

FAILURE TO REPORT INFECTIONS AFTER DISCHARGE LEADS TO THE UNDER-REPORTING OF RATES OF SURGICAL SITE INFECTIONS

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Accurate reporting of surgical site infection (SSI) rates depends on complete follow up of patients throughout the perioperative period. Many studies however report SSI rates based on only those infections identified prior to discharge, possibly under-representing the true rate of SSI. The purpose of this analysis was to identify the rate of SSI occurring between discharge and 30 days.

Methods: An ongoing prospective RCT initiated in April 2007 was used as the database for this study. This trial is design to confirm the role of adjunctive measures in reducing SSI. Patients undergoing elective transabdominal (open or laparoscopic) colorectal surgery are randomized between standard perioperative care and extended care. Extended care is defined by several evidence-based adjuncts thought to reduce SSI. These include omission of mechanical bowel preparation, perioperative warming, increased inspired oxygen during the perioperative period, reduced fluid administration, and the use of skin barriers/wound protectors. Rate of SSI between hospital discharge and 30 days is a secondary endpoint for this trial.

Results: 111 patients have been randomized and 98 have undergone surgery. A total of 31 (32%) infections have been identified. The majority of infections were superficial in location (23/31; 74%). Fourteen infections (45% of all infections) occurred between hospital discharge and 30 days, thirteen (93%) of these occurred in the extended arm of the study ($p = .001$). The median time to identification of these infections was 11 days (range 6-24d). When considering other potential factors associated with SSI only assignment to the extended arm of the study was significantly associated with infection after discharge (Odds ratio = 15.4; 95% CI 1.9-123).

Conclusion: SSI rates that do not take into account infections occurring after discharge significantly under-report the true incidence of SSI. The rate of infection after discharge appears to be highest in patients receiving adjunctive therapies previously thought to minimize SSI.