



Financing Graduate Medical Education to Meet the Needs of Children and the Future Pediatrician Workforce

Committee on Pediatric Workforce

Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of All Children

ABSTRACT

This policy statement articulates the positions of the American Academy of Pediatrics on graduate medical education and the associated costs and funding mechanisms. It reaffirms the policy of the American Academy of Pediatrics that graduate medical education is a public good and is an essential part of maintaining a high-quality physician workforce. The American Academy of Pediatrics advocates for lifelong learning across the continuum of medical education. This policy statement focuses on the financing of one component of this continuum, namely residency education. The statement calls on federal and state governments to continue their support of residency education and advocates for stable means of funding such as the establishment of an all-payer graduate medical education trust fund. It further proposes a portable authorization system that would allocate graduate medical education funds for direct medical education costs to accredited residency programs on the basis of the selection of the program by qualified student or residents. This system allows the funding to follow the residents to their program. Recognizing the critical workforce needs of many pediatric medical subspecialties, pediatric surgical specialties, and other pediatric specialty disciplines, this statement maintains that subspecialty fellowship training and general pediatrics research fellowship training should receive adequate support from the graduate medical education financing system, including funding from the National Institutes of Health and other federal agencies, as appropriate. Furthermore, residency education that is provided in freestanding children's hospitals should receive a level of support equivalent to that of other teaching hospitals. The financing of graduate medical education is an important and effective tool to ensure that the future pediatrician workforce can provide optimal health care for infants, children, adolescents, and young adults.

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Key Words

graduate medical education trust fund, Balanced Budget Act, Children's Hospital Graduate Medical Education Payment Program, direct graduate medical education, freestanding children's hospitals, graduate medical education, indirect medical education, Medicaid, Medicare, portable authorization system, residents, Title VII

Abbreviations

GME—graduate medical education
DGME—direct GME
DRG—diagnosis-related groups
IME—indirect medical education
BBA—Balanced Budget Act of 1997
CHGME PP—Children's Hospital Graduate Medical Education Payment Program
PPS—prospective payment system
NIH—National Institutes of Health
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GRADUATE MEDICAL EDUCATION (GME) AS A PUBLIC GOOD

To assure the American public of the competence of its physicians, the path to independent practice of aspiring physicians is a long and arduous one. After graduation from college, a medical student will spend 4 years in medical school, of which approximately 2 years are spent in patient-care settings under close supervision by faculty. After receiving their medical degrees, pediatricians spend an additional 3 to 6 years in residency and subspecialty fellowship training (collectively referred to as graduate medical education [GME]). Pediatricians, thus, spend up to 10 years in medical training to be eligible for board certification in their field. Pediatric surgical specialists likewise spend 5 to 7 years in residency and an additional 1 to 3 years in postgraduate surgical training before entering practice. During GME, these physicians provide essential health care services under supervision and thus facilitate access to care for children.

Residency or GME has been accepted by our society as an essential part of maintaining a high-quality physician workforce.¹ After earning a medical degree, US physicians are required by law in every state to complete an additional 1 to 3 years of GME before receiving a license to practice medicine.² This demanding educational process is unique to the medical profession.

Resident physicians provide valuable medical services, frequently to underserved populations and to patients with complex illnesses, under the supervision of experienced physicians. Thus, GME is a public good that ensures the sustained availability of highly skilled physicians and directly provides essential clinical services rendered by resident physicians.

There are many costs associated with GME. Direct costs include salaries and benefits, as well as the overhead costs

of practice for the resident physician, such as licensing fees, medical liability insurance, clinical facility expenses, such as utilities and maintenance, and administrative costs. Because residents must be under supervision for their education, there is also the expense of faculty time for education and supervision. Finally, because they are medical school graduates providing valued health care services, residents also receive salary and fringe benefits, although at a fraction of the income of physicians in independent practice.

In addition, the sponsoring institution incurs indirect costs of training residents. Residents may be less efficient and may perform more diagnostic testing, additional procedures, and require more staff support. Residents, often located at tertiary care centers, may also care for more complex patients. Leaders in managed care believe that services at teaching hospitals cost 5% to 10% more than those at nonteaching hospitals.³ Thus, for almost 4 decades, the US government has explicitly funded GME, primarily through the Medicare and Medicaid programs.

GRADUATE MEDICAL EDUCATION (GME) AND THE MEDICARE TRUST FUND

GME financing has become a major issue for both Medicare reform and the physician workforce. Medicare is the major explicit financier of GME⁴ and related activities in the United States, making payments of more than \$8.5 billion each year to teaching hospitals. By virtue of their nonelderly patient populations, freestanding children's hospitals do not receive significant reimbursements from Medicare. However, because 70% of pediatric residents are trained outside of freestanding children's hospitals, Medicare still has the major role in financing pediatric residency training, and its policies on financing for GME, therefore, significantly influence the overall workforce in pediatrics.

Before the enactment of Medicare, GME programs were funded primarily by the sponsoring teaching hospital through patient-care revenues. With the passage of Medicare in 1965, teaching hospitals received pass-through from Part A for the costs of GME, including resident salaries, benefits, and overhead, which are now referred to as direct GME (DGME) payments. In 1965, Congress recognized that hospitals with educational activities enhanced the quality of care offered and that the cost of this education should be borne by society. In the reports accompanying the Medicare legislation, Congress declared⁵:

Educational activities enhance the quality of care in an institution, and it is intended, until the community undertakes to bear such education costs in some other way, that a part of the net cost of such activities (including stipends of trainees, as well as compensation of teachers and other costs) should be borne to an appropriate extent by the hospital insurance program.

With the implementation of the Medicare diagnosis-related groups (DRG) payment system in 1983, teaching hospitals were given an adjustment factor to their reimbursement rate on the basis of their resident-to-bed ratio.⁶ Congress described the purpose of the indirect medical education (IME) adjustment as follows:

This adjustment is provided in light of doubts . . . about the ability of the DRG case classification system to account fully for factors such as severity of illness of patients, requiring the specialized services and treatment programs provided by teaching institutions and the additional costs associated with the teaching of residents . . . The adjustment for indirect medical education costs is only a proxy to account for a number of factors that may legitimately increase costs in teaching hospitals.^{7,8}

In 2001, DGME payments were approximately \$3 billion, and in fiscal year 2006, Medicare IME payments were estimated at approximately \$5.6 billion. Congress has reduced the IME adjustment several times since its inception, with the most recent prescribed cuts occurring as part of the Medicare Modernization Act of 2003.⁹

There are several important consequences of Medicare's primary role in GME. First, Medicare subsidizes GME as part of the expense of caring for Medicare patients. Thus, freestanding children's hospitals (technically referred to as "Medicare prospective payment system-exempt" hospitals) received, on average, only approximately \$374 per resident from Medicare in fiscal year 1997, because they care for very few Medicare patients; predominantly pediatric end-stage renal disease patients. These hospitals must seek other sources of funding for their GME programs. However, many pediatric residents train in general hospitals that receive both DGME and IME payments for these residents; thus, Medicare's GME policies still have a major effect on pediatric residency education. Second, Medicare Part A pays for hospital services. Medicare payment for associated GME costs, therefore, is based on hospital-based services provided by residents. Thus, these reimbursement policies are a major financial disincentive for resident education in nonhospital settings. The Balanced Budget Act of 1997 (BBA) allowed hospitals to count residents in nonhospital settings in determining the IME if the hospital substantially incurs all of the cost of training in that setting¹⁰; however, it is not clear that this change has increased ambulatory care training. Finally, Medicare provides GME support to any hospital with an accredited residency program. For years, this entitlement created a tremendous financial incentive for hospitals to increase the number of residency positions to increase Medicare reimbursement rates and to benefit from the clinical services provided by the residents. Increasingly fewer resident positions have gone unfilled during the past decade because of the high demand for residency positions in the United States by international medical graduates. Historically, Medicare's GME financing policies constituted an open-ended federal subsidy, although in 1997 Congress also placed a cap on the number of residency positions that Medicare would fund at each hospital. This cap has not only limited the growth of GME positions in the country but also frozen the geographic distribution of GME positions since its implementation. In 2005, the Centers for Medicare and Medicaid Services, authorized by the Medicare Modernization Act of 2003, made a one-time redistribution of resident slots. Hospitals that did not fill all of their resident slots under their BBA cap relinquished them to a subset of those hospitals that

had more resident slots than their BBA cap permitted to be eligible for Medicare GME reimbursement.

The nation's system of GME financing has a tremendous impact on the pediatric workforce and the education of future pediatricians.

CHILDREN'S HOSPITAL GRADUATE MEDICAL EDUCATION PAYMENT PROGRAM (CHGME PP)

The Children's Hospital Graduate Medical Education Payment Program (CHGME PP) was authorized for 2 years by the Health Research and Quality Act of 1999¹¹ and reauthorized for 4 more years by the Child Health Act of 2000.¹² The program helps Medicare prospective payment system (PPS)-exempt children's hospitals, which, because of their low Medicare patient volume, do not receive significant Medicare GME payments. Only Medicare PPS-exempt children's hospitals that have their own Medicare provider number are eligible for the program.

With enactment of this legislation, Congress recognized that, until comprehensive GME financing reform occurs, CHGME PP funding is essential to provide Medicare PPS-exempt children's hospitals a level of federal GME support equivalent to the Medicare GME support provided to all teaching hospitals. Without it, in today's health care market, Medicare-PPS children's hospitals, which train nearly 30% of all pediatricians, nearly 50% of all pediatric subspecialists, and the majority of pediatric research scientists, would be at significant risk, which would jeopardize the nation's future pediatric workforce.

The Health Resources and Services Administration administers the CHGME PP. It makes DGME and IME payments to ~60 eligible children's hospitals during the federal fiscal year. Congress authorized one third of the funding to go toward DGME payments and the remaining two thirds to go toward IME payments. The DGME payment is based on a standardized national average per resident amount and the average number of Medicare-weighted,* full-time equivalent residents, subject to the resident cap and rolling average established under the BBA. The IME payment varies by hospital, depending on the number of Medicare-unweighted full-time equivalent residents, the area-wage index of the metropolitan area in which the hospital is located, the complexity of its patient population, the volume of patients, the number of Medicare-approved beds, and its teaching intensity.

Unlike Medicare GME funding, Congress must appropriate funds annually for the CHGME PP. From fiscal year 2002 to fiscal year 2004, Congress fully funded the CHGME PP; however, cuts were made in subsequent years. Congress appropriated \$303 million for the CHGME PP in fiscal year 2004, \$301 million in fiscal year 2005, and \$297 million in fiscal year 2006. Given the duration of residency training, the uncertainty of CHGME PP funding levels from year to year is highly problematic.

*When determining the number of full-time-equivalent (FTE) residents for GME funding purposes, Medicare-weighted resident FTEs count residents beyond their initial residency period (i.e. fellows) as 0.5 FTE per current Medicare rules. For Medicare-unweighted counts, all residents (including fellows) are counted equally as 1 FTE.

OTHER SOURCES OF GME FUNDING

Medicaid

Although Medicare is by far the largest explicit national funder of GME, there are other major sources of GME financing. In 2005, Medicaid provided approximately \$3.2 billion for GME-related expenses; however, the amount varies widely from state to state and policies for GME use are highly variable. In 2005, 47 states and the District of Columbia paid for GME at some level out of Medicaid funds. Under state budgeting pressures and rising Medicaid costs as of 2005, 4 of these states have decreased the amount of Medicaid funding for GME, and 6 have considered eliminating Medicaid funding for GME altogether. In addition, an increasing number of states are linking Medicaid GME funds to state policy goals regarding the distribution of the health care workforce. It has even been proposed that the federal government not provide Medicaid funds to states for GME.

In total, 46 states and the District of Columbia contributed to GME through their Medicaid fee-for-service programs in 2005. Thirty-one of the states that paid for GME under fee-for-service programs did so through hospital per-case or per-diem rates. Of the 35 states and the District of Columbia that reported capitated Medicaid arrangements, 14 made explicit Medicaid GME payments to teaching hospitals or teaching programs; 10 others included the payments by incorporating them into the capitated rates negotiated in Medicaid managed care contracts with teaching hospitals.¹³

Title VII Programs

Training Grants in Primary Care Medicine and Dentistry, a provision of Title VII of the Public Health Service Act, provide the authority and funding for faculty development, academic administrative units, predoctoral training, and intensive primary care training for residents in diverse ambulatory settings. Title VII helps fund residency education in general pediatrics, internal medicine, and family practice, but this funding was cut by \$154.3 million in 2006.

Additional Federal Sources for GME Funding

A number of federal agencies sponsor residency training opportunities and funding outside the normal mechanisms of Medicare, Medicaid, Title VII, and the Children's Hospital GME Payment Program. The National Institutes of Health (NIH), for example, sponsors a limited number of subspecialty training positions, and through research grants, provides funding for some resident research activities. In addition to clinical areas of expertise, the NIH's National Library of Medicine offers predoctoral and postdoctoral research training in biomedical informatics, as well as support for librarians, scientists, health professionals, and others who wish to obtain cross-training to become in-context information specialists. The Agency for Health Care Research and Quality likewise offers a variety of training programs to support predoctoral work. Finally, the Maternal and Child Health Bureau operates a comprehensive program of training opportunities through its MCH Training Pro-

gram, which funds public and private nonprofit institutions of higher learning to provide leadership training in maternal and child health. Although this is not a comprehensive list of training opportunities, it serves to demonstrate the breadth of experiences offered through a number of less well-known federal programs.

Private or Industry-Sponsored GME Funding

More recently, pharmaceutical and medical device companies have supported a few GME positions in particular specialties. In 2006, a program to fund additional dermatology GME positions with funds from both the specialty society and pharmaceutical companies was announced. The program was withdrawn when concerns were raised about the potential influence of industry on residents. The Accreditation Council for Continuing Medical Education (ACCME) has developed and revised Standards of Commercial Support and has grappled with many of the same issues that GME is starting to face.¹⁴ The experiences gleaned from the continuing medical education community can be applied to GME policy development pertaining to funding issues, and thereby further solidify the relationship between these components of lifelong learning.

Cross Subsidy From Patient Care Revenue

The largest source of funding for GME in all specialties, however, continues to be cross-subsidies from patient-care revenue from private payers; however, these funds are not specifically designated for GME. In 2001, the US Bureau of Health Professions estimated Medicare provides 40%, Medicaid provides 10%, and the Bureau of Health Professions provides 1% of GME financing; 49% of GME financing is provided by “other” sources.¹⁵

Transparency and Decoupling Indirect Medical Education (IME)

Congress recognized the need to increase payment to tertiary care hospitals that care for more severely ill, complex patients because of the limitations of the DRG payment methodology.¹⁶ The ratio of residents to beds was used as a proxy for determining which hospitals cared for these patients. Unfortunately, until there were BBA caps, hospitals were also given a financial incentive to increase the number of residency positions irrespective of whether they cared for more complex patients. Calculating IME on the basis of resident numbers creates financial incentives which can distort GME and the physician workforce. Thus, another mechanism may be more effective at addressing costs because of patient complexity without inducing these unintended consequences.

Care for indigent patients, clinical research, and specialized services and technology for complex patients continue to be important regional and national needs that need adequate financing. Disproportionate share funding provides some support for indigent care at many teaching hospitals serving large proportions of unfunded or public sector patients. However, these funds have also been reduced over time by the BBA. Additional mech-

anisms should be developed to support the costs of these missions.

Given the substantial public funding directed toward GME, the products of this funding may face increased scrutiny. Traditional measures, such as the knowledge and skills of those being trained, will continue to be relevant. Greater accountability for the quality of care being delivered within GME-funded teaching settings is also likely. Finally, it will be increasingly important to demonstrate that GME funding results in an appropriate supply of physicians, trained in needed specialties and geographically distributed to ensure that the health needs of diverse populations across all U.S. communities are well served.

AN ALL-PAYER GME TRUST FUND

Although society in general and all payers, including Medicare, benefit from GME, Medicare and Medicaid cannot and should not continue to be the only payers to designate substantive funding specifically to support GME. The participation of all payers, both public and private, in financing GME should be encouraged, and a mechanism should be developed to ensure an equitable and openly acknowledged contribution from all parties. Medicare would be able to reduce its burden in financing GME if the private sector began to pay its fair share.

An all-payer GME trust fund has been proposed that will create many benefits.¹⁷ A national GME trust fund could eliminate distortions in the physician workforce caused by the current Medicare funding methodology and develop mechanisms for financing residency positions that will best meet the evolving physician workforce needs of the United States. The total number of residency positions financed can be based on national workforce needs. Funding could be more flexible to support education in ambulatory and community sites for residents in primary care specialties. Also, GME support could be provided to all specialties, including pediatrics, pediatric medical subspecialties, and pediatric surgical specialties, on the basis of need.

Some concerns about a national all-payer GME trust fund include an increase in the cost of employment-based and directly purchased health insurance; these costs are currently being partially borne by Medicare and other payers who support GME. An all-payer trust fund could potentially reduce a teaching hospital's incentive to care for Medicare patients; however, it is very unlikely that a teaching hospital would adopt such a strategy or policy given the dominant role of Medicare as a payer.

Allocation of funds also could be a divisive issue. A centralized planning body that allocates GME funds to each hospital and/or specialty could become highly politicized and also may be insensitive to signals from the health care market, leading to the training of an excessive number of physicians in certain specialties. Use of a market mechanism may be more flexible and responsive to actual societal requirements for physicians.

DISTRIBUTING GME FUNDS TO MEET WORKFORCE NEEDS AND DEMANDS

Using a market mechanism for distributing GME funds has many advantages.¹⁸ Such a system would be responsive to market demand for physicians and make residency programs and their sponsoring institutions more responsive to the educational needs of their residents. This system also may improve accountability of GME expenditures.

A proposed market mechanism would be a portable authorization system that would allocate GME funds for direct medical education costs to accredited residency programs on the basis of the selection of the program by qualified students or residents; thus, the funding would follow the residents to their program. The total number of positions to be funded would be set by a public-private health care workforce policy body on the basis of national workforce requirements. A portable authorization system will not directly address geographic maldistribution of physicians. Thus, continuing support for programs such as the National Health Service Corps and state-level scholarship, loan forgiveness, and incentive programs remain essential to address this problem.

FINANCING PEDIATRIC SUBSPECIALTY GME

Pediatric medical subspecialists and surgical specialists have an essential role in improving pediatric care by generating new knowledge through clinical and basic science research, in educating other pediatric practitioners, and in providing specialized pediatric services. Because of concerns about an excessive number of adult subspecialty physicians, Medicare GME support for subspecialty training was cut in both amount and duration of support, and some have advocated eliminating support altogether. However, not all subspecialties have an excess of physicians, and there is a need for more physicians in some pediatric subspecialties. Thus, stable and reasonable mechanisms of support for subspecialty GME are required.

IF PUBLIC SUPPORT OF GME IS NOT SUSTAINED

Budgetary pressures on the Medicare trust fund and on federal and state governments have led to greater efforts to reduce or eliminate public funding for GME. Policy makers note that Congress intended that the Medicare hospital trust fund's role as the primary funding agent of GME was to be temporary. Elimination of public funding for GME would mean that residency education would have to be supported by cross-subsidies from patient care revenues, leading to a greater focus on service delivery and revenue generation, and resulting in less teaching and less oversight by faculty. Given the high educational debt already owed by medical school graduates, charging tuition for GME would put medical education out of reach for students from poor or middle-class backgrounds and could drive students away from more poorly reimbursed specialties, such as primary care, and from communities with underserved populations.

CONCLUSIONS

GME benefits society through the education of highly skilled physicians and the delivery of clinical services by resident physicians. All payers should support the direct costs of GME through a national GME trust fund. In the absence of an all-payer national GME system, Medicare and Medicaid funding for GME should be maintained, and the CHGME PP should be fully funded. The services of resident physicians who are fully licensed should be reimbursed by all payers for who do not explicitly fund their share of GME costs. Distribution of GME funds across specialties and across training settings should be linked to the health workforce needs of the population. GME programs should be prepared to demonstrate accountability for the quality of resident education/training and the quality of care provided by the residents.

RECOMMENDATIONS

1. Because GME is a public good, federal and state governments should continue their support of GME.

Strategies

- A. Until an all-payer GME trust fund is established, the CHGME PP should be fully funded by the federal government at a level of funding that would approach what Medicare provides in DME and IME payments, per resident on average, to all teaching hospitals.
 - B. Medicare DGME and IME adjustment funding should be maintained.
 - C. Chapters of the American Academy of Pediatrics should lobby for Medicaid GME funding in their states.
2. Health care services provided by licensed residents should be reimbursed.

Strategy

- A. Physicians who are fully licensed and in GME programs should be permitted to bill payers for health care services they provide if the payer does not explicitly fund their share of GME costs.
3. All health care payers, including Medicare and Medicaid, should contribute equitably to a fund that supports the direct costs of GME, including resident salaries and benefits, faculty teaching time, and overhead and patient care expenses directly related to residency education.

Strategies

- A. A GME trust fund should be established that is supported by all payers and overseen by a sound, independent, national physician-workforce-planning body with pediatric representation.
- B. Subspecialty fellowship training and general pediatrics research fellowship training should receive adequate support from the GME financing system, including funding from the NIH and other federal agencies, as appropriate.

- C. Any mechanism for distributing GME funds should ensure that resident physicians are educated in specialties that reflect the needs of the population and should also be sensitive to promoting the educational needs of resident physicians to ensure quality health care in the future. A portable authorization system for use by graduates of accredited US medical schools and other qualified recipients is a potential mechanism to distribute funds to residency programs to finance the direct costs of GME.
- 4. GME programs in Medicare PPS-exempt children's hospitals should receive a level of support per resident equivalent to that of other teaching hospitals for their GME activities.

Strategies

- A. To ensure quality pediatric GME with stable funding, the CHGME PP should be funded as an entitlement or through multiyear, guaranteed appropriation, rather than an annual discretionary appropriations process.
- B. Education programs in Medicare PPS-exempt children's hospitals should be included in a reformed national GME financing system.
- 5. The distribution of GME funds needs to be directed to cover the costs of educational activities and to satisfy public demands for transparency and accountability.

Strategies

- A. GME funding should be paid to the entities that incur the costs of residency education, including community sites.
- B. GME funds must be directed toward GME, and should not be included in capitation payments for clinical services.
- C. Distribution of Medicare IME funds should be uncoupled from the number of residents at a teaching hospital. Funds that primarily support noneducational missions of teaching hospitals, including indigent care, clinical research, and specialized services and treatment programs, should be distributed through alternative mechanisms that provide stable funding for these important missions.
- D. Applying the experiences from the Accreditation Council for Continuing Medical Education and the continuing medical education community, the Accreditation Council for GME, the American Medical Association, and other organizations involved in GME should work together to develop guidelines for industry support of GME that assures the quality of GME and protects residents from undue industry influence during residency education.
- E. The Accreditation Council on GME and its Pediatric Review Committee and the American Board of Pediatrics should collect educational outcome

data to assess the quality of GME and its relationship to GME funding.

- 6. GME funding should be used to help achieve pediatric workforce goals, as determined by the pediatric community.

Strategies

- A. Funding for primary care training programs, such as Title VII, needs to be increased to meet the needs of children in underserved communities.
- B. Flexibility in GME funding should be increased to enhance diversity and address geographic maldistribution by mechanisms such as revisiting the BBA caps on residency programs.
- C. Because pediatric subspecialty physicians play a critical role in the development and application of new knowledge in health care for children and the education of future pediatricians, mechanisms should be in place to ensure adequate support to educate an appropriate supply of subspecialty physicians.
- D. Financial disincentives to education in ambulatory care sites, particularly in underserved communities, should be eliminated.
- E. The relationship between GME funding policy and the pediatrician workforce should be studied.
- 7. Representatives from pediatrics must be active participants in all significant deliberations and decision-making processes pertaining to GME financing.

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