

Quality coronary bypass care can improve lives and cut costs

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A new analysis led by researchers at UCSF shows that avoiding lowest-volume hospitals and maximizing adherence to quality care processes are both effective approaches to reducing costs associated with coronary bypass surgery.

The relationship between higher case volume and better outcomes of [cardiac surgery](#) is well established, while other efforts have focused on improving patient outcomes through adherence to quality care measures, according to the research team. However, the researchers state that few data exist describing the impact of case volume or quality measures on health care value - the combination of cost and quality of care.

In the study, which was adjusted for patient and site characteristics, lowest-volume hospitals had 19.8 percent higher costs than hospitals that saw higher numbers of patients, and adjusting for care quality did not eliminate differences in costs.

The researchers also determined that adherence to quality process measures resulted in cost savings and that maximizing overall performance on quality measures is critical. Individual quality measures had inconsistent associations with cost or length of stay in the hospital. However, patients for whom no quality measures were missed had much shorter hospital stays and lower costs than those for whom even one measure was missed.

Findings are available this week in the online edition of the [Archives of](#)

[Internal Medicine](#) at

<http://archinte.ama-assn.org/cgi/content/full/170/14/1202>.

"Improving quality and reducing costs of care are crucial goals for this country," said

Andrew D. Auerbach, MD, MPH, an associate professor in the UCSF Division of Hospital Medicine and lead author of the paper. "In addition, consumers are being asked to make more of their own health care decisions based on the value of their care. The better we understand the relationships between the drivers of cost and quality, the more effective we can be in designing systems and incentives to improve care."

The research team analyzed data collected from 81,289 adults undergoing coronary artery bypass surgery, cared for by 1,451 physicians in a sample of 164 U.S. hospitals. The team first examined the relationship between surgeon and hospital volume, and costs and length of stay. They then examined the relationships between case volume, costs and length of stay, after adjusting for individual measures of care quality, as well as overall care quality.

Quality was assessed by whether recommended medications and services were received in ideal patients, as well as the overall number of measures missed.

In the study, the majority of hospitals (51 percent) and physicians (78 percent) were lowest-volume providers and only 18 percent of patients received all quality of care measures. Hospital volume ranged from 112 coronary artery bypass surgeries per year in the lowest-volume group to 644 in the highest group. Physician volume ranged from 12 per year in the lowest-volume group to 155 per year in the highest group. Median length of stay was seven days and median costs were \$25,140 per patient.

The authors also recently published findings suggesting that maximizing adherence to quality measures can improve mortality rates for patients following coronary artery bypass surgery, independent of hospital or surgeon volume.

Provided by University of California - San Francisco

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