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## Surgical site infections: Incidence and impact on healthcare resources

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**Statement of the Problem:** Surgical site infections (SSIs) are infections of the incision, organ or space that occur in the 30 days following surgery. 5% of patients undergoing surgery develop SSIs. They are associated with significant morbidity and mortality. SSIs pose a heavy financial burden, prolong inpatient stay, and negatively impact quality of life. Numerous factors such as obesity, ASA score, operation duration and contaminated/dirty wounds are associated with SSIs. Attention therefore to pre, intra, and post-operative risk factors are essential in reducing their incidence. The purpose of this audit is to identify the incidence of SSIs occurring in general, vascular colorectal and breast surgery over a 1-year period (1st Jan – 31st Dec) and to identify techniques that may reduce occurrence.

**Methodology:** Retrospective data were collected on surgical patients that developed SSIs in 2018. Independent predictors of SSIs were evaluated including type of operation performed and use of intra/post-operative antibiotics. Consequences of SSIs were then reviewed involving wound swab utilisation,

antibiotic duration, use of further imaging, subsequent surgical intervention and prolongation of hospital stay.

**Findings:** 3996 operations were performed. 58 SSIs were identified (incidence of 0.015%). 79% received intraoperative antibiotics. 51% of patients had wound swabs taken. 11 patients had antibiotics prescribed according to sensitivities. 30 readmissions, 12 further operations and 27 additional scans were identified. 143 extra bed days were calculated. 402 days of antibiotics were prescribed.

**Conclusion and Significance:** The consequences of SSIs are multifactorial. More focussed antibiotic prescribing is needed according to wound swab results and sensitivities. The duration/indication for antibiotics and inclusion of SSIs on discharge summaries require improved documentation. Follow up of patients discharged is recommended to identify SSIs treated in the community, a potential source of bias in this study.

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