

Preventing Surgical Site Infection (SSI)

Policy and Procedure Steps

Policy:

Prevention of SSIs is a priority due to the potential to cause significant morbidity, mortality, and financial concerns to the patient, his or her family, and the healthcare facility. Cleansing the skin with a chlorhexidine gluconate (CHG) product prior to surgery has been shown to significantly decrease the risk of SSIs. This protocol includes having patients shower with CHG soap the evening before surgery. Using CHG cloths on the surgical site just prior to the preoperative scrub has also been shown to significantly reduce the number of organisms on the skin, and aids in the prevention of SSIs.

Purpose:

To aid in the prevention of SSIs.

Procedure:

Patients scheduled for an invasive surgical procedure with no known allergy to 4 percent CHG wash will undergo the following preparations prior to surgery:

Patients in the outpatient setting:

1. The patient will be given a bottle of 4 percent CHG wash, including instructions for use, during the office visit in which the patient is scheduled for surgery.
2. The preadmission nurse will verify the patient has received the 4 percent CHG wash. The preadmission nurses will keep a supply of 4 percent CHG wash and instructions for use available in case the patient has not received (or has misplaced) the wash. If the preadmission nurse does not have the supply in stock, instructions will be given to pick up or purchase the supplies prior to the surgery date and how to use the product.
 - A. If the patient is allergic to 4 percent CHG wash, the preadmission nurse will notify the surgeon for alternate wash.
 - B. The preadmission nurse will appropriately document SSI protocol.
3. On the day of surgery, the admitting nurse will cleanse the anticipated surgical site area with a 2 percent CHG cloth (or properly instruct the patient on where to cleanse) and place a clean gown and clean sheet over the patient. A second application with a 2 percent CHG cloth will be applied prior to sending the patient to surgery. The admitting nurse will appropriately document SSI protocol.

Patients in the inpatient setting:

1. The patient will be instructed (or assisted) to shower with 4 percent CHG wash the night before and morning of surgery. Prior to the patient going to surgery, the patient's nurse will cleanse the anticipated surgical site area with a 2 percent CHG cloth and place a clean gown and clean sheet over the patient. A second application with a 2 percent CHG cloth will be applied prior to sending the patient to surgery. The nurse will appropriately document SSI protocol.
2. Patients needing emergency surgery, whether from the emergency department, physician's office, or an inpatient unit, will have their surgical site area cleansed with the 2 percent CHG cloth and a clean gown and sheet placed over them by the nurse giving care prior to being transported to the operating room. The nurse will appropriately document SSI protocol.

Patients in the intra-operative setting:

1. After induction of anesthesia, a surgical prep using a non-toxic antimicrobial agent is performed.
 - A. Procedure of surgical prep using a non-toxic antimicrobial agent:
 - 1) After anesthetist/anesthesiologist gives permission, position patient as necessary and expose the area to be prepped.
 - 2) If hair removal is indicated, remove hair with approved clippers.
 - 3) Place professional towels, rolled and wedged, at all drip areas.
 - 4) Don sterile gloves.
 - 5) Apply 2 percent CHG scrub to surgical site following manufacturer instructions for use.
 - B. For urology procedures:
 - 1) Place legs in stirrups, pad legs well, and apply restraining straps.
 - 2) Place a towel under buttocks to absorb excess solution.
 - 3) Prep peritoneal area with Betadine **scrub**.
 - C. For gynecology procedures:
 - 1) Place legs in stirrups, pad legs well, and apply restraining straps.
 - 2) Place a towel under buttocks to absorb excess solution.
 - 3) Prep internal vaginal area with Betadine **solution**.
2. Prep solutions should be removed using a wet sponge at the close of incision and a sterile dressing applied to the surgical site.

Chloraprep should not be used:

- On children less than 2 months of age.
- On patients with known allergies to CHG gluconate or isopropyl alcohol.
- For lumbar puncture or in contact with meninges.
- On open skin wounds.
- In or around eyes, ears, mouth, or mucous membranes.

SSI Patient Care Bundle Protocol

For the Prevention of SSIs

Preoperative Phase

Preoperative Showering:

Patient has showered (bathed/washed if unable to shower) with chlorhexidine gluconate (CHG) solution the night before his or her scheduled procedure. If patient is allergic to CHG or if use is contraindicated by the manufacturer’s recommendations, an order from the surgeon must be obtained for an alternate product.

CHG 2 Percent Cloths:

The operative site is cleansed with pre-warmed, PH-balanced cloth and a clean patient gown/blanket is applied in the preoperative period. A second cloth is applied to produce a buildup of product prior to transport to the operating room.

Hair Removal:

Hair removal is to be performed only when absolutely necessary. If hair removal is required, it is removed by using a disposable clipper head and timed as close to the operating procedure as possible.

Intraoperative Phase

Skin Preparation: Patient’s skin has been prepared with an approved CHG solution and allowed to dry. *(If patient has sensitivity, povidone-iodine application is used.)*

Glucose Control: Perioperative blood glucose control of >150 mg/dL has been maintained in diabetic patients. *(This tight blood glucose control is not yet considered relevant in non-diabetic patients.)*

Prophylactic Antibiotics: Appropriate antibiotics were administered within 60 minutes of incision and only repeated if there is excessive blood loss, a prolonged operation, or during prosthetic surgery.

Supplemental Oxygen: Patient’s hemoglobin saturation is maintained above 95 percent (or as high as possible if there is underlying respiratory insufficiency) in the intra- and post-operative stages (recovery room).

Normothermia: Body temperature is maintained above 36°C (96.8°F) in the perioperative period.

Incise Drapes: If incise drapes are used, they are impregnated with an antiseptic.

Postoperative Phase

Surgical Dressing:

- Wound is covered with an interactive dressing at the end of surgery and while the wound is healing.
- Wound dressing is kept undisturbed for a minimum of 48 hours after surgery unless there is leakage from the dressing and need for a change.
- The principles of asepsis (non-touch technique) are used when the wound is being redressed.

Hand Hygiene:

- Hands are decontaminated immediately before and after each episode of patient contact using the correct hand hygiene technique.
- **Use of the Centers for Disease Control and Prevention “Clean Hands Count” materials are recommended.** <https://www.cdc.gov/clean-hands/hcp/clean-hands-count/index.html>

References:

1. CDC. *Surgical Site Infection (SSI) Prevention Guideline*. Available at: <https://www.cdc.gov/infection-control/hcp/surgical-site-infection/index.html>. Accessed on: Feb. 11, 2026.
2. Society for Healthcare Epidemiology of America (SHEA). *Compendium Of Strategies To Prevent Healthcare-Associated Infection In Acute Care Hospitals*. 2022 Updates. Available at: <https://shea-online.org/compendium-of-strategies-to-prevent-healthcare-associated-infections-in-acute-care-hospitals/>. Accessed on: Feb. 11, 2026.
3. Association of periOperative Registered Nurses (AORN). *Guidelines for Perioperative Practice*. 2026. Available at: <https://www.aorn.org/guidelines-resources/guidelines-for-perioperative-practice>. Accessed on: Feb. 11, 2026.
4. Lipke V, Hyott A. Reducing Surgical Site Infections by Bundling Multiple Risk Reduction Strategies and Active Surveillance. *AORN J*. 2010;92(3):288-96. Available at: https://www.researchgate.net/publication/46147465_Reducing_Surgical_Site_Infections_by_Bundling_Multiple_Risk_Reduction_Strategies_and_Active_Surveillance. Accessed on: Feb 20, 2026.
5. Agency for Healthcare Research and Quality (AHRQ). *The Four Key strategies of MRSA Prevention: Targeting SSI*. Available at: <https://www.ahrq.gov/hai/tools/mrsa-prevention/surgery/key-strategies.html>. Access on Feb. 23, 2026.
6. Berrios-Torres SI, Umscheid CA, Bratzler DW, et.al. Centers for Disease Control and Prevention Guideline for the Prevention of Surgical Site Infection, 2017. *JAMA Surg*. 2017;152(8):784-791. doi:10.1001/jamasurg.2017.0904. Available at: <https://jamanetwork.com/journals/jamasurgery/fullarticle/2623725>. Accessed on: Feb. 11, 2026.

Approval:

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