Scrubbing/Gowning/Gloving Objectives:

At the completion of the module the learner will be able to:

- Identify and list the purpose of a surgical hand scrub.
- Describe the steps involved in the gowning and degowning process.
- Relate the differences between closed glove technique and the open glove technique.
- Identify the sterile areas of the surgical gown.
Introduction

All members of the surgical team are responsible for knowing and following WMC Health’s policy on surgical attire.

- Surgical attire should be clean, freshly laundered, and facility approved for use only within the surgical suite.
- Surgical attire should be changed daily or more frequently, if it becomes soiled.
- Home laundering is not recommended because of the potential for contamination of the home from the health care facility or contamination of the health care facility from the home.
- Unscrubbed personnel should wear buttoned or snapped long sleeved jackets to contain bacterial shedding from the arms.
- The surgical attire selected should completely cover other garments worn beneath them.
- Personnel should cover all head and facial hair, including sideburns and necklines, when in the semi-restricted and restricted areas of the surgical suite.
- Masks must be worn in the restricted areas of the OR suite when open sterile items and equipment are present. The mask should fully cover both nose and mouth and be secured to conform to facial contours and prevent venting.
- In addition providing proper surgical attire, personal protective equipment (PPE) should be available and used to protect personnel from hazardous conditions in the semi-restricted and restricted areas of operating suite. This may include:
  - gloves
  - gowns and/or aprons that are liquid resistant
  - protective eyewear/shield
  - masks
Hand Hygiene
After donning surgical attire, personnel must perform hand hygiene. The purpose of hand hygiene is to remove soil and transient microorganisms from the hands. This is accomplished using mechanical friction (i.e., physically rubbing, washing, and rinsing of the hands). The term hand hygiene is defined as all measures related to hand condition and decontamination. Decontamination of the hands is the first and most important step in hand hygiene and can be accomplished by several methods using:

- soap and water
- antiseptic soap and water
- antiseptic hand rub (if visible not soiled)

**surgical hand scrub/rub using**
- waterless, brushless surgical antiseptics (if not the first scrub of the day)
- a traditional surgical hand scrub using a sponge.

**The purpose of the surgical hand scrub:**
- remove debris and transient microorganisms from nails, hands, and forearms
- reduce the resident microbial count to a minimum
- inhibit rapid rebound growth of microorganisms

**There are two types of microorganisms found on the skin:**
- Transient organisms
- Resident organisms

Hand hygiene is the primary means of removing transient and resident microorganisms commonly found on hands. Resident microorganisms are adherent and resistant to removal by simple hand washing. However, simple hand washing can reduce the number of these organisms when combined with antiseptic agent, and can inactivate or inhibit microbial growth. The surgical hand scrub uses a mechanical and chemical process to control transient and resident microorganisms on the skin.
People acquire transient organisms by direct contact and these organisms typically attach loosely to the skin surface. The mechanical friction of the hand scrub process removes almost all of the transient organisms. Resident organisms live below the skin surface in hair follicles and sweat glands, and there are adherent and resistant to removal. During the surgical scrub, the chemical action of the antimicrobial or antiseptic agent reduces resident skin flora.

**Remember:**

The surgical hand scrub is effective only if all surfaces are exposed to the mechanical cleaning and chemical antisepsis process.
In addition to wearing appropriate surgical attire, the scrub person should wear additional PPE including: headgear that covers all hair including sideburns and neckline. Complete coverage of hair is necessary because uncovered hair acts as a filter and collects bacteria. Shedding from the hair can affect surgical wound infections.

A mask that covers the mouth and nose completely. A mask contains and filters droplets and microorganisms expelled through the mouth and nose. Protective eyewear or a face shield to reduce the possibility of contamination of the scrubbed person’s mucous membranes of the mouth, nose, and eyes.

Shoe covers should be worn when exposure to blood or potentially infectious materials is anticipated.

Before the surgical scrub the scrub person should:

- tuck the scrub shirt into his or her trousers to prevent the shirt from getting wet and to reduce the risk of scrubbed hands and arms becoming contaminated by contact from the garment.
- fit the surgical face mask snugly and comfortably over the nose and mouth so that it does not vent at the sides.
- don clean protective eyeglasses or face shield.
- Use of protective eyewear or face shields prevents eye and mucous membrane contamination from splashing or spraying.
- ensure that all rings and watches are removed.
Scrubbing Procedure

The scrub person performs the surgical hand scrub before donning sterile gown and gloves. Before the surgical hand scrub, the scrub person should open the gown package containing a sterile gown, towel, and gloves and place them on a table in the OR. To prevent possible contamination of the sterile field, the main instrument table should not be used for this purpose.

Traditional Hand Scrub Procedure:
A traditional surgical hand scrub procedure should include the following steps:
1. Remove all jewelry (i.e., rings, watches, bracelets).
2. Don a surgical mask.
3. Wash hands and forearms, if visibly soiled, with soap and running water immediately before beginning the surgical scrub.
4. Clean the subungual areas of both hands under running water using a disposable nail cleaner.
5. Dispense the approved antimicrobial scrub agent according to the manufacturer’s written directions.
6. Apply the antimicrobial agent to wet hands and forearms using a soft non-abrasive sponge.
7. Scrub for three to five minutes according to the manufacturer’s written directions.
8. Visualize each finger, hand, and arm as having four sides. Wash all four sides thoroughly, keeping the hands elevated. Repeat for opposite fingers, hand, and arm.
9. If possible, turn off water when not in use.
10. Avoid splashing surgical attire.
11. Discard sponges, if used, in appropriate container.
12. Rinse hands and arms under running water in one direction from fingertips to elbows as often as needed.
13. Hold hands higher than elbows and away from surgical attire.
14. In the procedure room, dry hands and arms with a sterile towel before donning a sterile surgical gown and gloves.

It is WMC policy that the first scrub of the day is to be a traditional hand scrub.
Alcohol-based Hand Rub Procedure:

A standardized surgical hand scrub using an alcohol-based surgical hand rub product should include the following steps:

1. Remove all jewelry (i.e., rings, watches, bracelets).
2. Don a surgical mask.
3. Wash hands and forearms, if visibly soiled, with soap and running water immediately before beginning the surgical scrub.
4. Clean the subungual areas of both hands under running water using a disposable nail cleaner.
5. Rinse hand and forearms under running water.
6. Dry hands and forearms thoroughly with a disposable paper towel.
7. Dispense the approved antimicrobial rub agent according to the manufacturer’s written directions.
8. Apply the hand rub agent to the hands and forearms according to the manufacturer’s written instructions.
9. Repeat the product application process, as directed.
10. Rub thoroughly until completely dry.
11. In the procedure room, don a sterile surgical gown and gloves.