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At Hospitals, More Intensive And Costly Treatment Does Not Bring Higher-Quality Care

New Study Represents One Of The First Nationwide Analyses Of Spending And Quality At Individual Hospitals

Bethesda, MD -- Hospitals that provide more intensive and costly care do not provide better-quality care, as measured by the percentage of patients who are given evidence-based treatments, according to a study published today on the *Health Affairs* Web site. The study looks at care given to Medicare beneficiaries for three common conditions: acute myocardial infarction, or heart attack; pneumonia; and congestive heart failure.
http://content.healthaffairs.org/cgi/content/abstract/hlthaff.28.4.w566

The new research by Laura Yasaitis, Elliott Fisher, and Jonathan Skinner of Dartmouth and Amitabh Chandra of Harvard represents one of the first nationwide analyses of quality and spending at the level of individual hospitals. Previous studies had found that higher spending does not lead to better care on a regional level. However, because efforts to improve the quality of care and decrease unnecessary spending are likely to start at the level of individual hospitals, which provide the organizational context in which patients receive most of their care, it is important to ascertain the relationship between spending and quality at the hospital level.

"We found no evidence that hospitals with higher spending provided better care, whether we looked at all hospitals across the country or limited our study to academic medical centers, or hospitals within a single region. In fact, in some cases hospitals that spent more provided worse care," said Yasaitis, a joint M.D./Ph.D. student at Dartmouth Medical School and a researcher at the Dartmouth Institute for Health Policy and Clinical Practice. "The fact that some hospitals in the same region are able to provide exemplary care at lower costs points to the need for better reporting of both costs and quality, and for a greater understanding of what processes lead to this improvement in performance," added Chandra, a professor at Harvard University.

Spending In The Last Two Years Of Life Varied Widely Among Hospitals

To define a measure of spending that is not affected by the severity of patients' illnesses, the authors examined end-of-life (EOL) spending among the 2,172 U.S. hospitals with complete data on utilization, spending, and quality, Adjusted for the age, race, sex, and disease mix of each hospital's patients, average EOL spending was $16,059 for the lowest-spending quintile (or fifth) of hospitals; for hospitals in the highest-spending quintile, average EOL spending was $34,742.

Looking at hospitals of all types across the country, there was a statistically significant negative relationship between hospitals' EOL spending and overall quality, meaning that hospitals that spent more actually performed worse on overall quality measures than lower-spending hospitals. When the analysis was limited to academic medical centers, there was no positive association between quality and spending. Here, the only statistically significant finding was a negative relationship between EOL spending and the quality of treatment for heart attacks.

To assess the effect of geographic differences in care intensity, the researchers repeated their analysis while controlling for Hospital Referral Regions (HRRs), as defined by the Dartmouth Atlas of Health Care -- essentially, comparing each hospital only to others in the same region. They found that controlling for HRRs eliminated the negative correlation between EOL spending and the quality of treatment for heart attacks, but strong negative correlations remained between spending and both overall quality and the quality of treatment for pneumonia. "This shows that the failure of higher-spending hospitals to produce better care reflects more than the fact that quality is not higher in higher-spending regions. Within each region, some hospitals are able to do more with less, achieving better quality while spending fewer dollars," said Fisher, director of the Center for Healthcare Research and Reform at Dartmouth.

Study Methods

Yasaitis and coauthors measured the intensity of EOL treatment using Medicare spending and utilization data for hospital and physician services provided to chronically ill beneficiaries who died during 1999-2003. To eliminate components of Medicare spending not related to treatment intensity, such as payments for graduate medical education (GME), they constructed a treatment-intensity measure of spending that is based on the use of services that explain a large amount of hospital spending in the end of life: the number of hospital days; total physician visits; days in the intensive care unit (ICU); and the ratio of specialist to primary care visits. Upon each patient's death, all spending for these services was assigned to the hospital in which he or she had received the majority of care in the previous two years -- a reasonable assumption, since the average proportion of inpatient days spent at the assigned hospital was 89.7 percent.

To measure quality, the researchers used data reported to the Hospital Compare program run by the Hospital Quality Alliance, a public-private collaboration between the Centers for Medicare and Medicaid Services (CMS) and several hospital organizations. Hospital Compare focuses on treatment for heart attacks, pneumonia, and congestive heart failure. The measures reported by the program reflect the percentages of patients who received specific, often low-cost, evidence-based therapies. Examples include whether heart attack patients receive aspirin at arrival and discharge, whether heart failure patients received assessments of left ventricular function, and whether pneumonia patients received a blood culture before being given their first antibiotic in the hospital. Yasaitis and her colleagues pooled Hospital Compare data from 2004, when the program began, through 2007.

The study was funded by the National Institute on Aging.

After the embargo lifts, you can read the article by Yasaitis and coauthors at http://content.healthaffairs.org/cgi/content/abstract/hlthaff.28.4.w566

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