

Reader Take-Away Points: 1) Surgeries are about half of what a hospital does, 2) Hospital Profitability for surgical complications is 330% higher for privately insured, and 3) Increased profits treating surgical complications for Medicare patients is 190% higher.

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Relationship Between Occurrence of Surgical Complications and Hospital Finances

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ABSTRACT

[ABSTRACT](#) | [METHODS](#) | [RESULTS](#) | [COMMENT](#) | [CONCLUSIONS](#) | [AUTHOR INFORMATION](#) | [REFERENCES](#)

Importance The effect of surgical complications on hospital finances is unclear.

Objective To determine the relationship between major surgical complications and per-encounter hospital costs and revenues by payer type.

Design, Setting, and Participants Retrospective analysis of administrative data for all inpatient surgical discharges during 2010 from a nonprofit 12-hospital system in the southern United States. Discharges were categorized by principal procedure and occurrence of 1 or more postsurgical complications, using *International Classification of Diseases, Ninth Revision*, diagnosis and procedure codes. Nine common surgical procedures and 10 major complications across 4 payer types were analyzed. Hospital costs and revenue at discharge were obtained from hospital accounting systems and classified by payer type.

Main Outcomes and Measures Hospital costs, revenues, and contribution margin (defined as revenue minus variable expenses) were compared for patients with and without surgical complications according to payer type.

Results Of 34 256 surgical discharges, 1820 patients (5.3%; 95% CI, 4.4%-6.4%) experienced 1 or more postsurgical complications. Compared with absence of complications, complications were associated with a \$39 017 (95% CI, \$20 069-\$50 394; $P < .001$) higher contribution margin per patient with private insurance (\$55 953 vs \$16 936) and a \$1749 (95% CI, \$976-\$3287;

$P < .001$) higher contribution margin per patient with Medicare (\$3629 vs \$1880). For this hospital system in which private insurers covered 40% of patients (13 544), Medicare covered 45% (15 406), Medicaid covered 4% (1336), and self-payment covered 6% (2202), occurrence of complications was associated with an \$8084 (95% CI, \$4903-\$9740; $P < .001$) higher contribution margin per patient (\$15 726 vs \$7642) and with a \$7435 lower per-patient total margin (95% CI, \$5103-\$10 507; $P < .001$) (\$1013 vs -\$6422).

Conclusions and Relevance In this hospital system, the occurrence of postsurgical complications was associated with a higher per-encounter hospital contribution margin for patients covered by Medicare and private insurance but a lower one for patients covered by Medicaid and who self-paid. Depending on payer mix, many hospitals have the potential for adverse near-term financial consequences for decreasing postsurgical complications.