NORTHEAST HOSPITAL CORPORATION

Subject: Patient Skin Asepsis for Surgical and Invasive Procedures
Date Effective: 3/06
Date Revised: 3/08, 10/09, 9/12
Date Reviewed: 
Joint Commission Chapter: Infection Prevention & Control (IPC)

I. Purpose
To provide guidelines for achieving skin preparation of the surgical or invasive procedure site. Preoperative preparation of the patient skin is to reduce the risk of postoperative infection by removing soil and transient microorganisms from the skin.

II. Policy
A. Only personnel trained and skilled in skin preparation techniques shall prepare the surgical site/procedural site.
B. All patients should be assessed for allergy or sensitivity to skin preparation agents.
C. Skin cleansing shall be done prior to the skin antiseptic.
D. Only non-scrubbed personnel should apply the skin antiseptic.
E. The surgical/procedural site and surrounding area are prepared with an FDA-approved antiseptic agent recommended by the Infection Control and Prevention Committee and used according to manufacturer's product guidelines.
F. All prep solutions should be allowed to dry and vapors to dissipate before application of an incise drape or surgical drape, or use of electrosurgery, laser or other heat source.
G. When using flammable antiseptic prep solutions, allow adequate time for complete evaporation of the solution before beginning the surgery or procedure to decrease the risk of fire.
H. Pre-operative/pre-procedure hair removal
   1. Hair at the surgical site shall be removed only if it will interfere with the procedure.
   2. When hair removal is necessary, an electric clipper with disposable head will be used.
   3. If hair is removed, it should be done immediately before the procedure, in allocation outside of the operating/procedure room as close to the surgery/procedure time as possible.
I. Prep sponge should be used for a single application and discarded.
J. The antiseptic should progress from the incision site to the periphery of the surgical site.

Definition(s)
Antisepsis: the prevention of sepsis by preventing or inhibiting the growth of resident and transient microbes.
Antiseptic: a product with antimicrobial activity that formerly may have been referred to as an antimicrobial agent.
Antiseptic agent: antimicrobial substance applied to skin to reduce the log number of microbial flora. Examples include alcohols, chlorhexidine gluconate, chlorine,
hexachlorophene, iodine, parachloroxylenol, quaternary ammonium compounds, and triclosan.

**Detritus:** accumulated debris resulting from the wearing away or deterioration of tissue or other deposited material; any broken-down material.

III. Applies to
All personnel performing skin preparation for procedures requiring an incision.

IV. **This policy and procedure is to be used in conjunction with:** Surgical Attire policy, Hand Hygiene Policy, Hand Antisepsis Policy, Aseptic Technique policy

V. **Procedure**

A. The patient's surgical or procedural site shall be assessed for moles, warts, rashes or other conditions prior to skin preparation and will be documented.

B. Patients will be instructed not to shave or use a depilatory on the surgical/procedural site before surgery/procedure.

C. Pre-operative/pre-procedure skin preparation with chlorhexidine gluconate.

1. Patients undergoing Class I surgical procedure below the chin should have two preoperative showers with 4% chlorhexidine gluconate (CHG) unless contraindicated before surgery, when appropriate: showering both the evening before and the morning of surgery. Advise patient not to apply any lotions to body after showering.
2. Following each preoperative shower, the skin should be thoroughly rinsed, dried with a fresh clean dry towel and the patient should don clean clothing.
3. Patients undergoing surgery on the head should be instructed or assisted to perform two preoperative shampoos with 4% CHG to reduce the number of microorganisms. Conditioners and other hair care products should not be used after performing shampooing.

D. Caution should be used to avoid CHG contact with eyes, the inside of ears, the meninges or other mucous membrane.

E. If CHG solution gets into the eye immediately rinse the area with copious amounts of running water for at least 15 minutes and seek medical attention.

F. CHG should not be used on the head if the patient tympanic membrane is not intact.

G. Do not use CHG on patients from whom it is contraindicated, including patients with a known hypersensitivity to CHG or any other ingredient in the product.

H. Avoid the use of chlorhexidine gluconate and and/or alcohol or alcohol-based products on mucous membranes

I. Hair Removal
1. Alternatives to hair removal for head and neck surgery include
   a. Braiding hair instead of shaving
b. Using a nonflammable gel to keep the hair away from the incision

c. Depilatories may be used for hair removal if skin testing has been performed without tissue irritation

d. Hair spray and other alcohol based hair products should not be used prior to head and neck surgery. Alcohol-based hair products are flammable and should not be left on the hair during head and neck surgery because they pose a fire hazard.

J. Jewelry (including body piercing jewelry) and cosmetics will be removed before the skin prep.

K. The antiseptic product used for an individual patient should be selected on
   1. Patient allergies
   2. A patient’s report of significant skin irritation from specific antiseptic agents
   3. Contraindications to specific antiseptic agents
   4. The surgical/procedural site to be prepped
   5. The presence of organic matter, including blood
   6. Neonatal status
   7. Large, open wounds
   8. A review of written manufacturer’s information
   9. Surgeon preference

L. The skin preparation is performed using guidelines based on the following
   1. The length and location of the incision
   2. The potential for extension of incision and drain sites
   3. The size of the surgical drape fenestration

M. Hand hygiene will be performed before initiating the surgical prep

N. Application of the antimicrobial agents is done using aseptic technique, sterile supplies and gloves

O. Absorbent pads or towels will be placed appropriately before prepping begins (to prevent prep solution from pooling under patient)

P. Discard all prep sponges once the sponge reaches the periphery of the surgical area

Q. Use normal saline to prepare burned, denuded, or traumatized skin

R. Use gentle preparation techniques when preparing skin of patients with certain medical conditions (e.g., umbilicus, pubis, open wounds)

S. If a highly contaminated area is part of the procedure, the area with a lower bacterial count is prepped first, followed by the area of higher contamination, as opposed to working from the incision site toward the periphery

T. Allow prep solutions ample contact time before applying the sterile drapes to help achieve optimal effect of the prep solution and prevent chemical burns and skin irritation
U. If antiseptic solution contacts the ESU dispersive electrode
   1. The dispersive electrode should be removed
   2. The antiseptic solution cleaned from the patient's skin
   3. A new dispersive electrode applied
   4. If a tourniquet is used, the cuff, padding and skin under the cuff should be protected from contact with prep solutions
      a. If contact occurs, the cuff and / or padding should be replaced before draping

V. Adhesive incision drapes may be used to minimize the gaping and shifting of surgical drapes and to contain residual microorganisms on the skin

W. Protective measures should be implemented to prevent skin and tissue injury due to prolonged contact with skin prep agents. The prep agent should not contact fabric or be allowed to pool on or under body parts (e.g. umbilicus, groin)

X. Solution in contact with fabric may not dry adequately. Pooled prep agents require longer periods of time for evaporation.

Y. If pooling occurs, the excess solution-soaked materials should be removed from the procedure room before draping or using electrosurgery, laser, or other heat source. An adhesive, fluid-resistant or plastic drape may be beneficial in sealing the contaminated area.

Z. When using flammable prep solutions, active communication between the surgical team members include:
   1. A flammable prep agent was used
   2. The application site was dry before draping
   3. Pooling of the prep solution did not occur or has been corrected
   4. Any materials soaked with the prepping agent have been removed from the procedure room

AA. At the end of the procedure the skin prep shall be thoroughly removed from the skin.

BB. If solution is poured into a secondary container it is immediately labeled.

CC. Specific Anatomical Preps
   1. Areas with high microbial counts within the prepared area need to be the final areas prepped. (e.g., umbilicus, pubis, open wounds)
   2. Colostomy sites may be isolated from the prepped area or covered with an antimicrobial soaked sponge and prepped last: cleansed gently and isolated from the rest of the prepped area
   3. When prepping the anus or vagina or a stoma, sinus, ulcer or open wound, the sponge should be applied once to that area and then discarded
   4. For abdominal surgery, the umbilicus should be cleaned before the antiseptic skin preparation.
   5. To soften umbilical detritus, antiseptic solution may be instilled into umbilicus
before cleaning. Cotton applicators may be used to remove detritus.

6. For surgery on hands and wrist, the patient's nails should be short and natural without artificial nail surface (e.g., extensions, overlays, acrylic, silk wraps) in the prepped area. Clean nails first then complete prep.

7. Traumatic ortho injuries with exposed bone may be facilitated by pulse—lavage high pressure parallel water jet, or brush — suction irrigation using sterile 0.9% saline solution and caution should be taken to avoid aerosolization of wound contaminants.

8. Surgical field that includes the penis requires the foreskin be retracted before the glans is gently cleaned. After cleaning the foreskin should be pulled back over the glans to prevent circulatory compromise.

VII. Documentation

A. Preoperative or preprocedural instructions
B. Patient report of compliance with preoperative showering Removal and disposition of jewelry
C. Condition of skin at the surgical site
D. Hair removal, if performed, including: method, time of removal, and area
E. Antiseptic used
F. Area prepped
G. Names of person(s) performing skin preparation
H. Precautions taken when flammable agents are used
I. Removal of prepping agent
J. Postoperative/postprocedural skin condition, including any skin irritation or hypersensitivity (allergic) response to prep solutions

VIII. Orientation/Training

Personnel will receive initial education, training and competency validation on skin preparation agent selection, application procedures and patient assessment.

IX. Monitoring

Compliance is monitored by the OR Committee through performance improvement data collection.

X. References


XI. Storage, Retention and Destruction

A. All policies are able to be retrieved upon request. Policies are stored in MCN Policy Manager and in paper format.
B. This policy will be reviewed at least every three years
C. Previous versions of this policy are archived in MCN Policy Manager. Policies in paper format are retained for 7 years, or 9 years if related to obstetric and newborn care.