EDITORIALS

The Need For Data not Dogma on the Costs of Graduate Medical Education

In this issue of JGIM, Shine and colleagues report that patients receiving care from medical residents at a community teaching hospital had higher costs, as expected, but also higher payments and greater profitability, when compared to patients receiving care without involvement of medical residents.¹ At first blush, the finding of greater profitability despite higher costs contradicts existing dogma about the need for public reimbursement of the direct and indirect costs of graduate medical education (GME). If the findings are valid and generalizable, they would have serious implications for the current debate about federal support of GME.

In this context, we must carefully consider the limitations of the study. Are the results valid? In any comparison of resource utilization between groups it is important to use appropriate methods for adjusting for differences in risk between groups. This study used a proprietary risk adjustment methodology with regression models that were derived separately for examining costs and length of stay. The most important limitation of this methodology is that it relies on administrative data for information about clinical characteristics of patients. This limited the investigators' ability to adjust for case mix differences between the teaching and non-teaching units, which differed in their distribution of Diagnosis-Related Groups (DRGs) and severity of illness. However, the investigators nicely demonstrated that in virtually all DRGs, patients on teaching units received greater reimbursement than patients on non-teaching units. Moreover, if patients on teaching units were more seriously ill in ways not captured by administrative data, one would expect them to have greater costs but not greater profitability. Thus, limitations in the risk adjustment methods do not invalidate the findings.

A second question is whether the results of the study are generalizable. It is a non-randomized observational study of resource utilization and reimbursement in a single community teaching hospital in New Jersey. All patient groups examined in this study had hospital costs much lower than predicted by a risk adjustment model, indicating that this hospital is not representative of other hospitals. In addition, the investigators excluded all patients that were discharged from intensive care and specialty units, including designated renal, pulmonary, and oncology beds. Of 2550 discharges meeting their criteria for medical DRGs, 935 were excluded from the

analysis. Clearly, the results must not be generalized to different types of hospitals that provide care to different mixes of patients in different local markets, especially since pricing structures vary by local markets.

The study's lack of generalizability leaves us struggling still with a persistent policy question that must be dealt with during ongoing discussions of GME at the national level. This question is how to account reliably for the costs of GME. By national estimates, the indirect costs of GME total twice as much as the direct costs.^{2,3} Work by the Lewin Group and the Commonwealth Fund Task Force on Academic Health Centers has demonstrated that as currently measured by Medicare, indirect costs of GME really reflect the increased expense of caring for patients in teaching hospitals. The increased costs reflect a varied set of differences between the activities and care occurring in teaching and non-teaching facilities.⁴ The differences between teaching and nonteaching institutions include not only involvement with GME but also clinical research, providing high technology and highly specialized services, caring for a sicker group of patients, and providing a higher quality of care. To compensate teaching hospitals specifically and fairly for the indirect as well as direct costs of GME, we need better data. Such data should separate the costs of educational activities from the costs of other closely related functions. It will be difficult to accomplish this task given the number, complexity, and overlapping nature of the relevant activities. While the Task Force is experimenting with econometric approaches that may help to disentangle the costs of related activities, more work is needed to quantify the differences that may exist between various types of teaching hospitals.

Other questions not addressed by the Shine paper also continue to pose policy challenges. Calculations of national average expenses associated with GME are likely to hide enormous variation in the costs at particular institutions. Ideally we should know the costs of GME at each institution in the U.S. Such figures will inevitably reveal marked variation in the expenses of educating residents, and this will in turn raise concerns about what we are buying at more costly programs (or perhaps missing in the cheaper ones). Good cost data should lead to demands for good quality measures in the area of medical education. None currently exist, and one need only look at

the national debate about public education to appreciate the difficulty of developing such measures. In GME, quality measurement must consider that the GME enterprise produces a widely divergent set of products for which measures of quality should vary. These products include physicians trained to practice in community-based settings (suburban, rural, and urban) as opposed to tertiary care institutions; primary care practitioners as opposed to specialists; future teachers in these varied settings; and future physician-investigators, both clinical and basic. Having cost data without appropriate quality data will generate disputes about whether higher-cost programs can be justified. This will place the entire GME establishment on the defensive in discussions with public policy-makers. If one community teaching hospital can educate residents and turn a profit, all the more reason for other teaching hospitals to obtain better data on the costs and quality of training they provide.

Perhaps the most profound and important unanswered question is: once we know the costs of GME, who should pay them if they typically cannot be recovered in health care markets? Members of the academic medical community argue forcefully that medical education is a public good, whose costs should be borne by the public in some form. Economists, however, point out correctly that medical education expenses do not meet the classic definition of a public good.⁵ Some politicians go further and contend that they see no reason why their constituents should foot the bill for training physicians who, whatever their gripes about working harder for less, still earn far more than the average voter. Complicating this discussion still further is the appropriate role of particular federal and state programs in underwriting the costs of GME. The major public supporter of GME at the current time, Medicare, was created to purchase health care for elderly Americans. Strict constructionists of Medicare law

argue that, whether or not government should pay all or some of the costs of GME, the Medicare program should not, since its drafters never intended it to play this role.

There are good arguments for government generally and the Medicare program, in particular, to contribute to the direct and indirect costs of GME.^{6,7} A full treatment of these arguments is beyond the scope of this editorial. Suffice it to say that better data on the costs of GME will force advocates of this activity to challenge existing dogma and address a variety of issues that will stress their technical and rhetorical skills. And that is not all bad.—**DAVID BLUMENTHAL, MD, MPP**, *Institute for Health Policy, Massachusetts General Hospital, Boston, Mass, Partners HealthCare System, Boston, Mass, and Departments of Medicine and Health Care Policy, Harvard Medical School, Cambridge, Mass, and* **ERIC B. BASS, MD, MPH**, *Editor*.

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