APIC CONSULTING
Experts in Infection Prevention & Control

Top 5 Considerations for the Prevention of Surgical Site Infections (SSIs)

Surgical Site Infections (SSIs) remain a significant concern in healthcare. They can result in increased patient morbidity, extended hospital stays, and higher medical costs. While some risks are unavoidable, many SSIs are preventable with the right protocols in place. This article outlines five key considerations—spanning from pre-operative preparation to post-operative patient education—that can greatly reduce the risk of SSIs and enhance patient outcomes.

1. PRE-OPERATIVE PATIENT CARE

Prevention of SSIs begins well before the first incision. Proper preparation of the patient not only helps the procedure go smoothly but also significantly reduces the risk of infection. Many infections originate from the patient's own bacterial flora—the harmless bacteria that normally reside on the skin. To minimize this risk, include thorough skin decontamination in your preoperative process. This should involve the use of chlorhexidine gluconate (CHG) and alcohol-based antiseptics for skin preparation.

Another effective strategy is nasal decontamination prior to surgery. Common bacteria such as *Staphylococcus aureus*, which can colonize the nasal passages, may be transferred to the surgical site. Decolonizing the nose before surgery can significantly reduce the chance of *S. aureus* causing an infection.

2. PATIENT CARE DURING THE PROCEDURE

Maintaining normothermia—normal body temperature—during surgery is essential for reducing SSI risk. Keeping the patient warm supports optimal immune function and enhances wound healing by promoting proper collagen deposition. Conversely, even a mild drop in body temperature can trigger vasoconstriction, reducing blood flow to tissues and impairing wound healing, thereby increasing infection risk.

3. MAINTAIN APPROPRIATE OPERATING ROOM CONDITIONS

The operating room is a highly controlled environment that depends on strict regulation of air quality, temperature, pressure, and humidity. These parameters must be consistently monitored, and contingency plans should be in place to address any deviations from the recommended standards. Maintaining optimal environmental conditions is a key factor in preventing SSIs.

4. MONITOR PROCESSES IN THE STERILE PROCESSING DEPARTMENT (SPD)

The Sterile Processing Department plays a critical role in patient safety. The cleaning, sterilization, packaging, and storage of surgical instruments must be meticulously executed. Regular process audits, such as SPD tracers, help ensure each step is performed correctly. However, the responsibility doesn't end with SPD. Operating room staff must also carefully inspect every instrument before placing it on the sterile field—well before the procedure begins.

5. STAFF COMPLIANCE WITH HAND HYGIENE AND PPE PROTOCOLS

Surgical hand antisepsis is a frontline defense against SSIs. Staff must follow proper protocols before donning sterile gowns and gloves. Ensure the correct surgical scrub is used as specified in the Manufacturer's Instructions for Use (IFU), including appropriate dosing and timing. Hand hygiene practices must also be enforced among perioperative and post-anesthesia care staff. These staff members should perform hand hygiene:

- Before and after patient contact
- Before performing a clean or sterile task
- After contact with the patient's surroundings

Proper use of personal protective equipment (PPE)—such as beard covers and gloves—is equally important in minimizing infection risk.

BONUS: CLEAR, CONCISE PATIENT EDUCATION

Even with the best in-hospital care, SSIs can still occur after discharge. SSI surveillance continues for at least 30 days post-procedure, during which the patient is primarily responsible for wound care. To set them up for success, provide clear, easy-to-understand instructions on how to:

- Clean the wound properly
- Maintain the dressing
- Recognize signs of infection. Prompt attention to superficial infections can prevent them from becoming more serious.

Want to know more? Contact APIC Consulting to see how we can help you assess your facility and staff to reduce the risk of surgical site infections. Email: info@apicconsulting.com.