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## Surgical Site Infection Tops List of Reasons for Unplanned Readmissions



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Hospital readmissions present a major challenge for administrators working to reduce costs and improve care quality metrics. It is not only chronic medical conditions which can be problematic for hospitals wishing to avoid financial penalties for readmissions: many patients are readmitted with complications following surgical procedures. According to new research, the reasons for readmissions after surgery are often related to new post discharge complications such as surgical site infection, rather than a worsening of pre-existing conditions.

“Understanding the underlying reasons for readmission, the timing, and the associated factors should help hospitals to undertake targeted quality improvement initiatives to reduce readmissions. However, surgical readmissions mostly reflect postdischarge complications, and readmission rates may be difficult to reduce until effective strategies are put forth to reduce common complications such as SSI,” the authors write in their report which appears in the February 3 issue *JAMA*.

### ACS NSQIP Data Analysis

Data for the analysis came from patients who underwent surgery between January and December 2012 at one of the 346 facilities participating in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP). The researchers studied the factors associated with unplanned postoperative hospital readmissions within 30 days following surgery. The rates and reasons for readmission were tracked for all surgeries and for a set of six representative procedures: bariatric surgery, colectomy or proctectomy, hysterectomy, lower extremity vascular bypass, total hip or knee arthroplasty, and ventral hernia repair.

### Common Postdischarge Complications

The 30 day readmission rate for 498,875 procedures was 5.7 percent, not including planned readmissions. Overall, the most frequent reason for unplanned readmission was surgical site infection (SSI) at 19.5 percent of readmitted patients. Only 3.3 percent of patients who were readmitted to the hospital for SSI had experienced such an infection during their initial hospitalisation.

Postdischarge SSI occurred in 36.4 percent of patients readmitted after lower extremity vascular bypass, 28.8 percent of readmitted hysterectomy patients, 26.5 of readmitted ventral hernia patients, 25.8 percent of readmitted colectomy/proctectomy patients, 18.8 percent of readmitted arthroplasty patients and 11.4 percent of patients who were readmitted after undergoing bariatric procedures.

For patients who underwent bariatric surgery, the most common reason for readmission was intestinal blockage or obstruction (24.5 percent); this was the second most frequent cause for readmission overall (10.3 percent). Dehydration, nutritional deficiencies, anaemia, bleeding, blood clots and surgical device issues were other common cause for readmission.

### Readmissions Reasons Differ From Original Reason For Hospitalisation

The researchers also examined unplanned readmissions which occurred within seven days of discharge (early readmissions) compared with those occurring more than seven days after discharge (late readmissions). They found that, overall, the three most common readmission reasons were similar: SSI, ileum or obstruction, or bleeding. However, only 2.3 percent of patients reentered the hospital with the same complication that was the reason for their initial hospitalisation.

## Learning From Reliable Data

An editorial which accompanied the published study was written by Lucian L. Leape, MD from the Harvard School of Public Health in Boston. Dr. Leape noted that the reported findings are important because they are based on reliable ACS NSQIP data as opposed to administrative data. The authors are also commended for making useful suggestions as to how their findings may be used to reduce readmissions in the future.

"The findings reported by Merkow et al. provide an unprecedented opportunity to apply these lessons to make substantial reductions in surgical complications," Dr. Leape wrote.

Source: [JAMA](#)

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