Purpose
To reduce the resident microbial count to sub-pathogenic levels to reduce the risk of surgical site infection.

Key points
1. The surgical site shall be prepared with a TGA approved antimicrobial agent that is broad spectrum, non-toxic, rapid acting and provide residual protection.
2. The patient should perform a preoperative bath/shower with a (TGA) registered antimicrobial product and or use (TGA approved) antiseptic wipes before surgery. This removes gross contaminants and oils which may block the penetration of the preparation solution in theatre and reduce the presence of pathogens on the skin.
3. Hair removal with clippers should be undertaken as close to the time of surgery as possible.
4. Where ultrasound gel has been applied to the abdomen, it is recommended that a chlorhexidine wash cloth is used to remove residual gel prior to draping and prepping the patient.
5. Use of the antimicrobial agent shall be consistent with manufacturers’ guidelines, infection control guidelines and current research.
6. Selection of the antimicrobial agent shall be based on
   - Patient allergies or sensitivity
   - The operative site
   - Condition of the patients skin
   - Presence of organic matter, including blood
7. 2% Chlorhexidine gluconate in isopropyl 70% alcohol solution (CHG) is the recommended surgical site preparation to intact skin. CHG is contraindicated for use on eyes, ears, genitalia, brain & spinal tissue, open wounds or mucus membranes.
8. Where there is a documented allergy to CHG an appropriate alternative should be selected such a Povidone-iodine 10% w/v, ethanol 30% w/v.
9. Single dose containers of surgical skin preparation shall be used. Larger containers must not be used for pouring multiple uses.

10. Skin preparation fluid must be allowed to air dry before draping.

11. There is risk of harm to the patient from interaction of the antimicrobial agent with other surgical equipment such as electrical surgical unit. Interaction may result in ignition of the microbial agent causing fire, macro or micro shock, or a toxic chemical reaction. Prevent pooling of antimicrobial solutions in the umbilical area, groins, and under the patient. Blueys placed under the patient should be removed if soaked with prep, prior to commencing the procedure. Diathermy pad should be kept dry and free of antimicrobial solution. Change the pad if it comes in contact with the antimicrobial solution.

### Procedure

1. Prepping swabs shall be provided for the prepping of each area. For example: for a laparoscopy prepping swabs will be provided for prepping the abdominal area and further prepping swabs for the perineal area.

2. Appropriately skilled personnel shall perform surgical skin preparation.

3. Ensure that preparation commences from the cleanest area (usually the operative and or incision site), proceeding in a concentric fashion to the least clean area. Once a periphery or dirty area has been reached, the swab should be discarded to prevent contamination of the skin prep solution.

4. If a highly contaminated area is part of the procedure, the area with a lower bacterial count is prepared first, followed by the area with higher contamination;

5. When the abdominal and perineal areas require preparation, the preparation should be performed sequentially not simultaneously. The abdominal area is prepared first followed by the perineal area, ensuring a new applicator is used for each site.

6. If two areas are prepped (abdomen and perineum) two different antimicrobial agents may be used for example 2% Chlorhexidine gluconate in isopropyl 70% alcohol on the abdomen and Povidone iodine on perineum.

7. The prepared area shall be wide enough to permit the extension of incisions, potential drape shift, and the placement of drains, also avoiding the return electrode plate.


9. If any alcohol-based antimicrobial solution makes contact with the top gloves of scrubbed personnel, the gloves shall be removed and replaced.

10. At the end of the surgical procedure any excess antimicrobial agent should be removed from the skin, unless contraindicated by the manufacturer’s written instructions, to prevent skin irritation.
11. Documentation of skin preparation on the Theatre Management System (TMS) shall include.

- Skin condition and integrity at surgical site
- Hair removal including method, time, location, and area of the body
- Type of antimicrobial preparation used
- Details of skin reactions, hypersensitivities, or toxic reactions
- Post-operative skin assessment
References and resources


Related policies

Related WNHS policies, procedures and guidelines

Infection Prevention and Management Policies:

1. Micro Alerts and Multi Resistant Organisms
2. Prevention of Surgical Site Infections
3. Aseptic Technique
4. Prevention of Surgical Site Infections

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Standards Applicable: NSQHS Standards: 1 Governance, 3 Infection Control, 5 Patient ID/Procedure Matching,

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