

P0837 SSI bundle, the winning challenge

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Background: Surgical site infections (SSIs) are among the most preventable healthcare associated infections (HAI) with substantial burden to healthcare systems worldwide. In Europe, SSI is still the second most common cause of HAI. The Portuguese Stop Hospital Infection program, in partnership with the Institutes of Health Improvement and Gulbenkian, aims to implement bundles of interventions to optimize prevention practices in SSI with the objective of reducing the infection rate by 50% of elective colorectal surgery (ECRS) in 36 months, ending in October 2018.

Materials/methods: Through the Infection Surveillance Program in Surgery Units median colorectal SSI rate was calculated from May to October 2015. Implementation of SSI prevention bundle began in November 2015 through constitution of multidisciplinary work teams involving nurses, pharmacists, surgeons and anesthesiologists. Five interventions considered as priorities for SSI reduction included in the Portuguese guidelines were selected. Through application of "Plan-Do-Study-Act" (PDSAs) methodology, necessary changes were tested in each intervention and monitored monthly through process and result indicators.

Results: Twenty-three months after beginning (November 2015), 221 ECRS patients were operated. 40.8% SSI rate reduction was achieved with implementation of 4 of a total of 6 interventions. Chlorhexidine preoperative antiseptic bath obtained 100% adherence rate. 100% adherence rate was achieved regarding adequate tricotomy protocol, 91.28% adherence to surgical prophylaxis within 60 minutes prior to surgical incision as well as 100% single dose prophylactic antibiotic therapy. The median for normothermic patients in perioperative period was 43.06%, mostly due to hypothermia in induction procedures. PDSA methodology was applied at the end of October for institution of prophylactic measures of active heating in the operative room to prevention of inadvertent hypothermia during surgery procedures. Also at the end of October, efforts were made to start implementing adequate glycemic control monitorization (glycemic maintenance ≤ 180 mg/dl) in the surgery and up to 24 hours post-operatively.

Conclusions: SSI prevention is complex and requires the integration of a range of measures before, during, and after surgery to promote SSI prevention, including implementation and change strategies. The changes made demonstrate that a reliable and standardized process contributes significantly to the overall goal.