

HOD ACTION: Council on Medical Education Report 9 adopted and the remainder of the report filed.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

CME Report 9-A-15

Subject: The Value of Graduate Medical Education

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Referred to: Reference Committee C
(Daniel B. Kimball, Jr., MD, Chair)

1 Over the past century, the graduate medical education (GME) system in the United States has
2 contributed significantly to the health of the public by training generations of physicians who have
3 provided care and greatly improved the health and longevity of our population.¹ GME efforts are
4 aligned with the “Triple Aim” of our current health care agenda, to achieve better care and better
5 health, at lower cost. Today, the US GME system serves as the model for the globe and attracts
6 applicants from all over the world. GME is singularly important in affecting physicians’ practices
7 and the care of their patients for the remainder of their careers.

8
9 The system of funding GME in the United States is complex and largely falls to the public in the
10 form of funding from Medicare and, in many states, Medicaid. The Institute of Medicine (IOM)
11 has recently affirmed the value of this funding, while documenting concern about the lack of
12 transparency and accountability in the way these funds are currently distributed.²

13
14 The general public is likely to be uninformed as to the overall value of GME training, beyond that
15 of training individual physicians to provide for their care in the future. This report focuses on the
16 diverse activities of physicians while they are training in GME programs and how these contribute
17 to the health and benefit of the public, both in this country and around the world. This report briefly
18 summarizes the educational process and GME funding, and describes the added value GME
19 provides in the areas of service (in the United States and globally), education, research, improved
20 quality of care and community benefits. This will assist in supporting the policies of the American
21 Medical Association (AMA) for expansion of GME positions and funding sources.

22
23 **GRADUATE MEDICAL EDUCATION – PROCESS, FUNDING, AND VALUE**

24
25 *Process*

26
27 GME provides the formal training for physicians required by state licensure bodies. Upon
28 graduation from medical school, physicians enter GME at an accredited training program (typically
29 in a teaching hospital) in a particular specialty of medicine. There are two recognized accrediting
30 organizations. The Accreditation Council for Graduate Medical Education (ACGME) has
31 historically accredited allopathic medical programs (training for physicians with an MD degree),
32 and the American Osteopathic Association (AOA) accredits osteopathic medical programs for
33 physicians with a DO degree. Although several states may license a physician with just 1 year of
34 accredited training (graduates of international medical schools, or IMGs, typically must complete 2
35 to 3 years of accredited training to qualify for state licensure), physicians who wish to become
36 certified by an American Board of Medical Specialties (ABMS) member board in a particular
37 specialty must graduate from a training program in that specialty. Required training length,

1 depending upon the specialty, can be 3 to 5 years; therefore, all practicing physicians in the US will
2 have at least 1 year of GME, and the vast majority will have 3 to 5 years of GME. Additional years
3 of fellowship training are required for subspecialists.³

4 *Funding*

5
6
7 Prior to the end of World War II, hospitals covered GME costs via direct patient billing. The initial
8 federal foray into funding GME began after World War II in the form of support via the GI Bill.
9 The GI Bill provided a federally funded living allowance and subsidized costs when hospitals
10 provided GME positions to servicemen. From 1940 to 1960 the number of residency positions
11 offered in the US increased six-fold.⁴ With the establishment of Medicare in 1965, GME costs
12 were explicitly included as part of reasonable costs for teaching hospitals, without a cap on the
13 number of residency positions reimbursed. Currently, Medicare supports GME through two
14 payment streams, direct medical education (DME) and indirect medical education (IME),⁵ the
15 majority of which is in the form of IME payments to hospitals.⁶

16
17 In addition to DME and IME support from Medicare, the federal government also reimburses GME
18 partially through the Veterans Administration (VA), the Department of Defense, the National
19 Institutes of Health, and other federal agencies.^{5,6} The VA supports 9,000 full-time residents, in
20 addition to hosting more than 30,000 residents that rotate through VA facilities yearly. The
21 Department of Defense trains approximately 3,000 residents for the uniformed services. State
22 Medicaid programs contribute an estimated \$3 billion annually to GME funding nationwide.⁷

23
24 Most health policy experts, including our AMA, believe there is a looming shortage of qualified
25 physicians to take care of an aging population. In its 2014 report on GME, the IOM found the
26 evidence of an overall shortage wanting and highlighted the need for increased transparency in the
27 allocation of federal money for GME, specifically money that would encourage the production of
28 physicians in shortage specialties.² The IOM did not propose increased GME funding but instead
29 proposed combining DME and IME dollars into a single payment stream, and taking a percentage
30 of the overall GME funding to create a GME policy council within the Department of Health and
31 Human Services and a GME Center within the Centers for Medicare and Medicaid Services. This
32 council would guide the development of innovative models of training and payment systems for
33 GME.

34 *Current Value*

35
36
37 Service Value. In providing direct patient care, residents and fellows often perform the initial
38 evaluation of patients, provide first responder care in clinical emergencies, and perform necessary
39 interventions/surgery under the supervision of an attending physician. Trainees provide a major
40 component of care for underserved, uninsured, Medicaid, and Medicare populations. In particular,
41 trainees provide a higher percentage of acute/complex care than might be expected from the
42 relatively low percentage of US hospitals (roughly 6%) offering formal GME training. In this
43 setting, trainees provide care for more than 20% of all hospital inpatients in the country, 28% of
44 Medicaid hospital admissions, 40% of all hospital-based charity care (amounting to roughly \$9.9
45 billion annually), 40% of high-acuity patient transfers, 62% of pediatric ICU care and 80% of level
46 I trauma care. In addition, more teaching hospitals than nonteaching hospitals (89% vs. 16%) offer
47 community outreach ambulatory services, which significantly impact population health in the
48 setting of limited access to preventive services.⁸ Moreover, free community clinics staffed by
49 residents offer an opportunity for continuity in care for community health and an appreciation of
50 health care disparities.⁹

1 In 2003 and 2011, the ACGME implemented restrictions to limit the consecutive and total number
2 of hours resident physicians could work in order to promote rest and reduce fatigue among
3 residents. Evidence has been mixed regarding resulting quality of care;^{10,11,12} however, increased
4 resident productivity and efficiency allows for the continuation of high levels of care provided by
5 residents.

6
7 As the largest provider of medical training at all levels, the VA system is host to 30% of US
8 medical residents. These trainees contribute substantially to the delivery of cost-effective and high
9 quality patient care in the VA system. While roughly 33% of residents may consider VA
10 employment before their rotation, over 77% consider it afterward. This is of significant value to the
11 pipeline of providers of VA care.¹³ Given recent innovations in medical school curricula, VA
12 trainees may be uniquely positioned to promote the VA system's goals of improving service
13 delivery, with a focus on outcomes and setting a course for long-term excellence and reform.¹⁴

14
15 Global health rotations add perspective to the trainee's view of health care. Such experiences foster
16 idealism, enhancement of physical exam skills without reliance on technology, and knowledge of
17 diseases that are uncommon in the United States. Trainees pursuing such experience are likely to
18 develop an increased interest in primary care and are more likely to care for underserved
19 populations.¹⁵

20
21 In summary, GME positively impacts trainees, their sponsoring institutions, the community,
22 affiliated academic health centers/university sponsors and the global community as well as our own
23 nation's population health.

24
25 Teaching. Medical residents serve a vital role in undergraduate medical education, specifically
26 during clinical training.^{16,17,18} They play a similar role in resident-to-resident training, both in an
27 interdisciplinary manner and as senior residents training junior residents.¹⁷ In the apprenticeship
28 style of medical education, residents fill a vital gap between classroom and textbook learning and
29 problem-based application on the wards. They also model skills that attending physicians may not
30 readily demonstrate, such as finding work-life balance, handling criticism, and navigating the
31 complex social structure of the hospital.¹⁹

32
33 Based on surveys, residents enjoy teaching.²⁰ Many take time outside of work hours to prepare for
34 teaching topics,²¹ and there are estimates that up to a quarter of a resident's time is spent
35 supervising, evaluating, and teaching.¹⁷ Often, students rate the teaching of residents higher than
36 that of attending physicians.²² In looking at models of experiential learning, participation in patient
37 care stands out as the best learning tool.²³ Residents facilitate this learning by being open to
38 medical student participation. Studies suggest that residents are more likely to let students learn by
39 trial and error.¹⁹

40
41 Research. ACGME-accredited programs are required to advance residents' understanding of
42 research and engagement in scholarly activities; specialties differ in the level of research activity
43 required. Over 44% of training programs require research, averaging 30 weeks in duration, and
44 another 41% have an optional research rotation (American Medical Association, Graduate Medical
45 Education Database, 2015). Despite the compression of residents' time resulting from duty hours
46 restrictions, residents have been able to continue publishing research, and, in some cases, the
47 publication rate has increased,²⁴ although there can be associated costs in terms of decreased
48 clinical activities.²⁵ Promoting and encouraging research by residents has been found to increase
49 faculty involvement in research, thus contributing to the overall scholarly mission of the institution
50 and value to society.²⁶

1 International Medical Graduates. Physicians educated in other countries who seek GME in the
2 United States, known as international medical graduates (IMGs), provide much-needed patient
3 care, since many of them train in and enter primary care specialties and serve in underserved and
4 shortage areas, including inner-city and rural areas.²⁷ IMGs who are on an Exchange Visitor Visa
5 (J-1) during their GME training may apply for a J-1 Visa waiver that allows them to stay in the
6 United States after training, if they agree to work in an underserved area or shortage area. Since
7 1994, when the J-1 Visa waiver program was initiated, over 9,000 IMGs have been granted
8 waivers.²⁸ Without these IMGs, thousands of patients would be without a physician in their
9 communities. IMGs play a critical role in caring for the country's neediest patients. In 2012,
10 federal legislation was signed into law to extend to September 2015 the Conrad State 30 J-1 Visa
11 Waiver Program, a vital program for placing IMGs in communities that face health care access
12 challenges.²⁹ The AMA supports the permanent reauthorization and expansion of the Conrad State
13 30 J-1 Visa Waiver Program.

14
15 Outcomes of Care. Teaching hospitals have been compared to non-teaching hospitals and non-
16 teaching services on a wide variety of parameters, including quality of care, health care outcomes,
17 time spent on procedures, costs, and health care disparities.^{30,31,32,33,34,35,36,37,38,39} Kupersmith⁴⁰
18 reviewed 23 such studies published between 1985 and 2004. The majority of these studies showed
19 improved quality and outcomes in teaching hospitals, and several additional studies demonstrate no
20 difference between teaching and non-teaching hospitals. The outcomes measured were generally
21 risk-adjusted in these studies due to the increased likelihood of sicker patients to be cared for in
22 teaching hospitals.

23
24 Operative procedures performed by residents supervised by faculty have been shown to take more
25 time, but without significant differences in morbidity from non-teaching cases.³⁷ One study showed
26 a decrease in racial disparities in emergency department visit duration in teaching versus non-
27 teaching emergency departments.³⁶ In a study of cost efficiency comparing internal medicine
28 inpatient teaching teams to internists and hospitalists, the teaching teams had reduced length of stay
29 and overall costs, without a difference in mortality.³³

30
31 Thus in virtually all important health outcome measures, including patient safety and quality of
32 care, teaching hospitals perform the same as, or better than, non-teaching hospitals.

33
34 Community Value. The economic and health care value of GME to local communities has been
35 well established. GME creates a physician workforce that not only provides care locally while
36 physicians are training, but additionally as physicians tend to locate near the community in which
37 they have completed their training. This local workforce reduces recruitment costs for hospitals and
38 practices, helps retain providers and mitigates shortages, positively affecting local health care
39 practices in terms of increased community capacity and enhanced relationships between local
40 hospitals and communities.⁴¹ This in turn is self-perpetuating, as a community with an active
41 physician workforce tends to be attractive to medical students when considering options for their
42 own residency training.^{42,43} The economic value of a practicing physician to a community includes
43 supporting 14 jobs and over \$1 million in wages and benefits, as well as over \$90,000 in local and
44 state tax revenues.⁴⁴

45
46 Similarly, physicians may find a community with GME as an attractive place for relocation, as the
47 health care resources and educational opportunities provided by the teaching hospital create a
48 setting that enriches practice, and thus enhances health care.⁴⁵ Many residents who train in safety
49 net settings return to practice in these settings.⁴⁶ A review of the direct, indirect, and intangible
50 benefits of GME programs suggests that benefits extend beyond the walls of the teaching hospital
51 and into the community at large. Through service, these programs contribute positively in ways

1 that cannot be easily assessed in hospital revenue and expense reports. More study that can
2 demonstrate the magnitude of the contributions of GME to the institutions and the communities
3 they serve is warranted, to help improve planning, resource allocation, innovation, and quality for
4 the local community.³⁹

5
6 In summary, the local community gains from GME, specifically by attracting physician talent,
7 preventing physician attrition, and improving the economic and health care-providing benefits of
8 local teaching institutions.

9
10 AMA POLICY

11
12 Policy D-305.967 (9), The Preservation, Stability and Expansion of Full Funding for Graduate
13 Medical Education, asks our AMA to work, in collaboration with other stakeholders, to improve
14 the awareness of the general public that GME is a public good that provides essential services as
15 part of the training process and serves as a necessary component of physician preparation to
16 provide patient care that is safe, effective and of high quality.

17
18 SUMMARY AND RECOMMENDATIONS

19
20 While difficult to fully and accurately measure, the many tangible (and intangible) contributions of
21 resident/fellow physicians to not just the US health-care system but also to the nation as a whole
22 are no doubt significant. Those benefiting from GME include sponsoring and affiliated training
23 institutions, community health clinics, local physician practices, underserved areas, the
24 community-at-large, and the global community. The patient care services, teaching, research,
25 altruistic efforts, and global outreach are unique and represent a large and nearly irreplaceable
26 public health and economic benefit to society. Studies show that, despite concerns about the
27 potential quality impacts of trainees, patient safety is not compromised during GME, and in
28 virtually all important health outcome measures teaching hospitals perform the same as, or better
29 than, non-teaching hospitals. Further, the presence of GME in a community extends beyond the
30 institution's doors to enhance the economic and health well-being of the community. It also creates
31 opportunities to attract physician talent while preventing physician attrition, thus ensuring
32 continued access to care and providing inestimable public contributions. Surveys show that
33 Americans have a high level of respect for physicians as bastions of the community and as a
34 bulwark for ensuring the health of the individual, in all its aspects, as well as the community. In
35 summary, the value of GME to the nation is indisputable.

36
37 The Council on Medical Education therefore recommends that the following recommendations be
38 adopted and that the remainder of the report be filed.

- 39
40 1. That our American Medical Association (AMA) utilize its resources to share its content
41 expertise with policymakers and the public to ensure greater awareness of the significant
42 societal value of graduate medical education (GME) in terms of patient care, particularly for
43 underserved and at-risk populations, as well as global health, research and education.
44 (Directive to Take Action)
45
46 2. That our AMA revise Policy D-305.967, "The Preservation, Stability and Expansion of Full
47 Funding for Graduate Medical Education," to read as follows: "8. Our AMA will vigorously
48 advocate for the continued and expanded contribution by all payers for health care, (including
49 the federal government, the states, and local and private sources payers); to funding both the
50 direct and indirect costs of GME." (Modify Current HOD Policy)

- 1 3. That our AMA advocate for the appropriation of Congressional funding in support of the
2 National Healthcare Workforce Commission, established under section 5101 of the Affordable
3 Care Act, to provide data and healthcare workforce policy and advice to the nation and provide
4 data that support the value of GME to the nation. (Directive to Take Action)
5
- 6 4. That our AMA support recommendations to increase the accountability for and transparency of
7 GME funding and continue to monitor data and peer-reviewed studies that contribute to further
8 assess the value of GME. (New HOD Policy)

Fiscal Note: \$2,500.

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