

High-quality care associated with lower cost in trauma

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(PhysOrg.com) -- High-quality hospitals deliver lower-cost care to trauma patients, according to a study published in the *Annals of Surgery*. The study found high-quality hospitals have death rates that are 34 percent lower, while spending nearly 22 percent less on trauma patient care than average-quality hospitals, suggesting high quality can coexist with lower cost.

The reason is not clear, though.

The research comes at a time when the affordability of health care in the United States is a major concern. According to the Congressional Budget Office, “total spending on health care could rise from 16 percent of the gross domestic product in 2007 to 25 percent in 2025 and to 37 percent in 2050.” This study contributes to existing research seeking to better understand the relationship between quality and cost.

“There is a growing recognition that, when it comes to health care, we have a quality problem in this country,” said Laurent G. Glance, M.D., lead study author and professor of Anesthesiology and Community and Preventive Medicine at the University of Rochester Medical Center. “We all want better quality and outcomes, and one possible theory is that achieving better quality may be less expensive in the long run.”

One possible explanation for the new finding is that higher-quality hospitals may have fewer patient complications compared with lower-quality hospitals. Potentially preventable complications have been shown

to result in greater rates of death, [hospital](#) length of stay and cost, so fewer complications could translate into cost savings.

While many studies have analyzed cost and quality in [health care](#), this study looked at a unique patient population – [trauma patients](#) of all ages. Most previous analyses, including highly regarded research from the Dartmouth Institute, have focused on the Medicare population, made up of individuals 65 years and older.

“Trauma is mainly a disease of the young, as opposed to a disease of the elderly,” noted Glance, who conducts a wide range of health outcomes research.

Glance’s team analyzed data from the largest inpatient database in the United States, focusing on 67,124 patients admitted to 73 trauma centers across the country in 2006. Most patients were between 40 and 50 years old, male, and admitted to a trauma center following a car crash, fall, gunshot or stab wound, or other type of serious injury.

Researchers determined hospital quality by comparing a hospital's predicted mortality rate to its actual mortality rate. Information on the injury severity, age, gender, and pre-existing illness of a hospital's patients is used to estimate a hospital's predicted mortality rate. Trauma centers whose actual mortality rates are significantly greater than their expected mortality rates are classified as low-quality hospitals. For high-quality hospitals, actual mortality rates are significantly lower than expected mortality rates.

The research team then used mathematical models to explore the association between hospital [death rates](#) and costs.

The main limitation of the study is its design – it only provides a snapshot of trauma care quality and cost in the United States.

Researchers cannot conclude increasing quality will result in lower costs. Glance said more research is needed to explore the link.

More information: journals.lww.com/annalsofsurgery/pages/default.aspx

Provided by University of Rochester Medical Center

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