

What the experts say

The impact of Surgical Site Infections (SSI) and hospital-acquired pneumonia (HAP)

Surgical site infections (SSIs) are one of the most common healthcare-acquired infections and one of the most costly.¹ SSIs occur after 2% to 5% of all inpatient surgeries, amounting to 160,000-300,000 SSIs/year.² SSIs can also add 7-11 days to a patient's length of stay² and increase costs and mortality risk.³ 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) 2018⁴

- 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) 2014²

- "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 Implantation⁵

- "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

Surgical Site Infection (SSI) Rates in the United States, 1992-1998: The National Nosocomial Infections Surveillance System Basic SSI Risk Index⁶

Surgical site infection rates by operative procedure

CABG-chest and donor site	0.73% - 17.54%
Cesarean section	3.27% - 8.65%
Vaginal hysterectomy	1.08% - 1.47%
Colon surgery (laparoscopic)	0.69% - 12.95%

References:

1. Zimlichman E, et al. Health Care-Associated Infections A Meta-analysis of Costs and Financial Impact on the US Health Care System. *JAMA*. 2013;173(22):2039-2046 2. Anderson DJ, Podgorny K, Berrios-Torres SI, et al. Strategies to Prevent Surgical Site Infections in Acute Care Hospitals: 2014 Update. *Infection Control Hosp Epidemiol*. 2014;35(6):605-627 3. Kirkland KB, et al. The impact of surgical-site infections in the 1990s: attributable mortality, excess length of hospitalization, and extra costs. *Infect Control Hosp Epidemiol*. 1999;20:725-730. 4. Association for Professionals in Infection Control and Epidemiology (APIC) Implementation Guide: Infection Preventionist's Guide to the OR 2018. 5. Bebeko SP, Green DM, Awad SS, Effect of a preoperative decontamination protocol on surgical site infections in patients undergoing elective orthopedic surgery with hardware implantation, *JAMA Surg*. 2015 May;150(5):390-395. 6. Gaynes RP, et al., Surgical Site Infection (SSI) Rates in the United States, 1992-1998: The National Nosocomial Infections Surveillance System Basic SSI Risk Index, *Clinical Infectious Diseases*, 2001;33(Suppl 2):S69-77.