Do "America's Best Hospitals" Truly Perform Better?

Williams SC, Koss RG, Morton DJ, Loeb JM. Performance of top-ranked heart care hospitals on evidence-based process measures. Circulation 2006;114:558–64.

Study Overview

Objective. To determine how well *U.S. News & World Report* (USNWR) top-ranked heart and heart surgery hospitals performed on 10 evidence-based clinical process measures derived from American College of Cardiology and American Heart Association guidelines for treatment of acute myocardial infarction (AMI) and heart failure.

Design. Retrospective cohort study.

Setting and participants. 774 hospitals were included in the study, including 41 of the USNWR top 50 heart and heart surgery hospitals. Hospitals were included if they were accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), submitted data to JCAHO on all AMI and heart failure performance measures throughout 2004, and submitted data to JCAHO for at least 30 cases on each of the 10 measures. The 6 AMI performance measures were (1) aspirin given within 24 hours of arrival, (2) aspirin prescribed at discharge, (3) angiotensin-converting enzyme (ACE) inhibitor prescribed at discharge for patients with left ventricular systolic dysfunction, (4) smoking cessation advice/counseling, (5) β blocker given within 24 hours of arrival, and (6) β blocker prescribed at discharge. The 4 heart failure measures were (1) discharge instructions addressing medications, diet, weight, worsening symptoms, follow-up, and activity; (2) left ventricular function assessment; (3) ACE inhibitor prescribed at discharge for patients with left ventricular dysfunction; and (4) smoking cessation advice/counseling.

Main outcome measure. A cardiovascular composite measure derived from aggregating the 10 process measures.

Main results. The 41 hospitals in listed in USNWR provided care that was consistent with evidence-based practice 85.8% (SD, 6.1%) of the time versus 82.6% (SD, 8.4%) for the other hospitals, a statistically significant difference ($P \leq 0.05$). Differences between the 2 hospital groups ranged between 1% and 5% and were statistically significant for 5 measures. Individually, 23 of the 41 USNWR top-ranked hospitals scored significantly higher compared with the population average, and 9 of the 41 USNWR hospitals scored significantly lower.

Conclusion. A number of the USNWR top-ranked hospitals did not regularly provide evidenced-based care for AMI and heart failure patients. A significant number of lesser-known hospitals provided evidence-based care at high rates, concordant with national guidelines.

Commentary

For many hospital administrators, being featured in the "America's Best Hospitals" issue of USNWR has become an important measure of hospital success. However, whether this designation really means that these hospitals deliver higher quality care is still a matter of debate. Williams et al

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attempted to answer this question by comparing USNWR top-rated hospitals in heart and heart surgery to other hospitals using nationally recognized quality measures and combining them into 1 composite measure. Although, Williams et al reported a statistically significant difference between the top hospitals in USNWR and the other JCAHO hospitals examined in the study, individual comparisons did not guarantee that USNWR-ranked hospitals were among those with the highest cardiovascular composite rate.

This study has many limitations. The authors reported the results in aggregate, which limits how the data are interpreted. One cannot extrapolate the aggregate findings when comparing a top-ranked hospital against a nonranked hospital. In fact, when the authors looked at the hospitals individually, they found that not all the top-ranked hospitals were the best providers of evidence-based care. Another limitation is that the absolute difference in the rate of the cardiovascular composite score between the 2 groups was approximately 3%. It is hard to believe that a 3% difference in receiving evidence-based care is a significant finding and can be explained by differences in hospital characteristics. In addition, because data were collected over a 1-year period, it cannot be determined whether these institutions are improving, not improving, or whether consistent care is given.

This study also highlights some problems with measuring quality and basing hospital comparisons on quality measures. First, most measurements of quality are extracted from administrative databases and do not necessarily correlate with clinical situations. This is important because administrative databases are usually reflections of what is documented in the chart. If documentation is lacking or inaccurate, a hospital could be judged unfairly even though evidence-based care is provided. Second, all hospital are not equal. Many unmeasured factors can influence quality of care, such as type of hospital, location, and patient populations. Third, the impact of current quality measured on mortality is being debated. In a recent article, Bradley et al [1] showed that differences in AMI quality process measures could only explain 6% of the hospital-level variation in risk-standardized 30-day mortality rates for patients with AMI. This means that only 6% of the short-term mortality could be explained by the current process measures. Perhaps new process measures and determinants should be developed in order to better judge quality.

Applications for Clinical Practice

Overall, Williams et al helped to showcase some of the weaknesses of judging hospital quality with physician surveys and magazines. When objective measures of applying evidence-based medicine were compared with the USNWR rankings, there were many hospitals that, although not listed in USNWR, provided high-quality care. As pay for performance and pay for quality data are becoming more publicly available and thus are being used to promote higher quality care, this study emphasizes that lawmakers and doctors should take into account how quality is being measured and defined.

—Review by Robert L. Huang, MD

Reference

1. Bradley EH, Herrin J, Elbel B, et al. Hospital quality for acute myocardial infarction: correlation among process measures and relationship with short-term mortality. JAMA 2006;296:72–8.

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