

ABSTRACT NO. 38

ADVERSE OUTCOMES IN SURGERY: REDEFINITION OF POST-OPERATIVE COMPLICATIONS

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Background: With hospital administrative claims data, undercoding of complications may alter the prevalence of outcomes, while over-coding may increase reimbursement. Some coded complications may have trivial effects upon patient's recovery or cost. We propose that excess risk-adjusted, postoperative length of stay (RApoLOS) among live surgical discharges is a valid indicator of an adverse outcome.

Methods: Hospital administrative claims data for elective colon resection (CR), coronary bypass graft surgery (CABG), and total hip replacement (THR) were used from the 100 largest volume hospitals in the Healthcare Cost and Utilization Project for 2005. A RApoLOS linear model for each procedure was designed from patients without coded complications (CCs) and RApoLOS outliers were determined using Control Charts. Suspect hospitals with excessive outliers events were eliminated. A refined RApoLOS model was recreated from patients without coded complications from remaining facilities. All RApoLOS outliers were identified. Cost estimates were derived from billed charges and hospital cost-to-charge ratios.

Results: CCs and RApoLOS outliers were significantly different ($P < 0.0001$, Chi-square). In CR ($N = 8,971$), 3,717 (41%) had CCs and 633 (7%) were RApoLOS outliers. Hospital cost for no CCs/no RApoLOS (\$9,564) and +CCs/no RApoLOS (\$12,293) were similar, while +CCs/+RApoLOS (\$32,830) were greater. In CABG ($N = 12,163$), 8,034 (66%) had CCs and 920 (8%) were RApoLOS outliers. Hospital costs for no CCs/no RApoLOS (\$23,259) and +CCs/no RApoLOS (\$26,420) were similar, while +CCs/+RApoLOS (\$64,039) were greater. In THR (15,571), 4,489 (29%) had CCs and 704 (4.5%) were RApoLOS outliers. Hospital costs for no CCs/no RApoLOS (\$12,748) and +CCs/no RApoLOS (\$13,311) were similar, but +CCs/+RApoLOS (\$22,611) were greater.

Conclusions: In the era of public reporting, VA and private hospitals must consider adverse surgical outcomes in live discharges based upon RApoLOS and cost criteria rather than coded or surveillance observations.