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Is a hospital’s surgical site infection rate among Medicare-insured patients a good indicator of outcome for commercially-insured patients?

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Background. The Centers for Medicare and Medicaid Services tracks quality measures, including surgical site infection (SSI) rates. The degree of correlation between hospitals’ Medicare and Private Payer SSI outcomes is unknown.

Methods. Using 2009 inpatient claims data from California and New York, we evaluated SSI following coronary artery bypass graft (CABG) surgery for Medicare patients ≥65 years old vs Private Payer patients 18-64 years old. We screened claims within 90 days of surgery for codes suggestive of SSI. We separately analyzed the Medicare and Private Payer groups using generalized linear mixed models to predict the odds of infection at each hospital. Within group, models were adjusted for age, gender, and comorbidities. We assessed the relationship between the odds of infection for Medicare and Private Payer patients within the same hospital using a Pearson correlation. We repeated this process for hospitals performing ≥50 CABG procedures in each of the two groups (≥100 overall).

Results. 117 California and 40 New York hospitals performed CABG on both patient groups. 6-7% of Medicare patients had an SSI code, compared with 4-5% of Private Payer patients. Medicare patients were older (per study design), more likely to be female, and had higher rates of congestive heart failure, peripheral vascular disease, and renal insufficiency. Private Payer patients had higher rates of obesity. In California hospitals, the correlation between Medicare and Private Payer odds was 0.42 (95% CI 0.25-0.55) compared with 0.66 (95% CI 0.43-0.80) in New York hospitals. There was a larger proportion of relatively low volume hospitals (<100 CABG procedures) in California (47%) compared with New York (14%). Limiting the analysis to California hospitals performing ≥50 CABG procedures on both Medicare and Private Payer patients, the Pearson correlation improved to 0.60 (95% CI 0.15-0.83).

Conclusion. We found moderate-to-strong correlation in the adjusted odds of SSI in Medicare vs Private Payer patients undergoing CABG at individual hospitals. The poorer correlation in California compared with New York hospitals may reflect the large proportion of relatively low volume hospitals in California where small sample sizes limit precision in estimating SSI odds.

Disclosures. K. Kleinman, Sage Products: Conducting clinical trial for which contributed product is being provided to participating hospitals, Contributed Product; Molnlycke: Conducting clinical trial for which contributed product is being provided to participating hospitals, Contributed product