

## High-cost hospitals do not appear to have better survival rates for sepsis patients

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Increased hospital spending at high-cost hospitals does not appear to be associated with better short-term survival rates for patients with sepsis, according to a report in the February 28 issue of *Archives of Internal Medicine*.

"Sepsis affects approximately 750,000 patients each year in the United States and is in many ways a model condition for examining the relationship between hospital spending and patient outcomes and for identifying potential opportunities to improve the value of hospital care," the authors write as background information in the article.

Tara Lagu, M.D., M.P.H., of the Baystate Medical Center, Springfield, Mass., and Tufts University School of Medicine, Boston, and colleagues conducted a cross-sectional study of hospitals to determine whether higher levels of hospital spending were associated with better [survival rates](#) for patients with sepsis. Using the Perspective database, data were collected on 309 hospitals that cared for at least 100 patients with sepsis between June 1, 2004 and June 30, 2006.

The 309 hospitals contributed more than 166,900 patients during the study period. The average age of patients was 70 years, 52 percent were women and the majority (62 percent) were white. Of the hospitals included in the study, most (84 percent) were located in urban areas and half (49 percent) were in the southern United States.

Overall, 33,192 patients (20 percent) died while in the hospital. The

median expected mortality (death) rate for all hospitals was 19.2 percent. Of the hospitals with expected mortality between 18.5 and 19.5 percent, observed [mortality rates](#) ranged from 9.2 to 32.3 percent. Overall, 66 hospitals (21 percent) had a clinically and statistically significant higher-than-expected mortality rate. Twenty hospitals had observed mortality rates between 10 percent and 25 percent above the expected rate and 46 hospitals exceeded predicted mortality by 25 percent.

The median unadjusted hospital average cost per case was \$18,256. More than one-third (34 percent) of hospitals exceeded expected costs by at least 10 percent, with a median excess cost per case of \$5,207. When examining costs and mortality simultaneously, 22 hospitals (7 percent) had both significantly lower-than-expected costs and mortality rates, and 30 hospitals (10 percent) had both higher-than-expected costs and mortality rates.

The authors also identified a subset of institutions that provided high-value and lower-value care. Twenty-two hospitals (7 percent) had both significantly lower-than-expected costs and mortality rates, while 105 hospitals had higher-than-expected costs. These findings highlight potential opportunities to improve the value of sepsis care. For example, the 63,833 study patients treated at the 105 hospitals with higher than expected mean costs represent a potential \$332 million dollars in excess hospital spending (using the median of \$5,207 above expected costs).

"Hospital spending and adjusted mortality rates for patients with sepsis vary substantially, but higher [hospital](#) expenditures are not associated with better survival," the authors conclude. "Efforts to enhance the value of sepsis care could be modeled on hospitals that achieve lower-than-expected mortality and costs."

**More information:** *Arch Intern Med.* 2011;171[4]:292-299.

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