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HEALTH POLICY

Addressing the Nation's Physician Workforce Needs: The Society of General Internal Medicine (SGIM) Recommendations on Graduate Medical Education Reform

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The Graduate Medical Education (GME) system in the United States (US) has garnered worldwide respect, graduating over 25,000 new physicians from over 8,000 residency and fellowship programs annually. GME is the portal of entry to medical practice and licensure in the US, and the pathway through which resident physicians develop the competence to practice independently and further develop their career plans. The number and specialty distribution of available GME positions shapes the overall composition of our national workforce; however, GME is failing to provide appropriate programs that support the delivery of our society's system of healthcare. This paper, prepared by the Health Policy Education Subcommittee of the Society of General Internal Medicine (SGIM) and unanimously endorsed by SGIM's Council, outlines a set of recommendations on how to reform the GME system to best prepare a physician workforce that can provide high quality, high value, population-based, and patient-centered health care, aligned with the dynamic needs of our nation's healthcare delivery system. These recommendations include: accurate workforce needs assessment, broadened GME funding sources, increased transparency of the use of GME dollars, and implementation of incentives to increase the accountability of GME-funded programs for the preparation and specialty selection of their program graduates.

KEY WORDS: healthcare delivery system; graduate medical education; training; workforce.

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There is broad consensus that the US Graduate Medical Education (GME) system is not well aligned with the nation's healthcare needs, falling short in several ways.¹ Most importantly, GME is not training enough physicians to meet the needs of the American public, with estimates of a looming physician shortage of as many as 90,000 by 2020.² GME has not addressed the maldistribution of physicians by specialty or geography, resulting in shortages of primary care physicians and those practicing in underserved areas.³ GME insufficiently prepares graduates to provide cost-effective, evidence-based care.⁴ GME training continues to be almost entirely hospital-based despite a decades-long shift of patient care to outpatient settings. Lastly, residents need more experience in patient safety, quality improvement, chronic disease management, care of the elderly, and coordination of complex care in inter-professional teams.

In the 2013 residency match (Tables 1), there were 4,006 GME programs offering 25,463 GME Post-Graduate Year 1 (PGY1) positions.⁵ Of these, 12,555 PGY1 residents (49.3 % of total) are training in one of the three “generalist” specialties (Family Medicine, Internal Medicine, or Pediatrics). However, extrapolation of these match data using recent analyses of practice patterns of residency graduates indicates that fewer than half (42.5 %) of these generalist trainees will practice primary care after completing residency training, with the remainder seeking further training in a subspecialty or practicing hospitalist medicine.^{6–8} Thus, only 20.9 % percent of all graduating residents are expected to practice primary care.

The gap between generalist supply and demand will continue to widen as 80 million baby boomers become eligible for Medicare, and as the Affordable Care Act expands health insurance coverage to 32 million currently uninsured Americans by 2019. The Council on Graduate Medical Education (COGME), a Health Resources and Service Administration Advisory Committee, has suggested

Table 1. Number and Proportion of 2013 Post-Graduate Year 1 (PGY1) Residents Likely to Practice Primary Care (PC) after Completing Graduate Medical Education

Specialty	# (%) of Training Programs N=4,006	# (%) of PGY1 Residents Matching in Specialty N=25,463	# (%) of PGY1 Residents in Specialty Likely to Practice PC*	% of all PGY1 Residents Likely to Practice PC**
Family Medicine	462 (11.5)	2,919 (11.5)	2,627 (90.0) ⁶	10.3
Internal Medicine	532 (13.3)	6,947 (27.3)	1,493 (21.5) ⁴	5.9
Pediatrics	203 (5.1)	2,689 (10.6)	1,210 (45.0) ⁵	4.6
All 3 "Generalist" Specialties	1,195 (29.8)	12,555 (49.3)	5,330 (42.5)	20.9

*Calculated by multiplying the total number of PGY1 residents matching in each specialty (3rd column) by the proportion likely to practice primary care after graduating, using the percentages indicated in column 4 drawn from the references cited

**Calculated as the proportion of PGY1 residents by specialty likely to practice primary care after graduating (column 4), of the total number of PGY1 residents in the 2013 match (25,463)

an increase in the percentage of practicing primary care physicians from the current level (32 %) to at least 40 %.⁹ This would require a significant shift in the current distribution of residency training positions among specialties and a dramatic shift in medical school graduates' career choices.

GME STRUCTURE AND FINANCING

Medicare has funded GME since it was enacted in 1965. Intended to be a temporary measure, it remains the current major public source for GME funding.^{10,11} In 1997, due to escalating cost concerns, Congress capped the number of residency training positions supported by Medicare at about 100,000 with the passage of the Balanced Budget Act. The Centers for Medicare and Medicaid Services (CMS) contribute approximately \$9.5 billion annually to support the cost of GME at the approximately 1,100 teaching hospitals nationally. Of the \$9.5 billion, approximately \$3 billion is directed at resident and faculty salaries and administrative costs (Direct GME), and \$6.5 billion is added to Diagnostic-Related Group payments for Medicare patients to account for the higher costs of care at teaching hospitals (Indirect GME).¹²

The contribution from Medicare covers approximately 40 % of the cost of GME to the nation's teaching hospitals.¹³ The remaining costs are covered by Medicaid, Department of Veterans Affairs, Department of Defense, Health Resources

and Service Administration (HRSA), and by teaching hospitals themselves. Teaching hospitals also receive higher patient care payments from commercial insurers, as they can usually negotiate preferred rates.

GME funds flow directly to the sponsoring institutions (mostly hospitals) with little public accountability for training outcomes. Residency program directors, responsible for the training outcomes, have limited knowledge of their hospital GME financing and little input into how funds flow to support training in their institution.¹⁴

GME shapes the nation's physician workforce and represents a significant investment of public funds. Thus, there have been many calls for better alignment of GME funding policy with the needs of the US healthcare system and greater accountability of GME programs for their workforce outcomes.

RECENT PROPOSALS FOR GME REFORM

Changes in GME funding policy have been debated for over a decade. In considering recommendations for the reform of GME and GME funding, it is important to review the pros and cons of the variety of proposals, legislative and otherwise, put forth over the past several years.

GME funding cuts have been proposed as a part of many plans floated to reduce federal spending and reduce the deficit. As an example, in 2010, the National Commission on Fiscal Responsibility and Reform recommended limiting hospitals' Direct GME payments to 120 percent of the national average salary paid to residents, and cutting Indirect GME payments in half.¹⁵ Had this been adopted, GME payments to hospitals would have been reduced by more than \$35 billion over 10 years.

Others have recommended funding reforms focused on GME outcomes, with greater accountability and transparency. In 2010, the Medicare Payment Advisory Commission (MedPAC) recommended that CMS use a portion of Indirect GME funds to implement a pay for performance model, with performance measures for training programs to be established by the Secretary of Health and Human Services.¹⁶ Several bills have been introduced in Congress calling for an increase in

Table 2. Society of General Internal Medicine's Recommendations for Graduate Medical Education (GME) Reform

1. Workforce Analysis: Congress should fully fund the National Healthcare Workforce Commission.
2. Funding Mechanisms: All entities that pay for medical care should contribute to GME funding, which should reflect the true cost of training a physician workforce aligned to the nation's healthcare needs.
3. Transparency: GME dollars must be spent transparently and exclusively for resident training and related costs
4. Competency-Based Curriculum Accountability: GME-funded training programs must demonstrate that their graduates have the competencies necessary to practice medicine in the 21st century.
5. Optimize the Distribution of Physician Specialties: The GME system should provide incentives to institutions and training programs to align the practice patterns of their graduates with national and regional workforce needs.
6. Education Innovations: Funding must be available for GME innovations designed to positively impact the workforce.

GME slots, accompanied by requirements for greater accountability and transparency.¹⁷⁻¹⁹ The Association of American Medical Colleges (AAMC) advocates a 15 % increase in GME-funded training positions, and supports some accountability measures as well.²⁰

The American Medical Association (AMA) advocates, "...for expanded and broad-based funding for graduate medical education; and to continue to advocate for graduate medical education funding that reflects the physician workforce needs of the nation."²¹ The American College of Physicians (ACP) called for increased transparency and accountability in GME spending, and for lifting the cap on GME-funded positions, to allow for the development of an adequate health care workforce. The ACP expressed concern regarding the shortage of primary care physicians, and specifically called attention to the need for general internists to provide the necessary care for an aging population and a growing incidence of chronic disease.²²

The "GME Initiative," a collaboration of health care consumers and leaders in family medicine residency training, made recommendations to reform primary care training and financing to meet the nation's future health care needs, including the goal of a physician workforce comprised of at least 40 % primary care physicians, through the alignment of federal subsidies of GME; holding teaching hospitals accountable for expanding primary care residency positions; increasing the GME cap for primary care positions; and adoption of an "all payer" funding stream.²³ A recent COGME report has addressed the extent to which the nation is getting value from the GME system. Notably, it endorses an increased number of residents, an all-payer GME financing system, and direction of resources towards programs with a track record of training physicians who choose shortage specialties.²⁴

The Institute of Medicine (IOM) has a consensus panel on Governance and Financing of Graduate Medical Education that is expected to issue a report in 2014.²⁵ The panel will address the current financing and governance structures of GME; the residency pipeline; the geographic distribution of generalist and specialist clinicians; types of training sites; relevant federal statutes and regulations; and the respective roles of safety net providers, community health/teaching health centers, and academic health centers.

In preparing this report, the authors have reviewed these and other proposals. SGIM does not believe that there is evidence to warrant cuts to GME funding. Our proposals and recommendations reflect the concerns of an organization whose core interests include education, especially in primary care internal medicine.

SGIM'S RECOMMENDATIONS FOR GME REFORM

1. Workforce analysis: *Congress should fully fund the National Healthcare Workforce Commission.*

The Affordable Care Act includes a provision to establish a non-partisan Commission to develop recommendations for healthcare workforce policy. The Commission's charge includes data collection and analysis to assess current and projected healthcare workforce supply, with the development of an overall strategy for the nation's healthcare workforce.²⁶ However, Congress has not appropriated the \$3 million required, despite a call for this funding by three dozen health professional organizations.²⁷

There is currently no overall assessment of the specialty or geographic distribution of the US physician workforce that would optimally meet the health care needs of the US population. While GME has little direct control over the specialty choice of individual physicians, teaching hospitals and institutions that sponsor the training programs determine the distribution of their specialty specific training slots, overseen by the Accreditation Council of GME's (ACGME) specialty-specific Residency Review Committees (RRC), but without consideration of regional or national workforce needs. Similarly, there is little geographic control over physicians' placement following GME training. The majority of residency graduates will choose to practice close to the location of their training, favoring distribution of recently graduated physicians in large urban centers over rural communities.

SGIM supports a GME system that produces a workforce of appropriate size, specialty mix, and geographic distribution to meet regional and national workforce needs. We believe that decisions affecting the allocation of GME positions must be based on accurate data from unbiased sources that assess current and accurately predict future healthcare needs.

2. Funding mechanisms: *All entities that pay for medical care should contribute to GME funding, and funding levels should reflect the true cost of training a physician workforce aligned to the nation's healthcare needs.*

All who receive and pay for medical care share the benefit of having a well-trained physician workforce. All payers, not only CMS, should contribute to the cost of medical training. Additionally, the formula for Direct GME payments and for Indirect IME was developed in the 1980s; the minor modifications over the last 30 years have not kept pace with evolving requirements and costs of residency and fellowship training. It is long past time to reassess the real costs of training physicians.

GME has a fundamental role in healthcare workforce development. SGIM supports a stable funding source with adequate funding levels for our GME system. We believe that Direct GME must be rebased to reflect the true cost of training, and Indirect GME must be rebased to reflect the actual cost of patient

care in teaching sites compared with matched, non-teaching sites from the same region. The National Healthcare Workforce Commission will be well positioned to address this. GME funding must support the overall training of residents and fellows to develop a workforce able to address current and future health care challenges. This includes GME support for resident and fellow research and other academic activities. And with much of the current healthcare delivered outside of the hospital, GME funds must support training in appropriate settings, including outpatient and non-traditional sites of care, not restricted to inpatient care delivery.

3. *Transparency: GME dollars must be spent transparently and exclusively for resident training and related costs.* GME funds currently flow directly to the sponsoring institutions, without public accountability for the use of these funds. Funds should be used exclusively to support training, not to subsidize other activities or hospital costs. We recommend that the Secretary of Health and Human Services (HHS) implement requirements for institutions receiving GME funds to report their GME costs and the total amount of direct and indirect funds received. These annual reports should be publically accessible, and include the number of residents and fellows supported with GME funds by specialty and by training location.
4. *Competency-Based Curriculum Accountability: GME-funded training programs must demonstrate that their graduates have the competencies necessary to practice medicine in the 21st century.* MedPAC and others have pointed out that current graduates of GME programs lack the competencies required to provide optimal, cost effective care for the U.S. population.¹⁶ MedPAC emphasized deficiencies in the use of evidence-based medicine, team-based care, care coordination, communication skills and shared decision-making. The Accreditation Council for Graduate Medical Education (ACGME) has already begun to address these deficiencies in their Next Accreditation System (NAS).²⁸ NAS requires all accredited GME programs to accurately assess the competence of each resident, measuring discrete observable behaviors called milestones, in each of the ACGME-defined core competencies. We believe that NAS has the potential to serve as the basis for the implementation of needed accountability measures. We suggest that a program's ongoing GME funding should be contingent upon demonstrating that their graduates have met these ACGME milestones by the end of training.
5. *Optimize the Distribution of Physician Specialties: The GME system should provide incentives to institutions and training programs to align the practice patterns of*

their graduates with national and regional workforce needs.

Healthcare systems built upon a robust primary care workforce produce better outcomes at lower costs than systems without such a primary care base.^{29,30} Achieving COGME's recommended 40 % of physicians practicing primary care will require substantive change at multiple levels including undergraduate medical education and systems of physician reimbursement. But the structure and funding of GME also plays an important role in specialty choice. Direct accountability by GME institutions, linking the receipt of GME dollars with workforce outcomes, is an important step. SGIM supports the introduction of a system of incentives to reward institutions that demonstrate a sustained ability to train doctors who become primary care physicians.

The details of such an incentive program should be determined by a broad group of stakeholders, including clinician-educators and policymakers. The incentives must be sufficient to move institutions to implement the programmatic and curricular changes necessary to impact the career choice of their residents, and to support any increased costs associated with these changes.

We suggest that such an incentive program should be phased in over a period of 3–5 years. First, GME programs would be incentivized to track and report graduate career choices and practice patterns. Next, GME institutions would receive incentives to implement programmatic and curricular changes aimed at increasing primary care career selection. Finally, incentives should be provided to GME institutions that demonstrate progressive improvement in their graduates' practice patterns towards the goal of 40 % in primary care 5–7 years after completion of GME training. The measurement and tracking of institution and training site-specific outcomes is feasible, as demonstrated in a recent study by Chen and colleagues, using existing databases to measure specialty and geographic locations of graduate practice.³¹

While primary care plays an important role in the health of the nation, there are academic institutions with GME programs designed primarily to attract and train future specialists. These institutions may opt not to refocus their training to incentivize primary care careers and could forgo the GME incentive payments.

6. *Education Innovations: Funding must be available for GME innovations designed to positively impact the workforce.*

In addition to redistributing GME support for the physician workforce, the federal government should support and test innovative education and training models to prepare the next generation of physicians to practice in 21st century health care delivery systems.

SGIM recommends the establishment of a Center for Medical Training Innovation, whose goals would be to use evidence to craft the training systems best designed to meet the healthcare needs of the nation. The role of such a center would be to fund, supervise, and evaluate these training innovations. Examples of innovations that would benefit from such funding and support would include training programs incorporating non-physician disciplines; training outside traditional venues; or changes in training duration.

The Health Resources Services Administration (HRSA) has served as an engine for change in generalist training for decades through its Title VII program. Title VII has funded (and monitored) hundreds of generalist training programs as they have developed innovations focused on minority recruitment into generalist careers, patient safety, and quality improvement. SGIM suggests that HRSA has the expertise and infrastructure to administer such a Center. Positioning such a center within HRSA would facilitate the study, implementation and dissemination of the most promising innovations.³²

We recommend adequate funding for fellowship programs in primary care specialties to train the educators and researchers necessary to direct patient-oriented outcomes research, and to guide the direction of education and healthcare policy.

CONCLUSION

Aligning GME policy with the nation's healthcare needs is critical to creating a high value healthcare system that will improve the health of our population. Such an alignment will require broad changes at multiple levels, and will be challenging and necessarily span several years. The recommendations we have detailed in this paper reflect the values and principles of SGIM and its diverse membership. They reflect a deeply held belief, supported by evidence, that a robust, generalist physician workforce is the cornerstone of a high performing healthcare delivery system. and that GME reform must be a part of that transformation.²⁹

The recommendations in this paper provide a set of practical steps to achieve meaningful, sustained, positive changes in GME. We look forward to engaging policy-makers, teachers of medicine, and colleagues in continued dialogue about how to incorporate these proposals into our nation's vitally important system of graduate medical education.

Conflict of Interest: The authors and all other contributors declare that they do not have a conflict of interest.

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