

14. Centers for Medicare & Medicaid Services and the Joint Commission. *Specifications Manual for National Hospital Inpatient Quality Measures (Specifications Manual)*. <http://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPPage%2FQnetTier2&cid=1141662756099>. Accessed February 6, 2009.
15. Centers for Medicare & Medicaid Services. Hospital Compare downloadable database: years 2005-2008 archive. 2006. US Department of Health and Human Services Web site. [http://www.cms.hhs.gov/HospitalQualityInits/11\\_HospitalCompare.asp#TopOfPage](http://www.cms.hhs.gov/HospitalQualityInits/11_HospitalCompare.asp#TopOfPage). Accessed November 23, 2008.
16. Charlson ME, Pompei P, Ales KL, MacKenzie CR. A new method of classifying prognostic comorbidity in longitudinal studies: development and validation. *J Chronic Dis*. 1987;40(5):373-383.
17. Quan H, Sundararajan V, Halfon P, et al. Coding algorithms for defining comorbidities in ICD-9-CM and ICD-10 administrative data. *Med Care*. 2005;43(11):1130-1139.
18. Werner RM, Bradlow ET, Asch DA. Does hospital performance on process measures directly measure high quality care or is it a marker of unmeasured care? *Health Serv Res*. 2008;43(5, pt 1):1464-1484.
19. Werner RM, Bradlow ET. Relationship between Medicare's hospital compare performance measures and mortality rates. *JAMA*. 2006;296(22):2694-2702.

## INVITED CRITIQUE

### “Say It Ain’t So, Joe”

Nicholas et al have produced a provocative study on the relationship between a hospital's surgical outcomes, as measured by mortality rate and major complications, and its compliance with publicly reported quality process measures of the CMS SCIP. They found essentially no relationship with how well a hospital performs on its SCIP measures, as reported on the Hospital Compare Web site, and the associated complication rates for 6 major surgical procedures. The findings of this report are noteworthy because they come from the outcomes measurement laboratory of John D. Birkmeyer, MD, a national leader in research on surgical outcomes and use of the administrative database.

These findings, if true, call into serious question the increased time, labor, and effort currently expended by hospitals and surgeons across the United States to comply with the SCIP program process measures. The findings also could potentially change the field of pay-for-performance and value-based purchasing programs, many of which are based on process compliance measurement.<sup>1</sup> How can it be that the National Quality Forum, CMS, and others got it wrong? Or, as a dismayed baseball fan once said, “Say it ain’t so, Joe.”<sup>2</sup>

There are, however, several caveats that the reader should bear in mind when interpreting these findings.

- Is there an exact correlation between SCIP scores and actual care provided? The study was conducted during the first 2 years of the CMS Hospital Compare experience, 2005-2006. This represented the nascent period for hospitals to adopt and report SCIP measures; only now are many hospitals becoming proficient at providing all the SCIP processes and properly documenting that fact. For instance, in some hospitals, early “poor antibiotic scores” were commonly the result of giving an antibiotic a few minutes over the time limit. Other bad scores were the result of lax documentation of time administered. With experience, scores improved—in part because of better attention to time and documentation. However, those “good”

scores may not necessarily translate into reduced infection rates if the improvement was the result of small time changes or more accurate documentation of antibiotics that had been given appropriately.

- Is there a strong link between the SCIP processes reported and complications measured? The authors were severely limited by the years studied as to the SCIP measures publicly reported. In 2005, only 2 SCIP measures dealing with antibiotic administration (timing of administration and stopping) were reported. In 2006, 1 additional antibiotic administration measure was added (selection), along with 2 venous thromboembolism measures (ordering and receiving prophylaxis).<sup>3</sup> Mortality rate was linked to measure compliance of a hospital for 2005-2006, but the complications of deep venous thrombosis, pulmonary embolism, and surgical site infection were only analyzed for 2006. Thus, any effect on hospital mortality rate for 2005 would be linked only to hospital scores for those 2 antibiotic measures for that year. Similarly, any effect on the hospital complications of deep venous thrombosis, pulmonary embolism, and surgical site infection would be limited to only hospital scores in 2006.

- Can we assume that the accuracy of coding for complications is equal across all hospitals? The mortality rates and complications reported were derived from the hospital claims data (administrative data) submitted by each hospital. There has been active debate with regard to the accuracy and reliability of mortality rates and risk adjustment of those rates using administrative data.<sup>4,5</sup> We must also remember that administrative data regarding nonmortality complications are only as good as the hospital's identification, documentation, and coding of those complications. Hospitals that failed to accurately capture and code complications would therefore have more favorable complication rates than hospitals that endeavored to capture and report these complications. One inter-

esting possible explanation for the results shown in this article is that hospitals that do a poor job at SCIP compliance may also do a similarly poor job of identification and coding of complications and therefore may appear to have the same complication rate as hospitals that show diligence toward both coding and SCIP measures.

Despite the limitations of this study, it is an important one that begs the question of whether CMS and the insurance industry should focus on process measures or more on outcomes measures.<sup>6</sup> This article also points to the need for further analysis of newer data now that SCIP measures are more numerous, more fully understood, more widely implemented, and better reported.

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1. CMS premier quality hospital demonstration projects. US Department of Health and Human Services Web site. <http://www.cms.hhs.gov/HospitalQualityInits/downloads/HospitalPremierPressReleases20090817.pdf>. Accessed November 22, 2009.
2. "Shoeless" Joe Jackson. American Heritage Web site. [http://www.americanheritage.com/articles/magazine/ah/1960/4/1960\\_4\\_24.shtml](http://www.americanheritage.com/articles/magazine/ah/1960/4/1960_4_24.shtml). Accessed August 3, 2010.
3. CMS SCIP hospital measures 2005-2006. Medicare Quality Improvement Community Web site. <http://www.qualitynet.org/dcs/ContentServer?c=MQParents&pagename=Medqic%2FContent%2FParentShellTemplate&cid=1228694349383&parentName=Category>. Accessed November 22, 2009.
4. Steinberg SM, Popa MR, Michalek JA, Bethel MJ, Ellison EC. Comparison of risk adjustment methodologies in surgical quality improvement. *Surgery*. 2008; 144(4):662-667.
5. Kozower BD, Ailawadi G, Jones DR, et al. Predicted risk of mortality models: surgeons need to understand limitations of the University HealthSystem Consortium models. *J Am Coll Surg*. 2009;209(5):551-556.
6. Leonardi MJ, McGory ML, Ko CY. Publicly available hospital comparison Web sites: determination of useful, valid, and appropriate information for comparing surgical quality. *Arch Surg*. 2007;142(9):863-868.