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## PROFESSION

### Costliest hospitals report lowest death rates

The more California hospitals spend, the more lives they save, says new research that appears to contradict findings from the Dartmouth Atlas of Health Care.

By KEVIN B. O'REILLY, amednews staff. Posted Feb. 14, 2011.

Higher spending on hospital care is linked to lower death rates, according to new research analyzing a decade of cost and quality outcomes for more than 2.5 million patients at 208 California hospitals.

The study, published Feb. 1 in *Annals of Internal Medicine*, is the largest yet to apparently contradict well-known research published as part of the Dartmouth Atlas of Health Care. The atlas researchers have found wide regional variations in care costs without corresponding increases in quality outcomes, including mortality rates. Sixty percent more care in the highest-spending regions due to hospitalizations, physician visits, diagnostic imaging and other interventions had little apparent effect on mortality outcomes or other quality metrics for Medicare patients, Dartmouth researchers have concluded.

But in the new study, California hospitals that spent more had lower in-hospital mortality rates for Medicare patients with six common deadly conditions such as congestive heart failure and pneumonia. For example, heart attack patients at the lowest-spending quintile of hospitals from 2004 to 2008 were 19% less likely to survive their stay than counterparts at the highest-spending hospitals. The average cost of hospital care for such patients was \$21,072, four times greater than at the lowest-spending hospitals.

"We're sort of taking on the view that more [health care spending] is actually worse -- that more is less," said John A. Romley, PhD, the study's lead author. "We're just saying, in this context, more is more."

The higher-cost hospitals may be achieving better mortality results by spending more on staffing, deploying more evidence-based interventions such as cardiac catheterizations for patients with acute myocardial infarction and ordering emergency endoscopies to address gastrointestinal bleeding, said Anupam Jena, MD, PhD, a co-author of the study and a resident in internal medicine at Massachusetts General Hospital in Boston.

"All of these things are ways in which spending in the hospital would have a good effect," Dr. Jena said.

#### Implications for reform?

The findings come on the heels of a hospital value-based purchasing rule proposed in January by the Centers for Medicare & Medicaid Services as part of implementing the Patient Protection and Affordable Care Act of 2010. Hospitals would receive 1% lower base Medicare payments starting in 2013 and 2% less in 2017, but those that perform well on 25 quality measures would get bonus pay. Hospitals are set to see about a net \$100 billion in pay cuts in the coming decade under the health system reform law.

Such cuts "raise some concern about the impact of health care reform on the quality of care that people are going to experience," said Romley, an economist at the University of Southern California's Leonard D. Schaeffer Center for Health Policy and Economics.

The new research should give policymakers pause before seeking to squeeze health care savings while improving patient care, said Nancy Foster, vice president for quality and patient safety at the American Hospital Assn.

"Previous research has not found a strong relationship between overall spending in a region and patient survival," Foster said. "This study suggests that at the hospital level, careful analysis shows a very different result. Additional expenditures appear to extend life.

"What this tells us is that these questions are very complex. ... As we begin implementation of [the health reform law], policy proposals that fail to account for these complexities could create unintended consequences for providers, patients and communities."

The Dartmouth Institute for Health Policy and Clinical Practice, which produces the Dartmouth Atlas, did not respond to an interview request by this article's deadline. In response to research published last year with similar higher-spending/lower-death findings among patients at six California teaching hospitals, Dartmouth researchers suggested that different methods of risk adjustment could explain discrepancies in cost-and-quality findings.

Part of this research riddle could be explained by looking at what happens to patients when they leave the hospital, said Amber Barnato, MD, MPH, associate professor of medicine at the University of Pittsburgh School of Medicine.

#### High-intensity care

Dr. Barnato wrote a study published in the February 2010 *Medical Care* that examined the intensity of end-of-life care among more than 1 million patients at Pennsylvania hospitals from 2001 to 2005. She found that hospitals with high "treatment intensity" had better survival rates than those that deployed fewer interventions near the end of life. However, the mortality gap waned after six months and disappeared after one year.

"Perhaps patients going to high-intensity areas are getting some more days or months of life, but they're not on average living 15 more years," Dr. Barnato said.

The *Annals* study measured only whether patients survived their hospital stay and did not examine mortality rates over a longer period after patients were discharged.

Experts agreed that similar research to compare spending and quality outcomes among outpatient physician practices is lacking and could shed

light on why overall spending variations among regions appear to have little quality impact.

More research is needed to help doctors and hospitals make the most efficient use of scarce health care dollars, the AHA's Foster said.

This content was published online only.

#### ADDITIONAL INFORMATION:

### Variations in cost -- and quality

What if all the California patients treated at the state's lowest-spending hospitals received care at the highest-spending hospitals? Thousands of lives would be saved, says a new study. Here is an estimate of how many more patients with various conditions could have survived their hospital stays if they had received care at top-spending hospitals from 2004 to 2008:

Condition	Potential lives saved
Pneumonia	4,122
Congestive heart failure	3,164
Acute myocardial infarction	3,090
Stroke	2,468
Gastrointestinal hemorrhage	717
Hip fracture	52
<b>Total</b>	<b>13,613</b>

Source: "Hospital spending and inpatient mortality: evidence from California: an observational study," *Annals of Internal Medicine*, Feb. 1 (www.ncbi.nlm.nih.gov/pubmed/21282695)

#### WEBLINK

"Hospital spending and inpatient mortality: evidence from California: an observational study," *Annals of Internal Medicine*, Feb. 1 (www.ncbi.nlm.nih.gov/pubmed/21282695)

"Medicare Program; Hospital Inpatient Value-Based Purchasing Program: A Proposed Rule by the Centers for Medicare & Medicaid Services," *Federal Register*, Jan. 13 (federalregister.gov/a/2011-454)

The Dartmouth Atlas of Health Care (www.dartmouthatlas.org)

"The implications of regional variations in Medicare spending. Part 1: the content, quality, and accessibility of care," *Annals of Internal Medicine*, Feb. 18, 2003 (www.ncbi.nlm.nih.gov/pubmed/12585825)

"The implications of regional variations in Medicare spending. Part 2: health outcomes and satisfaction with care," *Annals of Internal Medicine*, Feb. 18, 2003 (www.ncbi.nlm.nih.gov/pubmed/12585826)

"Is survival better at hospitals with higher 'end of life' treatment intensity?" *Medical Care*, February 2010 (www.ncbi.nlm.nih.gov/pubmed/20057328)

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