The Impact of Graduate Medical Education Financing Policies on Pediatric Residency Training

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ABSTRACT. Objective. To review special issues related to pediatric residency training in managed care organizations, the effects of the changing health care system on the demand for pediatricians and the potential impact on financial support for residency training, current methods of financing graduate medical education (GME), possible future approaches to financing GME, and policy directions to support training of pediatricians well prepared for future practice.

Methods. We reviewed current information on residency education in managed care settings, including the rationale for training in such settings and the realities of such educational experiences. We then assessed the evidence concerning the supply and demand for pediatricians in the present health care marketplace, with its evolution to managed systems of health care. We summarized current approaches to financing GME through Medicare, Medicaid, private insurers and purchasers, and direct federal and state support, with emphasis on the financing of ambulatory training which could occur in managed care settings. Lastly, we described factors influencing the upcoming revolution in GME financing and outlined possible new policy directions for the financing of relevant GME training experiences.

Results. Appropriate training experiences in managed care organizations may be a valuable strategy to address the current disconnect between the traditional hospital-based education of pediatricians and the expanded competencies necessary to practice in intensively managed, integrated and accountable health systems. Present pediatrician supply appears to be in relative balance with health maintenance organization staffing patterns and with needs-based requirements estimates. However, the pediatrician-to-child population ratio is predicted to increase rapidly over the next decade, leading to an oversupply of pediatricians under likely future health care delivery system scenarios. Medicare is the largest explicit payer of GME training costs, historically directing reimbursement primarily for hospital-based education. Numerous innovative financing strategies are being considered to facilitate funding of GME training in ambulatory settings and to open up funding to greater public scrutiny and accountability.

Conclusions. Although reforms in federal GME financing have been limited to date and other significant changes have been largely state-based, it is likely in the future that explicit funds will be targeted to specialities in demand that prepare physicians well for future practice.

Pediatricians and medical educators must intensify their voices in the financing debate to ensure a productive future for quality pediatric residency training. Pediatrics 1998;101:785-794; managed care, graduate medical education, health care financing.

ABBREVIATIONS. MCO, managed care organization; GME, graduate medical education; PCP, primary care physician; HMO, health maintenance organization; GMENAC, Graduate Medical Education National Advisory Committee; IMG, international medical school graduate; DME, direct medical education; IME, indirect medical education.

The effort to increase pediatric residency training in managed care settings is occurring at a time of great turmoil in the financing of medical training. While historically the nation has provided billions of dollars each year through the hospital financing system for graduate physician training, the current financing system is being redesigned significantly. This overhaul is being stimulated by several factors: the changing marketplace, particularly competition and managed care; efforts to control Medicare and Medicaid expenditures; and concern over the growing supply of physicians. To help the pediatric community understand these forces from outside of pediatrics that will impact on pediatric training, this article reviews:

- special issues related to pediatric residency training in managed care organizations (MCOs);
- effects of the changing health care system on the demand for pediatricians and the potential impact on financial support for pediatric residency training;
- current methods of financing graduate medical education (GME), including training in ambulatory care settings;
- possible future approaches to financing GME and their implications for training in ambulatory care settings; and
- policy directions to support training of pediatricians well prepared for future practice.

The significant changes underway in the US health care system are having an immense impact on residency training programs for physicians. Historically, generous federal, state, and private-payer hospital reimbursement rates; a robust hospital sector; and a growing federal investment in research supported the training of physicians as part of the basic function of academic medical centers and hundreds of other hospitals. However, teaching hospitals and residency programs are confronting major challenges in the current delivery environment, in which the new marketplace has little tolerance for expenses not related directly to patient care and has expectations of

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an increasingly important role for primary care physicians (PCPs). It is crucial that pediatric residency programs learn to survive and thrive in this challenging environment, maintaining their tripartite commitment to education, service, and research.

BACKGROUND: PEDIATRIC RESIDENCY TRAINING IN A MANAGED CARE ENVIRONMENT

Today, pediatricians, historically leading advocates of comprehensive health care for sick and well children in a predominantly fee-for-service health care system, are confronted with daily challenges in delivering quality care to children in a health system in which care is increasingly overseen by others, specifically MCOs. For years, pediatric educators have tried to address the well-described residency–practice training mismatch, commonly acknowledged by the statement that it takes 6 to 12 months to learn how to practice in an office after completing a residency in pediatrics. In the past, pediatricians completing residency training, which historically has been hospital-based and replete with subspecialty experiences designed to give them broad exposure to serious medical problems, have developed many of the basic skills of office-based medical care of generally healthy children over their first year of practice. Educational initiatives to address this mismatch have focused on providing real world experiences in community settings for pediatric residents as a fundamental component of the training curriculum.1 However, despite countless discussions in papers and at conferences since the 1970s, efforts to make these experiences central components of GME have lagged, yielding relatively modest and uneven results over that period.

Such educational initiatives have taken on new urgency in the current rapidly changing delivery system, which has great expectations for physician performance and efficiency. Pediatric Resident Education in Community Settings, the March 1996 conference sponsored by the Johnson & Johnson Pediatric Institute and the American Academy of Pediatrics, recently provided a state-of-the-art review of basic and applied educational principles for pediatric resident education in community settings. Affirming this broad consensus, the newly revised Program Requirements for Residency Education in Pediatrics now mandates “structured educational experiences that prepare residents for the role of advocate for the health of children within the community.”2

Although some of the realities of managed care practice, particularly the extremes of those related to cost containment and utilization control, concern many pediatricians and medical educators, there is little question that coping effectively with these realities will be critical to the future practice of pediatrics. Thus, pediatric residency programs now are confronted with a dual challenge: continuing to carry through with their educational mission in an era of ever-decreasing resources, while at the same time developing and implementing the reforms needed to train pediatricians more effectively for future practice. In particular, if GME is to continue to be supported as a public good, that is, a good or service that serves the public at large, the content and process of GME will need to be driven more strongly by the workforce and competency needs and demands of the health care system, including the MCOs in which many physicians will practice.

SPECIAL ISSUES RELATED TO TRAINING IN MANAGED CARE SETTINGS

Rationale for Training in Managed Care Settings

MCOs have long embraced the concept of primary care as a means of promoting health, preventing illness, diagnosing the early onset of disease, and managing all patient encounters with the health care delivery system.3 As confirmed by a recent study of 23 representative group- and staff-model health maintenance organizations (HMOs), they show a strong preference for generalist physicians (family physicians, general internists, general pediatricians) providing this primary care.4 Recent data also suggest that rural plans and those with very high Medicaid enrollments confront the greatest difficulties in recruiting adequate numbers of generalist physicians. Numerous studies of rural and urban underserved practice demonstrate an association between community-based education and subsequent practice in similar settings, and it is conceivable that residents trained in MCOs will be more likely to practice there.5

As generalist physicians, pediatricians should be well prepared to serve children comprehensively in integrated delivery systems. However, studies of MCOs have demonstrated that managed care administrators consider physicians, including pediatricians, to be poorly prepared for practice in their environment.6 Of particular importance to pediatric practice is the recent dramatic increase in Medicaid’s use of managed care as states have turned to managed care for coverage of poor children and their parents and as the increasingly competitive health care marketplace has made enrolling Medicaid beneficiaries more attractive to health plans. In 1983, only 3% of the Medicaid population (750,000 beneficiaries) were enrolled in managed care.7 By 1995, 11.6 million Medicaid beneficiaries, nearly one third of all beneficiaries, were enrolled in managed care arrangements.8 MCOs clearly anticipate that the next generation of doctors caring for children and others need to be skilled in the delivery of primary and preventive care and to be prepared to practice in settings that are managed more intensively, integrated clinically, and accountable to private and public payers seeking lower costs and better quality. Thus, appropriate training experiences in HMOs and practices that have contracts with MCOs serving defined populations may be a valuable strategy to address the current disconnect.

Realities of Training in Managed Care Settings

The amount of resident education occurring in managed care settings is difficult to quantify because
of the multiplicity of differing delivery and educational arrangements that are possible. One of the difficulties in discussing training in MCOs is the diversity of settings and organizational relationships of sites that may be involved in managed care. These range from large, staff model HMOs, the oldest and best understood variants of the MCO, to group or even solo practitioners with MCO contracts. They have management tools in common, including utilization review, procedure preauthorization, capitated payment, practice guidelines, and fee schedules. Presently, these techniques are applied systematically and on a wide basis. However, the types of MCOs differ according to physician employment status, level of risk for the costs of care assumed by physicians, and level of oversight of physician practice. A 1990 survey by the Group Health Association of America of US HMOs demonstrated that larger staff- and group-model HMOs, not-for-profit plans, and HMOs owned or sponsored by an academic health center were more likely to be involved in resident education. The recent exponential growth in HMO enrollment, however, has been principally in for-profit managed care arrangements, which generally have resisted investment in physician education and training. In general, these MCOs contract with multiple private practitioners and physician groups to care for their subscribers. Residency programs currently have the potential to link with MCO service sites either by working through the MCO or by establishing direct relationships with the service sites. Supervising the education of residents scattered over such a variety of settings creates serious administrative and logistic, as well as educational, challenges for residency programs.

The specific educational content of programs conducted at MCOs, and how well the unique characteristics of the MCOs are exploited for training, is not well known. In some cases, the MCO may be a valuable ambulatory site because of its large patient base, not because of its unique characteristics. In other experiences, residents may gain specific competencies in areas such as evidence-based medicine in the context of their patient care experiences, rather than through formal didactic sessions. Educators have yet to define specific objectives related to managed care that residents must meet or to select the most appropriate clinical settings.

As economic forces stimulate the growth of managed care, competition for the purchasers will intensify. MCOs, constrained by cost-cutting measures and a shifting population in view of intense competition for contracts, may be even less sympathetic to the teaching and research missions of the academic health center. Sound education requires an excellent teaching staff, adequate funding to sustain the program, and an appropriate mix of patients to provide clinical experiences. In a competitive environment, with a changing economic climate and potential shortfalls in the supply of quality PCPs, all three educational pillars may be threatened. Individual practitioners who have had a long history of educational volunteerism may lose control of their time as they enter managed care networks. The decision to engage in teaching may occur at the organizational level, no longer necessarily reflecting the choices or teaching competence of the physicians who are being asked to train residents. Funds for activities viewed solely as nice add-ons will dry up if these do not contribute to the bottom line.

HMO leaders report that their most important functions and responsibilities are organizing; managing; and delivering high-quality, economical, satisfying health care to a defined population. Their major goals of a teaching affiliation are both self-interested and public-spirited. Teaching programs express a different set of objectives that primarily reflect their concern about educating residents and secondarily emphasize their commitment to the welfare of their institutions. Increasing cooperation would appear unlikely were there not potential benefits to each in working together. Residency training programs need many new ambulatory sites and additional teachers to model current practice. Residency training programs must capitalize on incentives for MCOs and practitioners to participate in teaching, including meeting recruitment goals; maintaining interest, enthusiasm, and clinical competence of existing staff; creating an image of high quality; and fulfilling their sense of community responsibilities. However, fundamental changes in public GME financing policies, discussed in depth below in this article, will be key to widespread acceptance of education–service partnerships in the market.

SUPPLY AND DEMAND FOR PEDIATRICIANS IN A MANAGED CARE MARKET

One of the factors contributing to the policy debate on GME and physician workforce policies is the growing concern with the potential surplus of physicians in the United States. As far back as 1980, the Graduate Medical Education National Advisory Committee (GMENAC) expressed concern that the nation would produce more physicians than needed. This concern has grown through the 1980s and 1990s.

The Growing Supply

Between 1950 and 1990, growth of the nation’s physician workforce outpaced growth of the general population, with the physician-to-population ratio increasing by two thirds. In response to the GMENAC, US medical school enrollment leveled off in the early 1980s. However, given the age distribution and practice patterns of physicians and the rate of entry of new US and international medical school graduate (IMG) physicians into the work force, growth in the physician supply is expected to continue outpacing population growth well into the next century.

Decreasing Demand

Simultaneously with the recent continued growth in physician supply has been the expansion of managed care. It is well documented that managed care arrangements, particularly staff- and group-model HMOs, typically use a higher proportion of PCPs but
fewer physician resources overall than the fee-for-service system, in some cases significantly less.\textsuperscript{18} For example, although the GMENAC, using an adjusted needs-based physician requirements methodology, estimated that the nation would need 191 active physicians for each 100,000 people, HMOs typically use 125 to 160 patient care physicians per 100,000 population.\textsuperscript{15,19} These requirements estimates compare to an active 1993 physician supply of almost 200 physicians per 100,000 population in 1993, and this ratio is growing each year.\textsuperscript{20,21} Thus, in aggregate, the nation is confronting a significant surplus of physician supply over demand and need in the next several decades. This will potentially weaken support for spending limited public dollars for training physicians.

For pediatricians, the GMENAC projected a need for 12.4 general pediatricians per 100,000 total population or \textasciitilde50 pediatricians per 100,000 children under age 16 years.\textsuperscript{15,22} McClendon’s recent study, which estimated pediatrician requirements based on the GMENAC’s forecasts and multiple reports of HMO staffing, proposed an estimate of 14.2 general pediatricians per 100,000 population or \textasciitilde61 pediatricians per 100,000 children under age 16 years.\textsuperscript{22,23} According to American Medical Association and American Osteopathic Association statistics, there were \textasciitilde56 active pediatricians per 100,000 children under age 16 years in the United States in 1993.\textsuperscript{20–22} Although presently, pediatrician supply would appear to be in relative balance with HMO staffing patterns and with needs-based estimates of requirements, McClendon’s study concluded that, given continuation of the past 5-year history of annual new certifications in pediatrics (which is a conservative estimate of additions to the pediatric workforce), the discipline would need to undergo a moderate degree of residency downsizing of \textasciitilde20\% to sustain its 1993 physician-to-population ratio.\textsuperscript{22} The American Board of Pediatrics reported recently on the increase in pediatricians certifying in general pediatrics rather than entering a pediatric subspecialty or other non-pediatric specialty training program after completion of their general pediatrics residency training program.\textsuperscript{24} In addition, because the pediatric population is projected to grow more slowly than the overall US population over the next 2 decades, these two trends in combination may serve to increase the pediatrician-to-child population ratio significantly faster than McClendon’s estimate and potentially worsen any oversupply.\textsuperscript{22,23,25}

**Indicators of Current Demand**

In very competitive markets, MCOs are likely to limit their payments to all providers, especially if there is an abundance of physicians in a specialty or related specialties. In some markets, pediatricians already feel squeezed. Growing cost pressures, combined with an increasing supply, may contribute to greater use of nurse practitioners and physician assistants to work with pediatricians to maximize productivity. Whether these other providers serve as substitutes for pediatricians or practice in complementary roles, their increased use may decrease the demand for pediatricians, who are currently more costly practitioners to employ.

In 1994, for the first time in many years, the average income for physicians declined. The overall decline was \textasciitilde4\%. After several years of above-average income growth, pediatricians’ incomes fell more than the average in 1994.\textsuperscript{26} There also has been a decrease in recruitment advertisements for general pediatricians in major medical journals since 1990.\textsuperscript{27} Both of these developments may indicate a possible excess of supply over demand, at least in some communities.

If there is a strong indication that a surplus of pediatricians is developing in the coming years, this could weaken public support for funding of pediatric training, at least at its current number of residency positions.

**IMGs**

One of the more perplexing workforce issues confronting this nation is the growing number of IMGs in training in the United States. Currently, the number of new IMG residents entering training in the United States exceeds the number of US medical school graduates by nearly one third. There have been growing calls to limit the number of IMGs that enter residency training, including a substantive study by the Institute of Medicine.\textsuperscript{28} Most of the major medical education and physician organizations in the nation recently agreed on policy recommendations to reduce the number of IMGs in training in the United States.\textsuperscript{29} In addition, there have been proposals in Congress to limit Medicare GME for IMGs, although these have not passed.

Some of the current debate was stimulated by a recommendation from the Pew Health Professions Commission that US medical schools should reduce their enrollment by 20\% because of the anticipated surplus of physicians.\textsuperscript{30} Many groups reacted strongly, concerned that under the current system, reductions in US medical school graduates would only lead to an increase in IMGs and have no impact on the total physician supply unless limits were placed on IMGs.

This issue has major ramifications for pediatric residency training. A policy that limits IMGs directly or that limits financing would have a significant impact on pediatric training programs. In 1995, 32\% of all general pediatric residents were IMGs, compared with 25.5\% of all residents.\textsuperscript{31} Although there is great resistance to targeting GME cuts to IMGs, there are pressures both to reduce total GME slots and to limit IMGs. The reluctance reflects several factors, including the reliance of many inner city teaching hospitals on IMGs to provide health care to underserved communities. One goal of the recently initiated Medicare GME demonstration in New York City and New York state’s new GME financing system is to encourage an overall downsizing of GME, with the implicit assumption that this will decrease the number of IMGs in training without directly penalizing programs or specialties that rely on IMGs. The Medicare demonstration project will provide transitional assistance, in the form of gradually decreasing annual payments, to teaching hospitals who...
elect to cut substantially their numbers of residents while preserving or increasing their primary care resident share. This funding will allow hospitals to develop alternative staffing to ensure continuation of essential patient care services. The costs of this demonstration in both the short- and the long-term will be significantly less to the public than continuation of the New York GME trend to date: greater numbers of residents in training programs in New York each year resulting in a growing total cost to Medicare, which pays ≈$70,000 per resident per year to New York teaching hospitals. The Balanced Budget Act of 1997, P.L. 105-33, enacted by Congress in August of 1997, expands eligibility for transitional assistance to hospitals throughout the nation that plan voluntary reductions in numbers of residents.

**CURRENT APPROACHES TO FINANCING GME**

Although there are a number of approaches to financing GME, the vast majority of support comes through hospital payment systems. Medicare and Medicaid provide ≈$9+ billion per year to hospitals as part of their reimbursement to support physician training and training-related costs. There are a number of reasons for this reliance on hospital rates to finance GME. First, historically, most training has taken place in the hospital. Second, hospitals are reimbursed according to complex financing formulas, and it has been relatively easy to modify these formulas compared with approaching legislative bodies each year for an appropriation. Third, use of complex formulas tends to obscure the costs associated with GME, resulting in a less vulnerable funding stream. Fourth, physicians-in-training and the academic centers that train them provide many public-oriented services, such as care for the poor and research, helping to justify relatively generous funding for GME.

Although use of the hospital reimbursement system has been very convenient, it has had several major and, in some cases, undesirable consequences: 1) it has led to generous reimbursement for training, >$68,000 per resident per year from Medicare alone and as much as $190,000 per resident per year from all payers in some states; 2) decisions about how many physicians to train in what specialties have been made by hospitals, and these decisions may have been based as much on hospital service and financial calculations as on national or community workforce needs; 3) there has been an overemphasis on hospital and tertiary care in the training of physicians that has contributed to the high rate of subspecialization; and 4) there has been little or no financial support for training in nonhospital settings.

**Major Current Sources of GME Funding**

Medicare provides ≈$6.6 billion per year for GME through hospital reimbursement. The reimbursement rules are complex and include financing for direct medical education (DME) costs (resident and faculty salaries and fringe benefits and facility administrative overhead) and indirect medical education (IME) costs (empirically demonstrated higher costs of teaching hospitals attributable to ill-defined factors such as longer hospital stays, added tests, higher patient complexity, and tertiary care infrastructure). Of particular importance to pediatric educators, because Medicare payments are based on the fraction of a hospital’s bed days paid for by Medicare, GME sponsored by children’s hospitals is not covered by this largest explicit payer of GME costs. The Balanced Budget Act of 1997 legislated the first significant changes in Medicare GME payment methodologies in the last 15 years.

Medicaid provides ≈$2 billion per year to hospitals for GME-related expenses. Medicaid is a joint federal–state program, with each state establishing its own Medicaid reimbursement policies within limits set by the federal government. Most states use a system similar to Medicare and cover both DME and IME. Private insurers and purchasers generally negotiate a price or set rates without identifying a specific amount for GME. This makes it almost impossible to estimate what they actually pay for GME. Although teaching hospitals believe that MCOs do not pay for GME, most MCOs do pay more for an admission at a teaching hospital compared with other hospitals. One recent study found that MCO leaders believe that they generally pay 5% to 10% more for services in teaching hospitals. On the other hand, costs at teaching hospitals may be 20% higher than at other hospitals.

Direct federal support for GME comes through Title VII, which provides direct grants for GME. The current Title VII program administered by the Health Resources and Services Administration provides >$200 million for primary care medical education, multidisciplinary training, minority–disadvantaged training, and student assistance-related funding. Only ≈$17 million is appropriated specifically for residency support and faculty development in general internal medicine and general pediatrics. While each of Title VII’s numerous programs has its own special eligibility and program requirements, all institutional grants are targeted toward national health workforce goals, including training greater numbers of generalist physicians in community-based settings to prepare them well for future practice, particularly among underserved populations. With respect to pediatric education, Title VII supports general pediatrics residency training programs and faculty development programs. However, because of very limited appropriations, Title VII grants help finance only ~10% of residencies in general pediatrics and only a generous handful of general pediatrics faculty development initiatives.

Direct state GME support is provided by several states for specific initiatives, such as family practice residency programs or rural training. Although current funding is limited, several states are considering additional support targeted toward specific state needs.

**FINANCING TRAINING IN AMBULATORY CARE SETTINGS**

Because the vast majority of residency programs are sponsored by hospitals, and most teaching hos-
hospitals, excluding children’s hospitals, receive generous reimbursement for training, is there a need for additional funding for training in ambulatory settings? The answer is not totally clear. Although the total amount of funding related to GME may be sufficient to cover the costs of training in all settings, the reality is that GME reimbursement to hospitals covers a range of activities, such as care for the poor, research, education of medical students, and expensive new technologies. GME funding often is viewed by hospitals as their money. This view has been reinforced by Medicare and most Medicaid program policies that historically have covered DME and IME only when residents were in a hospital or working at sites closely affiliated with the hospital. Thus, even when a resident rotated for a few sessions per week to an ambulatory care site, in many states Medicare and Medicaid did not cover their costs for that time if the hospital did not incur those costs.

There have been no direct funding streams for an ambulatory care site, such as an HMO or a community health center, that sponsors its own residency program or serves as a major training site, except the limited grant funding under Title VII or a few small state grant programs. Medicare and Medicaid in a few states, such as New York, have reimbursed certain free-standing health centers using cost-based rates that allow GME costs, but there have been caps on the amounts that curtail GME funding support. This is a limited source that will decrease even further with the rapid spread of managed care for Medicare and Medicaid recipients.

One factor contributing to the historical failure of public policy to address GME funding in ambulatory settings is the lack of consensus on what it costs to train a physician in those settings. Although there would appear to be some real costs, such as supervision, lost productivity, and space, residents can care for patients, especially after the first year of training, and these services are likely to reduce the net costs of training in ambulatory settings. In addition, if residents rotate through an ambulatory care site for only two or three or four sessions per week, which is the common approach, then the costs to the ambulatory care site are less than those to the sponsoring institution. This is not meant to suggest that additional funding is not needed at ambulatory sites. However, although public policy makers were willing to accept a generous calculation of GME for inpatient care in more prosperous times (and when the cost implications were unclear), the current fiscal and political environment is unlikely to support new funding streams in the absence of documentation of need.

There is some direct funding for ambulatory training. As noted above, much of the direct federal support under Title VII funds ambulatory training. However, the amount of this funding is minuscule compared with GME payments in the overall reimbursement system. In addition, this funding stream is subject to the annual Congressional budget process; this creates great uncertainty that prevents programs from relying on this source.

Although public and private payers could provide higher reimbursement rates for ambulatory care facilities that also train physicians, as they do under hospital rate setting, most ambulatory care payment systems use fees or prices rather than cost-based reimbursement or a related variant. Perhaps because most ambulatory care payment systems pay providers based on a large number of procedures and visits, there has been little or no inclination to add GME costs on to ambulatory care payment levels. In addition, because the vast majority of training still occurs in hospitals and most residents are paid by hospitals, there has been only limited attention given to this issue. However, because the current shift in training to ambulatory care settings is occurring at the same time as the expansion of managed care and capitation, fee-for-service reimbursement strategies will be less significant in the future.

THE UPCOMING REVOLUTION IN GME FINANCING

The Environmental Causes

Revolution is a strong word to use, but it appears appropriate. The foundation on which the old GME financing system was built is disappearing, and a consensus among hospital administrators, medical educators, public policy makers, and private payers is emerging on the need to change. Although it is not totally clear how the future system will operate, the directions of change are unfolding. The following are some of the major factors forcing change.

• In the competitive market, payers, including managed care plans and insurers, are no longer willing to pay generous hospital reimbursement rates and they are negotiating lower rates. Businesses and individual subscribers will go to competitors if a payer cannot control its costs. There is little room for supporting public goods that cost more than the basic services for enrollees/subscribers.

• Managed care plans also are steering patients to lower-cost hospitals, often hospitals that sponsor little or no residency training. There already is some indication that academic medical centers are losing managed care market share to other hospitals.36

• Medicare and many state Medicaid programs are aggressively looking to reduce expenditures; the dollars for GME stand out to many as excessive, especially in consideration of the projected surplus of total physicians. Therefore, cutbacks in public funds for GME are expected. The Balanced Budget Act of 1997 reflected this perspective, requiring a reduction in overall IME payments to hospitals and a capping of the number of residents eligible for DME and IME payments.

• Overall hospital use is decreasing across the nation, resulting in fewer inpatient days or admissions on which to tie GME costs, and support for GME will drop automatically as inpatient days decline. In New York City, the epicenter for GME, inpatient days dropped >20% from 1992 to 1996.37 Nationally, there was an 8.5% drop in patient days from 1992 to 1995. As total patient days decrease, there are fewer yet sicker patients for residents to
work with; it also becomes more awkward to add GME payments on to reimbursement for fewer days as the GME cost per day or per stay becomes a larger portion of total costs. In 1995, GME payments already constituted between 4% and 8% on average, and in some large teaching hospitals, up to 20% of total hospital revenues.30

• The number of Medicaid and Medicare patients enrolled in managed care is expected to continue its rapid increase in coming years. Most states have requested permission from the federal government to require all Medicaid patients to enroll in managed care. This has been one of the most critical factors forcing change in GME financing, because many teaching hospitals have a disproportionate share of Medicare and Medicaid patients as inpatients and outpatients. With many of these patients enrolling in MCOs, hospitals have lost much of their explicit GME reimbursement, which has been included, instead, in capitation payments to the MCOs. Hospitals and their associations have been vocal, politically active forces that favor change.

NEW DIRECTIONS FOR GME FINANCING

With the erosion of the ability to fund GME through add-ons to inpatient rates, teaching hospitals, especially academic medical centers, are more willing than ever to support the development of alternative approaches to the collection and distribution of funds for GME. There is unprecedented opportunity to restructure the current system to support more primary care training, including pediatric training. The Balanced Budget Act of 1997 initiated some broad changes in Medicare financing of GME, although many of the specifics of changes in reimbursement policies and methodologies have yet to be implemented through federal regulations. The following sections describe some of the GME reimbursement strategies being developed or considered throughout the United States.

Medicaid and Medicare Managed Care GME Carve Out

Under Medicaid and Medicare managed care, a capitated amount (the premium) is paid to the MCO to cover a wide range of services. The MCO, in turn, is responsible for negotiating with and paying practitioners and providers for caring for its members. Medicare and Medicaid usually use the historical costs of care for their covered population to calculate the premium levels for MCOs. While GME costs have been used by Medicare and Medicaid to set the MCO premium, the MCO has been under no obligation to pass these payments on to teaching hospitals in its geographic region, whether or not the MCO admits patients to these hospitals.

Teaching hospitals have protested vigorously that these funds were included in the rates for the specific purpose of medical education and should be used for that purpose. In response, Medicare and some state Medicaid programs now carve out GME; the cost of GME (the amount used to calculate GME under the old system) is excluded from the MCOs premium, the dollars go to support residency training, and MCOs may reduce their payments to hospitals to reflect their reduced premiums.

The Balanced Budget Act of 1997 phases in over 5 years a carve out of DME and IME funds from the capitation payments to Medicare managed care plans. Specific DME and IME payments are then made to hospitals caring for Medicare managed care enrollees on the basis of what would have been paid if patients had admitted under the prospective payment system and counting managed care inpatient days in calculating Medicare’s share of total inpatient days.

As of early 1997, five states carve out GME for Medicaid, and several other states are considering such a policy (Henderson T, personal communication, February 1997). Medicare also is considering such a carve out. At least two of the states have taken the establishment of the Medicaid GME carve out as an opportunity to drastically restructure the distribution of these funds. Michigan has allocated a portion of its Medicaid managed care carve out to grants to support partnerships—consortia involving hospitals, residency programs, and MCOs. Tennessee is shifting all of its Medicaid GME funds for distribution through the medical schools in the state.32

Although there are a number of approaches to how the carved out dollars are distributed to teaching hospitals, the significance of this change is that the connection between GME funds and inpatient rates is eliminated. The mechanisms to collect and disseminate GME funds are separated, and GME funding levels can be identified more easily. This is not to imply that the use of a managed care carve out is the answer to funding training in ambulatory settings, but it will facilitate movement in that direction.

The GME Trust Fund and Dedicated GME Pools

In 1995, Congress passed legislation as part of the Balanced Budget Act that would have established a Medicare GME Trust Fund to support GME from sources that broadly represent the entire health care system and to potentially expand eligibility for GME to institutions other than teaching hospitals. Although the bill was vetoed for reasons unrelated to the GME Trust Fund, it shows the interest and support for this approach. In New York state, a Professional Education Fund of $540 million per year has been established to support GME with funds from an assessment on private insurers. Ten percent of these funds are distributed to hospitals, based on performance in achieving GME policy goals including increasing training in ambulatory care settings. As noted above, Tennessee has pooled all of its Medicaid managed care GME funds through the carve out.32

There are several major benefits of a trust fund or financing pool. These include severing the tie to inpatient days; facilitating distribution of GME funds to other training settings; developing sources of funds independent from hospitals; and opening up the GME funding process to greater public scrutiny and accountability. These changes have the potential to increase support for training in ambulatory settings, especially for primary care specialties. A GME
trust fund could provide dollars to an HMO, community health center, or other ambulatory care site directly. Realization of benefits clearly depends on the magnitude of the pooled funds (dependent, in part, on the sources of funds for the pool: Medicare, Medicaid, and/or private payers) and on the policies and methodologies guiding distribution of funds.

The Balanced Budget Act of 1997 contains a number of new Medicare GME payment provisions that should eliminate certain current disincentives to hospitals for training residents in ambulatory sites and that may strengthen the position of ambulatory sites as teaching settings. Specific provisions include DME payments to qualified nonhospital providers such as federally qualified health centers, rural health clinics, Medicare MCOs, and other nonhospital entities if they incur the costs of approved residency programs; IME payments to hospitals for resident training in nonhospital settings; and a demonstration project to make DME payments to medical education consortia.

**FUTURE POLICY DIRECTIONS**

There is broad consensus that appropriate, quality ambulatory care training is essential to preparing pediatricians for future practice. Residents need to spend more time in the multiplicity of outpatient settings, including clinics, office practices, home care settings, and HMOs, where most of future health care will be delivered. Recent developments suggest that there is reason to be optimistic about fundamental changes in GME financing policy that may facilitate this shift, although the changes to date have been limited, state-based, or not yet fully implemented through federal regulation. Given limited public dollars, if GME continues to be valued as a public good, it is highly likely that the funds available will be targeted to specialties in demand that prepare physicians well for practice in the future delivery system.

Pediatricians and medical educators need to intensify their voices in the GME financing debate to ensure a productive future for quality pediatric residency training. First, medical educators should focus internally on increased accountability of GME before there is a public mandate to do so. The profession should monitor its workforce supply and residency training program demographics, adjusting training profiles to match workforce realities, and future probable directions of health care delivery. To improve GME cost accountability, the fair and actual costs of direct medical education and the costs attributable to residents’ presence at all sites must be identified. Medical educators need to encourage data collection and research on pediatric education and training to affirm the contribution and impact of community-based primary care education on the nation’s health. Additional Title VII financing to support educational innovation, demonstration, and evaluation in general pediatrics residency training could provide essential support for this work. Finally, educators need to demonstrate much greater flexibility and creativity in developing, implementing, and modifying pediatric residency curricula to prepare practitioners comprehensively for their future roles.

Pediatricians also should engage in a number of external activities to move the discussions of GME financing reform forward. First, pediatricians must advocate for adequate funding for primary care services and coverage for uninsured children. Unless there is sufficient financing for primary care services for children, there will be few thriving sites in which to train future pediatricians. Second, pediatricians should build alliances for education and training support. Particularly at the state level, primary care sites are an important asset, both practically and politically. Now is the time to build alliances among community-based training sites, hospitals, medical schools, community organizations, and others concerned with preparing the future pediatric workforce. Third, while pooling of GME funding can be viewed as a mere funding mechanism, support for a GME pool with as broad a payer base as feasible should foster a link between funding and workforce goals. Any informed discussion of needs and priorities is likely to conclude that more financial support should go to primary care education in community-based sites, including MCOs. Fourth, pediatric educators must actively engage the specific provisions of proposed state and federal reforms in GME financing policies, providing constructive professional assistance and feedback to legislators and policymakers regarding the potential impact on the training of pediatricians from their unique perspectives.

As the profession of pediatrics devotes resources to responsible examination of its future through broad-based initiatives, exemplified by The Future of Pediatric Education II project currently in progress, there is a fundamental concept that may be lost all too easily in the context of much well-intentioned discussion. Pediatricians and medical educators must remember that the specifics of training, including experiences in community-based settings such as MCOs, should only be a means to an end: the production of pediatricians who can best help meet the future health care needs of this nation’s children, given the realities of limited resources and informed choices that must be made.

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The article by Bazell and Salsberg articulates quite clearly some of the key issues regarding graduate medical education (GME) confronting us today.

**THE PAST AND PRESENT**

The authors point out the following:

1. Managed care organizations (MCOs) do not really pay their share for GME.
2. There is a projected significant surplus of physicians in general.
3. There will need to be an approximate 20% decrease in pediatric residency positions to meet future pediatric needs.
4. There is a strong desire by the legislative and regulatory agencies to reduce significantly the present dependence on international medical school graduates by reducing their number significantly.
5. The generous support of GME by Medicare ($6 billion), Medicaid ($2 billion), and previously negotiated rates paid by private insurers will be reduced significantly; managed care contracts will decrease this fiscal support even further.
6. With increasing amount of residency training time being spent in ambulatory sites, either private office or community-based sites, previous formulae for calculating resident reimbursement are rapidly becoming irrelevant.

**THE FUTURE**

Given these facts, the future is really quite uncertain as we publish this supplement. The playing field...
is filled with a number of forces, each with its own agenda and, in many cases, each not having the best interest of medical education as its primary motivation. All too often, optimum education of our future physicians is lower on its priority list. The danger is that the desire to decrease the costs of providing care can easily become confused with decreasing the costs of education in an arbitrary and possibly capricious manner. The infrastructure that has supported our fine quality medical education and research institution is delicate and finely tuned. If it is significantly weakened, it will be very difficult to reconstruct.

How can we prevent harming medical education? What do we need to do collectively to guarantee that we can educate in a cost-efficient manner and still have high quality? As a medical educator and pediatric chair, I believe there are some key principles to establish. Then the key steps to implement these principles will become clear.

1. It is appropriate that medical education be supported through a federally based, tax payer-supported method, combined with similar state-supported contributions.
2. Those academic centers that are the sites for GME must be strictly accountable for the education dollars they receive; dollars paid for education need to be so identified and directed clearly and accountably to the training/educating facility and departments.
3. Medical education fiscal support must be separate and distinct from patient care dollars.
4. A more accurate accounting of costs of education must be part of the requirement for participating academic medical centers.
5. Private/not-for-profit insurers must participate in the support of GME through separate identifiable pools of dollars.
6. GME positions approved should be guided by best estimates as to type(s), numbers, and geographic needs of populations, state by state.
7. Accrediting and certifying authorities that control the quality and content of GME through resident review committees and certifying boards must maintain independence from political and regulatory influences.

To understand the relationship between medical education and health care financing, it is important to recognize that GME is a component that traditionally has not been part of health care organizations. In a sense, GME is an excellent example of a true externality in medical economic terms. An externality is defined as a benefit or cost of an economic transaction imposed on someone who is not party to the transaction. For example, the $500 000 000 federal immunization program protected children who were vaccinated from disease, but also protected other adults and children. Several important types of externalities in the health field are associated with public health programs such as vaccination programs, clean water programs, pollution abatement, and medical research. GME would certainly qualify as such an externality, with desirable effects on our population as a whole, and worth paying for. In this case, the government, on behalf of its ultimate funders, the taxpayers, has decided that it is for the greater good for everyone—rich, poor, regardless of race, age, religion, sex, or educational level—that the population residing within its borders deserve the most highly qualified and educated physicians to meet all of its health care needs and that its money should be used toward ensuring that goal. I believe this is a wise use of dollars.

However, this fiscal support for education for our doctors can and should no longer be just a blank check, endorsed by the name and PGY level of the resident, and deposited in the AMC bank account. The financiers are simply asking to know why, where, and to whom the money is going; is our money being spent wisely? Because it is their money, the taxpayers should have some say as to how it is spent. We, the leaders in the medical education discipline, must take this accountability to heart, carefully teach our financiers how they should wisely spend their money, and then show them how it is being spent—what their money has accomplished in very concrete terms. The more knowledgeably they realize the bargain they are getting for their dollar, given the quality of the faculty and AMCs we have in the United States, the more likely it will be that they will be satisfied with spending their money on such activities as high-quality medical education. It is our job to teach them why their money is being well spent. Remember, Doctor, Docere—To Teach.

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