

## PREVENT SURGICAL SITE INFECTIONS (SSI)

### Goal:

To reduce Surgical Site Infections (SSI) by consistently and effectively implementing all elements of the “SSI Bundle.”

### Background:

Surgical site infections are the second most common type of adverse event occurring in hospitalized patients in the United States. Surgical complications, including surgical site infections, were the most frequent type of adverse event reported in the 2004 Canadian Adverse Event Study.

Surgical site infections can increase mortality, re-admission rate, length of stay and costs in terms of more out-patient / wound clinic visits, emergency room visits, radiology services, laboratory investigations, antimicrobial therapy and home wound care services for patients who acquire a healthcare-associated SSI.

### Interventions:

*There are 4 key components of the SSI Bundle: If practiced consistently with all surgical patients, these interventions together contribute significantly to lowering SSI rates.*

1. Appropriate use of prophylactic antibiotics (including appropriate selection, timing and duration / discontinuation)
2. Appropriate hair removal: Avoid shaving; where depilation is necessary, use of clippers or depilatory creams.
3. Maintain post-operative glucose control (\*for major cardiac surgery patients cared for in an ICU).
4. Post-operative normothermia (\*\* for all open abdominal surgery patients).

\*Glucose Control: Review of evidence shows that the degree of hyperglycemia in the postoperative period correlates with the rate of SSI in patients undergoing major cardiac surgery. Although glucose control may benefit other surgical populations, for the BCA Campaign, this measure will apply only to the cardiac surgery population for the purposes of national measurement.

\*\*Normothermia: Evidence suggests that patients have a decreased risk of surgical site infection if they are not allowed to become hypothermic during the peri-operative period. Although temperature control may benefit other surgical populations, for the BCA Campaign, this measure will only apply to the colorectal or open abdominal surgical population for the purposes of measurement of compliance.

Additional evidence-based components of good quality surgical care may be added by each individual facility.

**Intervention Measures:**

The aim is measurement of compliance to the elements and individual goals will be set by each participating facility.

**Definition of a Surgical Site Infection:**

Broadly, a surgical site infection is one which occurs within thirty days of surgery, or one year of surgery if an implantable device is placed, and is related to the surgical intervention. SSI's are further differentiated as superficial, deep incisional or organ / space depending on the location of the infection within the wound.

**References:**

1. Institute for Healthcare Improvement. <http://www.IHI.org>
2. Safer Healthcare Now campaign. <http://www.saferhealthcarenow.ca>
3. A Compendium of strategies to prevent healthcare-associated infections in acute care hospitals: *Infect Control Hosp Epidemiol* 2008; 29: S12 – S21. <http://www.shea-online.org/about/compendium.cfm>