Surgical site infections (SSIs) are one of the most common healthcare-acquired infections and one of the most costly. SSIs occur after 2% to 5% of all inpatient surgeries, amounting to 160,000-300,000 SSIs/year. SSIs can also add 7-11 days to a patient’s length of stay and increase costs and mortality risk. This has a dramatic impact on a patient’s quality of life and leads to never events that impact the facility.

### Recommendations & guidelines

**Association for Professionals in Infection Control and Epidemiology (APIC) 2018**

- In the pre-admission period, a minimum of two (night before, morning of surgery) showers/cleansings using a standardized process with 4 percent chlorhexidine gluconate (CHG) aqueous soap or 2 percent CHG impregnated, no-rinse cloths has been shown to be an effective risk reduction strategy when combined with a number of other SSI prevention strategies.
- The Wisconsin Department of Public Health supports the use of CHG and antiseptic povidone-iodine (PVI) pre-operatively.
- APIC supports an oral CHG mouthwash pre-operatively for cardiac surgical patients.

**Society for Healthcare Epidemiology of America (SHEA) 2014**

- “To gain maximum antiseptic effect of chlorhexidine, adequate levels of CHG must be achieved and maintained on the skin. Typically, adequate levels are achieved by allowing CHG to completely dry.”

### Published outcomes

**Effect of a Preoperative Decontamination Protocol on Surgical Site Infections in Patients Undergoing Elective Orthopedic Surgery With Hardware Implantation**

- “Our study demonstrates that preoperative MRSA decontamination with chlorhexidine washcloths and oral rinse and intranasal povidone-iodine decreased the SSI rate by more than 50% among patients undergoing elective orthopedic surgery with hardware implantation.”
  - 69% reduction in the number of SSIs
  - 100% reduction in MRSA-caused SSIs


<table>
<thead>
<tr>
<th>Surgical site infection rates by operative procedure</th>
<th>CABG-chest and donor site</th>
<th>Cesarean section</th>
<th>Vaginal hysterectomy</th>
<th>Colon surgery (laparoscopic)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.73% - 17.54%</td>
<td>3.27% - 8.65%</td>
<td>1.08% - 1.47%</td>
<td>0.69% - 12.95%</td>
</tr>
</tbody>
</table>

**References:**