

VIEWPOINT

Moving the Financing of Graduate Medical Education Into the 21st Century

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In 2019, the Hahnemann Medical Center, a safety net hospital in Philadelphia, declared bankruptcy and a consortium of hospitals submitted a winning bid of \$55 million for 550 government-funded residency slots. The auction challenges the narrative of teaching hospitals that training residents is a money-losing proposition and provides an opportunity to rethink the role of public financing of graduate medical education (GME) and its nearly 4-decades-old funding formulas.

Since 1983, GME has been financed by 2 funding streams: direct GME and indirect graduate medical education (IME) payments. Direct GME payments are based on the hospitals' cost structure in 1984, the number of full-time equivalent residents in 1996, and Medicare's share of total inpatient days at that hospital during the current period. IME payments increase Medicare payments to teaching hospitals and are intended to cover additional costs hospitals may incur as a result of training physicians, such as additional diagnostic tests or procedures ordered by residents. IME payments depend on a ratio of the number of residents to hospital beds as a proxy for a hospital's teaching intensity. Between 2000 and 2015, average GME payments per resident increased nearly 20%, from a mean of \$117 323 to \$138 938, driven mainly by increases in IME reimbursements, which represent nearly three-fourths of total Medicare GME payments.^{1,2} In 2015, federal and state support for GME reached \$16.3 billion (nearly \$18 billion in 2020 dollars), representing \$14.5 billion from the federal government and \$1.8 billion from state Medicaid agencies.²

Hospitals that receive GME funding maintain that the GME program offsets their costs of training residents. They also contend that without GME funding there will be fewer physicians, that private payers do not pay directly for GME, and that losses incurred in the teaching mission will be offset by "cost-shifting" onto other payers. Given the size of the public allocation, it is worth understanding if there is support for these claims.

First, the total costs of care for Medicare beneficiaries with common conditions are similar or lower at teaching hospitals compared with nonteaching hospitals, which directly contradicts the higher resource use argument. One analysis based on data from 2014 and 2015 found that although teaching hospitals used 4.2% more resources in the index hospitalization, their index physician bills were 7.0% less, and risk-adjusted post-acute care and other subsequent 30-day spending were 5.8% less.³ Teaching hospitals that use more resources initially to lower the total cost of a care episode will capture these gains through higher commercial prices, savings from accountable care organizations, and attracting more patients.

The GME formulas also reward care in a fee-for-service inpatient setting, which is a superannuated approach, especially for training primary care physicians. Hospitals will always be needed, but hospitalization rates have been declining since the design of the program as outpatient care, pharmaceutical treatments, and accountable care organizations have become more important, and there is growing appreciation for managing other factors such as the social determinants of health. Paying hospitals by measuring their "empirically justified levels" of inpatient resource use contradicts the principles of value-based care, for which the central tenet involves rewarding outcomes by discouraging unnecessary resource use.⁴

Second, teaching hospitals claim that training programs incur costs beyond delivering more care, such as the clinical time of attending physicians teaching new clinicians. Economists have noted that residents implicitly pay for the high cost of their training (including the lost clinical revenue from their attending physicians) by accepting salaries below the market value of their services. For example, if training costs \$40 000 per year and if a resident generates \$100 000 in benefits to the hospital, then that resident's compensation will be \$60 000. That residents receive salaries and do not pay tuition reflects their net positive economic value to training hospitals. This is not just theory: large cuts to the GME program, of the magnitude of \$9 billion that occurred over the 5 years after the 1997 Balanced Budget Act, did not change the number of residents or their salaries, which challenges the views of teaching hospitals that resident education hinges on public support. Moreover, more than 15 000 residency positions have been created since 2003, despite no increase in funding for these positions.⁵

Third, because of the matching algorithm-based allocation of residents to training hospitals, residents likely receive lower salaries than if hospitals had to compete for residents. While the matching algorithm may be socially desirable because of its ability to efficiently allocate residents to hospitals, it reduces the bargaining power of residents. Resident physicians routinely obtain "moonlighting" wages that are substantially higher than their regular wages for delivering the same care, providing evidence that their salaries as residents are lower than the market's assessment of their talents.

Fourth, while hospitals routinely claim that they "cost-shift" by increasing commercial prices in response to lower public prices, the evidence does not support this claim. Lower Medicare prices *lower* commercial prices because Medicare prices are the floor for negotiations (cost-shifting is also a dubious claim, given that hospitals did not reduce commercial prices in response to more generous payments from the Affordable Care Act).⁶

These factors point to the GME program being “lucrative” for teaching hospitals and explains their advocacy for more GME funding, their willingness to expand residency positions even without funding, and joining auctions to gain access to revenue streams for training residents. They also highlight the need to redeploy limited public dollars more efficiently.

There are 2 determinations for reform. First, what should the GME program fund? Determining what to fund can be answered by identifying the particular problem that needs to be solved; the problem is not the cost of GME, for these costs are paid for by residents accepting lower salaries. There is evidence that the geographic distribution of physicians is far from ideal and that the nation needs more primary care physicians. These disparities can be addressed by sending GME dollars to rural hospitals with training programs, large primary care physician groups, or the Indian Health Service or by reducing debt for physicians and nurses who work in underserved areas and increasing the wages of primary care physicians, nurses, and community health workers who work in underserved areas. Debt reduction and wage multipliers are more targeted and would change the beneficiary of GME monies from teaching hospitals to individual physicians, nurses, and community health workers.

Alternatively, the GME program could be ended and the money used for other public priorities, ranging from expanding insurance, reducing patient cost-sharing, increasing the National Institutes of Health budget, and increasing public health agency funding for emergencies, including hurricanes. Funds could be used where there is a market failure by establishing stockpiles of personal protective equipment and launching training programs for medical students, nurses, and community health care workers to serve as a reserve workforce that can respond during emergencies.

These approaches are different than measuring the competencies of residents to justify GME support, for this still assumes that public support is necessary when it is not. Measurement efforts were encouraged by the National Academy of Medicine but have spawned unvalidated measures of physician competency, such as ensuring

that resident physicians have mentors with publications and research grants.^{7,8}

Second, how will Congress reform a program with a powerful lobby composed of the nation’s best hospitals that are also responding to the coronavirus disease 2019 (COVID-19) crisis? Given the important role of teaching hospitals in caring for patients with COVID-19, the current pandemic may dissuade various groups, including the federal government and teaching hospitals, from considering immediate reforms. But the pandemic also highlights the failure of the current GME allocations in helping to deal with the pandemic: in 2013, teaching hospitals in the Northeast received a disproportionate share of GME funding (Massachusetts, New York, and Pennsylvania received 35% of Medicare GME dollars), but teaching hospitals in states that have been most affected by COVID-19 (Arizona, Florida, and California) received 10% of Medicare GME outlays.⁹ Similarly, states that have been most severely affected by the opioid epidemic (Ohio, West Virginia, Maryland) might prefer to receive federal and state monies for these priorities. States that receive less GME monies may want dollars to rescue hospitals that are experiencing financial difficulty. The geographic inequity in where GME monies currently flow relative to where they are needed may create a coalition willing to challenge powerful representatives from states that disproportionately benefit from these allocations.

GME policy is a microcosm of US health care policy, where professional associations, including the Association of American Medical Colleges, the American Hospital Association, and the Council of Teaching Hospitals, have lobbied Congress and state legislatures to use an outmoded formula to give \$20 billion annually to their members, leveraging national catastrophes into an opportunity to ask for more GME funding and raising the specter of “unintended consequences” to derail GME reform that would be in the public’s interest, including a reform proposal from the National Academy of Medicine.⁷ As the size of government in health care increases, the opportunity to capture more public resources through lobbying increases, highlighting the potential for even larger disparities and misallocations and underscoring the need for more evidence-based health policy.¹⁰

ARTICLE INFORMATION

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