

## VIEWPOINT

# Advancing the Academic Medical Center Value Debate

## Are Teaching Hospitals Worth It?

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**Improving health care value** by achieving superior outcomes at comparable or lower cost has been a central goal of delivery system reform. In recent years, academic medical centers (AMCs) have encountered renewed questions about how much value they offer patients and the health care system.<sup>1</sup> Academic medical centers, which train the next generation of physicians, generally have greater subspecialty expertise and more sophisticated technology, but are also widely believed to be more expensive than community hospitals.

Payers and policy makers have raised concerns about whether AMC costs are defensible, and some have taken steps to steer patients away from them and other high-cost clinicians and health care centers. Do AMCs offer sufficient value to justify their costs? Do they actually cost more at all?

### AMC Mortality Benefits

A series of recent studies provide data to help address some of these questions. In one study, more than 21 million Medicare fee-for-service hospitalizations for

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common medical and surgical conditions were evaluated.<sup>2</sup> Overall, patients treated at major teaching hospitals had significantly lower 30-day adjusted mortality than those treated at nonteaching hospitals (8.3% vs 9.5%, respectively). Major teaching hospitals had lower mortality rates for 11 of 15 common medical conditions, and lower rates for 2 of 6 common surgical conditions. These differences were similar at 90 days after the index hospitalization.

Consistent with older studies, this work suggested that AMCs have significant mortality benefits for Medicare patients across a variety of conditions. It is possible, however, that the observed benefits accrue disproportionately to patients who have greater illness severity. The specialized expertise, resources, and technology available at AMCs would be expected to be most helpful in caring for complex patients, but less useful (and less used) when caring for patients with less complexity and lower acuity. Some policy makers have made precisely this point, arguing that healthier patients should not be cared for at AMCs because they are not likely to require the (relatively expensive) resources at these centers.<sup>3</sup>

But the evidence, although limited, does not support this position. For patients with common medical

conditions, even low-severity patients (not just the sickest patients) benefitted from care at teaching hospitals. In another study, high-severity patients who received care at AMCs (n = 250), compared with those who received care at nonteaching hospitals (n = 4232), had lower odds of 30-day mortality (odds ratio [OR], 0.93 [95% CI, 0.90-0.96]; absolute rates, 28.8% vs 31.5%, respectively), whereas low-severity patients had even lower odds (OR, 0.83 [95% CI, 0.77-0.91]; absolute rates, 0.51% vs 0.62%, respectively).<sup>4</sup> The reverse was true for surgical patients: high- and medium-severity patients at AMCs (n = 250), compared with those treated at nonteaching hospitals (n = 4232), had relatively lower odds of mortality (OR, 0.83 [95% CI, 0.78-0.89] and 0.90 [95% CI, 0.85-0.96]; absolute rates, 17.3% vs 20.7%, respectively) and there was no mortality difference for low-severity surgical patients (absolute rates, 0.24% vs 0.24%).

Why nonsurgical patients with low absolute mortality rates still benefit from care at AMCs relative to nonteaching hospitals is unclear. Possible hypotheses include differential adoption of technology, availability of care management resources, lower rates of diagnostic error, and better performance on process measures. There are also likely unmeasured variables related to culture and expertise that influence health outcomes. Why these differences exist and what lessons can be learned and applied across care settings should be the subject of rigorous study.

### AMC Costs

Are mortality benefits offered by AMCs worth their cost? The question of whether AMCs cost more (ie, by how much, for whom, and over what period) is complicated. Much of the research examining costs, particularly for Medicare, is decades old and has yielded mixed results.<sup>5</sup> These studies have also generally analyzed costs only for the index hospitalization, and failed to incorporate additional spending that occurs after the initial hospitalization, a factor that is increasingly relevant as hospitalized days per admission decline, care is shifted to outpatient settings, and payers move toward episode-based and global payment.

In a third study, total costs of care were examined for more than 1 million Medicare hospitalizations at AMCs vs nonteaching hospitals.<sup>6</sup> These costs included those incurred during the index hospitalization, but also the costs of postacute care, outpatient physician services, and readmissions within a 30-day period afterward. In this study, AMCs appeared to have slightly higher costs

during the index hospitalization (\$8529 as the mean cost for AMCs vs \$8180 as the mean cost for nonteaching hospitals), which was partly driven by outlier payments for highly complex patients.

But taking a broader view reveals a more nuanced story. At 30 days, AMCs had slightly lower overall total costs compared with nonteaching centers (mean total costs: \$18 605 vs \$18 873, respectively) largely because of lower spending on postacute care and readmissions. The reasons for these differences are not clear, but it is possible that greater intensity of care during the index hospitalization at an AMC reduces the need for follow-up care, or that AMCs are able to provide more integrated postacute care and more robust care management services during the period immediately after discharge.

But this finding comes with several caveats. First, when costs were assessed at 90 days posthospitalization, there were no differences between AMCs and nonteaching hospitals, suggesting that whatever factors accounted for lower AMC costs at 30 days may not persist. Second, the relatively lower cost of AMCs does not persist when including the indirect medical education (IME) payments that Medicare makes to teaching hospitals to train residents and fellows. When these payments are included, the AMCs cost more than nonteaching hospitals at 30 days (mean total costs at 30 days of \$20 174 at teaching hospitals vs \$18 969 at nonteaching hospitals).

Should IME payments be counted as AMC costs? Because IME payments are used to train the next generation of physicians, they arguably benefit both teaching and nonteaching hospitals and the patients they serve in the future. But whether IME payments should

be included in cost analyses and whether they should be made by Medicare at all is the subject of ongoing discussion.<sup>7</sup> In addition, these findings apply to fee-for-service Medicare beneficiaries, not commercially insured patients for whom price not utilization is the dominant factor in cost variation for hospital services. Evidence suggests that commercial insurance rates are higher for AMCs compared with nonteaching hospitals.<sup>8</sup>

### Policy Implications

On balance, for Medicare beneficiaries, the narrative that AMCs fail to deliver sufficient value is uncertain. For common medical and surgical conditions, patients treated at AMCs have similar or better outcomes and incur similar or lower costs. That is true for patients who have complex conditions, as well as those with relatively moderate severity of illness and for relatively healthy patients. Efforts to divert care away from AMCs, then, may be misguided.

There is still much to learn. For example, differences for outcomes other than mortality are worthy of examination. As more and more expensive therapies are developed, such as chimeric antigen receptor T-cell therapy, what will happen to cost of care at AMCs? Reasons for observed differences should also be sought and efforts to narrow them undertaken.

Ultimately, the debate about whether to direct patients to one type of institution over another should be informed by research and by a clear appreciation of the tradeoffs being made. Without that commitment, there is the risk of allowing opinion and interests, rather than data and evidence, to determine where, when, and how patients receive care.

### ARTICLE INFORMATION

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