Medical Student Surgical Asepsis Training
Objectives

- Describe appropriate surgical attire
- Define the procedure for surgical hand scrubs
- Define the procedure for gowning and gloving in the Operating Room/Procedural Areas
- Discuss the key elements of aseptic technique and actions in maintaining a sterile field
Three Designated Areas of Surgical Units

- **Unrestricted areas** - includes entrance areas for patients, personnel and materials. Also includes Pre-Op and PACU and the OR Lounge. Street clothes are permitted and traffic is not limited.
Three Designated Areas of Surgical Suites

• Semi-Restricted areas- includes the peripheral support areas of the surgical suite including corridors, clean and sterile storage, and instrument processing area. Traffic in these areas are limited to authorized personnel and patients. Staff will wear surgical scrub attire and cover head and facial hair. Clean shoes must be worn and shoe covers are advised to keep shoes protected from blood and fluids.
Three Designated Areas of Surgical Suites

Restricted Areas—includes operating and procedure rooms. Non-scrubbed personnel must wear hospital-provided long sleeved jackets that are snapped closed. Masks are required where open sterile supplies or scrubbed persons are located.
Surgical Services/Invasive Procedure Attire

- Attire and personal protective equipment (PPE) in Invasive Procedure areas is worn to:
  - Promote Healthcare personnel safety
  - Establish high level of cleanliness and hygiene
  - Reduce risk of post op SSI

- A detailed policy & procedure regarding attire is essential for Invasive Procedure Areas

- All members of the surgical team are responsible for knowing and following facility policy on surgical attire.
  (Refer to SMC P7P 8514.443)

- Invasive Procedure Area attire should be:
  - A tightly woven, low-linting material
  - Contain shedding skin squames & bacteria
  - Provide comfort & safety
  - Have a professional appearance
Disposable Head Covers and Masks
Surgical Masks

- Masks are worn when sterile supplies are open
  - Protects both the patient and staff members
  - Masks should cover the mouth and nose and be secured to prevent venting & shedding of bacteria
  - Ties are secured behind the back of the head and neck

- Masks should either be tied on securely or removed and discarded….never allow it to hang around the neck or tuck a mask into a pocket for future use

- Masks will be changed between cases and as they become wet or soiled
• Warm-up jackets are part of the surgical attire
• Worn with front closed and sleeves down to wrist
• Wash daily and be made of same material as scrub
Eye Protection

- Eye protection is required for all invasive procedures.
- Goggles or shields that wrap around the face provide the protection needed to prevent splashes to the eyes.
Hand Asepsis

- A surgical hand scrub is done before donning sterile attire for invasive procedures
- Follow these basic guidelines:
  - No artificial nails (any nail enhancements or resin bonding product is considered artificial)
  - No rings, watches or other jewelry
  - No open cuts or sores

Be sure to inspect your hands for intact skin, no open cuts/sores.
Surgical Hand Scrub

*Traditional “wet-scrub”*

- Scrub is 3-5 minutes using a non-abrasive sponge or brush. Visualize each hand as having 4 sides and follow the steps below:
  1) Moisten hands and arms
  2) Clean under nails with nail cleaner under running water
  3) Apply antimicrobial agent to wet hands and arms
  4) Scrub nails, fingers, hands and forearms
  5) Wash all four sides effectively keeping the hand elevated
  6) Repeat this process for opposite fingers, hand and arm
  7) Rinse thoroughly keeping hands above arms and away from body

Refer to SMC Surgical Services Guideline “Surgical Scrub Technique”
Surgical Hand Scrub

**Alcohol-Based Antiseptic Surgical Hand Scrub/Waterless Hand Scrub:**

- Wash hands and arms with soap and water for at least 15 seconds immediately before the beginning the antiseptic surgical hand scrub. Clean under nails with nail cleaner under running water. Rinse hands and arms.
- Dry hands and arms thoroughly
- Dispense one pump (2 mL) into the palm of one hand
- Dip the fingertips of the opposite hand into the lotion and work it under the nails
- Spread the remaining lotion over the hand and up to just above the elbows
- Using another one pump (2 mL) and repeat with other hand and arm
- Dispense one pump into either hand and reapply to all aspects of both hands up to the wrist
- Allow to dry before donning gloves
Waterless Hand Asepsis

- Surgical hand hygiene using an alcohol-based surgical hand rub product should be performed each and every time according to the manufacturer’s written directions for use.

- Avoid short-cuts or variance in procedure.
Maintaining A Sterile Field

- Sterile persons should function within a sterile field
  - Perform hand antisepsis prior to donning sterile gown and gloves
  - Front of gown is considered sterile from chest to the level of the sterile field
  - Gown sleeves are considered sterile from 2 inches above the elbow to the cuff circumferentially
  - Gowns should be of adequate size to close completely in the back
Gowning and Gloving

- **Drying the hands and arms after the traditional “wet-scrub’ method**

1) The sterile scrub tech will hand a towel to the newly scrubbed person length-wise and the top half should be placed over the wet hand and arm.

2) The newly scrubbed person should bend over slightly so that the towel does not become contaminated on the scrub pants.

3) The newly scrubbed person will blot the first hand and arm, being careful not to move the towel downward so that the contaminated portion of the towel (above the elbow) comes in contact with the scrubbed portion of the arm.

4) The newly scrubbed person will take the bottom half of the towel with the opposite hand and arm, then fold it over the wet arm in the same manner as the first and blot the second hand and arm dry.

5) Once both arms are dry, discard the towel by simply letting go.

**DO NOT GATHER UP THE TOWEL IN EITHER OR BOTH HANDS FOR DISCARD!**
Gowning and Gloving

- A gowned and gloved individual may assist another individual in donning a sterile gown
- The gown is opened with the inner side and open armholes towards the person being gowned.
- The gown is held until the person’s hands and forearms are in the sleeves of the gown
- The circulating nurse assists in pulling the gown onto the shoulders, adjusting the back and tying the tapes
- The sterile scrub tech will then hold out a glove for the newly gowned individual to insert the right hand, followed by the left hand. In some cases, the sterile surgical team double-gloves
- The wraparound back on the gown is fixed into position by the scrub person after gloving is completed.
Maintaining a Sterile Field

- Scrubbed personnel should remain close to the sterile field.

- Scrubbed personnel move from sterile area to sterile area (back to back or face to face).

- Unscrubbed personnel should face sterile fields on approach.
  - Do not walk between sterile fields.
  - Keep a distance of at least 12 inches when walking by a sterile field.

- Keep hands above level of waist.

- Avoid changing levels.
  - Be seated if the entire case requires being seated.
Establishing A Sterile Field

- Sterile drapes should be placed on the patient, furniture, and required equipment to establish a Sterile Field
- Handle drapes as little as possible
- Drapes should be held higher than table and placed from surgical site to periphery – once place sterile drapes cannot be moved
- During draping, be cautious to prevent gloved hands from being contaminated
When in Doubt, It’s Out

- When a break in sterile technique occurs, corrective action should be taken immediately.
- If someone tells you that something is contaminated, accept that and take steps to correct.
Removing Gown and Gloves

- Arms and hands must be protected from contagion with the outside of the gown.
- Grasp gown at shoulder seams and pull firmly away and down over arms to cuff.
- Continue to turn gown, inside out, over gloved hand evertng the cuff of the glove.
- Repeat with other sleeve.
- Keep arms and hands away from body while rolling the gown inside out and discarding in designated receptacle.
References


Cleaning the OR Toolkit – Atlas Surgical Services website [http://atlas2.medcity.net/portal/site/surgical/menuitem.46add28b860289e48fa894a39c01a1a0/](http://atlas2.medcity.net/portal/site/surgical/menuitem.46add28b860289e48fa894a39c01a1a0/)

Fire Safety Toolkit – Atlas Surgical Services website [http://atlas2.medcity.net/portal/site/surgical/menuitem.93c1e38d98c7bbe4a98044818c01a1a0/](http://atlas2.medcity.net/portal/site/surgical/menuitem.93c1e38d98c7bbe4a98044818c01a1a0/)

Flash Sterilization Toolkit [http://atlas2.medcity.net/portal/site/surgical/menuitem.aef6e0aef2b01c80d1505755bc01a1a0/](http://atlas2.medcity.net/portal/site/surgical/menuitem.aef6e0aef2b01c80d1505755bc01a1a0/)

SMC P&P 8614.443 “Surgical Attire”

SMC Surgical Services Guideline “Surgical Scrub Technique” revised 11/10

Preventing Surgical Infections and Maximizing Patient Safety Back to Basics:Part I (HCA Clinical Services Group)
Congratulations!

• You have completed the Medical Student Surgical Asepsis module.

• Please complete the quiz.

• Thank you for your time and commitment to quality patient care.