



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

COMMITTEE ON PEDIATRIC WORKFORCE

The American Academy of Pediatrics (AAP) believes that an appropriately financed graduate medical education (GME) system is critical to ensuring that sufficient numbers of trained pediatricians are available to provide optimal health care to all children. A shortage of pediatric medical subspecialists and pediatric surgical specialists currently exists in the United States, and this shortage is likely to intensify because of the growing numbers of children with chronic health problems and special health care needs. It is equally important to maintain the supply of primary care pediatricians. The AAP, therefore, recommends that children's hospital GME positions funded by the Health Resources and Services Administration be increased to address this escalating demand for pediatric health services. The AAP also recommends that GME funding for pediatric physician training provide full financial support for all years of training necessary to meet program requirements. In addition, all other entities that gain from GME training should participate in its funding in a manner that does not influence curriculum, requirements, or outcomes. Furthermore, the AAP supports funding for training innovations that improve the health of children. Finally, the AAP recommends that all institutional recipients of GME funding allocate these funds directly to the settings where training occurs in a transparent manner.

Graduate medical education (GME) is a public good that ensures the sustained availability of a highly skilled pediatric workforce, including primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists (as a group henceforth referred to as "pediatric physicians"), and increases the availability of health care for all children. It is the "hands-on" training phase of physician education that occurs after graduation from medical school before entering clinical practice. At least 3 years of GME training are required to be eligible

## abstract

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for board certification in general pediatrics, and additional years of fellowship training are required to be eligible for certification in pediatric medical subspecialties. Pediatric surgical specialists begin their GME training in surgery but must also complete fellowship training in their desired pediatric surgical specialty. Fellowship training requirements vary by specialty, but at least 3 years of training are usually required. Although the Accreditation Council for Graduate Medical Education broadly determines the curriculum for GME training, GME funding policies affect the availability of training positions. Funding for GME also plays an essential role in improving access to pediatric care, because trainees provide valuable medical services under faculty supervision, frequently to underserved populations, during their training. Teaching hospitals are a safety net for the poor and uninsured and provide approximately 37% of all charity care nationwide.<sup>1</sup> Without adequate GME funding, there will be insufficient GME positions to remediate current, and prevent future, pediatric physician workforce shortages and provide the opportunity for all US medical graduates to complete their GME training.<sup>2</sup> Although US medical schools have increased their enrollment to address workforce shortages, there has not been a commensurate increase in GME positions. Without an increase in GME positions, it is likely that the increased competition for the limited number of GME positions will decrease the opportunities for international medical graduates (IMGs) to enter GME training as well, which has several implications for the physician workforce. For example, IMGs are more likely to practice in medically underserved areas than are graduates of US medical schools. IMGs also increase the diversity of the physician workforce, because they are more

likely to be of Asian or Hispanic descent than are US medical school graduates. It has also been suggested that decreased opportunities for IMGs will have a detrimental effect on countries that have benefited from returning physicians who have been trained in the United States.<sup>3</sup>

### **CURRENT SOURCES OF GME FUNDING**

Although GME is an essential public investment in the future physician workforce, less than 1% of the \$1.4 trillion in federal and state expenditures on health care is allocated to GME.<sup>4</sup> It is estimated that the cost to hospitals for training a resident averages \$100 000 or more per year.<sup>5</sup> For most teaching hospitals in the United States, the largest source of GME funding is from the Centers for Medicare and Medicaid Services (CMS), but for pediatric training programs that are based at a children's hospital the major sources of GME funding are the Children's Hospital Graduate Medical Education (CHGME) Payment Program and Medicaid. All of these sources of funding are considered in this policy statement.

Total federal GME funding amounts to nearly \$16 billion annually. Medicare is the largest federal government contributor to GME, providing \$9.5 billion (almost \$3 billion for direct graduate medical education [DGME]) to pay the salaries of residents and supervising physicians, and approximately \$6.5 billion for indirect medical education (IME) to subsidize the higher costs that hospitals incur when they run training programs. Federal Medicaid spending adds another \$2 billion for GME, and an additional \$4 billion comes from the Veterans Health Administration and the Health Resources and Services Administration.<sup>6</sup>

In fiscal year 2012, the CMS provided \$2.7 billion in DGME funding and \$6.7 billion in IME to teaching

hospitals.<sup>7</sup> The DGME funding is hospital-specific and based on the institution's Medicare patient population and its resident-to-bed ratio. The CMS only provides "full" DGME payments for the initial residency period (IRP) required for a trainee to become eligible for board certification in the specialty in which the resident first begins training. IRP for a specialty is based on the minimum accredited length of a residency program, as determined by the Accreditation Council for Graduate Medical Education, which is 3 years for general pediatrics. After this IRP, any additional training, such as fellowship training (eg, in a pediatric medical subspecialty or surgical subspecialty), is funded at the 50% level. The IME payments are based, in part, on the number of trainees and the number of Medicare patients receiving care at the teaching hospital. Training outside of the teaching hospital and its clinics (eg, private physician offices) or time spent in scholarly and didactic activities usually does not qualify for payment even when such training is mandated by training requirements.

Despite increasing evidence of physician shortages in the United States, the Balanced Budget Act of 1997 (Pub L No. 105-33) capped the number of residents funded by Medicare at the number of full-time equivalent residents enrolled in a hospital's training program in 1996.<sup>8,9</sup> The Institute of Medicine (IOM), in its 2014 report, "Graduate Medical Education That Meets the Nation's Health Needs," called for maintaining GME support at the current level.<sup>10</sup> In contrast, the American Medical Association, Council on Graduate Medical Education, and Council of Medical Specialty Societies have all recommended increased funding for GME and expanding the number of GME trainee positions funded by Medicare. In its 21st report, the Council on Graduate Medical Education recommended that the

number of trainee positions be increased to provide GME training for the additional 3000 medical school graduates who will need trainee positions because of the expansion of medical school enrollment in the United States.<sup>11,12</sup> The Association of American Medical Colleges has recommended that the number of federally supported GME training positions be increased by at least 4000 and that half of these positions be allocated to primary care.<sup>13</sup> The American Academy of Family Physicians (AAFP) has also recommended preferentially funding increased trainee positions for generalist physicians, particularly family physicians, with concomitantly less funding for the training of other physicians.<sup>14</sup> The American College of Physicians (ACP) also has recommended that GME funding by CMS place a priority on primary care.<sup>15</sup>

States support GME through nearly \$4 billion in Medicaid spending. The federal government does not require state Medicaid programs to provide GME funding, but in 42 states and the District of Columbia Medicaid programs made GME payments in 2012. The federal government also does not have explicit guidelines on how these payments should be made. However, a number of states link Medicaid DGME and IME payments to state policy goals, such as encouraging training in primary care, increasing the supply of physicians who care for those insured by Medicaid, and improving the geographic distribution of the physician workforce. Attention to these state goals has been emphasized as states work to implement the Affordable Care Act (Pub L No. 111-148 [2010]).<sup>10</sup> In 2012, 40 states and the District of Columbia made GME payments under the Medicaid fee-for-service program, and 12 of these states used methods similar to those of the Medicare program to allocate

funding. Sixty-five percent of the 36 states and the District of Columbia with risk-based Medicaid managed care programs also provide some GME funding through a variety of methodologies (for current information on your state, please contact the American Academy of Pediatrics' [AAP's] Division of State Government Affairs at [stgov@aap.org](mailto:stgov@aap.org)). These payments are primarily made directly to teaching hospitals, but a few states also make payments to nonhospital teaching sites or medical schools.<sup>16</sup>

Freestanding children's hospitals receive little or no GME support from Medicare, because they do not provide care for the elderly. In 1999, the CHGME program was enacted to address this disparity in federal GME support between freestanding children's hospitals and other teaching hospitals. Since its enactment, funding from the CHGME program has helped support the training of primary care pediatricians, pediatric medical subspecialists, and pediatric surgical subspecialists through an annual appropriation. More than 50 US children's hospitals currently participate in the program,<sup>17</sup> which is critical for maintaining an adequate pediatrician workforce, because 49% of primary care pediatricians and 51% of pediatric medical subspecialists receive their GME training at children's hospitals.<sup>18</sup>

Unfortunately, unlike Medicare GME funding, Congress must appropriate funds annually for the CHGME program, and each year established programs are unsure whether sufficient funds will be available to continue their programs. Because the duration of pediatric GME training is 3 to 6 years, trainees in children's hospitals could potentially lose their positions if there is a decrease in appropriations for CHGME. This lack of stable funding (eg, time-limited grant funding) is also a disincentive for children's hospitals to maintain

or expand their training programs. These issues are also noted in the IOM report on financing GME, which supported a stable and equitable source of Medicare funding for pediatric residents in freestanding children's hospitals.<sup>10</sup>

Title VII of the Public Health Service Act (42 USC 6A §201 [1944]) helps fund residency education in general pediatrics, internal medicine, and family practice by providing training grants in primary care medicine and dentistry. These grants provide the authority and funding for faculty development, academic administrative units, predoctoral training, and intensive primary care training for residents in diverse ambulatory settings. In 2012, \$38.9 million was provided for these programs.<sup>7</sup>

Other federal sources for GME funding include the Teaching Health Centers GME Payment Program, which provides DME and IME funding for primary care residency programs that are sponsored by qualified teaching health centers. The Teaching Health Centers GME Payment Program is a \$230-million, 5-year initiative that began in 2011 to support more primary care residents and dentists trained in community-based ambulatory patient care settings. Payments are made for direct expenses associated with sponsoring an approved graduate medical or dental residency training program and for indirect expenses associated with the additional costs relating to training residents in such programs. As of August 2014, however, only 3 of the >60 programs funded have been in pediatrics.<sup>18,19</sup> The Maternal and Child Health Bureau also provides funding to institutions of higher learning for leadership training of physicians and other health care professionals in the areas of teaching, research, clinical practice, public health administration and policy making, and community-based programs in maternal and

child health.<sup>20</sup> In fiscal year 2013, the Division of Maternal and Child Health Workforce Development awarded 151 grants, an investment of \$47 million. The National Institutes of Health sponsors a limited number of subspecialty training positions and, through research grants, provides funding for some resident research activities. The federal government also indirectly supports GME training through a variety of scholarships and loan repayment programs. Other nonfederal sources of pediatric GME funding include teaching institutions as well as payments for medical services to medical school practice plans and physician groups associated with teaching hospitals that fund GME positions that exceed the Medicare cap or trainees in fellowship programs that are not fully funded. States may also provide additional funding not tied to Medicaid, such as resident scholarships and funding to begin or expand training programs.

The current system of funding GME relies heavily on federal support from the CMS and provides insufficient financial support to ensure that all children have access to optimal health care provided by a pediatric physician. Therefore, additional sources of revenue are needed. Because the health care industry gains from a well-trained pediatrician workforce, funding sources logically should include hospitals, health care systems, health maintenance organizations, the pharmaceutical industry, private and public insurers, durable medical equipment companies, health care information technology companies, and others.

### **THE EFFECT OF GME FINANCING POLICY ON THE PHYSICIAN WORKFORCE**

In its recent report, the Macy Foundation recommended that the goal of GME funding should be to produce an adequate and competent physician workforce

with the appropriate specialty mix.<sup>21</sup> Both the ACP and the AAFP also have recommended that GME funding be allocated in a manner that addresses the nation's physician workforce needs.<sup>14,15</sup> Under the current Medicare guidelines, training programs can use their GME funding for any accredited program, regardless of the physician workforce needs in their community. In addition, there is no requirement that training programs provide data on their program graduates, which could be used to assess the effectiveness of each program's efforts to address physician shortages. A recent analysis of the trainee positions that were expanded as a result of the redistribution of Medicare GME funding under the Medicare Modernization Act (Pub L No. 108-173 [2003]) revealed that these positions were allocated by teaching hospitals to non-primary care positions rather than the primary care specialties, which have the greatest shortages of physicians. This trend in allocation of GME positions shows that, without guidelines, teaching hospitals may not use additional GME funding in a manner that addresses the physician workforce needs of their community or the nation but rather expand positions in specialties that serve the needs of the teaching hospital.<sup>22</sup> Under the Affordable Care Act, redistribution of unused positions now must be prioritized to training positions in primary care and general surgery programs, which are specialties with physician shortages.

The IOM report listed 6 important goals, some of which are, at least in part, in concert with the positions of the Macy Foundation, the AAFP, and the ACP. In brief, these goals aim to achieve the following:

1. to encourage the production of a physician workforce that is better prepared to work within, lead, and improve the health care delivery

system that provides better care at a lower cost;

2. to encourage innovation in GME programs;
3. to create transparency and accountability of GME programs with respect to the stewardship of public funding;
4. to clarify and strengthen public policy planning and oversight of GME with reference to public funding;
5. to use public funds for GME in a rational, efficient, and effective manner; and
6. to avoid unintended negative effects of planned transitions in GME funding methods.<sup>10</sup>

These IOM goals, especially the ones pertaining to innovations in GME training, as well as improved transparency and accountability, should be encouraged.

From these laudable goals stemmed 5 complex recommendations that focus on GME training from the prevailing adult medicine perspective. The IOM recommendations, and not the goals, are intended to influence congressional proposals for GME reform and would require enabling legislation before they could be implemented. Because the AAP believes that any changes in public policy pertaining to financing GME must address current and future pediatric training needs and the IOM recommendations do not directly address pediatric GME funding issues or pediatric physician workforce shortages, the AAP is, therefore, unable to support all of the IOM recommendations at this time.

There is currently a shortage of pediatric medical subspecialists and pediatric surgical specialists in the United States, and this shortage is likely to increase because of the increasing number of children who have significant chronic health problems and special health care needs.<sup>23</sup> Despite this shortage, the

current limitation on the duration of full Medicare GME funding to the IRP has created a financial barrier to expanding pediatric medical subspecialty and surgical specialty trainee positions, because the DME funding from Medicare that is available for these fellowship training years is 50% of the level provided for their IRP in general pediatrics or surgery. For similar reasons, direct GME payments from Medicare for some combined specialty programs that are recognized by the American Board of Pediatrics and other specialty boards to provide GME (eg, Pediatrics-Genetics) are limited, because the duration of these programs is longer than the IRP of 3 years that is required for certification in general pediatrics. This lack of support requires teaching institutions to find funding for these positions from patient care revenues, grants, and private sources. Unfortunately, these alternative sources are most likely to result in additional trainee positions in adult medicine specialties and subspecialties, which generate the largest amount of revenue for the teaching institution, rather than fields in which there are the greatest physician shortages. The AAP maintains that increasing the number of fully funded residency training positions directed toward pediatric surgical specialties, child psychiatry, pediatric medical subspecialties, and general pediatrics (a pipeline to further pediatric medical subspecialty training) could improve access to care and enhance pediatric health.

### **THE EFFECT OF GME FINANCING POLICY ON EDUCATIONAL EXPERIENCES**

The current GME funding structure creates a financial barrier to providing trainees with all of the educational activities that contribute to a high-quality graduate training experience. Because most GME funding is based, in part, on the

number of trainees and the number of Medicare patients receiving care at the teaching hospitals of the sponsoring institution, there is a financial disincentive for training institutions to allow residents to train outside of their teaching hospital and to appropriately fund the faculty and institutions that provide these nonhospital educational experiences, including private physician practices, public health clinics, and international health care sites. GME funding should flow to the site where training occurs on the basis of the amount of time a resident spends in each setting so that these nonhospital training opportunities can offset the costs they incur for GME training and have sufficient resources to provide a high-quality educational experience. There is also a financial disincentive for sponsoring institutions to provide residents with nonclinical scholarly and didactic experiences, even though these experiences are required for accreditation and are essential aspects of training.

Finally, there is no requirement that training programs provide outcome data that could determine their effectiveness in addressing physician shortages by graduating residents who ultimately practice in underserved communities, including rural areas. Without this information, it is difficult to redirect GME funding to programs that are most successful in addressing physician shortages. In addition, training institutions are not required to provide data on how the funding they receive is used. For example, a portion of GME funding should be used to support the training of faculty in both academic and nonacademic settings and the infrastructure needed to provide high-quality educational experiences, such as simulation laboratories, telemedicine experiences, and public health opportunities. Unless training institutions are required to provide utilization data, it is not possible to know whether GME funding is

adequately used to support teaching faculty and provide high-quality educational opportunities as well as other activities that are directly related to the education of residents, payment of faculty, and clinical training sites rather than for other unrelated hospital purposes.

### **SUMMARY**

GME is a public good that ensures the sustained availability of a highly skilled pediatric workforce and increases the availability of health care for all children. The current system of funding GME (including backing from both the CMS and the Health Resources and Services Administration for CHGME) provides insufficient financial support to address the current and future pediatrician workforce needs of the nation's infants, children, adolescents, and young adults. Current GME funding also fails to meet the increasing demand for pediatric services and does not adequately support training in all settings. Current shortages of pediatric physicians are likely to continue if funding remains at current levels. To address this potential shortage and ensure a well-trained pediatric physician workforce, the AAP recommends increased public funding of GME so that all pediatric physician trainees, including pediatric medical and surgical subspecialty fellows, are fully funded for the duration of their training. Entities that gain from an appropriately trained pediatrician workforce should contribute funding for GME training without an expectation of being able to influence curriculum or training requirements or outcomes of GME. The allocation of both the public and private GME funding must be transparent and documented to ensure that the funds are being used appropriately for GME training and distributed in a manner that addresses the current and future

pediatrician workforce needs of the United States.

## RECOMMENDATIONS

Because GME training is a public good that is essential to the production of pediatricians who practice the highest-quality patient-centered care and to increase the availability of health care for all children and their families, including the underserved and those with special health care needs, the AAP recommends that

1. GME training for all pediatric physician trainees, including pediatric medical subspecialists and pediatric surgical specialists, be fully funded for the full length of training required to meet the standards of each of these pediatric and pediatric medical subspecialty and pediatric surgical specialty programs;
2. all entities in the health care industry that gain from a well-trained pediatrician workforce, including government, hospitals, health care systems, health maintenance organizations, the pharmaceutical industry, private and public insurers, medical device and equipment companies, health information technology companies, and others, contribute funding for GME training without being able to influence the curriculum, training requirements, or outcomes of GME;
3. funding for GME programs that are sponsored by freestanding children's hospitals be provided in a stable manner and at a similar level as GME programs that are sponsored by other teaching hospitals and related institutions;
4. GME funding be allocated in a manner that addresses the current and future pediatrician workforce needs to meet the

current and future health care needs of children in the United States;

5. GME funding from Medicare, Medicaid, CHGME, and all others who gain from GME be allocated for the time trainees spend in their scholarly and didactic activities and all clinical experiences (inpatient and ambulatory), including all educational activities required by accrediting agencies;
6. full GME funding be available for combined specialty programs that are recognized by the American Board of Pediatrics and other specialty boards to provide GME in a particular combined specialty (eg, Internal Medicine-Pediatrics, Pediatrics-Genetics);
7. funding for GME support the education of trainees in all settings and flow to the site where the training occurs;
8. GME funding be allocated in a transparent manner so that funders can assess whether the funds have been used appropriately for GME training;
9. the number of funded pediatric GME positions be increased to address the current and ongoing pediatrician workforce needs of the nation and the increasing demand for pediatric services; and
10. changes in public policy pertaining to financing GME address current and future pediatric training needs.

### LEAD AUTHOR

Mary Ellen Rimsza, MD, FAAP

### CONTRIBUTING AUTHORS

Andrew J. Hotaling, MD, FAAP  
Harold K. Simon, MD, FAAP

### COMMITTEE ON PEDIATRIC WORKFORCE, 2015-2016

William B. Moskowitz, MD, FAAP, Chairperson

Christopher E. Harris, MD, FAAP  
Andrew J. Hotaling, MD, FAAP  
James P. Marcini, MD, MPH, FAAP  
Thomas W. Pendergrass, MD, MSPH, FAAP  
Harold K. Simon, MD, FAAP

### LIAISONS

Michelle M. Macias, MD, FAAP – AAP Section Forum Management Committee  
Laurel K. Leslie MD, MPH, FAAP – American Board of Pediatrics

### PAST COMMITTEE MEMBERS

William T. Basco, MD, MS, FAAP  
Mary E. Keown, MD, FAAP  
Mary Ellen Rimsza, MD, FAAP  
Ted D. Sigrest, MD, FAAP  
Gail A. McGuinness, MD, FAAP - Liaison, American Board of Pediatrics

### STAFF

Holly J. Mulvey, MA

### ABBREVIATIONS

AAFP: American Academy of Family Physicians  
AAP: American Academy of Pediatrics  
ACP: American College of Physicians  
CHGME: children's hospital graduate medical education  
CMS: Centers for Medicare and Medicaid Services  
DGME: direct graduate medical education  
GME: graduate medical education  
IME: indirect medical education  
IMG: international medical graduate  
IOM: Institute of Medicine  
IRP: initial residency period

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

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