SURGICAL SCRUBBING, GOWNING AND GLOVING

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Key Words: Surgical scrubbing, surgical gowning, gloving, perioperative services, surgical preparation, preparation for surgery.

1. PURPOSE

To minimise the risk of infection from microorganisms present at the time of interventional procedures and surgery.

BACKGROUND

The patient’s surgical outcome is influenced by the creation and maintenance of an aseptic environment.

The surgical scrub is the process of removing debris and transient microorganisms from the hands and forearms, reducing the residual microbial count and leaving an antimicrobial residue on the skin to prevent growth of microorganisms for several hours.

The wearing of sterile gowns and gloves by the surgical scrub team minimises the risk of surgical wound infection in the patient, and protects the team from exposure to contamination from blood and other body fluids.

KEY POINTS

1. All members of the surgical scrub team shall be appropriately dressed in perioperative attire and personal protective equipment prior to commencing the surgical scrub.
2. Skin disinfectants and or antiseptics used for the surgical scrub shall be approved by the Therapeutic Goods Administration and used in accordance with the manufacturer’s recommendations.
3. The surgical scrub team shall follow a standardised procedure for the surgical scrub.
4. The surgical gown shall be presented in a manner that enables its application using an aseptic technique.
5. Surgical gloves shall be applied in an aseptic manner.
6. Double gloving is recommended.
7. A three minute scrub shall be undertaken as the first scrub of the day.
8. Subsequent scrubs of 2 minutes shall be undertaken between cases.
9. Hand preparation shall be performed as per the Skinman® Surgical Hand Rub procedure

PREPARATION:

Surgical Scrub Team Members

- Theatre suite attire shall be worn
- Bare below elbows at all times
- Clean closed in shoes, trainers, rubber boots or clogs shall be worn in theatre
- Hair completely covered with disposable hat provided or clean cloth hat
- Facial hair must be covered with a mask and disposable hood worn
Headdresses worn for religious reason must be clean and for the purpose of wearing in theatre.

- Remove all jewellery from the hands and arms (e.g. rings with stones, watches and bracelets).
- If unable to remove wedding ring, please pay particular attention to scrubbing under the ring.
- Appropriate mask to be worn with protective eyewear.
- Protective eyewear must be worn in theatre.
- Ensure sleeves are above elbows.
- Nails shall be short, clean and free of artificial acrylic nails and nail polish.
- Ensure sterile gown pack and gloves are opened ready for use.
- Disposable AAMI ¾ gown must be used for surgery.

**Note:** for insertion of spinal/epidural anaesthetist will use AAMI 2 gowns.

**SKINMAN® SURGICAL HANDBRUB PROTOCOL**

**FIRST CASE OF THE DAY: 3 MINUTES DURATION**

- Hands must be washed using medicated or non-medicated soap.
- Open brush.
- Turn tap on and adjust temperature.
- Wet hands and arms under running water.
- Turn off tap.
- Apply antimicrobial solution 5mL (1 pump) to hands and arms up to 2.5cm past the elbow for 30 seconds.
- Remove pick from brush packet and clean nails for 15 seconds in all.
- Discard pick and use brush on nails only for 15 seconds each hand, on completion the brush should be discarded.
- Scrub all sides of each digit, including connecting web spaces, the back of the hands and palms for 1 minute.
- Rinse off solution from fingertips to elbow.
- Apply antimicrobial solution to hands and halfway down forearms.
- Wash hands paying particular attention to washing between the digits, the back of the hands and palms for 1 minute.
- Finish off applying a circular movement from wrist to halfway down forearms.
- Final rinse and turn tap off with elbow.
- Allow excess water to drain from the elbows into the sink.
- Walk to gowning and gloving area with hands held away from the body keeping hands higher than elbows.
- Any debris beneath the fingernails must be removed under running water using a nail pick.
- The hands are dried using a non sterile paper towel.
- Hands must be thoroughly dry before commencing the Skinman® Surgical Hand Rub (SHR).

**STEP 1 (30 SECONDS IN TOTAL)**

- Dispense 2-3 pumps of Skinman® Soft into the palm of the left hand.
- Dip the fingertips of the right hand into the pool of Skinman® Soft in the left hand to decontaminate the nails (5 seconds).
- Apply the Skinman® solution to the right hand an arm up to the elbow (10 seconds).
- Repeat the process for the other hand and arm (5 seconds & 10 seconds).
STEP 2 (30 SECONDS IN TOTAL)
- Dispense 2-3 pumps of Skinman® Soft into the palm of one of the hands and cover the entire surface of both hands and forearms.
- Rub the areas for 30 seconds
- If the hands or forearms dry off during this stage dispense another pump of Skinman® Soft to have adequate coverage for 30 seconds.

STEP 3 (30 SECONDS)
- Dispense 1-2 pumps of Skinman® Soft into the palm of one hand.
- Cover the entire surface of both hands with the solution up to the wrists.
- Rub the hands palm to palm.
- Spread the Skinman® Soft onto the backs of the hands including the wrists with the fingers interlaced.
- Grip the fingers on each hand and rub the solution in sideways / back and forth motion.
- Clasp each thumb in the opposite hand and rub the solution all over it using a rotating movement.

At the end of the 90 seconds and the hands are dry, gowning and gloving may commence.

SUBSEQUENT SCRUBS:
- Repeat steps 1 – 3. Washing is not required unless the hands are visibly soiled.

GOWNING AND GLOVING:
- Disposable gowns only are used for surgery
- The closed glove method of gloving shall be used to don gloves
- Double gloving is recommended practice, the gloves underneath should be ½ size larger than the gloves on top, the top gloves will be the normal size for the wearer
- Should a change of gloves be required during surgery and the user has donned only 1 pair of gloves, the open method should be used to don gloves, the sleeves of the gown must remain at the wrist, not pulled down over the hand.

Note: medical staff must gown, glove and wear PPE when uterine manipulation is required.

GLOVING:
1) Closed Glove Technique       2) Open Glove Technique

CLOSED GLOVE TECHNIQUE
This is the recommended technique for those involved in a surgical procedure.
- Grip the sterile inside pack through your gown cuffs keeping the fingers inside the gown cuff, open and display the gloves upside down
- Place your right thumb inside the top cuff edge of the right glove (thumb to thumb), pick up and lay flat on your right hand.
- Place left thumb under the cuff exposed on right glove, and stretch glove over right hand
- Keeping your right fingers straight, pull down the glove with your left hand, using a combination of glove and sleeve pulling
- Ensure the white cuff remains inside the glove
- Repeat procedure with left glove.

Once gowned and gloved, areas considered most sterile are between the nipple line and umbilicus, the fingertips to the elbow.
Disposable gowns have a left side tie and a right side tie, both attached to a sterile card. The left tie is released from the card which is held by the scrub person, and the card with right tie attached is handed out to the scout. The scout will hold on to one side of the card while the scrub person pivots round and their back is covered. The scrubbed person releases the tie from the card and ties both ties at the side. The card is disposed of by the scout. The ties are tied at the front.

**OPEN GLOVE TECHNIQUE:**

This technique should be used if contamination has occurred at the table. This technique can be used if a catheterisation is performed on table by the circulating nurse.

- Pick up the cuff of the right glove with your left hand. Slide your right hand into the glove until you have a snug fit over the thumb joints and knuckles. Your bare left hand should only touch the folded cuff - the rest of the glove remains sterile.
- Slide your fingertips into the folded cuff of the left glove
- Pull out the glove and fit your left hand into it
- Unfold the cuffs down over your gown sleeves. Make sure your gloved finger tips do not touch your bare forearms or wrists.

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**REFERENCES (STANDARDS)**

1. **ACORN Standards for Perioperative Nursing.** 2012-2013. The Australian College of Operating Room Nurses Ltd. Adelaide. South Australia.
3. **Australian College of Operating Room Nurses** 2006 Recommended practices: surgical scrubbing, gowning and gloving S21
4. **Journal of Hospital Infection** (2002) 51; 241-255. Behaviours and rituals in the operating theatre, a report from the hospital infection society working party on infection control in theatres. Dublin, HIS working party
6. US standard for Surgical Gowns AAMI: PB70

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National Standards – 3.10 Developing and implementing protocols for aseptic technique.
Legislation - Nil

Related Policies – **KEMH Perioperative Clinical Guidelines**
Other related documents – Nil

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