Title: Maintaining a Sterile Field/Aseptic technique

Date Effective: 4/96, 10/1/09
Date Revised: 6/97, 4/05, 8/07, 8/09, 10/09, 5/12, 10/12
Date Reviewed:

Joint Commission Chapter: Infection Prevention & Control Committee

Purpose: To outline to personnel how to create and maintain a sterile field.

I. Policy or General Principles

Maintaining a sterile field is an important component of infection prevention. These set of practices that are performed before, during and after invasive procedures reduce the number of potentially infectious microbes and help to reduce the risk of post procedure infection. By maintaining a sterile field it minimizes wound contamination and reduces the patient’s risks for surgical site infections.

Aseptic technique is strictly applied in the Operating room and used in all other clinical settings where invasive procedures (central venous catheter insertion, Peripheral Inserted Central Catheter insertion), are performed. These recommended practices are intended as guidelines to various practice settings which include traditional operating rooms, ambulatory surgery centers, cardiac catheterization, cardiovascular and radiology services, MOH's Clinic, and all other areas where invasive procedures may be performed.

II. Definition(s)

Aseptic Technique: Methods by which contamination with microorganisms is prevented.

Event —related sterility: Shelf life of a packaged sterile item depends on the quality of the wrapper material, the storage conditions, and the conditions during transport, and the amount of handling. The integrity of the package has not been breached.

Sterile field: Area around the site of incision into tissue or the site of introduction of an instrument into a body orifice that has been prepared for use with supplies and equipment. Created by placing a sterile bacterial barrier (sterile drapes) that covers all furniture and becomes an area for sterile supplies and instruments.

Sterile: the absences of all living microorganisms.

Strike-through: Contamination of a sterile surface by moisture that has originated from a non-sterile surface and penetrated the protective covering of the sterile item.

Surgical Aseptic technique: Practice in the Operating room requires sterile equipment and establishing a sterile field.

Surgical draping: is the covering with sterile barrier materials the unsterile area immediate to and surrounding the operative site.

FOR PERFORMANCE BY: Clinical Associate, Surgical Technologist, RN, Environmental Services worker.

POLICY STATEMENTS:

III. This policy applies to all areas that create a sterile field. Policy and procedure is to be used in conjunction with

   A. Surgical Attire Policy
B. Surgical Hand Antisepsis/Hand Scrub
C. Gowning and Gloving
D. Traffic Control
E. Skin Preparation Protocol

IV. Procedure
A. General Principles
1. Wear proper surgical attire as recommended in the Surgical attire policy.
2. Wash hands to provide maximum reduction of skin microorganisms before opening sterile supplies or performing a surgical hand scrub following the Surgical Hand Antisepsis/Hand Scrub Policy. (See Surgical Hand Antisepsis/Hand scrub Policy)
3. The scrubbed person will scrub hands according to the Surgical Hand Scrub procedure (See Surgical Hand Antisepsis/Hand Scrub Policy)
4. Prepare the patient's skin prior to invasive procedure using current skin prep protocol. (See Skin Prep Protocol).
5. Use barrier techniques to decrease transmission of microorganisms from personnel/equipment to patient.
6. Maintain area of sterile field with sterile gloves, gowns, drapes and supplies.
7. On the patient only the sterile drape and the prepared surface of the patient's body are considered the sterile field. The edges of the sterile field are not considered sterile because they come in contact with non-sterile surfaces.

Procedure:
1. Scrubbed persons should function within a sterile field.
   a. Don sterile gown and gloves from a separate surface away from the main sterile instrument table.
   b. The front of the sterile gown is considered sterile from the chest to the level of the sterile field.
   c. Gown sleeves are considered sterile from two inches above the elbow to the cuff circumferentially.
   d. Sleeve cuffs should be considered contaminated when the scrubbed person's hands pass beyond cuff.
   e. Cuffs of the gown should remain at or below the natural wrist area.
   f. Gown sleeves should not be pulled up, leaving cuffs exposed.
   g. The shoulders, areas under the arms, sleeve cuffs, and the back of the gown are considered unsterile.
   h. Scrubbed personnel should inspect glove integrity after donning.
   i. Double gloving is preferred to reduce the potential for hand contact with blood and body fluids.

2. Sterile drapes should be used to establish a sterile field
   a. Drapes should be handled as little as possible and held higher than the OR bed.
   b. Gloves should be protected by cuffing the drape.
   c. The drape that establishes the field should not be moved after it is positioned.
   d. All cables, tubing, etc., for equipment is secured on the sterile field with a non-perforating device.
e. Non-sterile equipment (i.e. Mayo stands, microscopes, C-arms) should be covered with sterile barrier material before being brought over a sterile field.

f. The sterile barrier material covering the equipment will be on the top, bottom and sides.

g. Sterile dressing materials are applied before the surgical drapes are removed.

3. Items used within the sterile field should be sterile.
   a. Items should be inspected immediately for package integrity before presentation.
   b. Event related sterility is not altered over time but may be compromised by certain events or environmental conditions.
   c. Items of doubtful sterility are considered unsterile and discarded.
      a. Only sterile items should touch sterile items.

4. All items introduced to a sterile field should be opened, dispensed and transferred by methods that maintain sterility and integrity.
   a. When the expiration date is provided it should be checked before the package is opened and the contents are delivered to the field.
   b. All items should be inspected immediately before presentation to the sterile field for: proper packaging (wrapped material) and package integrity.
   c. The package will be inspected for appropriate color change for the sterilization process selected, including outside processing indicator tape and inside sterile indicator
   d. Unsterile individuals should open wrapped sterile supplies by opening the wrapper flap farthest away from them first and then open the side flaps. The nearest wrapper should be opened last.
   e. All wrapper edges will be secured when supplies are presented to the sterile field.
   f. Sharp and heavy items should be presented to the scrubbed person.
   g. Peel pouch items should be presented to scrubbed person to prevent contaminating of the contents.
   i. Rigid containers are opened on a separate surface and the filter is checked.
   j. Nonsterile objects or people should not extend over the sterile field.
   k. Basins should be placed on the table’s edge.
   l. Sterile persons will check the chemical indicator prior to lifting contents from packages by reaching down and lifting them straight up, holding the elbows high.
   m. Unscrubbed personnel will not reach over a sterile field.
   n. Unscrubbed personnel will face the sterile field when passing by and will not pass between two sterile areas.
   o. The entire content of the bottle is poured slowly to prevent splashing the sterile field. Any remaining solution will be discarded.
   p. All items will be delivered to the surgical field in a manner that prevents non-sterile objects or people from extending over the sterile field.

5. Sterile field are prepared in the location that they are being used and as close to the scheduled time as possible.
   a. The sterile field should not be covered.
   b. Sterile fields will be monitored constantly; unguarded sterile fields are considered contaminated.
c. An open sterile field requires continuous direct observation to detect if there is any breach in sterility.
d. A sterile field should be considered contaminated if any non-sterile item touches any part of the field.
e. If contamination occurs, dispose of the contaminated materials and recreate the sterile field using new sterile materials.

6. All members of the surgical team will be cognitive of areas that are considered sterile and which are considered unsterile.
   a. All personnel moving within or around a sterile field should do so in a manner that maintains the sterile field.
   b. Unscrubbed personnel will maintain a distance of 12 inches from the sterile field.
   c. Scrubbed persons should move from sterile areas to sterile, if they must change position they should turn back to back or face to face while maintaining safe distances from each other and the sterile field.
   d. Scrubbed personnel should avoid changing levels and should be seated only when the entire surgical procedure will be performed at that level.
   e. Scrubbed personnel should avoid leaving the sterile field when x-rays are taken. Protective devices for reducing radiological exposure should be provided to personnel who cannot leave the room or stand approximately 6 feet away from radiation source.

VII. Documentation N/A

VIII. Orientation/Training

IX. Monitoring
Case by case situations

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.