The Perspective Newsletter is a quarterly newsletter among NMPRA (National Med-Peds Residents Association), the AAP (American Academy of Pediatrics), and MPPDA (Med-Peds Program Directors Association). Inside this edition you will find highlights from the recent NMPRA conference, articles written by our peers, and useful resources from the AAP. Thank you to everyone who came to the NMPRA Conference in October and we look forward to seeing you next year for the 50th Anniversary of Med-Peds as a specialty!

If you have a picture or article to contribute to a future newsletter, please email it to communications@medpeds.org.

Save the Date!

50th Anniversary of Med-Peds

Sept 16-17, 2017
Chicago, IL

Joint CME Course: Section on Med-Peds and Section on Adolescent Health

February 9-12, 2017
Disney’s Grand Californian Anaheim, CA
Register at shop.aap.org/adolescent2017

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Chair Letter

The Section of Med-Peds is an active component of the national Med-Peds advocacy agenda. Over the four years as Chair (ended November 1, 2016) and as part of the med-peds community we have accomplished:

1. **Physician Health and Wellness booth:** A fully funded structure that now incorporates the Section on Integrative Health and is part of the AAP exhibit hall offerings. Numerous students, residents and attending physicians have volunteered to talk with pediatricians about their own health.

2. **Pediatric Hospital Medicine fellowship:** The section has voiced its strong opinion (based on a survey of membership) to the American Board of Pediatrics and the American Board of Medical Specialties. We continue to have a seat on the Joint Council of Pediatric Hospital Medicine subcommittees. Our section has created its own Hospitalist subcommittee.

3. **Graduate Medical Education funding:** We strongly support continued funding of combined certificate holders. Fortunately the Alliance of Academic Internal Medicine, American College of Physicians and the American Academy of Pediatrics supports this notion and went on the record.

4. **Articles from the Executive Committee:** The Med-Peds Hospitalist Workforce: Results From the American Academy of Pediatrics Workforce Survey at [http://hosppeds.aappublications.org/content/5/11/574.long](http://hosppeds.aappublications.org/content/5/11/574.long) and Characteristics of the Combined Internal Medicine-Pediatrics Workforce at [http://www.sciencedirect.com/science/article/pii/S0002934315008190](http://www.sciencedirect.com/science/article/pii/S0002934315008190)

5. **Policy Statements and Clinical Reports:** Many section members weighed in on many statements most recently the Age Limit of Pediatrics.

6. **Transition Care and Young Adult Care:** A New Special interest group will be created with the hopes to attain full multidisciplinary section status within the AAP. We are part of the writing group for an updated transition statement that includes the AAP, ACP and AAFP.

7. **FACP pilot project:** As a way to have people be part of the AAP and FACP we have been able to get numerous med-peds physicians to obtain FACP status without an application.

8. **Joint Newsletter with NMPRA and MPPDA:** Speak as One Voice.

9. **Maintenance of Certification:** We were able to secure continued reciprocity from the ABP to the ABIM as significant changes to ABIM were occurring. We have had educational sessions and prepared a document on navigating the MOC for med-peds physicians.

10. **Section on Adolescent Medicine and Section on Med-Peds combined CME:** This course will be held at Disney’s Grand Californian in Anaheim, CA February 9-12, 2017. Register before January 9th for a discount at shop.aap.org/adolescent2017. This multi-day session includes many section members as speakers!

11. **New Subcommittees:** Physician Health and Wellness and Hospitalist, added to already established sub-committees (communication, membership, nominations, and abstract review). Please let us know if you want to be involved.

12. **50th Anniversary Med-Peds as a Specialty Celebration:**
   Save the dates of September 16-17, 2017 in Chicago.
   Tell your classmates, have reunions, send us memorabilia and pictures.

I have the fullest faith in the new leadership of Michael Donnelly, MD, FACP, FAAP, the executive committee and it sub-committees.

**Allen Friedland, MD, FACP, FAAP**
**Christiana Care Health System**
**Program Director, Combined Med-Peds Residency Program**

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**Section on Med-Peds Executive Committee**

**Chairperson**
Michael Donnelly, MD, FACP, FAAP

**Past-Chairperson**
Allen Friedland, MD, FACP, FAAP

**Members**
Jayne Barr, MD, FACP, FAAP
Samuel Borden, MD, FACP, FAAP
Richard Wardrop III, MD, PhD, FACP, FAAP
Jennifer Gerardin, MD, FAAP
Michael Mandarano, DO, MD
NMPRA Conference Highlights
October 2016 in San Francisco, California

Theme: Caring for the Underserved

In addition to underserved care presentations from Med-Peds faculty across the country, there was also an informative underserved care panel question and answer session.

Congratulations to the 2016 Grant and Award Winners

Gary Onady Award
Dr. Brandon Allport (University of Miami)

Howard Schubiner Award
Dr. Amrit Misra (Wayne State University)

Advocacy / Community Service
Dr. Kira Watson (LAC/USC Medical Center)

International Travel Grant
Dr. Shalini Vaid (University of Rochester)

Resident Case Competition
Dr. Mara Horwitz (University of Missouri)
Dr. Jessica Jaddaoul (Albany Medical Center)

Medical Student Case Competition
Sam Wainwright (University of Illinois – Chicago)
San Francisco Success of Physician Health and Wellness Program Rings in Year Number 7!

The AAP Med-Peds Section extends a whole-hearted thank you to all those who participated in the Physician Health and Wellness (PHW) program and volunteered their time and skills to help educate conference attendees about their own health and wellness. As ‘physician burnout’ and ‘building resiliency and wellness’ are hot topics throughout the medical nation this year, the PHW program was the exact endeavor that brought many different organizations together. We are again grateful to the generous efforts and contributions of the J.H. Milligan-Barr Family as well as the AAP Section on Integrative Medicine for the permanence of the booth and the expansion of material that we were able to distribute. We are also glad to continue our collaboration with NMPRA and engage the students and residents interested in Med-Peds.

As each year goes by, this program continues to evolve from a rudimentary table and poster to permanent beautiful structure. With each annual occurrence, we learn new guidelines, are humbled by how fast things change, are enlightened by evidence-based medicine, and are excited to hear new ideas as requested by our volunteers and attendees. The requests for next year: electronic apps and some incorporation into social media! We look forward to continuing to work on this endeavor and welcome any involvement from members of the Med-Peds Section and NMPRA.

The most eventful item on the horizon for next year is the 50th anniversary of Med-Peds as a specialty! The PHW program will continue to take a leap further as we become involved with the AAP Peds 21 event, a half day long event focusing on physician wellness. Participation in this AAP Inter-sectional event is key in demonstrating that over the last 50 years, Med-Peds has come to be a respected, integrated, exciting, and celebrated specialty! We look forward to joining you where east coast meets west in shimmery Chicago!

Himani Divatia, D.O., FAAP
AAP Section on Internal Medicine-Pediatrics, Physician Health and Wellness Committee
Empathy or Compassion: Which Approach Will Better Support Your Wellbeing?
Previously published in the AAP Section on Integrative Medicine Fall 2016 Newsletter

Pediatricians are empathic, almost by definition. While traditionally perceived as a positive trait, an excess of empathy, which is characterized as the ability to share or experience the feelings of another, can predispose to burnout in situations where frequent exposure to intense emotional pain occurs. Consider the NICU, the pediatric oncology service, the PICU, the Pediatric ED, the child maltreatment team, pediatric surgery service, or the general pediatric office. Chronic exposure to an excess of suffering that is met with an empathic response can result in serious emotional distress and may predispose to burnout.

An alternative response to suffering under active study in medicine is compassion. The distinction between empathy and compassion is subtle, but important to understand. Compassion is described as a feeling of deep sympathy and concern for the suffering of others, accompanied by a strong desire to alleviate the suffering. (Merriam-Webster) Studies in people who have undergone compassion training have demonstrated that it can enhance emotional well-being, increase positive emotions, and encourage prosocial behavior. Advances in neural imaging have reinforced the important differences between empathy and compassion. Simply stated, an empathic response to pain has been shown to activate the same areas in the brain that process pain. Compassion on the other hand activates brain regions that are generally associated with reward, love, and affiliation. (Klimecki et al 2014)

A controlled study of 25 adult females who received empathy training showed that it led to an increase in empathy, which in turn created stronger feelings of painful emotional distress, and increased overall negativity in response to every day situations. Conversely, those who received compassion training experienced feelings of warmth and affiliation, decreased negative affect, and increased positive affect—-even when the subjects viewed the same emotionally painful material. Even short-term training in each approach impacted distinctly different areas of the brain. (Klimecki et al, 2014) The bottom line is that compassion training helped people to strengthen their positive affect even while recognizing and acknowledging the presence of suffering of others.

Compassion training is secular and generally approached in stages by learning to develop: attention and stability of the mind; a sense of self-compassion; equanimity and impartiality; appreciation and gratitude; affection and caring for others; and a sense of unconditional love for challenging people and strangers in addition to those known and loved. If you’re looking for a new approach to preventing burnout you may want to explore the topic further.

Some examples of available national training programs include:
1. The Center for Compassion and Altruism Research and Education Stanford School of Medicine  http://ccare.stanford.edu/tag/ccare/
2. UC San Diego Health System Compassion Cultivation Training http://health.ucsd.edu/specialties/mindfulness/programs/compassion- programs/Pages/compassion-training.aspx
3. Emory-Tibet Partnership Emory University Cognitively-Based Compassion Training http://www.tibet.emory.edu/cbct/

References:
A Need for Increased Collaboration and Awareness
Jennifer Gerardin, MD, FAAP and Fred Rodriguez III, MD, FAAP

Previously published in the Fall Edition of News and Views, the newsletter for the AAP Section on Pediatric Trainees

I trained as a combined internal medicine and pediatrics resident because I wanted to care for both children and adults, but quickly realized that the care settings of pediatric and adult care are very different. Training in the two different systems can have frightening moments, especially when the systems collide. As a third year internal medicine-pediatrics resident working in an adult hospital, I was called to evaluate a young man with single ventricle physiology who underwent a Fontan palliation and developed acute hemoptysis. If I had been a senior resident on the pediatric service, I would likely have called the attending pediatric cardiologist on call. Options may have included taking the patient to the cardiac catheterization laboratory to evaluate for aortopulmonary collaterals or other causes of bleeding. On the internal medicine floor, however, I called the Critical Care / Pulmonologist who had always seemed confident. However, the attending told me, “Honestly, you are the most qualified person here to care for him.” At the time, I knew enough about my patient’s physiology to be scared that I was in charge.

Many diseases that were traditionally thought of as pediatric illnesses now have life expectancy well into adulthood. Most children with congenital heart disease survive into adulthood and adults with congenital heart disease now outnumber pediatric patients. Similar successes stories can be illustrated with cystic fibrosis, pediatric oncology, sickle cell disease and many more subspecialties. Ten years ago, it was estimated that at least 750,000 young adults with chronic childhood diseases were eligible to transfer to adult care annually. A growing number of adults with chronic childhood diseases are admitted to pediatric hospitals and account for disproportionate hospital charges. In 2011, the American Academy of Pediatrics, American Academy of Family Physicians, and American College of Physicians collaborated and recommended starting the transition process at 12 years old and ideally ending with transfer of care between 18-21 years old.

Since this recommendation, resources have been developed for the transition process and how to prepare patients to better navigate the adult health system. However, there are still few easily-accessible resources to assist with the care of common chronic disease of childhood for adult providers. A study of pediatric cardiologists listed a lack of qualified providers as a barrier to transfer of care. A survey of internists stated that the number one barrier in transfer of care was that internists may not have enough training in chronic illnesses of childhood.

Collaboration with our adult counterparts regarding when and where patients should follow up may help fill this gap. In Canada, increased referrals to adult congenital heart disease centers corresponded with a decreased mortality in the adult congenital heart disease patient population. Without these resources for adult providers, transition and ultimately transfer of care to adult providers may not be successful. Many patients do not have a smooth transfer of care to an adult provider; a multicenter study showed 42% of patients establishing care at an adult congenital center had more than a three year gap. A common reason for returning to care was a recommendation by a health care provider. As pediatricians, we need to create awareness of these recommendations, especially in settings where patients re-enter care.

We invest tremendous resources into children with chronic disease so that they can “graduate” into adulthood. We need to identify who will manage our graduates and collaborate with the adult system to build the infrastructure to take care of adults with chronic childhood diseases. Now that I am an adult congenital cardiology fellowship trainee, I see possibilities where the pediatric and adult systems can compliment each other. I will apply the lessons learned from seeing patients struggle in unfamiliar systems to help educate and improve the transition processes from both the pediatric provider’s and the adult medical team’s perspective.
**AAP Resources and Information**

**For AAP Members/Other Pediatric Practitioners**

**Adolescent and Health Professional Perspectives on the Medical Home**

The following health policy study may be of interest titled “Adolescent and Health Professional Perspectives on the Medical Home: Improving Health Care Access and Utilization Under the Affordable Care Act.” The purpose of this Health Policy Study is to better understand adolescents’ views on what are considered core components of the medical home and identify barriers to promoting adolescent health in relation to the medical home. In addition, this study sought to better understand the needs and challenges in providing adolescents with access to medical homes—from the perspective of both adolescents and experts in adolescent health and medical home policy. To accomplish these goals, researchers conducted focus groups with adolescents, presented these findings to experts, and gathered experts’ reactions to the adolescents’ perspectives. This report includes a detailed description of the methods used for this study, followed by a summary of key focus group findings and the expert reactions to these findings.

**Transitioning Youth from Pediatric to Adult-Centered Care MOC Part IV Module**

This web-based, self-directed quality improvement module will evaluate adequacy of participant documentation of patients’ transition from pediatric to adult-centered care within the 6 Core Element framework developed by Got Transition: Center for Health Care Transition Improvement. The module is ideal for general and subspecialty physicians who actively evaluate pediatric patients with chronic diseases on a frequent enough basis to report data on 30 patient visits over a one year period. Participants who successfully meet completion criteria are eligible to receive 25 Maintenance of Certification (MOC) Part IV credits and 20 Continuing Medical Education credits towards maintaining American Board of Pediatrics MOC. To register and for more information, contact Kim Rose at krose@naspgan.org. Through March 31, 2017, this module is FREE if you mention GotTransition.org, University of California San Diego/Rady Children’s Hospital.

**High Value Care: New Transitions of Care Toolkit**

A new Transitions of Care Toolkit designed to assist physicians in transitioning patients from pediatric care to an adult primary or specialty setting of care is now available. Developed by the American College of Physicians (ACP) Council of Subspecialty Societies, with participation from the American Academy of Pediatrics (AAP), multiple medical specialty groups and patient advocacy organizations, the toolkit contains disease/condition-specific tools developed to assist physicians in transitioning young adults with chronic diseases/conditions into adult care settings. Based on the clinical report, “Supporting the Health Care Transition From Adolescence to Adulthood in the Medical Home,” from the AAP, ACP, and American Academy of Family Physicians, the National Health Care Transition Center/Got Transition developed an evidence-informed model, the Six Core Elements of Health Care Transition, which includes free sample tools clinicians can download and implement in their offices. These core elements were used as a basis for the development of the Transitions of Care Toolkit. Click here for more information and to access the Transitions of Care Toolkit.

**How to Implement Care Coordination in Your Practice**

Need help identifying, adapting and implementing tools to support care coordination capacity building and measurement? The National Center for Care Coordination Technical Assistance (NCCCTA) provides technical assistance (TA) on the Pediatric Care Coordination Curriculum, Care Coordination Measurement Tool and the Pediatric Integrated Care Survey. The NCCCTA can also answer individual questions about making care coordination work in your practice. Visit us for more information and links to the above tools. Contact us for TA or questions. Join the NCCCTA Community of Learners listserv.
Transitions Resources

**Clinical Report:** Supporting the Health Care Transition from Adolescence to Adulthood in the Medical Home, authored by the American Academy of Pediatrics, the American Academy of Family Physicians, and the American College of Physicians (ACP), provides guidance, including a step-by-step algorithm, on how to plan and execute better health care transitions for all patients.

**Center for Health Care Transition Improvement (Got Transition):** Got Transition focuses on: quality improvement via the Six Core Elements of Health Care Transition; professional training; youth/family engagement; policy improvements; and information dissemination. The Six Core Elements define components of health care transition support: establishing a policy, tracking progress, administering readiness assessments, planning for adult care, transferring, and completing transfer. There are 3 sets of customizable tools available for different practice settings:

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<th>Transitioning Youth to Adult Health Care Providers</th>
<th>Transitioning to an Adult Approach to Health Care Without Changing Providers</th>
<th>Integrating Young Adults into Adult Health Care</th>
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<td>(Pediatric, Family Medicine, and Med-Peds Providers)</td>
<td>(Family Medicine and Med-Peds Providers)</td>
<td>(Internal Medicine, Family Medicine, and Med-Peds Providers)</td>
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**Transitions of Care Toolkit:** A Transitions of Care Toolkit was created as part of the ACP Pediatric to Adult Care Transitions Initiative. The toolkit contains tools developed to assist physicians in transitioning young adults with specific chronic diseases/conditions into adult care settings. It is derived from the Six Core Elements of Health Care Transition and the clinical report, "Supporting the Health Care Transition From Adolescence to Adulthood in the Medical Home."

**Web-Based Training and Transitions QI Project:** The Transitioning Youth to Adult Health Care for Pediatric Providers course and QI activity includes resources to improve care of transitioning youth: clinical guidelines, videos, skills building tools for youth, and QI tools. Learn how to use medical home and QI strategies to improve care of transitioning youth, especially CYSHCN. Maintenance of Certification (MOC) Part IV credit is available.

**Medical Home Interview Videos—Transitions:**
- How Does a Medical Home Support Transitioning from Pediatric to Adult Care?
- Why Is It Important for Primary Care Providers to Help Families Prepare to Transition from Pediatric to Adult Care?

**Transition MOC Part IV Module:** The Transitioning Youth from Pediatric to Adult-Centered Care module is ideal for general and subspecialty physicians who actively evaluate pediatric patients with chronic diseases on a frequent basis. Participants are eligible to receive Maintenance of Certification Part IV credits and Continuing Medical Education credits. To register and for more information, contact Kim Rose. Through March 31, 2017, this module is free if you mention Got Transition.org.

**Transition of Care from Pediatric to Adult Surgery:** This article presents a discussion on the importance and benefits of a formal process of transition of care for children who undergo operations in infancy for a congenital anomaly. Three broad categories within pediatric surgery needing particular attention are also discussed.

**Coding and Reimbursement Tip Sheet for Transition:** This payment tip sheet supports the delivery of recommended transition services in pediatric and adult primary and specialty care settings. It describes innovative payment methodologies with a listing of transition-related CPT codes with corresponding Medicare fees.

**Transition Tips for Parents:** HealthyChildren.org, the parenting website of the American Academy of Pediatrics, offers a video and additional resources to help parents help their child/children transition to adult health care.

**Transition Resources Developed By States:** State-based organizations who have developed their own transition resources:
- Planning for a Healthy Transition: A Family Transition Plan from the Washington State Department of Health
- Transition resources from the Kentucky Cabinet for Health and Family Services, such as checklists and tip sheets
- Transition resources from the Statewide Parent Advocacy Network, Inc, including guides, strategies and timelines
- Vermont Family Network Transition Toolkit for Youth with Disabilities

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MPPDA Update

Medicine-Pediatrics Program Directors Association Implements Regional Meetings

To connect, collaborate, and encourage, MPPDA has implemented 2 new regional meetings. Taking a page from NMPRA who has long organized regional meetings, the PD’s got into the act. For 8 years, the Program Directors in the Northeast have been meeting yearly to share innovations and discuss common goals. People vote with their feet: these gatherings have been spirited and well attended. In that hope, the programs in the Los Angeles and Chicago regions met this past fall. Several people worked hard to pull these together – in particular, Alice Kuo from UCLA and Jennifer McDonnell and Molly Rose Elkins-Ryan from Rush, and John Solomonides from UMASS. There is great commitment to continue these gatherings. We welcome input from NMPRA to coordinate and support these events going forward. Enjoy the pictures of your smiling program directors!
NMPRA Updates

- Our Community Outreach Day will be on Saturday, March 4, 2017.
- NMPRA is beginning a new Med-Peds Mentoring Program to allow students across the country to seek advice from current Med-Peds residents. If you are a resident or student who is interested in participating, please fill out this form.
- NMPRA responded to the American Board of Pediatrics (ABP) application for a subspecialty certificate for Pediatric Hospital Medicine (PHM). Our response can be found online.
- Please send any Med-Peds pictures and announcements for our Facebook, Instagram, and Twitter pages to communications@medpeds.org.
Financing Graduate Medical Education to Meet the Needs of Children and the Future Pediatrician Workforce

COMMITEE 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...
their GME training. US medical graduates to complete and provide the opportunity for all and prevent future, pediatric GME positions to remediate current, funding, there will be insufficient nationwide. hospitals are a safety net for the poor and uninsured and 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. 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. 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.

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. It is estimated that the cost to hospitals for training a resident averages $100,000 or more per year. 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.

In fiscal year 2012, the CMS provided $2.7 billion in DGME funding and $6.7 billion in IME to teaching hospitals. 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. 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. 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. 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. 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. The American College of Physicians (ACP) also has recommended that GME funding by CMS place a priority on primary care.

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]). 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). These payments are primarily made directly to teaching hospitals, but a few states also make payments to nonhospital teaching sites or medical schools.

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, 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.

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.

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.

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.

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. 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. 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. 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.

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.

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. 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
The 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.

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**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

**REFERENCES**


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

**COMMITTEE ON PEDIATRIC WORKFORCE**

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Financing U.S. Graduate Medical Education: A Policy Position Paper of the Alliance for Academic Internal Medicine and the American College of Physicians

Renee Butkus, BA; Susan Lane, MD; Alwin F. Steinmann, MD; Kelly J. Caverzagie, MD; Thomas G. Tape, MD; Susan T. Hingle, MD; Darilyn V. Moyer, MD; and the Alliance for Academic Internal Medicine and American College of Physicians Graduate Medical Education Task Forces, for the Health and Public Policy Committee of the American College of Physicians*

In this position paper, the Alliance for Academic Internal Medicine and the American College of Physicians examine the state of graduate medical education (GME) financing in the United States and recent proposals to reform GME funding. They make a series of recommendations to reform the current funding system to better align GME with the needs of the nation’s health care workforce. These recommendations include using Medicare GME funds to meet policy goals and to ensure an adequate supply of physicians, a proper specialty mix, and appropriate training sites; spreading the costs of financing GME across the health care system; evaluating the true cost of training a resident and establishing a single per-resident amount; increasing transparency and innovation; and ensuring that primary care residents receive training in well-functioning ambulatory settings that are financially supported for their training roles.


Graduate medical education (GME) is the process by which graduate medical students become competent practitioners in a particular field of medicine. The GME programs, known as residencies and fellowships, allow trainees to develop the knowledge, skills, and attitudes required for independent practice. Therefore, GME plays a major role in addressing the nation’s workforce needs because it is the ultimate determinant of physician output. Recognizing the important public good GME provides to the nation and, by extension, its help in ensuring needed care to patients, the federal government is the largest explicit provider of GME funding, contributing nearly $15 billion annually. Most of the government’s funding comes from Medicare. Currently, the types and numbers of residents trained in teaching hospitals are largely determined by the staffing needs of the particular hospital and the number of funded positions established by a “cap” in the Balanced Budget Act of 1997, which froze the number of funded GME positions at 1996 levels for existing training programs. Although hospitals that have never been assigned a resident cap can start new programs and have 5 years to establish one, the existing caps on the current number of Medicare-funded GME positions available make it impossible to fund the number of GME training positions necessary to slow or reverse the growing shortage of primary care physicians and other specialists. With sharply increasing numbers of allopathic and osteopathic medical students and looming physician workforce shortfalls, especially in primary care, the current bottleneck in the physician supply chain is the fixed number of funded GME positions for residency training (1).

Much attention has been focused on Medicare’s support of GME. Its costs are recognized by Medicare under 2 mechanisms: direct GME (DGMEM) payments to hospitals for residents’ stipends, faculty salaries, administrative costs, and institutional overhead; and an indirect medical education (IME) adjustment developed to compensate teaching hospitals for the higher costs associated with teaching, the involvement of residents in

See also:
Web-Only
Appendix: Full Position Paper

* This paper, written by Renee Butkus, BA; Susan Lane, MD; Alwin F. Steinmann, MD; Kelly J. Caverzagie, MD; Thomas G. Tape, MD; Susan T. Hingle, MD; Darilyn V. Moyer, MD; and the Alliance for Academic Internal Medicine and American College of Physicians Graduate Medical Education Task Forces, was developed for the Health and Public Policy Committee of the American College of Physicians. Individuals who served on the Health and Public Policy Committee from initiation of the project until its approval were Darilyn V. Moyer, MD (Chair); Douglas M. DeLong, MD (Vice Chair); Sue S. Bornstein, MD; James F. Bush, MD; Gregory A. Hood, MD; Carrie A. Horwitch, MD; Gregory C. Kane, MD; Robert H. Lohr, MD; Kenneth E. Olive, MD; Shakaib A. Rehman, MD; Micah Beachy, DO; Mitch Biermann; and Fatima Syed, MD. Members of the Alliance for Academic Internal Medicine Graduate Medical Education Task Force include Kelly J. Caverzagie, MD (Co-Chair); Susan Lane, MD (Co-Chair); D. Craig Brater, MD; Bergitta E. Cotroneo, BA; John Donnelly, MD; Jeffrey Jaeger, MD; Heather S. Laird-Fick, MD; John P. Moriarty, MD; Darilyn V. Moyer, MD; Niraj Sharma, MD; Alwin F. Steinmann, MD; Sara L. Wallach, MD; and Richard M. Wardrop III, MD, PhD. Members of the American College of Physicians Graduate Medical Education Task Force include Thomas G. Tape, MD (Co-Chair); Darilyn V. Moyer, MD (Co-Chair); Michael S. Bronze, MD; Thomas G. Cooney, MD; Douglas M. DeLong, MD; Gustavo R. Heudebert, MD; Susan T. Hingle, MD; Gregory C. Kane, MD; Susan Lane, MD; Mark A. Levine, MD; Wickliffe J. Many Jr., MD; Lawrence G. Smith, MD; and Sara L. Wallach, MD. Approved by the ACP Health and Public Policy Committee in October 2015 and the ACP Board of Regents and the AAIM Board of Directors in January 2016.

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patient care, and the severity of illness of patients who require the specialized services that teaching hospitals provide. In a 2010 report to Congress, the Medicare Payment Advisory Commission stated that 50% of the IME adjustment represents overpayment to hospitals and recommended using those funds to establish a performance-based GME program. Since then, IME has been frequently identified as an opportunity for deficit reduction. Calls for increased transparency and accountability for training an adequate supply of physicians with the skills necessary to meet the nation's health care needs have been made. In 2014, the Institute of Medicine (IOM) released a report recommending that Congress overhaul the federal financing and governance of GME, including the creation of new infrastructure for fund distribution and research into improved payment models. Many applauded the IOM for its call for transformation and innovation in GME, but the report also sparked criticism. Although it called for maintaining Medicare’s current level of support for GME, the net effect would be a reduction in payments for existing GME programs because the funds would not only support 2 new federal entities and probably absorb the Children’s Hospitals GME Payment Program costs, they would also be distributed to facilitate innovation.

Furthermore, the report did not recognize the looming physician shortage, especially in primary care, declaring that there are "no credible data" to support this claim (2). Although workforce projections are unlikely to precisely predict shortages, trends can guide determination and preparation for future challenges. In fact, several projections indicate a shortfall of physicians in both primary and specialty care (3-18). The IOM rejected the evidence of existing and looming shortages, stating that these projections often assume historic provider-patient ratios, and called for a more coordinated, affordable, and patient-centered health care system through expanded roles for advanced practice clinicians, redesign of care delivery, and other innovations in health care delivery (including telehealth and electronic communication). Although such a system would be ideal, transformation will take time and making future workforce decisions based on a model that has not been achieved or tested would be unwise. An adequate workforce to assist in the transition to, and training of, physicians in the model health delivery system to which the nation aspires will also be necessary.

In 2010 and 2011, the Alliance for Academic Internal Medicine (AAIM) and the American College of Physicians (ACP) individually called for GME reform and alignment of GME with the nation’s health care workforce needs (19, 20). Since then, nearly 50 billion Medicare dollars have been spent to train physicians without consideration of those needs. Our organizations, with a combined membership of 151,627 internists, internal medicine subspecialists, medical students, residents, and fellows, feel strongly that sufficient GME funding and a strategic approach to physician workforce projections (as they relate to GME financing) is critical. The imperative of deficit reduction also suggests that funding for GME could be more effectively targeted and prioritized to fields with the greatest and most critical needs, with the goal of training more physicians to meet national workforce needs.

The GME system should ensure that the nation has an adequate supply of the types of physicians needed to treat patients; that they enter the workforce with the knowledge, skills, and attitudes required to provide the highest quality care; and that all Americans have access to such care. The nation will not be able to expand access, improve outcomes, and decrease expenditures without a national health care workforce policy and the appropriate direction of funding to achieve these goals.

Methods
This policy paper was drafted by the AAIM and ACP Graduate Medical Education Task Forces for the ACP Health and Public Policy Committee, which is charged with addressing issues that affect the health care of the U.S. public and the practice of internal medicine and its subspecialties. The authors reviewed available studies, reports, policy documents, and surveys on GME from PubMed, Google Scholar, Web sites, and other sources. Recommendations were based on reviewed literature and input from the ACP Board of Governors, Board of Regents, Council of Early Career Physicians, Council of Resident/Fellow Members, Council of Student Members, and Council of Subspecialty Societies; and the AAIM Advocacy Committee, Education Committee, and Board of Directors. The policy paper and related recommendations were reviewed and approved by the ACP Health and Public Policy Committee in October 2015 and the ACP Board of Regents and the AAIM Board of Directors in January 2016. Financial support for the development of this position paper comes exclusively from the ACP operating budget.

AAIM and ACP Position Statements and Recommendations
The following statements represent the official policy positions and recommendations of the AAIM and ACP. The rationale for each is provided in the full position paper (see the Appendix, available at www.annals.org).

1. The federal government should maintain its commitment to GME. Payment of Medicare GME funds should be linked to the ability of the GME system to meet the nation’s health care workforce needs. Payments should be used to meet policy goals to ensure adequate supply, specialty mix, and training sites.

2. All payers should be required to contribute to a financing pool to support residencies that meet the nation’s policy goals related to supply, specialty mix, and training sites.

3. A thorough evaluation of the true cost of training physicians is required before any decisions are made about how GME funds are distributed.
4. Direct GME and IME should be combined into a single, more functional payment program that is designed to meet the needs of patients and populations.

5. Graduate medical education funding should be transparently allocated to ensure that funds are appropriately designated toward activities related to the educational mission of teaching and training residents and fellows. Graduate medical education funds should follow trainees into all training settings, rather than being linked to the location of service relative to the sponsoring institutions.

6. Graduate medical education caps should be lifted as needed to permit training an adequate number of primary care physicians, including internal medicine specialists, and physicians in other specialties facing shortages, including internal medicine-pediatrics and many internal medicine subspecialties.

7. The concept of a performance-based GME payment system is worth exploring. Such a system should be thoughtfully developed and considered in a deliberate way to ensure that goals are achieved without destabilizing the system of physician training. We recommend the following:
   a. Measures should be developed by appropriate stakeholders, including physicians involved in GME training.
   b. All measures must be carefully developed and thoroughly evaluated before they are implemented.
   c. Institutions must be allowed adequate time to make necessary changes to their training programs before financial incentives are introduced.
   d. Revised GME funding should account for the costs of transitioning into a performance-based GME system, and once done, clear-cut financial transparency and incentives must be delineated.
   e. The performance measures should be evidence-based and align with the Accreditation Council for Graduate Medical Education (ACGME) requirements. The core mission of individual programs should be considered. Producing a certain number of physicians trained in a certain specialty or subspecialty should not be a specific performance metric.
   f. A careful study of unintended consequences should be done to ensure that programs are not unfairly disadvantaged.
   g. Regular evaluations of the measures should be implemented to avoid adverse unintended consequences, ensure that the goals of implementing such a system are achieved, and confirm that the measures remain relevant over time.

8. Pilot projects should be introduced to evaluate potential changes to GME funding, including a performance-based GME payment system, and to promote innovation in GME by providing training programs with the resources necessary to experiment with innovative training models. Pilot projects should not be funded using existing GME funding.

9. Internal medicine and internal medicine-pediatrics residents should receive primary care training in well-functioning ambulatory settings that are financially supported for their training roles. Barriers should be removed to encourage programs to train residents in nonhospital settings, promote innovation in training, and facilitate clinical learning experiences that promote primary care.

CONCLUSION

A concerted effort must be made to ensure that the nation has an adequate supply of the types of physicians needed to treat patients, that they enter the workforce with the knowledge and skills required to provide the highest quality care in an ever-evolving delivery system, and that all Americans have access to such care. Graduate medical education funding must be reformed to include all health care payers and to ensure that payments better correlate with the funds they are intended to cover, address physician workforce needs, and provide an optimal training environment so that residents gain the skills necessary to care for the needs of society.

From the American College of Physicians, Washington, DC; Saint Joseph Hospital, Denver, Colorado; University of Nebraska Medical Center, Omaha, Nebraska; Southern Illinois University School of Medicine, Springfield, Illinois; Temple University, University of Pennsylvania, and Thomas Jefferson University, Philadelphia, Pennsylvania; Cristiana Care Health System, Newark, Delaware; Michigan State University, Lansing, Missouri; Yale-New Haven Hospital, New Haven, Connecticut; Brigham and Women’s Hospital, Boston, Massachusetts; St. Francis Medical Center, Trenton, New Jersey; University of North Carolina, Chapel Hill, North Carolina; University of Oklahoma Health Sciences Center, Oklahoma City, Oklahoma; Oregon Health & Science University, Portland, Oregon; Bassett Healthcare Network, Cooperstown, New York; University of Alabama at Birmingham School of Medicine, Birmingham, Alabama; University of Vermont Medical Center, Burlington, Vermont; and Northwell Health, Great Neck, New York.

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Background
GME in the United States
Graduate medical education is formal clinical training provided by approved residency and fellowship programs to physicians who have received an MD or a DO degree (or an international equivalent). It involves a 3- to 7-year training period after completion of medical school in which physicians are directly supervised as they progressively assume more responsibility for patient care. This training is mandatory for certification. In the United States, training programs must be accredited by the ACGME or approved by the Commission on Osteopathic College Accreditation. Osteopathic programs are in the process of transitioning to accreditation by the ACGME. Teaching hospitals generally serve as the sponsors and main training sites for most residency programs, although training can occur in other inpatient and ambulatory settings in various community-based settings.

In the 2013-2014 academic year, 120 108 residents were enrolled in ACGME-accredited residency programs. During this time, 693 institutions sponsored residency programs, of which 377 were considered multisite sponsors that sponsored programs in more than 1 specialty or affiliated subspecialties. Internal medicine had 24% of the total number of residents enrolled in these residency programs, with 11% in family medicine, 8.9% in pediatrics, and 1.9% in internal medicine-pediatrics. Of note, 42% of these internal medicine residents were international medical graduates (21).

Overview of GME Financing System
Graduate medical education financing is provided primarily to teaching hospitals from federal and state...
government payers and indirectly from private payers through the higher payments negotiated with teaching hospitals. Although teaching hospitals account for only 6% of the nation’s hospitals, they provide 20% of all U.S. hospital care, 25% of all Medicaid hospitalizations, and 41% of all hospital charity care (22). The primary federal sources of GME funding are Medicare, Medicaid, the U.S. Department of Veterans Affairs, the Health Resources and Services Administration (HRSA) Title VII health professions programs, the Children’s Hospitals GME Payment Program, and the U.S. Department of Defense. Other sources include private payers (although this is rarely explicit), philanthropy, and institutional resources.

Medicare. The largest single explicit financing source for GME is Medicare. Medicare subsidizes education and training for more than 90,000 residents in more than 1100 hospitals. In 2012, Medicare expenses associated with GME were approximately $9.6 billion (2). Such funding is provided to teaching hospitals with no restrictions on which types of physicians are trained; however, the number of funded positions has been capped at 1996 levels by the Balanced Budget Act of 1997. Hospitals that have never been assigned a resident cap can start new programs and have 5 years to establish a Medicare cap, which has allowed for a modest expansion of Medicare GME positions.

The costs of GME are recognized by Medicare under 2 mechanisms: DGME payments to hospitals for residents’ stipends, faculty salaries, administrative costs, and institutional overhead; and an IME adjustment developed to compensate teaching hospitals for the higher costs associated with teaching, the involvement of residents in patient care, and the severity of illness of patients who require the specialized services that are available in teaching hospitals (Appendix Figure).

Direct GME payments are based on a hospital-specific per-resident amount (PRA). The PRA is calculated by taking the DGME costs incurred by a teaching hospital during a base period (1984 or 1985) and dividing it by the number of full-time equivalent residents during that year. The PRA is updated annually for inflation. Payments for primary care residents are slightly higher because in 1994 and 1995, only their payments were updated for inflation. In addition, the DGME amount for training beyond residents’ initial board certification in their first specialty is reduced by 50% (except for geriatrics). Medicare capped the number of residents it supports to the number in a hospital’s most recent cost report period ending on or before 31 December 1996 as a result of changes made in the Balanced Budget Act of 1997 (23).

Indirect medical education payments are tied to a hospital’s Medicare inpatient volume and case mix along with its training program size (subject to its resident cap number). The payments, based on a formula, are an adjustment to Medicare’s inpatient payment rates and vary based on each hospital’s ratio of residents to beds. The current IME rate is 5.5%. Based on this rate, the IME adjustment would result in a 5.5% increase in a teaching hospital’s Medicare reimbursement per 0.1 increase in the resident-to-bed ratio (1 resident to 10 beds). Medicare IME payments were more than double the Medicare DGME payments in 2010 (24).
Medicaid and Other State Support. States can support GME through their Medicaid programs, although the amounts and mechanisms of support vary substantially. Medicaid’s contribution to GME expenses is considerable—it comprised an estimated $3.9 billion in support from federal and state funds in 2012 (2). Medicaid GME funding has become extremely vulnerable due to recent financial constraints in state budgets. A 2012 survey found that 42 states and the District of Columbia provided GME payments under their Medicaid program. Five states reported having recently considered ending GME Medicaid payments (25). Some states have dedicated programs to support GME, whereas others facing shortages have recently increased their support. Maryland has collected money from private insurance plans to help finance GME since 1974. In 2014, the New Mexico legislature redirected state Medicaid funds to help open new primary residency slots in underserved areas of the state (26). Texas lawmakers granted an additional $30 million ($97 million total) for GME in its 2014–2015 state budget (27).

Other Federal Support. The U.S. Department of Veterans Affairs funds more than 10,000 resident full-time equivalent positions ($1.4 billion annually). The U.S. Department of Defense supports the education and training of about 3000 residents. The Children’s Hospitals GME Payment Program, administered by HRSA, provides funds (which have decreased in recent years to $265 million for the 2015 fiscal year) that support direct and indirect GME costs at children’s teaching hospitals. The Teaching Health Center (THC) GME program also supports direct and indirect costs of GME for about 550 residents through HRSA, but unlike other funding, support from these sources is appropriations-based (28). Start-up costs for new residency programs, including those for program directors and residency coordinators, and facility-related costs, including construction of conference and call rooms, are high; without a guaranteed funding stream, cost and uncertainty about future appropriations represent a major deterrent for THCs. Some Title VII grants administered by HRSA are used to support residency programs in primary care and geriatrics; however, funds for these programs are modest and appropriations-based, which often makes them vulnerable and unpredictable.

Private Funding. Graduate medical education is also supported by private sources, including hospitals, universities, philanthropy, and industry gifts and grants. Although the amount is not well-documented, it may be significant. Private insurers also support GME indirectly through the higher rates they pay to teaching hospitals than other hospitals. The actual amount is difficult to estimate because the proportion attributed to education is not specifically identified in these payments (29). Despite the 1997 cap by Congress on the number of Medicare-supported residency positions, between academic years 2003-2004 and 2012-2013, the number of trainees increased by 17.5% (from 100,176 to 117,717), indicating that there is substantial private funding for GME (2). Some of the increase involves Medicare-funded positions, yet the portion funded privately has changed over time. After a few years of relative stability following the passage of the Balanced Budget Act, the number of U.S. trainees grew by nearly 17,000 positions by 2010, with about 27% of these being funded by Medicare and 73% being funded through other sources. By 2013, that number had grown to more than 23,000 and the percentage with Centers for Medicare & Medicaid Services funding increased to 46%. This may have to do more with GME-naive hospitals starting new programs, especially in association with newly formed medical schools (30, 31).

Problems With the Current GME Funding System

Lack of Consideration of Workforce Needs

Graduate medical education funding is not linked to current or future health care workforce needs. Although Medicare GME funds are intended to help develop the future physician workforce, teaching hospitals are not required to consider local, regional, or national workforce needs. The types of residents trained in teaching hospitals are largely determined by the particular hospital’s staffing needs and the number of funded positions set by the cap in 1997. Despite the increasing need for primary care physicians, hospitals have largely favored less costly, higher revenue-generating specialty training when adding GME positions (32).

The existing caps on the number of Medicare-funded GME positions available also make it impossible to fund the number of GME training positions necessary to slow or reverse the growing shortages of primary care physicians and other specialists. With sharply increasing numbers of allopathic and osteopathic medical students and looming physician workforce shortfalls, especially in primary care, the current bottleneck in the physician supply chain is the number of residency positions.

Our organizations have long been concerned about the shortage of primary care physicians in the United States, particularly the supply of internal medicine physicians who apply scientific knowledge and clinical expertise to the diagnosis, treatment, and compassionate care of adults across the spectrum of health and complex illness. The projected growth in demand for services necessary for the elderly population is expected to be substantially higher than the growth for pediatric services because the population younger than age 18 is projected to grow by only 5% by 2025, whereas the population aged 65 years or older is projected to grow by 46% (5). The Medicare population is
expected to grow from 53.8 million in 2014 to 82 million in 2030 (33). The skills of internal medicine physicians will be increasingly needed to care for an aging population with a growing incidence of chronic disease and multiple comorbidities. Health care systems dominated by primary care providers have better outcomes at lower costs (34), yet the nation faces a severe shortage of primary care physicians—estimated to be 12 500 to 31 100 by 2025 (5).

The reasons behind this decline in the supply of primary care physicians are multifaceted and complex. Key factors include the rapid increase in medical education debt, decreased income potential for primary care physicians compared with specialists, and increased administrative requirements that have caused great dissatisfaction with the current practice environment. Although studies show that debt is near the bottom of factors affecting specialty choice, when combined with other factors, especially differential in earnings over a lifetime, debt may have a major effect on specialty choice (35, 36). In 2014, the average medical student graduate was $176 348 in debt (37). During residency training, the average resident works 40 to 80 hours each week and earns a median first-year salary of $50 214. The average education debt and salary during training are the same for all residents, but the salary when entering practice varies greatly by specialty. The gap between the median income of a primary care physician and that of a subspecialist is $135 000. This amounts to a $3.5 million difference over a 35- to 40-year career and decreases the odds of choosing primary care by nearly 50% (38). Of note, there is significant variation in salary based on specialty, with procedural subspecialists at the higher end and cognitive-based subspecialists at the lower end. These barriers must be addressed simultaneously and swiftly for the nation to meet the demand for the number of primary care physicians necessary to care for the U.S. population.

Although it is imperative that the number and proportion of primary care physicians be increased, the aging of the population will demand a sufficient number of physicians, including geriatricians and many other internal medicine subspecialties, trained in the complex medical problems typical of that age group. In addition, other specialties are facing shortages, including general surgery (5, 10, 12, 13).

Of note, as the general population rapidly ages, so does the physician population. According to the Association of American Medical Colleges 2015 State Physician Workforce Data Book (39), 29.4% of the physician population (248 572 physicians) is aged 60 years or older. The work product of retiring versus newly minted physicians should not be considered a 1:1 equivalency because new medical school graduates are more likely to take employed positions and are increasingly seeking quality work-life balance, therein working fewer hours than older physicians. Productivity will also be affected by the increasing number of female physicians in the workforce. Women represent a growing portion of U.S. medical school graduates, increasing from nearly 20% in 1980 to 47% in 2014. They are more likely to work part-time and take extended leave than their male counterparts. In addition, female physicians work an average of 7.4 hours fewer per week than male physicians (40).

**Geographic Disparities and Maldistribution**

Beyond overall shortages, the geographic disparities in the number of Medicare-funded GME positions among states and the amount that is paid per resident are large. Teaching hospitals, and therefore residents, are unevenly distributed across the United States. This is important because there is a positive correlation between the site of residency training and where a physician ultimately chooses to practice medicine (41). Physician maldistribution results in gaps in access to care and health disparities experienced by specific regions, races, and income groups (38).

Resident-to-population ratios range from 1.63 residents per 100 000 persons in Montana to 77.13 residents per 100 000 persons in New York (42). Since the resident caps went into effect in 1997, population growth and shifts in where people reside have been noteworthy. Between 2010 and 2014, seven of the ten fastest growing areas were southern and western states. Texas has led the nation in population growth for a decade, with an increase of 450 000 people between 2013 and 2014 alone (43). Between 2000 and 2010, the populations of the resident-poor states of California, Florida, and Texas grew by 10%, 17.6%, and 20.6%, respectively, whereas the resident-rich states of New York, Massachusetts, and Pennsylvania grew only by 2.1%, 3.1%, and 3.4%, respectively (42). The current GME formula also results in substantial variation in the amount that is paid by Medicare per resident depending on the institution. Substantial inequalities also exist when this is viewed at the state level. For example, the average GME payment to institutions per resident ranges from $43 908 in Wyoming to $155 135 in Connecticut (42). Although some degree of variation in GME payments is appropriate due to cost-of-living differences across geographic areas and other factors, this amount of variation warrants examination.

**Lack of Transparency**

Medicare GME funds go directly to teaching hospitals that sponsor training programs even if the hospitals do not directly incur all of the training costs. Some institutions have specific formulas for the distribution of GME funds, but others are subject to annual negotia-
tions with departments, which could result in the use of funds for purposes not intended. Faculty who direct training programs often do not know how they are supported or whether they are receiving adequate support from Medicare (19). In addition, although hospitals are required to provide cost reports annually to the Centers for Medicare & Medicaid Services, obtaining information on specific direct and indirect payments is sometimes problematic because of large variation in transparency and accountability. Information on the amount of funding provided through private sources and the true cost of training residents are also unclear.

Variable Accountability to Government Funding of GME

Currently, accountability for the substantial investment the federal government makes in GME varies. The Medicare Payment Advisory Commission, IOM, and others have recommended moving toward a GME payment system that fosters greater accountability for Medicare GME dollars and rewards programs that meet desired educational outcomes and standards. Data suggest that teaching hospitals have favored less costly, higher revenue-generating specialty training over primary care positions (35). The expansion of these programs over the past 10 years parallels losses in positions in primary care specialties.

Need for More Flexibility to Allow for Innovative Models of Training

As the health care delivery system evolves, a parallel evolution in the setting, content, and duration of training must also occur. Experimentation and adoption of innovative models of training are necessary to prepare future physicians with the skills necessary to practice in patient-centered medical homes, accountable care organizations, and other contemporary and interprofessional models of health care. Enabling residents to train in well-functioning ambulatory settings, specifically physician offices, will allow them to gain the skills necessary to care for the kinds of patients encountered in a typical office-based practice. Such training will require changes to GME funding, accreditation, and the culture of academic medicine. Systems-based practice, 1 of the 6 core competencies in the ACGME Next Accreditation System, defines an expectation that residency programs and trainees understand the changing face of health care delivery and work to improve systems to optimize patient care. Accomplishing this goal will require innovative models of training.

IOM Report on the Governing and Financing of GME

In July 2014, the IOM released the highly anticipated report, “Graduate Medical Education That Meets the Nation’s Health Needs” (2), which calls for major restructuring of GME financing “to allow a transition to an accountable, performance-based system” to fund GME over the next 10 years.

IOM Recommendations

Recommendation 1: Maintain Medicare graduate medical education (GME) support at the current aggregate amount (i.e., the total of indirect medical education and direct graduate medical education expenditures in an agreed-on base year, adjusted annually for inflation) while taking essential steps to modernize GME payment methods based on performance, to ensure program oversight and accountability, and to incentivize innovation in the content and financing of GME. The current Medicare GME payment system should be phased out.

Recommendation 2: Build a graduate medical education (GME) policy and financing infrastructure.

2a. Create a GME Policy Council in the Office of the Secretary of the U.S. Department of Health and Human Services. Council members should be appointed by the Secretary and provided with sufficient funding, staff, and technical resources to fulfill the responsibilities listed below.

- Development and oversight of a strategic plan for Medicare GME financing;
- Research and policy development regarding the sufficiency, geographic distribution, and specialty configuration of the physician workforce;
- Development of future federal policies concerning the distribution and use of Medicare GME funds;
- Convening, coordinating, and promoting collaboration between and among federal agencies and private accreditation and certification organizations; and
- Provision of annual progress reports to Congress and the Executive Branch on the state of GME.

2b. Establish a GME Center within the Centers for Medicare & Medicaid Services with the following responsibilities in accordance with and fully responsive to the ongoing guidance of the GME Council:

- Management of the operational aspects of GME Medicare funding;
- Management of the GME Transformation Fund (see Recommendation 3), including solicitation and oversight of demonstrations; and
- Data collection and detailed reporting to ensure transparency in the distribution and use of Medicare GME funds.
Our organizations have reviewed the report in detail, and although we support many elements of it, there are several areas of concern. We join the IOM in the call for innovation and transformation in GME, including a greater emphasis on training in community-based settings. However, we are concerned that reducing GME payments to existing programs (by taking the expense of 2 new government offices and the Children’s Hospitals GME payments out of a static GME fund) will devastate many teaching hospitals and the patients they serve who are in the greatest need of health care—those who disproportionately consist of the poor, minorities, and underserved persons. We agree with the IOM that it is critical that GME policy be aligned with the nation’s workforce policies. Although we also agree that GME is a public good, we are disappointed that the IOM did not call for an all-payer GME financing system to support this public good.

Although not part of the recommendations, that the IOM stated that it “did not find credible evidence” (2) that the nation is facing a looming physician shortage, particularly in primary care specialties, is extremely concerning. Paradoxically, the IOM suggested that “GME funds might be used to finance new incentives for choosing a primary care career” (2), even as it questioned whether a primary care shortage exists. We concur with the IOM that more research is needed to guide physician workforce policies and that incentives, including payment reform, are needed to encourage careers in primary care, but we believe there is credible evidence of a real and growing shortage of primary care physicians for adults and other specialties that warrants immediate action.

Although workforce projections are unlikely to precisely predict shortages, the trends can serve as a guide in determining and preparing for future challenges. Several projections indicate a shortfall of physicians in both primary and specialty care (3–18). The IOM rejected the evidence of existing and looming shortages, stating that these predictions often assume historic provider-patient ratios. The IOM noted the need for a more coordinated, affordable, and patient-centered health care system and cited studies that considered models with expanded roles for advanced practice clinicians; redesign of care delivery; and other innovations in health care delivery, such as telehealth and electronic communication (44–47). Such a system would be ideal, but transformation will take time and it would be dangerous to make workforce decisions based on a model that has not been achieved or tested. For example, nurse practitioners and physician assistants have similar subspecialization trends seen in physicians and cannot be relied on to increase access to primary care (48).

Further, adoption of technology and increased use of telemedicine have had many obstacles, so widespread use is not guaranteed and will take time. Electronic health record (EHR) systems have the promise of improving patient care and practice efficiency, but the evidence suggests that these effects have not been realized. A 2015 report by AmericanEHR Partners and the American Medical Association based on a survey of physicians revealed that compared with 5 years ago, more physicians report being dissatisfied or very dissatisfied with their EHR system. Of note, 72% believed that decreasing the workload was difficult or very difficult to do with EHR use and 42% believed that improving efficiencies was difficult or very difficult with EHR use (49). In addition, the federal EHR incentive payment program designed to encourage physicians and health facilities to install EHRs has had many challenges, includ-
ME payments would result in a failure to cover necessities. The DGME reimbursement amounts were set in recognition that significant variation exists across states and institutions. Substantial reductions in IME costs, such that across the entire system, current IME adjustments have decreased, we also contend that the IOM’s recommendation that funding should be limited to current levels and cited evidence of shortages in many specialties, including family medicine, pediatrics, general internal medicine, general surgery, and pediatric subspecialties. The Council on Graduate Medical Education also cautioned, “With the current increasing demand for health care services, missteps in GME policies could have long-lasting, detrimental effects on the physician workforce, cost, healthcare quality, access to medical services, and the patient experience” (51). Our organizations echo this warning and offer the following recommendations to ensure that the nation has an adequate supply of the types of physicians needed to treat patients; that they enter the workforce with the knowledge, skills, and attitudes required to provide the highest quality care; and that all Americans have access to such care.

**Positions**

1. The federal government should maintain its commitment to GME. Payment of Medicare GME funds should be linked to the ability of the GME system to meet the nation’s health care workforce needs. Payments should be used to meet policy goals to ensure adequate supply, specialty mix, and training sites.

   Our organizations believe that sufficient GME funding and a more strategic approach to its use are critical. Medicare’s contribution to GME must be preserved. Although we agree that some of the costs covered by the IME adjustment have decreased, we also contend that other costs related to DGME expenditures have increased, primarily because of increased regulatory demands. The DGME reimbursement amounts were set in 1986 and have been adjusted only for inflation. Studies evaluating the costs of residency programs support higher DGME costs over time (52). In fact, the increase in DGME costs seems to roughly offset the decrease in IME costs, such that across the entire system, current reimbursement approximates actual costs of training residents (recognizing that significant variation exists across states and institutions). Substantial reductions in IME payments would result in a failure to cover necessary direct costs and could have a devastating effect on GME programs. Of note, these calculations were based on studies conducted in the early 2000s; a more recent study published in 2014 found substantially greater training costs that exceed the IME offset (53).

   We also feel strongly that Medicare GME funds should be tied to the nation’s health care workforce needs. We were encouraged by the establishment of the National Health Care Workforce Commission, which is charged with evaluating the nation’s health care workforce needs and providing recommendations to Congress and the administration on national health workforce priorities, goals, and policies through The Patient Protection and Affordable Care Act. However, we are dismayed that this Commission has yet to receive funding to conduct its important work. The nation needs workforce policies that include sufficient support to educate and train a supply of health professionals that meets the nation’s health care needs—policies that ensure an adequate supply and spectrum of primary care physicians trained to manage care for the whole patient.

   The Association of American Medical Colleges projects a shortfall of between 46 100 and 90 400 physicians by 2025. The shortage in the number of primary care physicians is estimated to range between 12 500 and 31 100 by 2025 (5). A report released by HRSA in November 2013 (6) also predicted a shortage of primary care physicians within this range, estimating a shortage of 20 400 primary care physicians by 2020 (6). These projections are not as large as those that have been found in prior studies, yet they are still significant. In certain parts of the country, a shortage of primary care physicians already exists. The HRSA estimates that there are 6100 designated primary care health professional shortage areas, and it would take approximately 8200 additional primary care physicians to eliminate them (54).

   We found significant evidence of geographic mal-distribution of physicians (55, 56). Metropolitan areas have 84 primary care physicians per 100 000 persons, whereas nonmetropolitan areas have 68 primary care physicians per 100 000 persons (57). Specialists are even more concentrated, with more than 3 times the density of specialists in metropolitan than nonmetropolitan areas (58). Physicians tend to stay and work where they were trained, so Medicare GME dollars should be weighted to favor training programs in rural and underserved areas. Students from rural areas are more likely to practice there than those from urban areas (59). Weighting or shifting GME dollars to programs in areas where physicians are needed most might lead to an increase in training positions in underserved areas and a change in the distribution of physicians once their training is completed.

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A thorough assessment of the supply, specialty mix, and distribution of physicians is necessary, and Medicare GME dollars should be used to address any shortcomings. This assessment should be a top priority for the National Healthcare Workforce Commission and the National Center for Health Workforce Analysis. We believe that workforce data should be used in a real-time, dynamic system to inform GME funding formulas. If the GME finance system is to act as a lever to affect the physician workforce, then the process by which it acts should be nimble and dynamic enough to respond to the changing priorities of our health care system. Further, this system should recognize the need that institutions and programs have for intermediate-range stability. It is important that state and regional needs are considered and that these entities have a role in the decision-making process.

The American Academy of Family Physicians has proposed limiting GME funding to first-certificate programs, which we cannot support because it would effectively eliminate all federal GME funding of nearly all internal medicine subspecialty fellowship training programs, including cardiology, critical care medicine, endocrinology, gastroenterology, geriatrics, hematology, infectious disease, nephrology, oncology, pulmonology, and rheumatology (60). Internal medicine and internal medicine–pediatrics training programs provide a strong foundation in clinical decision-making skills that can be applied in several settings, including complex and chronic illnesses. This patient-centered, high-value focus is important in primary care and subspecialty practices. Many internal medicine subspecialists serve as primary care physicians for their patients. All subspecialists are first trained in 3 years of core internal medicine, which prepares them with the diagnosis, management, and prevention of diseases that affect patients. The amount of primary care that subspecialists provide depends on various factors, including geography and practice type. Fellowship programs already receive only 50% of the DGME payment that first-certificate programs receive, leaving teaching hospitals to cover the remainder. Many institutions are already strained by these costs, and elimination of such funding in internal medicine subspecialty training programs would undermine the goals of having well-trained physicians in these critically important subspecialty areas and contribute to a growing shortage of physicians in many of these fields. Cognitive subspecialties in particular are underfunded, and their pipeline is drying up quickly, which is illustrated by the 2015 appointment year fellowship data—56.1% of geriatrics, 32.1% of nephrology, and 30.3% of infectious diseases programs went unfilled due to lack of applications (61) (Appendix Table). In addition, up to one third of physician-scientists who drive research and innovation come through the internal medicine subspecialty pipeline (62). Flexibility is internal medicine’s strength, and as we produce physicians for an ever-changing health care system, internal medicine should be structured to draw persons into needed specialties.

1. All payers should be required to contribute to a financing pool to support residencies that meet the nation’s policy goals related to supply, specialty mix, and training sites.

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Our organizations feel strongly that the costs of financing GME should be spread across the health care system. Although Medicare and other federal programs should continue to make a substantial contribution to the financing of GME, an all-payer system would ease the obligation on Medicare and taxpayers and provide a more stable and predictable funding stream. The supply and distribution of physicians affect the availability, cost, and quality of care for all Americans. As such, the cost should be borne by all payers of health care services—public and private.

### Appendix Table. 2015 Match Summary, Internal Medicine Subspecialties*

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Positions Offered, n</th>
<th>Programs, n</th>
<th>Positions Filled by U.S. Graduates, %</th>
<th>Positions Filled by All Applicants, %</th>
<th>Programs Filled, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergy and immunology</td>
<td>126</td>
<td>82</td>
<td>71.4</td>
<td>92.9</td>
<td>90.2</td>
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<tr>
<td>Cardiovascular disease</td>
<td>835</td>
<td>187</td>
<td>51.6</td>
<td>98.7</td>
<td>95.7</td>
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<tr>
<td>Endocrinology, diabetes, and metabolism</td>
<td>271</td>
<td>134</td>
<td>36.5</td>
<td>93.0</td>
<td>88.8</td>
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<tr>
<td>Gastroenterology</td>
<td>464</td>
<td>181</td>
<td>64.2</td>
<td>98.5</td>
<td>96.7</td>
</tr>
<tr>
<td>Geriatric medicine</td>
<td>353</td>
<td>126</td>
<td>18.4</td>
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<tr>
<td>Hematology</td>
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<td>71.4</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Hematology and oncology</td>
<td>521</td>
<td>134</td>
<td>54.7</td>
<td>97.9</td>
<td>94.8</td>
</tr>
<tr>
<td>Infectious disease</td>
<td>327</td>
<td>138</td>
<td>34.3</td>
<td>69.7</td>
<td>49.3</td>
</tr>
<tr>
<td>Interventional pulmonology</td>
<td>24</td>
<td>20</td>
<td>29.2</td>
<td>95.8</td>
<td>95.0</td>
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<tr>
<td>Nephrology</td>
<td>374</td>
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<td>21.1</td>
<td>67.9</td>
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<tr>
<td>Oncology</td>
<td>20</td>
<td>7</td>
<td>25.0</td>
<td>100.0</td>
<td>100.0</td>
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<tr>
<td>Pulmonary disease</td>
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<td>11</td>
<td>4.3</td>
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<tr>
<td>Pulmonary disease and critical care medicine</td>
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<td>139</td>
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<td>96.4</td>
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<td>107</td>
<td>33.0</td>
<td>90.9</td>
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</table>

* Data obtained from reference 61.
Graduate medical education serves a public good. It benefits all of society, not just persons who directly purchase or receive it. All payers depend on well-trained medical graduates, medical research, and technical advances from teaching hospitals to meet the nation’s demand for high-quality care. All payers should be concerned that the nation’s system of GME is preserved, high standards of quality for patient care services are maintained, and opportunities for entry into the medical profession are available to the most qualified candidates. A mechanism should be established to require all payers to explicitly contribute to GME.

3. A thorough evaluation of the true cost of training physicians is required before any decisions are made about how GME funds are distributed.

Except for inflation, the hospital-specific PRA has not been adjusted since 1983. Since then, much has changed in GME that has added to the cost of training, including program requirements mandated by the ACGME. For example, costs related to implementing duty hour changes have had a substantial effect on programs’ funds (63, 64). In many programs, the GME costs are often subsidized by clinical practice, and as these dollars shrink, it will be challenging to function with a reduction in GME funds or cover the costs of additional unfunded mandates.

We believe that the current distribution of DGME and IME funds does not accurately reflect the expenses that they are intended to cover. Payment must be calibrated to the true costs of educating physicians in today’s accreditation and clinical environment and be structured to account for any future changes so that funds are not held static while the costs of training increase.

4. Direct GME and IME should be combined into a single, more functional payment program that is designed to meet the needs of patients and populations.

Our organizations support the IOM’s recommendation that Congress combine DGME and IME funds and establish a single PRA with a geographic adjustment. We believe that once the true cost of training a resident is determined and a single PRA is set, transparency will greatly improve.

5. Graduate medical education funding should be transparently allocated to ensure that funds are appropriately designated toward activities related to the educational mission of teaching and training residents and fellows. Graduate medical education funds should follow trainees into all training settings, rather than being linked to the location of service relative to the sponsoring institutions.

Our organizations strongly favor funding that “follows” trainees to settings outside the walls of the sponsoring institution, thus minimizing barriers to training sites that would broaden their experience and expose them to a greater variety of practice settings. Any rotation or experience that is approved by the training program and is consistent with accreditation standards should be eligible for Medicare reimbursement, regardless of the location.

We considered the option that IOM and others have proposed to pay training programs directly but determined that such action would not improve their quality. Individual residency programs generally lack the infrastructure to deal with such financial processes, and acquiring this resource would add overhead costs to residency training. In addition, programs have a budget and would probably be allocated costs by their institutions, which they would have to pay from GME funds. We believe the core issue is transparency. The entity to which the funds are distributed would be a nonissue if institutions had to fully account for how the dollars are dispersed to the programs and other pertinent entities. More flexibility is needed in how funds are used so that programs have the ability to use alternative “highly functioning” settings, recruit from excellent outpatient practices and other innovative ambulatory settings, and pay more equitably for faculty teaching time and resources required for training in various settings.

Further, although the term “accountability” has been tied to the notion that training programs and institutions should be responsible for producing the specialty spectrum and geographic distribution of physicians that are necessary to meet the nation’s health care needs, we believe this expectation is unreasonable. National and regional workforce decisions should be guided by periodic rigorous analyses made on a national and regional level and promoted through specific funding mechanisms rather than metrics (as noted in our first position).

Medicare GME payment information should be made publicly available in a concise, timely, and easily accessible report to ensure that the funds are used for educating and training residents. We support an annually published report that clearly identifies each institution and training program, the GME payments received, the number of residents and other health professionals that Medicare supports, and Medicare’s share of teaching costs incurred. Hospitals should show that funds flow to programs.

6. Graduate medical education caps should be lifted as needed to permit training an adequate number of primary care physicians, including internal medicine specialists, and physicians in other specialties facing shortages, including internal medicine–pediatrics and many internal medicine subspecialties.

Changing the way existing GME dollars are distributed is important, but Medicare limits on GME funding on residency training positions will continue to impede the establishment of new residency programs and additional training positions in existing programs. Medical
The Affordable Care Act included provisions for a modest redistribution of unused residency slots with a priority for primary care, but this redistribution will not be enough to help meet the future demand for such physicians. To reform the nation’s health care delivery system to better manage chronic conditions and keep a patient from requiring hospitalization, we need an adequate supply of primary care physicians who collaborate with subspecialists and other health professionals as part of a team to manage a patient’s whole health. In addition, without an increase in residency positions, international medical graduates may be forced out of the U.S. health care system. More U.S. medical graduates will probably fill residency positions once filled by international medical graduates, leading to a potential reversal of gains made in reducing health professional shortage areas and a less culturally diverse physician population.

7. The concept of a performance-based GME payment system is worth exploring. Such a system should be thoughtfully developed and considered in a deliberate way to ensure that goals are achieved without destabilizing the system of physician training. We recommend the following:

a. Measures should be developed by appropriate stakeholders, including physicians involved in GME training.

b. All measures must be carefully developed and thoroughly evaluated before they are implemented.

c. Institutions must be allowed adequate time to make necessary changes to their training programs before financial incentives are introduced.

d. Revised GME funding should account for the costs of transitioning into a performance-based GME system, and once done, clear-cut financial transparency and incentives must be delineated.

e. The performance measures should be evidence-based and aligned with the ACGME requirements. The core mission of individual programs should be considered. Producing a certain number of physicians trained in a certain specialty or subspecialty should not be a specific performance metric.

f. A careful study of unintended consequences should be done to ensure that programs are not unfairly disadvantaged.

g. Regular evaluations of the measures should be implemented to avoid adverse unintended consequences, ensure that the goals of implementing such a system are achieved, and confirm that the measures remain relevant over time.

In recent years, there have been several proposals to use a portion of GME dollars to establish a performance-based GME payment system in an effort to encourage greater accountability for Medicare’s GME dollars and reward education and training that will improve the health care delivery system or meet the nation’s workforce goals. Our organizations believe that the concept of a performance-based GME payment system is worth exploring, but caution that such a system must be thoughtfully developed using a sound research basis and evaluated with input from various stakeholders, including physicians involved in training. It should not be assumed that simply instituting performance metrics will result in improved medical education or progress toward workforce goals.

We feel strongly that immediate implementation of a performance-based GME payment system is premature without other substantial changes. Other than for inflation, GME funding has not been adjusted for some time while salary and other indirect costs of GME have increased. It would be difficult to think that such a program could be successfully implemented in a budget-neutral manner. In addition, it is critical that programs be given time to implement the measures. Of note, institutions have unique restrictions that affect their ability to change their programs, including accreditation requirements that preclude significant adjustment in administrative support (ratio of faculty to number of residents for all programs, and more detailed requirements for some disciplines for other types of clinical and nonclinical staff), contractual commitments to residents that are reinforced by accreditation that supersede “at-will” employment regulations in states and even require institutions to place currently contracted residents if they go out of business, rules stating that the size of programs cannot expand to meet workforce needs without documenting educational need and institutional resources and obtaining approval from accrediting bodies, and policies stating that institutions cannot increase the price of services in response to changes in demand and are legally obliged to provide emergency care to all who present to the emergency department.

Metrics should also be evidence-based to the extent possible. The evidence base available to inform changes to the financing of GME is extremely limited, and pilot projects are essential to mitigating unintended consequences. In addition, we believe that
most GME funding should be based on accurate cost estimates and that payments based on performance metrics should make up a substantial portion (but less than the majority).

We do not recommend specific performance metrics in this policy position paper but have identified potential areas to be explored. These include high-value care, innovating ambulatory training, interprofessional models of care, and other new models of care. Hospitals and residency programs are already required to meet certain measures as part of the ACGME program and institutional requirements, the ACGME Clinical Learning Environment Review, and the competency-based ACGME milestones for their trainees. Although direct use of these formative measures would not be appropriate and would have unintended consequences that would undermine competency-based training, the variables that guide the Clinical Learning Environment Review and milestones data could inform a performance-based GME payment system. The AAIM has developed a GME Funding task force with the express purpose of proposing performance metrics in the following areas: care of the underserved; value in health care; patient safety; access to care; patient-centered care; educational environments; and communication, teamwork, and transitions of care. This task force will consider each of these performance categories across 4 perspectives: collective GME, institutions, programs, and trainees.

Several proposals to move toward a performance-based GME payment system have included a measure to increase the number of physicians in needed specialties and geographic locations, and some specify primary care as a metric. We caution that this is not a realistic metric because training programs cannot be held accountable for the career decisions of their trainees. Important factors for the career choice of medical students include perceived professional satisfaction of practitioners; lifestyle; and ability to pay off debt incurred for medical school, which now averages $176,348. In addition, the effect of our dysfunctional health care system, undergraduate medical education environment, family pressures, and professional goals are major determinants of the career decisions of young physicians. Unless there are other reforms (such as payment and practice reform) that draw persons into shortage fields or underserved geographic areas, changes to our GME finance system will probably have little effect. We believe that measures should go beyond workforce needs and instead hold programs accountable for ensuring that residents obtain durable skills that they will need when they start practice and confer flexibility in skills to lead and evolve as delivery systems change.

Flexibility and adaptability in measurement are necessary because not every program or institution has the same core mission and patient population, and they should not be required to meet the same set of performance measures. Although some programs may focus on training residents in ambulatory primary care or highly specialized specialties, others may have a history of training the nation’s best researchers. All of these clinicians will be needed to meet the nation’s health care needs. We support a core set of measures with additional measures that are unique to the core mission of each program.

8. Pilot projects should be introduced to evaluate potential changes to GME funding, including a performance-based GME payment system, and to promote innovation in GME by providing training programs with the resources necessary to experiment with innovative training models. Pilot projects should not be funded using existing GME funding.

Our organizations believe that GME must continually improve and evolve to better meet the needs of society. We agree with the IOM that a transformation fund is needed with the goal of promoting innovation and achieving the triple aim of improving the experience of care, improving the health of populations, and reducing per capita costs of health care. However, we strongly oppose using existing GME dollars to fund these pilot projects because any reduction would be destabilizing to the nation’s training programs. Instead, there should be a separate, dedicated source of funding for pilot projects and multisite educational outcomes research. Successful studies can then lead to wide application.

The nation cannot reform the health care delivery system without ensuring that future physicians have the skills necessary to coordinate care across settings, improve care quality, and use resources efficiently. Training should evolve to incorporate the coordinated care that patients want and need to improve the value of the health care delivery system. Our organizations believe that there is no single appropriate model for a training program, and programs should be encouraged to develop models that best fit the needs of the communities they serve.

In addition, any changes to the structure of GME funding, including a performance-based GME payment system, should be studied through pilot programs before implementation to help balance unintended consequences. To our knowledge, there is no evidence on the effects of implementing such a payment system.

An alternative to the IOM’s proposed transformation fund is the establishment of a Center for Medical Education Innovation and Research, parallel to the Center for Medicare and Medicaid Innovation, with dedicated funding for pilot programs. If successful, such programs would then have wider dissemination in the GME community. We feel strongly that this would greatly enhance efforts to ensure that residents are
trained with the necessary skills for the practice environment of the future.

9. Internal medicine and internal medicine–pediatrics residents should receive primary care training in well-functioning ambulatory settings that are financially supported for their training roles. Barriers should be removed to encourage programs to train residents in nonhospital settings, promote innovation in training, and facilitate clinical learning experiences that promote primary care.

Internal medicine and internal medicine–pediatrics residents receive in-depth training in the prevention, diagnosis, and treatment of conditions that affect all organ systems. They are also trained to solve puzzling diagnostic problems and handle severe chronic illnesses and situations in which several illnesses may occur at the same time. Internal medicine residents are also trained in the essentials of primary care internal medicine, which incorporates an understanding of disease prevention, health promotion, substance abuse, and mental health. Internists are particularly focused on the care of adult and elderly patients with multiple complex chronic diseases. Internal medicine specialists provide long-term, comprehensive care in both the office and hospital. They manage both common and complex illnesses of adolescents, adults, and the elderly. It is essential that residents receive training in hospitals and various well-functioning ambulatory settings, including physician offices, geriatrics clinics, subacute rehabilitation and skilled nursing facilities, area health education centers, and community health centers. Exposure to the mix of patients typically seen in practice is also important during training.

The mix of patients typically seen by residents in internal medicine programs is heavily skewed toward those whose overall health is negatively affected by social determinants, including poverty, low literacy, and limited access to resources and safe housing. This effect can seem overwhelming to physicians-in-training who may not have the experience or resources to address their patients’ medical and biopsychosocial needs. Residents might view careers in office-based general internal medicine more positively if they were exposed to a wider, more representative mix of patients and practiced in models with appropriate resources to address the effects of these social determinants. Ambulatory experiences should also mitigate against inpatient responsibility conflicts. One possible approach to this is to use ambulatory immersion systems.

Further, changes in health care delivery and the population’s health have deemphasized hospital-based training, making it less relevant to some specialties. By exposing residents to well-functioning ambulatory settings, specifically physician offices, residents will be able to gain the skills necessary to care for the kinds of patients encountered in a typical office-based primary care practice.

The current requirement for ambulatory education for internal medicine residents is set at a minimum of 33% of overall residency training. The importance of considering a change in the amount of ambulatory training is highlighted in a recent study that showed a dramatic reduction in hospitalizations among Medicare beneficiaries from 1999 to 2013. Hospitalizations decreased from 35.274 per 100,000 beneficiaries to 26.903 per 100,000 beneficiaries, underscoring the need to continue to improve our trainees’ outpatient experience and better prepare them for the health care system of tomorrow (66). We believe that internal medicine training programs should improve not only the quantity but also the quality of ambulatory training time. This may need to be encouraged through the regulatory or funding process. By establishing specific goals for training time spent in well-functioning ambulatory settings and ensuring “protected time” while in the ambulatory setting, internal medicine and other primary care residency programs can offer a more balanced and realistic experience. Although it is important for all programs to provide high-quality outpatient settings, there could be more flexibility around increasing the quantity of ambulatory training depending on individual program goals. For more outpatient-intense programs, GME payments should reflect their higher cost of training (53). In addition, mentorship programs should be encouraged and strengthened to ensure that residents are matched with practicing primary care physicians who can show them the many rewarding aspects of careers in general internal medicine and other primary care specialties.

Community-based training programs are 1 option to ensure more training in nonhospital ambulatory settings for primary care residents. The THC GME program, established through the Affordable Care Act, provides primary care medical and dental training opportunities in community-based settings. According to HRSA, physicians trained in health centers are more than 2 times as likely to work in an underserved area than those not trained at health centers. The program, established through the Affordable Care Act, provides primary care medical and dental training opportunities in community-based settings. According to HRSA, physicians trained in health centers are more than 3 times as likely to work in a health center and more than 2 times as likely to work in an underserved area than those not trained at health centers. The program is administered and funded by HRSA rather than Medicare and is subject to appropriations. We believe it is important that this program continue and receive adequate and stable funding to support its mission. Community-based stakeholders have been reluctant to spend the time developing this program, only to see it lose funding. We also believe that the THC program should be modified so that it is more conducive to the participation of other primary care specialties (67). Funding for the THC program should not come out of existing Medicare GME funds but should be supported.
through mandatory appropriations or making GME funding permanent with additional GME funding.

Web-Only References
52. Steinmann AF. Threats to graduate medical education funding and the need for a rational approach: a statement from the alliance


