providers, or both. The loss of patients may erode AHC revenues, while also reducing the supply of subjects available for clinical training and research.

Changes in Medicaid and Medicare payment policies could substantially affect AHC clinical revenues. Such public policy changes could affect AHCs in two ways: by scaling back support for graduate medical education and other missions, and by encouraging beneficiaries to enroll in managed care plans, causing the number of patients receiving health care at AHCs to dwindle further.

These factors are changing the way AHCs operate. Some AHC hospitals are responding by restraining costs, improving their efficiency, and becoming more responsive to local communities. These are positive developments that should not be inhibited by public policy. AHCs, however,

are unlikely to be able to compete on an even playing field with other providers as long as they bear the costs of their social missions. As a result, some of the premier teaching institutions are looking for ways to scale back their programs. The loss of patients and their associated revenue, compounded by a decrease in public support, could lead to a reduction in AHC mission-related activities. The critical question for policymakers is whether such potential reductions are desirable, and, if not, whether preserving the mission-related activities of AHCs requires a public policy response.

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3. RATIONALE AND PRINCIPLES UNDERLYING PUBLIC FINANCING OF THE SOCIAL MISSIONS OF ACADEMIC HEALTH CENTERS

The rationale for public funding of the mission-related activities of academic health centers (AHCs) rests primarily on the widely accepted economic concept that free markets fail to produce certain socially valuable goods and services (generally called public goods) effectively.³⁰ National defense is a classic example. Another is basic research. The social missions of AHCs are public goods and are unlikely to be undertaken in socially optimal amounts if allocation is left entirely to a market-based health care economy. AHCs' role in compensating for market failure by engaging in these missions is the major reason for their ongoing governmental support.

THE TRAINING MISSION OF AHCs

AHCs perform several training functions that have social value and entail added costs. But because these functions are public goods, their full costs cannot be recouped during the course of market transactions. Educating new physicians is the most visible training function.

Over time—and at the behest of government and the profession—AHCs have assumed quasi-regulatory roles that are intended to ensure the quality of medical care and protect consumers of that care. The perceived need for this quality assurance function originates in the fact that asymmetries of information exist between sellers of health care services (doctors, hospitals, and health care organizations) and purchasers (especially patients). Since medicine is a complex and highly technical field, health care consumers often rely on the professional integrity of physicians for decisions about their care. That makes patients much more vulnerable in their dealings with health care providers than consumers are in other market transactions.

Supported by the public, one solution policymakers have adopted to protect health care consumers is to regulate the training of physicians and other health professionals. The purpose is to ensure, insofar as possible, that all of these professionals have the knowledge and experience needed to practice their profession competently. It is generally accepted that acquiring this knowledge base requires a period of supervised involvement in patient care before and after graduation from medical school. Medical school accrediting agencies, governmental boards of medical licensure, and professional societies that certify physicians' credentials require that physicians participate in such training experiences.

Training increases the costs of producing health care services in several ways. The care delivered by residents is likely to be less efficient than that provided by fully trained health care professionals. Compared with non-teaching colleagues, teaching faculty are likely to see fewer patients because of their teaching activities. Teaching also entails administrative costs. Some observers maintain that trainees should be exposed to research and caring for

vulnerable populations at some time during their learning experience. Institutions like AHCs that conduct these activities bear certain added expenses in doing so.

For a variety of reasons, in a highly competitive market, institutions are unlikely to be compensated for the costs of training medical students and residents. Given the choice between a low-cost provider who

. . .freely functioning markets are unlikely to compensate institutions for the costs of training medical students and residents.

does not teach and an expensive one who does, most purchasers of health care services would choose the former and hope that someone else will invest in training an adequate supply of physicians and other health care professionals. If training institutions like AHCs could demonstrate that they offer a higher-quality product due to teaching, then they might be rewarded. However, the technology for measuring quality cannot yet document such differential quality.

AHCs play an important role in the training of physician researchers. Physicians who engage in basic research provide a critical link between taking discoveries from the laboratory and applying them at the bedside. Yet it is widely known that various forms of research tend to be underproduced in freely competitive markets. Since markets fail to reward research adequately, young physicians become discouraged from pursuing a career in research. Since research is vital, support for training skilled researchers is essential.

In the case of biomedical science, AHCs are well-positioned to conduct such training. Physicians who perform fundamental research have special insights into the relationships between basic research and the human ailments to which it is ultimately applied.³¹ Conducting clinical research also requires physicians with necessary skills and interests, and AHCs are uniquely suited to identifying and training such clinical researchers.

THE RESEARCH MISSION OF AHCs

AHCs conduct a disproportionate share—42 percent—of the health research and development in the United States.³² Basic biological research is a classic public good that is almost certain to be underproduced in private markets. Its need for public support is demonstrated by the ongoing bipartisan support in Congress of the National Institutes of Health, the primary supporter of basic biomedical research in the United States.

One reason that AHCs have assumed a prominent role in conducting such research is that its purpose is to develop knowledge applicable to human illness. Basic biomedical research is more likely to produce knowledge with practical benefits when potential users (physicians and other caretakers) participate in the research or interact with the investigators conducting it.³³ Such interaction occurs naturally and efficiently in AHCs, which have been able to attract and retain both fundamental investigators and physicians interested in translating new knowledge into new clinical applications.

The investigative work of AHCs extends well beyond basic research. It includes studies related to health outcomes, health services, and certain types of applied clinical research, all of which are likely to be undervalued and undersupplied in market conditions. Clinical, social, and behavioral investigation offers major potential public benefit but has little attractiveness in private markets, because existing intellectual property statutes do not protect the resulting intellectual property.³⁴

The conduct of clinical research is often subsidized by clinical revenues. The results of clinical research often are eagerly copied, but difficult to market. One example of undervalued clinical research is investigation into the refinement of surgical techniques. Another is the development of new diagnostic and therapeutic regimens that innovatively combine existing treatments, such as alleviating back pain through exercise or treating headaches using relaxation techniques. A third illustration relates to clinical trials comparing the efficacy of older, cheaper, off-patent generic drugs like niacin for treating high cholesterol with newer, costlier brand-name agents like Mevacor™ or Zocor™ that are still under patent.

THE PATIENT CARE MISSION OF AHCs

AHCs fulfill several social missions in the sphere of patient care. The policy rationale for supporting this activity varies somewhat, depending on the type of service provided. First, AHCs—especially publicly owned ones—provide a disproportionate amount of care to indigent and uninsured populations. The justification for public support of this function rests largely on considerations of equity. Some may argue, however, that many people who do not benefit directly from charity care value its availability, since they are comforted by knowing that such care would be available if they needed it. As a result, economists theorize that, left to their own devices, markets would produce less than the optimal amount of care (from a societal perspective) for vulnerable populations.

AHCs also provide disproportionate amounts of certain socially valuable but unprofitable services. These include highly specialized and complex trauma care, burn care, AIDS care, and intensive care for patients with multisystem failure. Though AHC hospitals constitute only about 2 percent of all non-federal community hospitals, they have 33 percent of the trauma units and 31 percent of the dedicated AIDS units. That care for these conditions is concentrated in AHCs reflects in part their ability to marshal the diverse, specialized, technical capabilities necessary for patients with these health problems. Since AHCs also train physicians to furnish such services, they need to attract patients who require them.

The availability of such services—sometimes called a standby capacity—has social value that markets fail to reward. Citizens attach value to knowing that the capacity to provide unprofitable care exists in case they need it. They also want to be assured that the supply of physicians capable of treating these conditions is being replenished. However,

these benefits are not captured in market transactions. If left to rely on markets to pay for these activities, AHCs are likely to reduce their involvement.

Obviously, AHCs provide many primary, secondary, and tertiary services that can be sold to paying patients and that are also delivered competently by non-teaching institutions. A compelling case can be made that to maximize efficiency and improve quality of services, or both, AHCs should compete with non-academic institutions for patients seeking more routine services.

Competition, however, may have unintended effects on the ability of AHCs to produce other kinds of goods and services that are ill-suited to distribution in free markets. The capabilities of AHCs to fulfill their core missions depend to some degree on their continued involvement in providing primary, secondary, and tertiary care.³⁵ Helping to provide primary and secondary care exposes physicians in training to a full range of medical problems and appropriate treatments. Clinical advances require that patients participate in clinical research. Efforts to disentangle what amounts to a joint production process (teaching, research, and patient care) have proved fruitless. Thus, even when AHCs' services seem similar to those of non-academic competitors, subjecting them to the rigors of competitive markets may entail side effects foreign to other sectors of the economy.

THE UNIQUE CONTRIBUTION OF AHCs TO THE HEALTH CARE SYSTEM

AHCs make another vital contribution that is difficult to quantify, but easily understood. In important ways, their work represents an investment in the future of America's health care system. They are in the business of ongoing innovation in health and medical services: continuously improving the skills of physicians and other health care professionals; making inroads in understanding the causes and cures for disease; and forging advances in drugs, devices, and technologies to treat illness and maintain health. Society has charged AHCs with applying new scientific information to improve human health.

AHCs' unique role can be readily demonstrated. Imagine a world in which ten years of unfettered competition in the nation's health care system had transformed the largest and most prominent teaching hospitals—institutions such as Johns Hopkins Hospital, Duke University Medical Center, University of Pennsylvania

Imagine a world in which ten years of unfettered competition in the nation's health care system had transformed the largest and most prominent teaching hospitals. . . into modest-sized community hospitals, or forced them to close altogether.

Hospital, Mayo Clinic, Massachusetts General Hospital, Columbia Presbyterian Hospital, University of California, San Francisco, and Emory Hospital—into modest-sized community hospitals, or forced them to close altogether. What would have been sacrificed in the process? The answer almost certainly includes the ability to train the next generation of physicians and scientists, to bring the fruits of research to the American people, to provide somewhere to go

for highly specialized care when all else fails, and—to some degree—the hope for a better health care system in the future.

ISSUES OF ACCOUNTABILITY

The social missions of AHCs have evolved, like most of the health care system, rather haphazardly. That is illustrated by the way in which AHCs finance their mission-related activities. Some of these are supported directly by an array of programs run by multiple agencies at many levels of government. The federal government supports biomedical research through the National Institutes of Health, the National Science Foundation, the Department of Defense, and the Department of Veterans Affairs.³⁶ Through Medicare, Medicaid, and other programs, federal, state, and local tax dollars fund indigent care in public and private hospitals affiliated with or owned by AHCs. The federal government also supports professional training through Medicare and direct grants to teaching institutions, while state governments provide for medical education through appropriations to public universities and Medicaid supplements.³⁷

AHCs have developed indirect mechanisms for funding goods and services difficult to produce in a free market economy. They have charged higher prices than community competitors and have used some of the resulting net revenues to subsidize training, research, and patient care missions.³⁸ Their ability to charge higher prices undoubtedly reflects in part the lack of past constraints on the pricing of health care products generally. As noted earlier, faculty practice plans spend an average of 28 percent of their revenues for mission-related activities.³⁹

The disparate funding mechanisms that stem from the haphazard evolution of AHCs' social missions have raised questions about whether these institutions have been held sufficiently accountable in their production of public goods and services. In using government funds, AHCs are at least nominally responsible through agency rules and regulations. However, many question whether the fragmented nature of support for the social missions has produced a suitable quantity and mix of goods and services in the most efficient way.⁴⁰ Furthermore, there are no explicit mechanisms for ensuring accountability in the way AHCs use the net revenues collected from selling private goods and services at higher prices than community competitors.

Critics believe that AHCs' lack of accountability has contributed particularly to distortions in the supply of physicians. The Pew Health Professions Commission has concluded that AHCs are training too many physicians for society's needs, though in fairness, public concerns about a physician shortage during the 1960s pushed AHCs in this direction.⁴¹ AHCs are also accused of influencing young physicians to become specialists, rather than primary care doctors, and thereby contributing to an imbalance between specialty and primary care in the United States.

There is a strong argument that future public funding of AHCs' social missions should be designed to make them more responsive to the needs of the society that supports their work. The requirement for greater accountability is particularly pressing in the area of physician training, but extends to other missions as well. AHCs must understand that an implicit social contract governs the public's investment in their mission-related activities. The public supports AHCs not because they are inherently deserving, but because they serve public purposes in the areas of teaching, research, provision of highly specialized services, and innovation in patient care. The managers of the public's money expect and deserve evidence that AHCs not only are discharging these public purposes effectively, but also are trying to become more efficient and responsive.

AHCs must understand that an implicit social contract governs the public's investment in their mission-related activities. The public supports AHCs not because they are inherently deserving, but because they serve public purposes in the areas of teaching, research, provision of highly specialized services, and innovation in patient care.

The pressure on AHCs to demonstrate that they are meeting public expectations is especially intense now that changes are rocking the health care system. This is a time when non-academic health care providers are required to re-engineer themselves—forming integrated health care systems, adopting protocols and guidelines, measuring the quality of their care, and adapting to new information systems. AHCs can hardly expect to be immune from public scrutiny and demands for reform. Can they train health professionals more efficiently than they have in the past, and train them better for the next century of practice? Can they conduct clinical trials faster and cheaper without sacrificing the quality of their research? Are they overcoming internal bureaucratic obstacles to collaboration and coordination across disciplines and specialties in biomedical investigation and in providing specialized services?

Equally important, changes in the health care system are challenging old assumptions about whether AHCs are always the preferred institutions for conducting the mission-related activities they have traditionally provided. Though infrequently involved in research and training up to this point, managed care organizations have growing appeal as sites in which to conduct many of these activities. Increasingly, they have the patients needed for clinical trials and the information systems necessary to conduct outcomes research, clinical epidemiology, and quality improvement activities. Managed care plans also have the ambulatory settings required to train physicians for the 21st century.⁴² Should managed care organizations seek access to public funds supporting these mission-related activities, they may offer formidable competition for AHCs in the future.

AHCs not only must demonstrate their effective use of public support, but also must re-engineer and reorganize their internal operations to improve the efficiency and

effectiveness of their mission-related activities. Rather than being entitled to protection from market forces, AHCs must earn that support through demonstrated accomplishment.

PRINCIPLES GUIDING THE TASK FORCE'S RECOMMENDATIONS

The findings discussed here led the Task Force to embrace several principles that helped guide its deliberations. These principles recognize that AHCs provide valuable social missions worthy of public support; that public policy should level the playing field; that broad-based financing is needed; and that financing mechanisms must not cause market distortion.

Principle 1: The social missions of AHCs have intrinsic value for society, will not be financed optimally in a competitive marketplace, and deserve public support.

Nevertheless, public policy should not shield AHCs or other entities receiving public funds from the need to compete, where appropriate, with other health care providers on the basis of price and quality. Such protection would unduly favor training institutions. However, the fact that AHCs produce public goods should not put them at a competitive disadvantage either. That concern leads to the following principle.

Principle 2: The goal of public policy should be to level the economic playing field for AHCs and other training institutions; that is, it should enable these facilities to fulfill their social missions, including graduate medical education, while competing with others on the basis of price and quality.

Government should seek broad methods of financing to support the social missions of AHCs. Society generally is best served when those who gain from a particular good or service pay for it. In the case of public goods and services, society at large benefits. Having a well-trained corps of physicians and other health care providers, taking advantage of developments in science and technology, and delivering highly specialized services for the unfortunate few who need them contribute to the well-being of all citizens. It is these very goods and services that AHCs provide. Bearing that in mind leads to the following principle.

Principle 3: Methods of financing the social missions of AHCs should distribute the burden of payment broadly and equitably among those who benefit from them.

Changes in government programs can have unintended consequences for the organizations and people affected by those programs. Policy solutions should not create perverse incentives that would make health care markets less efficient.

The composition of the physician work force illustrates this. There is growing evidence of a glut of physicians in many areas, a problem exacerbated by an

overabundance of residency slots.^{43,44} The situation is aggravated by the growth in the number of international medical graduates training in AHCs, resulting in an excess of trainees.

Furthermore, too many trainees of all backgrounds are selecting careers in subspecialties, skewing the distribution of physicians toward areas other than primary care despite an alleged shortage of doctors in that field. Even though this trend seems to be changing today, with more graduates selecting primary care, the overall number of first-year residency positions still exceeds national requirements. To address these problems, the Task Force adopted the following principle.

Principle 4: Methods of financing the social missions of AHCs should introduce as few distortions as possible into health care markets. In particular, public policy toward graduate medical education should not contribute to regional oversupply and specialty imbalance among the physician work force.

These principles constitute the foundation on which the Task Force has built its recommendations, which follow in the next section of the report.

4. RECOMMENDATIONS: LEVELING THE PLAYING FIELD

In fashioning its recommendations, the Task Force has sought to build on the findings and principles expressed here. As more data become available, it will offer additional policy recommendations and may refine current ones. The Task Force believes, though, that the following recommendations are responsive, responsible, and flexible enough to be useful in the current policy debate.

CREATING A TRUST FUND TO FINANCE THE SOCIAL MISSIONS OF ACADEMIC HEALTH CENTERS

A new funding stream should be established that is independent of the pricing strategies of managed care plans and academic health centers (AHCs), and that allows a linkage between public support and the achievement of public policy goals.

Recommendation 1: Establishing the Academic Health Services Trust Fund

A broadly financed pool, to be called the Academic Health Services Trust Fund, should be established to provide a stable and adequate source of dollars to pay for the higher costs of patient care associated with the social missions of AHCs and teaching hospitals. The amounts Medicare now pays for the direct and indirect costs of medical education should be transferred into the trust fund for distribution.

The traditional methods of financing academic health center missions have resulted in a complex web of external and internal supports, based partly on higher charges for patient care. In today's market, providers involved in training, research, and the provision of highly specialized or innovative services—including AHCs and

other teaching hospitals—will likely lose patient share or pursue these missions less vigorously, or both. Another problem is that traditional funding mechanisms have lacked systems to make AHCs accountable for their use of these monies. For example, individual institutions determine how many or what kinds of physicians should be trained, often without considering the needs of the community or the marketplace. As a result, these decisions do not necessarily reflect broader social needs.

The Task Force believes that, secure in the knowledge that public goods are protected, managed care organizations will feel free to negotiate even lower prices from AHCs, thus accelerating AHCs' efforts to improve internal efficiencies.

The proposed Academic Health Services Trust Fund would significantly reduce the need for AHCs and other teaching hospitals to cross-subsidize their missions through patient care revenues. By creating an alternative, explicit source of support, teaching institutions would be able to compete on an equal basis with the other hospitals in their communities. Health maintenance organizations (HMOs) would negotiate with AHCs for the provision of

routine services based on price and quality alone, thus accelerating AHCs' efforts to improve internal efficiencies. Further, funding agencies would have more opportunities to promote accountability.

The idea of a separate pool for financing graduate medical education (GME) and other social missions has been proposed previously. An academic trust fund was proposed by the Clinton Administration in 1993 and by Republican members of Congress in 1995.

The Task Force does not specifically endorse these or any other specific proposals. However, leveling the playing field by providing an alternative to patient care revenues for financing the social missions of AHCs and other teaching institutions addresses the problems created by financing missions out of patient care revenues in a competitive market. While creating a trust fund would go a long way toward achieving the desired leveling effect, case-mix adjustments need to be developed to prevent adverse selection without fair compensation for AHCs and their competitors.

THE STRUCTURE AND FINANCING OF THE TRUST FUND

The creation of a pool to finance the social missions of AHCs raises several related issues. The size of the pool and methods for financing it would have to be determined. Additionally, a means for distributing the funds would have to be devised. Finally, some mechanism for modifying trust fund policies over time would need to be developed.

Recommendation 2: Funding Sufficient to Support Social Missions

Public policy should support the nation's current capability to produce valued public goods and services in the areas of training health professionals, biomedical research, highly specialized health care services, and innovation in patient care. In the area of training, though, support should be commensurate with a decrease in new trainees to 110 percent of graduates from U.S. medical schools and schools of osteopathy. The amount placed in the trust fund should be updated annually to reflect inflation and other changes in the direct and indirect costs of medical education and other social missions.

At this time, there is no precise way to measure the financial burden imposed on the delivery of routine patient care by AHCs' social missions. Medicare calculations of the direct expenses of graduate medical education are based on historical costs using Medicare concepts and principles. The indirect effect that these missions have on patient care costs is estimated as a residual amount in a regression model. In other words, indirect expenses are estimated as the additional costs per case of inpatient care after all known relevant factors (such as direct costs of education, area wages levels, and case mix) are considered.

On the basis of the Lewin Group's work, the Task Force estimates that the national total for the direct and indirect costs of GME and AHCs' other missions will be approximately \$18 billion in 1997. This estimate has several limitations. First, it reflects only the direct costs borne by general acute care hospitals and the indirect costs associated with

inpatient care in these institutions. Expenses incurred in children's hospitals or in hospitals owned and operated by the Department of Veterans Affairs are not included. Allowing for the costs in children's hospitals alone would inflate the Lewin estimate by about 5 percent, or \$900 million. Second, the estimate assumes that costs reflect efficient producers. If hospitals or training programs became more or less efficient, these estimates would change. Third, the estimate is based on the 104,000 residents trained in 1993 and would change, depending on the actual number of trainees. The Council on Graduate Medical Education (COGME), for example, has recommended reducing the number of first-year residency positions by about 20 percent and training fewer specialists.⁴⁵

Finally, the estimate reflects the current allocation of training efforts between inpatient and outpatient settings. Increasingly, though, training is shifting to outpatient sites of care. That trend could be accelerated if the mix of specialties included a higher share of primary care trainees. Training in outpatient settings is thought to be less efficient than that in inpatient sites. There are, however, no data to estimate the potential effect of this change. While expenses related to inpatient services presumably would go down, whether total training costs would change is unknown.⁴⁶

A pool of approximately \$15 billion in 1997 would provide sufficient funds for AHCs to continue performing their missions at current levels, yet enable them to compete fairly in the market for patients. The \$15 billion figure reflects a 20 percent decrease in the number of first-year residents to 110 percent of the number of current graduates from U.S. medical schools and schools of osteopathy.

Several factors were considered when estimating how a 20 percent reduction in trainees would affect the level of financing required. First, if reductions were made based on COGME recommendations, far fewer specialists would be trained. That would shorten the average training period, leading to a greater decline in the total number of residents at any given time and in the related costs for any single year. Second, total costs would depend on how the reductions were allocated across existing institutions. For example, the cost implications of closing selected programs and concentrating positions in fewer institutions, rather than spreading reductions evenly across all institutions, may be different. Third, payments for the direct expenses of training in outpatient settings should be made. Because these costs are not included in current estimates of Medicare GME spending, they would constitute an added amount that annual payments to teaching facilities would have to accommodate. Finally, the assumption of linearity attributes all the indirect costs in AHCs and teaching hospitals to their training activities. Indirect costs, however, also reflect undergraduate training, research, and the other AHC missions that drive up patient care expenses. Trimming the resident pool would not necessarily change the costs associated with these social missions.

Considering these factors, the assumption of a direct relationship between the number

of trainees and the cost of AHCs' mission-related activities may be inappropriate. The Task Force estimates that a 15 percent reduction in total current spending for the direct costs of graduate medical education and the indirect costs of mission-related activities would be appropriate to allow for downsizing training activities at AHCs and other teaching hospitals. The estimated \$15 billion reflects this 15 percent reduction.

The amount placed in the trust fund should be adjusted annually to reflect changes in the activities of AHCs and other teaching hospitals, and to keep pace with inflation. A proposed Academic Services Payment Review Commission (ASPRC) would provide annual recommendations on the financing required to support the missions of these hospitals as they changed.

Adjustments for inflation are another matter, however, since there is no index that accurately measures how these costs might rise. An appropriate rate of growth in trust fund payments should reflect more than just increases in underlying expenses, such as wages or hospital input cost factors. It also should account for greater efficiency in training programs, changes in the number of residents and the average length of their training period, and changes in inpatient service use. Until a more appropriate index can be devised, the amount deposited into the fund should be increased each year by the percentage change in the CPI-U. In addition, the commission should annually recommend to the Congress an appropriate level for the update percentage.

Market forces are beginning to affect both the number and mix of specialties being trained. The Task Force does not support policies that would explicitly regulate or allocate residency positions. Nonetheless, to the extent that broad social financing is provided, the amount available should be limited to what is needed to best meet current estimates of the nation's physician work force requirements.

Recommendation 3: Financing the Trust Fund in a Broad and Equitable Manner

The trust fund should be equitably financed through contributions from Medicare, Medicaid, and all private payers (including health insurers and self-insured employer-based plans) or from the allocation of general revenues.

Four sources account for the estimated \$18 billion to be spent in 1997 for the costs of the social missions of AHCs. Three of these make explicitly designated payments. Medicare will contribute \$7.1 billion for the direct and indirect costs of graduate medical education.⁴⁷ Some Medicaid programs also make explicit contributions for the costs of graduate medical education, estimated at \$1.4 billion in 1997.⁴⁸ State and local government contributions earmarked for medical education will go to teaching hospitals, including some AHCs. For 1997, this amount is estimated to be \$220 million.⁴⁹ About \$9.4 billion is not explicitly funded, but will come from patient care revenues hospitals receive from private health plans and other private payers.

In the future, the financing of AHC missions should be broadly and equitably distributed among those who benefit. Any proposals to do this must consider the issues linked to restructuring public support for AHC missions at a time of concern over budget deficits and keen competition among health plans and providers.

Several potential sources of funds could be used to finance the pool. One option would be to require all payers to contribute by instituting an assessment, or tax, on private health plans for their fair share of the costs of AHCs' missions. Combined with contributions from Medicare and Medicaid, these revenues would spread the burden across a broad segment of the population. Only the uninsured would not contribute to the pool. The monies in the trust fund could be allocated by basing Medicare's and Medicaid's shares on what is now coming from on Medicare IME and DME payments and state Medicaid GME contributions, estimated at \$8.5 billion in 1997. Total annual private health insurance costs in 1997 are about \$339 billion.⁵⁰ Therefore, a 2 percent tax on health insurance premiums could provide the additional monies needed to finance the pool. The relative contributions from each source could be modified, so long as the total summed to the aggregate amount needed to finance the fund.

Conceptually, an assessment on health plans would not divert new funds to support the missions of AHCs. These missions are already supported, in part, through the higher prices that AHCs and other teaching hospitals charge for patient care. The intent is to replace the implicit funding of missions through higher prices with explicit funding through direct contributions. Presumably, to the extent that explicit funding were available, providers would be able to offer—and insurers could negotiate—lower payments for patient care services. Plans that have avoided paying their share of AHC mission-related costs would see their total costs increase. Those now paying more than their share would experience a reduction in their total costs.

An all-payer financing scheme is subject to certain limitations. First, it is not clear how to capture the funds contributed by Medicaid or state and local governments. Some states do not provide Medicaid GME support and would resist efforts that imposed new requirements. Among those that do, the amounts of these contributions and the methods for making them vary by state in ways that are not well understood. While federal Medicaid matching funds could be directed to the fund, doing so equitably is a challenge. If the trust fund is financed solely from payers' contributions, Medicaid should be treated like all other payers and should contribute its share. However, additional policies would be needed to implement this aspect of the financing.

Second, like all excise taxes, the all-payer approach is inherently regressive. With an all-payer premium tax, the poor would contribute a higher share of their income than wealthier people. Similarly, costlier plans would contribute more to the trust fund than less

expensive ones.

Another strategy for financing the pool would use federal general revenues to partially fund a proposed Graduate Medical Education and Teaching Hospital Trust Fund. This approach was included in the Balanced Budget Act of 1995. Medicare's share of the financing—what it would have paid for the direct and indirect costs of graduate medical education—would have provided the rest. The primary advantages of using general revenues are that it spreads the burden most broadly across the entire tax-paying population and has the progressive characteristics of the income tax system. However, using general revenues would compete with other programs as budget deficit reduction policies place limits on total discretionary spending in future years.

Concern with the breadth and equity of any financing mechanism suggests an approach that relies at least partly on general revenues. However, other considerations—especially sensitivity to the federal budget deficit—argue for an approach that incorporates payments already allocated to the support of the social missions of AHCs. These include payments built into the current Medicare and Medicaid programs, and the implicit support already provided by private health plans.

Recommendation 4: Redirecting Payments from Medicare's Adjusted Average Per Capita Cost Health Plan Payment System

Medicare payments to the trust fund should include the Medicare graduate medical education funds now incorporated into payments to risk contracting plans through the adjusted average per capita cost.

Medicare pays health plans participating in its risk contracting program a monthly amount per Medicare enrollee that equals 95 percent of the adjusted average per capita cost (AAPCC) of treating all Medicare beneficiaries in that market. The AAPCC is intended to reflect the expenses that Medicare would incur had a beneficiary not enrolled in the managed care organization. The AAPCC includes Medicare payments to AHCs and other teaching hospitals for the direct and indirect costs of graduate medical education and other mission-related activities. Thus, both the AAPCC and the per capita payments to HMOs are higher in areas with AHCs and other teaching hospitals. Risk plans will receive a total of \$692 million in 1997 due to the inclusion of these activities in the AAPCC payment.⁵¹

Plans now have no incentive to pay higher prices to support the social missions of AHCs. Risk plans are expected to negotiate prices with providers to control their own costs, consistent with the goal of maintaining quality of care. The Task Force believes that payment for the costs of AHCs' social missions should be divorced from negotiations between providers and health plans.

The trust fund is based on a premise that all AHCs and other teaching hospitals

should be able to negotiate prices and contracts with plans without considering the effect of their teaching and research programs on the costs of providing routine patient care services. Including funds now provided via the AAPCC is consistent with the principle of leveling the playing field by allowing these institutions to compete with other providers for managed care plan patients.

While the pool should be established and fully funded, the recommendation to remove from the AAPCC Medicare's GME payments should be adopted whether the trust fund is established or not.

Recommendation 5: Direct and Indirect Payments

Separate payments should be made for the direct and indirect costs that the social missions of AHCs and teaching hospitals impose on the costs of patient care. Payments for the direct costs of medical education should be made on a per-resident basis. Payments to hospitals for the indirect costs of medical education and other social missions should be linked to each treated case.

Ideally, the valuable social missions of AHCs should be financed directly. Realistically, though, it is hard to disentangle the costs of carrying out these missions from the costs of providing patient care.

The distribution of payments from the proposed trust fund should be used to level the playing field for providers engaged in education and research. Under the trust fund, the direct and indirect costs that AHCs incur in furnishing patient care would be paid for separately. For the direct costs of graduate medical education, funds would be allocated in a manner similar to the process now used by Medicare. However, payments would be based on a uniform national rate per resident, adjusted for local differences in wages, rather than on institution-specific historical costs.

For the indirect costs of mission-related activities, payments should be made to patient care institutions on a per-case basis. Ideally, that amount should reflect higher patient care expensed due to all the various missions of AHCs. The formula for determining the payment amount should reflect both the intensity of the GME programs (as it does under existing Medicare policy) and activities related to undergraduate medical education, research, and other missions. Ongoing studies are examining the contribution of each of the social missions of AHCs to patient care costs. Until these studies are complete and a better formula is developed, the trust fund revenues should be distributed using a formula identical to the one Medicare uses to determine its IME adjustment.

Under this approach, payers would continue to negotiate prices with providers. AHCs and other teaching hospitals would be able to participate in negotiations, knowing that they would receive additional trust fund payments for both the direct costs of medical education and the indirect costs of their other missions. The distribution of payments from the trust fund

would forge a link between the value that society places on these products and the financing of their production. Over time, the funds distribution formula could be altered to reward those institutions that further policy goals related to the number and mix of physicians, the conduct of research, and the provision of specialized and innovative services. In the future, funds should also be available to support all mission-related activities, whether in inpatient or outpatient settings.

Recommendation 6: Distribution of Payments with Respect to Site

Payments from the trust fund should be neutral with respect to the site of mission-related activities, so that these activities will occur in the most appropriate location. Demonstration projects should be conducted to test and evaluate new institutional arrangements, such as consortia, that may accelerate the transition of mission-related programs into ambulatory and community-based settings.

The existing system of Medicare payments for graduate medical education creates a bias toward inpatient training. Payments for direct costs are made only to hospitals; those for indirect costs are made on a per-discharge basis. As the health care system evolves, the training of physicians and other health care professionals is moving into ambulatory care settings such as hospital outpatient settings, managed care organizations, community health centers, nursing homes, and the offices of community-based physicians. Other missions besides training may be conducted in these settings as well. Public support for mission-related activities should treat all such sites fairly, compensating each to the extent practicable for the marginal costs associated with serving social missions.

Methods for training health care professionals in non-hospital settings are changing rapidly, along with current understanding about the burdens training programs impose on the cost of routine patient care. Payments for mission-related activities should support training in a variety of settings and include institutions and sites with the skills and resources that provide diverse educational experiences. At the same time, the federal government must avoid abrupt policy reversals that cause major disruptions among teaching hospitals that traditionally have received all explicit mission-related payments from Medicare and Medicaid.

At this time, little is known about the marginal costs of training in non-hospital settings. In particular, there are no generally accepted estimates of how training in ambulatory settings affects the cost of routine patient care. It is both possible and desirable to begin supporting those direct costs associated with training in outpatient sites that are not already funded through existing DME policies. Additional research is needed before payments for the indirect costs can be made.

Demonstration projects of new institutional arrangements should facilitate training in non-traditional sites. Consortia of academic institutions can provide opportunities for

institutions to pursue their missions and may be a viable way to ensure that diverse recipients are eligible for trust fund support while protecting the interests of hospitals. Consortia “occupy the middle portion of the spectrum of entities involved in graduate medical education, bridging the territory between traditional affiliations on the one hand and acquisitions or mergers on the other,” according to a COGME draft report.⁵²

Citing two national surveys, COGME found consortia performance to be mixed. Although there was evidence of enhanced working relations and management efficiencies, issues of medical education were not addressed comprehensively. Nor did consortia institute policies with the intention of influencing the size or composition of residency positions. Furthermore, few consortia are currently organized as legal entities that would be eligible to receive federal funds. Despite these shortcomings, COGME endorses the creation of medical education consortia. Some states, including New York, are emphasizing consortia as part of graduate medical education reform efforts.

Recommendation 7: Establishing the Academic Services Payment Review Commission

An independent commission, to be called the Academic Services Payment Review

Commission, should be established to provide advice on the amount and distribution of trust fund dollars. The commission should monitor market changes and how the trust fund affects the social missions of AHCs. It should study direct and indirect costs associated with AHCs’ social missions to ensure that trust fund support is being appropriately targeted and used. Additionally, the commission should issue an annual report that presents its research findings and recommendations.

The health care delivery system continues to evolve at a rapid pace. To ensure that financial support is properly administered, the Task Force recommends establishing an Academic Services Payment Review Commission, similar to the Prospective Payment Assessment Commission (ProPAC) and the Physician Payment Review Commission (PPRC). The commission should provide a focal point for data collection and research related to the social missions of AHCs and other health care institutions and how market forces are affecting these missions. It should issue an annual report that includes recommendations on the size and financing of the proposed trust fund and on appropriate changes in the rules for distributing these funds. In developing its research agenda and recommendations, the commission should, to the extent feasible, coordinate its activities with existing bodies having overlapping interests, including the Council on Graduate Medical Education, the National Institutes of Health, the National Research Council, the Department of Defense, and the Department of Veterans Affairs.

Commission membership should include individuals with expertise in health care delivery and financing, medical education, health work force policies, and clinical and basic research. Businesses, insurance companies, managed care organizations, and consumer groups should also be represented, along with practicing physicians, AHCs and other

teaching hospitals, and other interested parties.

Arguably, the commission's functions could be assigned to an existing entity like ProPAC. However, in the Task Force's view, other bodies do not have the appropriate expertise or representativeness to meet the agenda of the proposed commission.

WORK FORCE ISSUES

In the past few years, numerous groups and organizations have recommended reductions in the number of physicians being trained and a change in the mix of specialties to emphasize primary care.⁵³

The Task Force agrees that the number of physicians being trained should be curbed and that the mix of specialties should be changed to reflect the oversupply of subspecialists. However, it does not endorse specific targets for the number or specialty distribution of physicians. It is difficult to predict how physicians' productivity will be altered as a result of changes in the health care delivery system. Forecasts based on current evidence may prove inaccurate and will have to be modified over time. Furthermore, market forces are causing a number of AHCs to downsize their residency training programs, even in the absence of mandated limits on financing.⁵⁴

Recommendation 8: Allocation of Training Support

The level of trust fund support for the training mission of AHCs and teaching hospitals should reflect the nation's requirements for physicians and physician scientists. Funds should be allocated preferentially to support the graduate medical education of U.S. citizens.

The Task Force is opposed to open-ended public financing of physician training. Thus, in proposing the size of the trust fund, the Task Force lowered the level to reflect the emerging consensus on estimates of the future need for physicians. Still at issue, though, is the extent of public support for training and how the funds should be distributed to further national physician work force goals, rather than how many and what types of physicians to train.

Three general approaches could be used to distribute limited funds among trainees and training programs. First, a process could be established to allocate training positions among specialties and hospitals. That was the approach discussed in 1993 as part of the health reform debate. There are several variations on this theme. But all models depend on some entity making explicit decisions about the numbers of trainees, by specialty, that each training institution could support. These decisions would be enforced by limiting GME funding to approved institutions or programs. This approach would likely be extremely cumbersome and rigid.

Second, funding for each residency position could be proportionally reduced if the

total number of positions filled exceeded estimates of future needs. For example, if the total number of trainees were 10 percent higher than judged appropriate, then support for all positions would be reduced by an appropriate percentage. That would create a cap on total support and reduce incentives for continued expansion of training programs. However, it would penalize equally institutions that modified their training program to be more consistent with national needs and those that did not.

A third approach—and the one the Task Force prefers—would set a limit on total funding for graduate medical education and would favor U.S. citizens. This approach is a modified version of the one used by Medicare. The Task Force views this as a reasonable interim mechanism, pending further study. Under this model, the money in the trust fund for supporting graduate medical education would equal the amount required to support the full costs of a number of trainees equal to 110 percent of residents and interns in AHCs and teaching hospitals who are U.S. citizens. The calculation would be based on the current numbers and distribution of trainees and volumes of patients at institutions.

Of the total amount in the trust fund for supporting graduate medical education, 90.9 percent would cover the full costs of training U.S. citizens. The remaining 9.1 percent would support the training of those who are not U.S. citizens. The payments distributed to these trainees would be a weighted fraction of the amounts provided to support U.S. citizens. For example, if the number of non-U.S. citizen residents was twice the desired level, payments for these residents would be approximately 50 percent of the amount paid for U.S. citizens.

This approach would end the current system of open-ended funding, reduce incentives for further expansions of graduate training, and increase accountability for use of public funds for training. Nevertheless, the consequences of capping support and downsizing the number of residents raise difficult questions. Significant downsizing would result in major changes for some institutions. However, it is hoped that, after a transition period, these changes would create significant social benefits by bringing the physician work force more in line with society's needs and by eliminating the costs associated with training too many physicians.

Recommendation 9: Protecting Safety Net Institutions

Safety net hospitals that are primary sources of care in their communities and that depend on resident physicians to supply services should be given the resources necessary to continue this role.

Some hospitals that both serve poor communities and depend on residents to provide routine patient care may be particularly vulnerable to reductions in support for graduate medical education. If the number of residency positions is reduced or federal support is limited to a smaller pool, special consideration should be given to ensure that patients who traditionally use these facilities continue to have access to their services. In some cases, a

hospital and its residents may be the only regular source of care for the poor and uninsured in its community. In the absence of definitive initiatives to cover the uninsured, federal policy should make certain that these institutions can perform their vital roles. One strategy would be to redirect existing funds to the National Health Service Corps for creating positions at these safety net hospitals.

The Task Force does not believe that special payments should be given to all hospitals that depend on residents to provide medical services. Funds should be limited to those where, without such support, indigent and low income patients would have no alternative source of care.

The Task Force is concerned about potential disruptions to the clinical work of AHCs that might result from precipitous changes in the level of public support for their training functions. The proposed Academic Services Payment Review Commission should be responsible for making recommendations regarding possible approaches to aid these institutions.

Recommendation 10: Caring for Indigent Patients

Adequate resources should be made available to AHCs and other safety net providers to care for indigent patients.

Although most AHCs provide care to indigent patients, the financing of such care should be separate from efforts to fund the other social missions addressed in this report. To the extent possible, disproportionate share payments and other public support should be made available to help AHCs and other safety net providers cover the unreimbursed costs associated with caring for these populations.

SAVINGS TO MEDICARE

Future congressional legislation may include changes in Medicare payments to hospitals. Many policymakers, for example, agree that the current indirect medical education adjustment is higher than the additional costs associated with AHC missions. The Republican majority in the 104th Congress and the Clinton Administration both have proposed reductions in the IME adjustment. ProPAC also recommended that the adjustment be lowered.

Recommendation 11: Reductions in Overall Medicare Funding

Any significant reductions in current Medicare support for the direct and indirect costs of graduate medical education and other AHC social missions should be accompanied by the establishment of the recommended financing pool, with additional sources of funding.

In the current environment—and without any replacement of support from an all-payer pool—changes in Medicare and Medicaid reimbursement policies would have significant repercussions for AHCs since these institutions have become increasingly dependent on public revenues. Reductions in Medicare and Medicaid payments for patient

services or mission-related activities would likely affect the ability of AHCs to discharge these activities. As these institutions struggle to adapt to the new competitive environment, any decline in public support should be carefully coordinated with the creation of an Academic Health Services Trust Fund.

COMMENTARY

ENDNOTES

1. AHCs perform several activities in addition to those mentioned in this report. An important one is the provision of routine medical services—including primary, secondary, and tertiary levels of care. However, because markets do a reasonable job of supplying and allocating these services, they are not public goods and therefore are not defined as social missions for the purposes of this report.
2. Unpublished figures by the Lewin Group, Fairfax, VA, 1997.
3. There is no universally accepted definition of an academic health center (AHC) at this time. In its broadest sense, an AHC is an organization that consists of multiple institutions including schools of medicine, public health, allied health sciences, and nursing, as well as teaching hospitals and other affiliated clinical enterprises. By contrast, a teaching hospital is any hospital with at least one resident or graduate medical program. There are about 1,000 teaching hospitals in the United States. Some AHCs maintain affiliations with a single teaching hospitals while others have affiliations with several.
4. Congressional Budget Office, U.S. Congress, 1997 baseline estimates.
5. Institute of Medicine, *Careers in Clinical Research: Obstacles and Opportunities* (Washington, D.C.: National Academy Press, 1994).
6. Congressional Budget Office, *Medicare and Graduate Medical Education* (Washington, D.C.: U.S. Government Printing Office, September 1995).
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27. Researchers at the Lewin Group experimented with other methods of estimating DME costs, but found that dollars merely shifted to or from estimates of IME, so that the total costs of GME remained largely unchanged.
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29. The Lewin estimate used by the Task Force may be a conservative (low) figure. First, it does not include the costs of teaching and other mission-related activities in children's hospitals or hospitals that are part of the Department of Veterans Affairs or the Department of Defense. Children's hospitals account for about 5 percent of all residents; including them could be expected to increase total GME costs by roughly the same proportion. Second, since a wider

set of explanatory variables was employed in the Lewin model, some of the “teaching effect” is explained by other variables. For example, teaching hospitals tend to have higher staffing levels than do community hospitals. By including this variable in the model, the higher costs per case due to additional teaching hospital staff are no longer attributed to teaching status, per se. When these variables are left out of the model, the estimate of total GME costs can rise as high as \$20.9 billion in 1997.

30. Public goods have two distinctive attributes: they are “non-excludable” and “non-rival.” A good is non-excludable in the sense that, once it is produced, “anyone can enjoy the benefits it offers, without getting the consent of the producer of the good.” A non-rival good is one in which the “individual’s consumption of the good does not diminish the quantity available for others to use.” (Garber, A. and P. Romer, “Evaluating the Federal Role in Financing Health-Related Research,” paper presented at Roundtable on Economics, National Institutes of Health, October 19, 1995). Basic biological research fits both these criteria: it is non-rival because consumption of knowledge by one person does not diminish its potential value to another person. It is non-excludable because, once published in the academic literature, the information produced by basic research is freely available to all interested parties.
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46. Another limitation of this estimate is that it does not take into account the impact of the loss of faculty practice plan revenues on medical schools. Faculty practice plan revenues traditionally have subsidized the added costs of the clinical education of medical students and related mission costs. This important issue remains to be addressed and will be the subject of future study.
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48. This amount is based on 1995 estimated spending for GME of \$1.3 billion, increased by the percentage change in total Medicaid spending between 1995 and 1997. The 1995 estimate is from Henderson, T., "Financing of Health Professions Education" (paper presented at "States and the Changing Workforce," an Association for Health Care Policy and Research conference in Palm Springs, Calif., November 12, 1996).
49. This amount is based upon 1994 tax appropriations of \$200 million, increased to 1997 by the percentage change in the CPI-U. It does not include state and local appropriations in support of medical school education, for general operating support of public hospitals, or for indigent care.
50. This estimate is based on analysis presented in: U.S. House of Representatives, Committee on Ways and Means, *1996 Green Book* (Washington, D.C.: U.S. Government Printing Office, 1996).
51. The Prospective Payment Assessment Commission estimated that in 1995 risk contracting plans received a total of \$545 million in DME, IME, and DSH payments. DME and IME special payments accounted for 65 percent, or \$354 million. This amount was projected to 1997, based on 20.02 percent growth in total Part A benefits and 62.96 percent growth in risk contracting plan enrollment.

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54. Massachusetts General Hospital and Brigham and Women's Hospital are downsizing their residency positions by more than 20 percent. At UCLA's department of medicine, medical subspecialty fellowships—cardiology, gastroenterology, pulmonary medicine, and others—will be available only to physicians pursuing Ph.D.s and full-time careers in biomedical research.

APPENDIX: ACRONYMS AND TERMS

The following acronyms and terms are used in this report. Many of the definitions are taken directly from ProPAC reports. Where necessary, the Task Force has developed new definitions or modified existing ones for use in this report.

ACRONYMS

AHC	Academic Health Center
ASPRC	Academic Services Payment Review Commission
AAPCC	Adjusted Average Per Capita Cost
CBO	Congressional Budget Office
CPI-U	Consumer Price Index–All Urban Consumers
COGME	Council on Graduate Medical Education
DRG	Diagnosis-Related Group
DME	Direct Medical Education
DSH	Disproportionate Share Hospitals
GME	Graduate Medical Education
HCFA	Health Care Financing Administration
HMO	Health Maintenance Organization
HCRIS	Hospital Cost Report Information System
IME	Indirect Medical Education
IRB	Interns and Resident to Bed Ratio
NIH	National Institutes of Health
PPRC	Physician Payment Review Commission
ProPAC	Prospective Payment Assessment Commission
PPS	Prospective Payment System
TEFRA	Tax Equity and Fiscal Responsibility Act

TERMS

Academic Health Center - One of 125 institutions in the United States consisting of at least a medical school and its owned or closely affiliated clinical facilities and faculty practice plans.

Adjusted Average Per Capita Cost (AAPCC) - Actuarial projections of per capita Medicare spending in an area for enrollees in fee-for-service Medicare. Separate AAPCCs are calculated—usually at the county level—for Part A and Part B services for the aged, disabled, and people with End Stage Renal Disease. Medicare pays risk plans by applying adjustment factors to 95 percent of the Part A and Part B AAPCCs. The adjustment factors reflect differences in Medicare per capita fee-for-service spending related to age and sex, as well as institutional, Medicaid, and employment status. (See also *Risk Contract.*) (ProPAC)

Case Mix - The mix of patients treated within a particular institutional setting, such as the hospital. Patient classification systems like DRGs can be used to measure hospital case mix. (See also *Diagnosis-Related Groups.*) (ProPAC)

Diagnosis-Related Groups (DRGs) - A system for determining case mix, used for payment under Medicare’s PPS and by some other payers. The DRG system classifies patients into groups based on the principal diagnosis, type of surgical procedure, presence or absence of significant comorbidities or complications, and other relevant criteria. DRGs are intended to categorize patients into groups that are clinically meaningful and homogeneous with respect to resource use. Medicare’s PPS currently uses 490 mutually exclusive DRGs, each of which is assigned a relative weight that compares its costliness to the average for all DRGs. (See also *Case Mix.*) (ProPAC)

Direct Medical Education (DME) - Payments made to teaching hospitals for the purpose of reimbursing them for the direct costs associated with GME. Direct costs include the salary and fringe benefits of interns, residents, and teaching physicians, along with other costs that can be directly related to the training programs and are

based on a hospital-specific, per-resident amount.

Disproportionate Share (DSH) Adjustment - A payment adjustment under Medicare's PPS or under Medicaid for hospitals that service a relatively large volume of low income patients. (CBO)

Graduate Medical Education (GME) - The period of training following the completion of medical school when physicians, as residents, receive training in a specialty like family practice, general surgery, or anesthesiology. (ProPAC)

Health Maintenance Organization (HMO) - A managed care plan that integrates financing and delivery of a comprehensive set of health care services to an enrolled population. HMOs may contract with, directly employ, or own participating health care providers. Enrollees are usually required to choose from among these providers and in return have limited copayments. Providers may be paid through capitation, salary, per diem, or prenegotiated fee-for-service rates. (ProPAC)

Indirect Medical Education (IME) Adjustment - A payment adjustment applied to DRG and outlier payments under PPS for hospitals that operate an approved graduate medical education program. For operating costs, the adjustment is based on the hospital's ratio of interns and residents to the number of beds. For capital costs, it is based on the hospital's ratio of interns and residents to average daily occupancy. (HCFA)

Part A - Medicare Hospital Insurance (HI) under Part A of Title XVIII of the Social Security Act, which covers beneficiaries for inpatient hospital, home health, hospice, and limited skilled nursing facility services. Beneficiaries are responsible for deductibles and copayments. Part A services are financed by the Medicare HI Trust Fund. (See also *Part B.*) (ProPAC)

Part B - Medicare Supplementary Medical Insurance (SMI) under Part B of Title XVIII of the Social Security Act, which covers Medicare beneficiaries for physician services, medical supplies, and other outpatient treatment. Beneficiaries are responsible for monthly premiums, copayments, deductibles, and balance billing. Part B services are financed by a combination of enrollee

premiums and general tax revenues. (See also *Part A.*) (ProPAC)

Prospective Payment System (PPS) - Medicare's acute care hospital payment method for inpatient care. Prospective per-case payment rates are set at a level intended to cover operating costs for treating a typical inpatient in a given diagnosis-related group. Payments for each hospital are adjusted for differences in area wages, teaching activity, care to the poor, and other factors. Hospitals may also receive additional payments to cover extra costs associated with atypical patients (outliers) in each DRG. Capital costs, originally excluded from PPS, are being phased into the system. By 2001, capital payments will be made on a fully prospective, per-case basis. (See also *Diagnosis-Related Groups* and *Prospective Payment System.*) (ProPAC)

Risk Contract - An arrangement between a health maintenance organization and HCFA under Section 1876 of the Social Security Act. Under this contract, enrolled Medicare beneficiaries generally must use their plan's provider network. Capitation payments to plans are set at 95 percent of the AAPCC. (See also *Adjusted Average Per Capita Cost.*) (ProPAC)

Social Missions - The products and services of AHCs that markets fail to produce or allocate in socially optimal amounts. The principal social missions of AHCs addressed in this report include supplying medical education, conducting biomedical research, providing highly specialized health care services, and making continuous improvements and innovations in patient care. Many AHCs also consider caring for the uninsured and indigent patients as one of their core social missions.

Uncompensated Care - Care rendered by hospitals or other providers without payment from the patient or a government-sponsored or private insurance program. It includes both charity care, which is provided without the expectation of payment, and bad debts, for which the provider has made an unsuccessful effort to collect payment due from the patient. (ProPAC)