OBSERVATIONS

The “Hidden Costs” of Graduate Medical Education in the United States

The cost of graduate medical education in the United States is subsidized by the federal government through direct and indirect Medicare payments. These payments are intended to cover the portion of resident salaries, teaching expenses, and indirect hospital costs associated with the academic mission attributable to the care of Medicare beneficiaries, using a complex allocation formula. However, there are other program expenses associated with medical education that are not reimbursed by Medicare and still significantly affect the competitiveness and quality of the educational programs. Although most educators recognize the amount of extra work and money required to run high-quality training programs, there are few analyses demonstrating the actual amount and effect of these extra expenditures on graduate medical education.¹⁻⁴

Programs often spend significant amounts on *recruitment efforts*, including interviews, travel reimbursements, and orientation days. They purchase resource *education materials* for residents, such as books, simulation training, digital resources, association and membership dues, and in-service examinations to support their education. For scientific *meetings and events*, they often pay for travel and lodging expenses, program application fees and food; graduation ceremonies, awards, and certificates add to the expenses of running a program. Other items purchased for *trainee support* include laboratory coats, office supplies, computer hardware and software, parking, meal cards, and pagers.

As fiscal pressures intensify for academic medical centers and associated faculty practice plans, it is essential to identify the magnitude and distribution of these “hidden costs” of residency training. As part of a strategic review of education and budgets, the 8 core Accreditation Council for Graduate Medical Education (ACGME) residency programs (comprising 461 trainees) at an academic medical center reported all nonsalary costs of training residents. The programs were asked to identify the costs by category of expenditure (using the 4 categories noted above) and the source of the funding: hospital cost center, physician practice plan, or special funds (eg, philanthropy, grants).

The total annual hidden costs for resident education at that institution were \$1,865,016. Approximately 70% (\$1,315,693) was paid by the physician practice plan; 25% (\$462,202) by the hospital; and 5% (\$87,121) from special funds. The average annual cost per resident was \$4439

(range, \$1500 to \$9417 among programs). By category, the average annual per resident costs were *Educational materials* \$1423 (32.1%); *Trainee support* \$1299 (29.3%); *Meetings and events* \$1191 (26.8%); and *Recruitment* \$525 (11.8%). See the **FIGURE**.

One limitation of this analysis was that we relied on our program directors to define the costs and the category under which they would best be classified. Departmental budgets were not audited independent of those reports.

The figures obtained were from 2006 (as part of a baseline analysis for ongoing institutional efforts to support residency training programs) so may not be accurate for 2012 conditions (they likely underestimate current costs). The figures reported are for a single institution only. While it is probable that similar conditions exist elsewhere, further study is warranted to investigate the effect of these costs on hospitals and academic practices as the cost containment elements of health care reform reduce clinical margins and jeopardize the cross-subsidization of education that has been prevalent for many years. With more than 109 000 ACGME-accredited residents currently in training, even if this analysis is off by an order of magnitude, it still represents a cost of tens of millions of dollars per year in the United States alone.⁵

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All authors have academic appointments at Harvard Medical School. The online version of this article contains a figure, Average Program Expenditures by Funding Source and Category of Expenditure.

References

- 1 Koenig L, Dobson A, Ho S, Siegel JM, Blumenthal D, Weissman JS. Estimating the mission-related costs of teaching hospitals. *Health Aff (Millwood)*. 2003;22(6):112–122.

- 2 Mechanic R, Coleman K, Dobson A. Teaching hospital costs: implications for academic missions in a competitive market. *JAMA*. 1998;280(11):1015–1019.
- 3 Ling LJ, Meier G. The medical education funding gap: one hospital's perspective. *Minn Med*. 2003;86(2):46–49.
- 4 Guterman S. Financing teaching hospital missions: a context. *Health Aff Millwood*. 2003;22(6):123–125.
- 5 Accreditation Council for Graduate Medical Education. Accreditation Council for Graduate Medical Education website home. <http://www.acgme.org>. Accessed March 6, 2012.