SKIN PREPARATION OF THE PATIENT

PURPOSE

To remove soil and transient microorganisms from the skin, reducing the resident microbial count to subpathogenic levels in a short period of time, with the least amount of tissue irritation and inhibiting the rebound growth of microorganisms.

KEY POINTS¹

1. The surgical site shall be prepared with an antimicrobial agent. It shall be broad spectrum, non toxic 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 has been found to be safer and result in fewer surgical site infections then shaving, and should be undertaken as close to the time of surgery as possible. Hair removal shall take place outside of the operating room where the surgical procedure is to be performed.

4. Skin integrity is preserved by the use of hair clippers with disposable blades.

5. The skin antimicrobial agent used shall contain
   - Broad spectrum properties,
   - Non irritating non toxic
   - Rapid acting,
   - Have a persistent effect ,
   - Be a TGA registered product.

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
   - Surgeons’ preference.

7. Use of the antimicrobial agent shall be consistent with manufacturers’ guidelines, infection control guidelines and current research.

8. Chlorhexidine in alcohol is contraindicated for use on eyes, ears, genitalia, brain & spinal tissue, open wounds or mucus membranes as it can cause neurotoxicity.

9. Single dose containers of surgical skin preparation shall be used rather than larger containers for multiple use.
10. 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.

11. The diathermy pad should be kept dry and free of antimicrobial to avoid ignition and burns. Change the pad if it comes in contact with the antiseptic solution.

PROCEDURE

1. Appropriately skilled personnel shall perform surgical skin preparation.

2. 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.

3. 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;

4. Areas of high microbial count are prepared separately. These areas include the umbilicus, vagina, anus, stomas & wounds.

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 (perineum and abdomen) two different antimicrobial agents may be used for example iodine on perineum and Chlorhexidine on the abdomen.

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.

8. Ensure the preservation of skin integrity.

9. Maintain an aseptic technique during skin preparation;

10. Allow adequate contact time, drying time, and vapour dissipation of microbial agents before draping to prevent skin irritation as well as prevent fire or burn injuries.

11. It is recommended that the incision site is not physically dried with a swab or sponge, as this negates the efficacy of the antimicrobial solution, time permitting respecting emergency procedures.

12. In the case of an emergency where air drying of the skin is not possible, a swab can be used to wipe off any residual skin prep. The used swab must be removed from the sterile field, and be placed in receptacle as directed by circulating nurse.

13. Prevent pooling of antimicrobial solutions in the umbilical area, groins, and under the patient to minimise the risk of ignition and burns to the patient’s skin. Blueys placed under the patient should be removed if soaked with prep, prior to commencing the procedure to minimise the risk of ignition and burns to the patient.

Note: antimicrobial solutions containing alcohol are highly inflammable.
14. If any alcohol-based antimicrobial solution makes contact with the top gloves of scrubbed personnel, these shall be removed and replaced.

15. At the end of the surgical procedure the antimicrobial agent should be thoroughly removed from the skin, unless contraindicated by the manufacturer’s written instructions, to prevent skin irritation.

16. 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 (STANDARDS)


National Standards – 3 Preventing and Controlling Healthcare Associated Infections
Legislation - Nil

Related Policies – Section F Perioperative Guidelines
Other related documents – Nil

RESPONSIBILITY

<table>
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<tr>
<th>Policy Sponsor</th>
<th>Nursing &amp; Midwifery Director OGCCU</th>
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<td>Initial Endorsement</td>
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