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Commentary: Time to open Pandora's box: Assessing true costs in cardiac surgery

Alexander A. Brescia, MD, MSc, and
Gorav Ailawadi, MD, MBA

In a statewide retrospective study, Salenger and colleagues¹ linked clinical data from the Society of Thoracic Surgeons (STS) Adult Cardiac Surgery Database (ACSD) to hospital charge data from the Maryland Health Care Commission for coronary artery bypass grafting (CABG) procedures at 9 Maryland hospitals to identify modifiable factors associated with interhospital variability in hospital charges. From these data, the authors concluded that by targeting the factors associated with greater hospital charges, hospitals “can realize cost savings while improving quality of care” for patients undergoing CABG.¹ The authors should be commended for leveraging a statewide database to link hospital charge to clinical data. Their main conclusion was that patients with longer operations, longer length of stay, and more postoperative morbidity have, not unexpectedly, greater hospital charges. However, assessing true hospital costs remains Pandora's box, as these findings only reflect fee-for-service hospital billing structures. Moreover, hospital billing practices reflecting charges are inconsistent and not standardized across hospitals. Many of the analyses cited by the authors in discussing hospital charges actually assessed cost-to-charge ratios²⁻⁵ or episode payments⁶ rather than hospital charges, which is an important distinction. In Michigan, we have assessed hospital variation in episode payments,⁶⁻⁸ rather than hospital charges, cost-to-charge ratios, or other estimates of cost. Episode payments may be a better reflection of payers' and society's perspective on cost, since they reflect

Alexander A. Brescia, MD, MSc, and Gorav Ailawadi, MD, MBA

CENTRAL MESSAGE

Value is a measure of quality versus cost and is an important metric for CABG. Hospital charges, though easy to capture, do not accurately reflect cost. True cost accounting is needed in our specialty.

the actual realized cost of the episode of care rather than what is billed and may therefore be more relevant to bundled payments and value-based reimbursement.⁸

Minimizing spending/costs alone will not guarantee achieving high-value care without also delivering high-quality care. Donabedian,⁹ the founder of the study of quality in health care, defined a hospital's performance as the byproduct of processes of care, outcomes, and a hospital's structure. Salenger and colleagues¹ assessed quality with postoperative outcomes from Maryland STS ACSD, while notably concluding that patient risk profile as described through STS Predicted Risk of Mortality only accounted for 10% of the statistical variance in charges across hospitals. Among all hospitals in the national STS ACSD, we similarly found that only 2% of hospital variation in post-CABG pneumonia rates are explained through traditional factors.¹⁰ Many consider “value” to be defined as quality divided by cost, which we estimated through risk-adjusted clinical outcomes and risk-adjusted, price-standardized 90-day episode payments, respectively.⁸ Specifically, we found significant variation among 33 Michigan hospitals performing CABG and, more importantly, identified specific targets to maximize value, including avoiding prolonged length of stay, prolonged intubation, and operative mortality while achieving lower spending, specifically in professional payments.⁸ Continuous quality improvement

From the Department of Cardiac Surgery, University of Michigan, Ann Arbor, Mich. Disclosures: The authors reported no conflicts of interest.

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Address for reprints: Gorav Ailawadi, MD, MBA, Department of Cardiac Surgery, University of Michigan School of Medicine, 1500 E. Medical Center Dr, SPC 5856, Ann Arbor, MI 48109 (E-mail: ailawadi@med.umich.edu).

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efforts through statewide collaboratives will need to address the hospital structure and processes of care components of quality. Assessing value using appropriate metrics for both quality and cost will be essential to evaluating cardiac surgical care in the era of value-based reimbursement.

In conclusion, the authors should be commended for describing sources of charge variation among hospitals, while true costs remain an enigma. Standardized cost accounting is needed at hospitals and in databases to identify targets to optimize performance in the setting of value-based care.

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Commentary: Costs of coronary artery bypass grafting: We can do better

Nicolas H. Pope, MD, and Arman Kilic, MD

Healthcare spending remains a hot topic among patients, healthcare providers, payers, and policy makers. As such, it behooves providers to take an active role in examining healthcare costs, in an effort to provide the best patient

Nicolas H. Pope, MD, and Arman Kilic, MD

CENTRAL MESSAGE

Hospital charges varied widely in a statewide retrospective review of more than 7500 patients undergoing coronary artery bypass grafting. Importantly, only 10% of this variability was attributable to patient risk profile.

care while controlling spending. Part of the difficulty in surveying healthcare spending is that hospital charges and actual cost are not interchangeable; however, these variables can be normalized such that charges can serve as a

From the Division of Cardiothoracic Surgery, Medical University of South Carolina, Charleston, SC.

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Address for reprints: Arman Kilic, MD, Medical University of South Carolina, 30 Courtenay Dr, Suite BM 279 MSC 295, Charleston, SC 29425 (E-mail: kilica@musc.edu).

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