Findings question measures used to assess hospital quality

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Hospitals that were penalized more frequently in the Hospital-Acquired Condition (HAC) Reduction Program offered advanced services, were major teaching institutions and had better performance on other publicly reported process-of-care and outcome measures, according to a study in the July 28 issue of *JAMA*, a theme issue on Medicare and Medicaid at 50. These findings suggest that penalization in this program may not reflect poor quality of care but rather may be due to measurement and validity issues of the HAC program component measures.

The Affordable Care Act (ACA) established the HAC program in an effort to reduce the incidence of preventable adverse events that occur during hospitalizations in the United States. This program reduces payments to the lowest-performing hospitals. However, it is uncertain whether the program accurately measures quality and fairly penalizes hospitals, according to background information in the article.

Karl Y. Bilimoria, M.D., M.S., of the Feinberg School of Medicine, Northwestern University, Chicago, and colleagues evaluated the characteristics and performance of hospitals penalized in the HAC Reduction Program. Data for hospitals participating in this program for FY2015 were obtained from CMS' Hospital Compare and combined with the 2014 American Hospital Association Annual Survey and FY2015 Medicare Impact File. The authors examined the association between hospital characteristics and HAC program penalization.

An 8-point hospital quality summary score was created using hospital

characteristics related to clinical volume, accreditations, and offering of advanced care services. Publicly reported process-of-care and outcome measures were examined from 4 clinical areas (surgery, acute heart attack, heart failure, pneumonia).

Of the 3,284 hospitals participating in the HAC program, 721 (22 percent) were penalized. Hospitals were more likely to be penalized if they were accredited by the Joint Commission (24 percent accredited, 14 percent not accredited); they were major teaching hospitals (42 percent) or very major teaching hospitals (62 percent vs nonteaching hospitals, 17 percent); they cared for more complex patient populations based on case mix index; or they were safety-net hospitals vs non-safety-net hospitals (28 percent vs 20 percent).

Hospitals with higher quality summary scores had significantly better performance on 9 of 10 publicly reported process and outcomes measures compared with hospitals that had lower quality scores. However, hospitals with the highest quality score of 8 were penalized significantly more frequently than hospitals with the lowest quality score of 0 (67 percent [37/55] vs 13 percent [53/422]).

The researchers speculate that one explanation for these findings may be that these component measures are affected by surveillance bias, where differences in clinical practice result in varying rates of identifying an adverse outcome. "Hospitals that look more for adverse events frequently identify more events and incorrectly appear to have worse performance."

In addition, hospital-to-hospital differences in information technology may also result in differences in the detection of adverse events.

The authors conclude that "these paradoxical findings suggest that the approach for assessing hospital penalties in the HAC Reduction Program

merits reconsideration to ensure it is achieving the intended goals."

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