

## SUMMARY OF:

### REDUCTION OF SURGICAL SITE INFECTIONS AFTER IMPLEMENTATION OF A BUNDLE OF CARE

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#### BACKGROUND

Surgical site infection (SSI) was found to be one of the top preventable complications of surgery in Dutch hospitals. In response to this finding, a program was put in place which implemented a bundle of care to help reduce the occurrence of preventable deaths and measure its effect on the SSI rate. A bundle of care is a set of procedures defined for a specific patient population to ensure consistency in care.

#### OVERVIEW

All colorectal surgeries over a period of four years were observed, including post-discharge surveillance until 30 days after the procedure. Compliance with the bundle of care was measured which included perioperative antibiotic prophylaxis, hair removal before surgery, perioperative normothermia and discipline in the operating room.

#### RESULTS

The overall SSI rate determined was 19.5% (300 out of 1,537 surgeries), but was shown to decrease over the period of observation, with a 36% reduction in the last year. This correlates to compliance with the bundle of care, which increased from 10% to 80% in less than three years after implementation. The study showed that cases with a SSI were more likely to result in mortality. SSI was also linked to duration of the surgical procedure and was shown to result in an average of 18 additional days of hospitalization.

#### CONCLUSION

Implementation of a bundle of care was shown to significantly reduce the occurrence of SSI. It can also be concluded that this therefore resulted in cost savings higher than the investment in the program. Implementation of a program like this can include many different procedural changes and can take a substantial amount of time, discussions, repeated feedback and zero-tolerance enforcement to be successful.

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**References** 1. Crolla et al., Reduction of Surgical Site Infections after Implementation of a Bundle of Care *PLoS ONE* 2012;7(9):e44599; <http://www.plosone.org/article/fetchObject.action?uri=info%3Adoi%2F10.1371%2Fjournal.pone.0044599&representation=PDF>

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