MRAD 240: Specialized Imaging 1

Sterile Fields

MRT Program

Objectives

- Apply proper surgical asepsis when establishing a sterile field using personal protective equipment

- Discuss the role of the radiologic technologist as part of the surgical team

What is a sterile field?

- A microorganism-free area prepared for the use of sterile supplies and equipment.
- Sterile fields are used in many modalities such as Angiography, CT, U/S and MRI. Example- Biopsies
- A sterile field is required for all invasive procedures because there are risks and complications such as infections

Large Sterile Field – Sterile Corridor



From Frank ED, Long BW, Smith BJ: *Merrill's atlas of radiographic positions and radiologic procedures*, ed 12, St Louis, 2011, Mosby.

Small Sterile Field



https://nursekey.com/minor-office-surgery/#s0045

Creating a Sterile Field

Before you open anything:

- Wash your hands, disinfect surface (allow to dry), and put on mask
- Ensure integrity of tray packaging, reusable or disposable

To open tray:



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Adding Supplies to a Sterile Field

Non disposable sterile items

- Standing back from the table, grasp the object through the wrapping with one hand.
- With the other hand, unseal the wrappings, allowing them to fall over your wrist.
- Hold the edges of the wrapper with your free hand, and drop the object onto the sterile field without releasing the wrapper.



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Adding Supplies to a Sterile Field

"Peel down" disposable sterile items

- Locate opening end and grasp a flap in each hand.
- Peel layers apart.
- Invert hands and drop item onto field.
- You may also hand the item to a gloved individual.



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Moving Supplies Within a Sterile Field

- When a radiographer must manipulate sterile items in a sterile field, a sterile transfer forceps are used.
- Open packaging so only forceps handles are exposed.
- Grasp the handles firmly without touching the remainder of the instrument.
- Keep the forceps above your waist and in your sight at all times. After use, place the tips in a sterile field with the handles protruding so you can use them again.
- **Never** reach across a sterile field.

Adding Solution to the Sterile Field

- Read the label, check the expiry, read the label AGAIN
- Hold bottle with hand over label
- Remove lid, do not touch the inside of lid or rim of bottle
- Pour a small amount of liquid into garbage
- Pour liquid from about 6 inches of height. Be sure not to splash solution onto sterile field
- Replace cap and check label again



https://www.surgo.com

Unattended Sterile Fields

- Don't establish sterile field too early. Wait until you need it.
- However, sometimes sterile trays are pre-assembled without adding any fluid. These trays are called dry vs.a tray with fluid (wet) the time the tray is "deemed" sterile will depend on whether it's a wet or dry tray. Example- Angiography because several trays are assembled at once at the start of the day.

- If the sterile field is already established, and procedure postponed, cover it immediately with a sterile drape.
  - Be sure not to flip or fan the drape
  - Handle drape as little as possible and only on corners

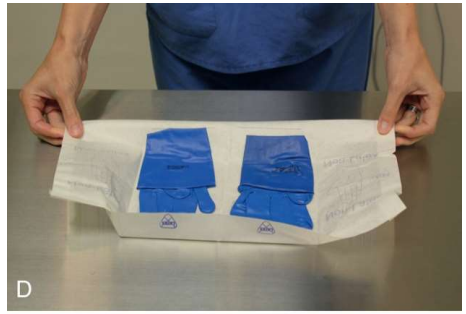
- Airborne contamination is still contamination

Open Sterile Gloving

What's the difference between open and closed gloving? Which do you think you'll be doing most often as a technologist?



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Open gloving technique

- Inspect packaging
- Remove rings, bracelets, roll up sleeves. Perform hand hygiene
- Open packaging like a book. Place in front of you so you can read the writing
- Open flaps and fold bottom edge under so it doesn't close again

Open Sterile Gloving

- Pick up one glove by the cuff end closest to you
- Place hand into glove, aim for fingers
- Slide gloved fingers under cuff of second glove and pick up.



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Open Sterile Gloving

- Slide second hand into glove
- Carefully pull down cuffs of gloves
- Why do I dislike these two pictures?



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Cleaning Up a Sterile Field

- Always check for sharps. Typically it's the Rads responsibility to dispose of properly but sharps can be missed.
- Put in designated sharps bin. Use the appropriate size.

- Discard pharmaceuticals in white pail and bodily fluids in yellow biohazard pail. All other refuse goes in garbage

- Don gloves and thoroughly clean all reusable items before returning them to central sterile supply.
  - Thorough cleaning is important because items must be free of all residue so the sterilizing agent can penetrate to all surfaces.