ROUTINE PRACTICES PROTOCOL

WINNIPEG REGIONAL HEALTH AUTHORITY
INFECTION PREVENTION AND CONTROL

The primary goal of Infection Prevention and Control programs is to reduce the risk of acquiring a healthcare-associated infection (HAI) to a minimum level; zero risk is not possible in every circumstance but should nevertheless be the ultimate goal. The consequences (adverse effects and cost) of cross-transmission of microorganisms (germs) must be balanced against the cost and increased work load when Routine Practices are being followed.

Routine Practices are the foundation for preventing the transmission of microorganisms during care in all healthcare settings. It is a comprehensive set of Infection Prevention and Control (IP&C) measures developed for use in the routine care of ALL PERSONS at ALL TIMES in ALL HEALTHCARE SETTINGS (acute, long-term, or community care). Routine Practices aim to minimize or prevent healthcare-associated infections in everyone in the healthcare setting including the patient/resident/client (PRC), all staff, visitors, Designated Caregivers, contractors, and so on. Following Routine Practices can reduce the transmission of microorganisms in all healthcare settings.

All staff (physicians, nurses, allied health staff, support staff, students, volunteers and others) are responsible for complying with Routine Practices and for tactfully calling a breach in practice, as appropriate. PRCs and all visitors have a responsibility to follow Routine Practices. Teaching those receiving care and visitors the basic principles of Routine Practices (e.g., hand hygiene, use of personal protective equipment) is the responsibility of all staff. No one is exempt from following Routine Practices.

Consistent use of Routine Practices is expected for the care of all persons at all times in all healthcare settings: in hospital, long term, or community care. It is important to follow Routine Practices at all times for all PRC in all healthcare settings as microorganisms can be transmitted from both symptomatic and asymptomatic people in any setting.

"Standard precautions" is a term widely adopted in the United States and convey the same set of principles as "Routine Practices"

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1. POINT OF CARE RISK ASSESSMENT (PCRA)

Prior to every interaction with the patient, resident or client (PRC); all healthcare staff are responsible to assess the task/care to be performed, the clinical presentation of the PRC, physical state of the environment and the healthcare setting, to determine the infectious risk to themselves, those receiving care, Designated Caregivers, visitors, and staff. A Point of Care Risk Assessment (PCRA) is a tool for staff to use before each interaction to determine appropriate action and control measures needed to minimize the risk to staff, the PRC and others in the healthcare external environment.

A Point of Care Risk Assessment (PCRA)
should be used by both clinical and non-clinical staff

1.1. How to Perform a Point of Care Risk Assessment

To perform a PCRA, consider infection transmission risk for the specific:

- Interaction/task
- Environment
- PRC, and
- Health care worker

When each staff member performs a PCRA, they must determine the risk of exposure and potential for the spread of microorganisms (germs) during interactions with those receiving care. Examples of factors to consider include:

- What kind of contact will I have with the PRC (prolonged or frequent direct care)?
- What is the health status of the PRC? Are they showing signs and symptoms of infection (i.e., coughing, sneezing, respiratory secretions)? Are they immunocompromised?
- Is the PRC cooperative? Do they understand what is happening?
- Will there be a risk of splashes or sprays of blood or body fluids during the task(s) or procedure(s)? Is there a risk of exposure to secretions and excretions, non-intact skin, or mucous membranes?
- If the PRC has diarrhea, is he/she continent? If incontinent, can stool be contained in an infant diaper or incontinent product?
- Is the PRC able and willing to perform hand hygiene and/or wear a medical mask (procedure or surgical mask) if required?

- Will an aerosol generating medical procedure (AGMP) be involved?
- Is the PRC in a shared room/treatment space?

1.2. Using Control Measures After Performing a PCRA

After assessing the status of the PRC, the task/procedure, and the care environment, use control measures to lower the chance of spreading potentially harmful microorganisms.

Control measures may include:

- Hand hygiene at point of care
- Placement and accommodation of the PRC:
    - Prioritize placement of those with suspected or confirmed airborne infection (e.g., measles or tuberculosis) into an airborne isolation room (AIR) with the door closed. Bed moves (shuffles) may be required.
    - Implement strategies to reduce aerosol production in AGMP's (see: AGMP section 4.5)
    - Give priority to those with uncontained wound drainage or uncontained diarrhea into a single room
    - If sharing a room, spatial separation (2 metres/6 feet) between beds is ideal and shared equipment must be cleaned and disinfected between uses.
- Treating an active infection
- Selecting roommates for shared rooms or for transport in shared ambulances (and other types of transportation e.g., air ambulances, taxis), consider the infection risk *posed from* a PRC or *posed to* the PRC
- Consider the immune status of PRC who may potentially be exposed to certain infections (e.g., measles, mumps, rubella, varicella)
- Flow (movement) of the PRC
    - Restrict movement of symptomatic PRC within the specific care area/facility or outside the facility as appropriate for the suspected or confirmed infection/colonization.
- Work assignment: consider the immune status of staff who will potentially be exposed to certain infections (e.g., measles, mumps, rubella, varicella)
- Personal protective equipment (PPE) selection:

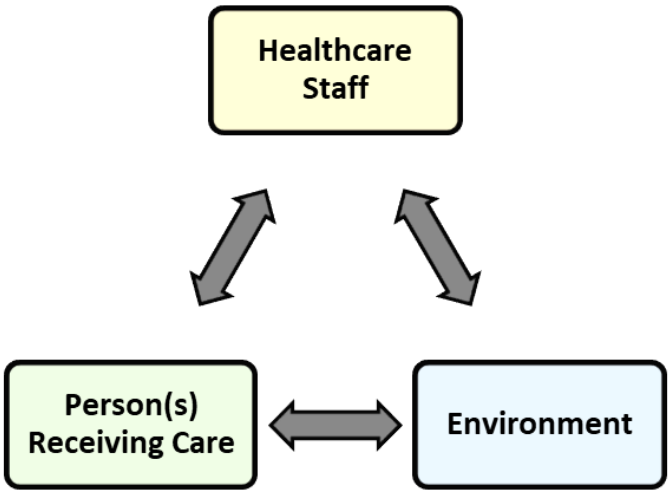
- Use personal protective equipment appropriate to the suspected or confirmed infection/colonization.

- Aseptic technique for invasive procedures such as injections, IV insertions, etc. Cleaning and disinfecting non-critical care equipment and the environment
- Handling of linen and waste
- Restricting visitor access where appropriate
- Assess need for implementing, maintaining or discontinuing Additional Precautions.

2. HAND HYGIENE

Hand hygiene (HH) is a comprehensive term that applies to cleaning one's hands with alcohol-based hand rub, or soap and water. It also includes actions taken to maintain healthy hands and fingernails. Hand hygiene is a core element of safe care for the prevention of infections and preventing the spread of microorganisms (germs), including antimicrobial resistant organisms (AROs). 1 includes cleaning hands with soap and water or alcohol-based hand rub in order to remove microorganisms. HH includes surgical hand antisepsis.[13.4]

The most common way microorganisms are spread in any healthcare setting is from the hands of health care staff to patient/resident/client (PRC), either directly or indirectly. During the delivery of health care, staff constantly touch surfaces and substances including inanimate objects, a PRC's intact or non-intact skin, mucous membranes, food, waste, body fluids, the staff member's own body (e.g., hair). Eating, respiratory hygiene, and use of the toilet also expose hands to body fluids. All of these can carry potentially harmful microorganisms that can be passed on to someone else if proper HH is not performed. The spread of microorganisms can result in healthcare-associated infections (HAIs).



Healthcare workers should teach those receiving care, Designated Caregivers and visitors about HH. The benefits of the general public participating in hand hygiene should not be underestimated. HH education and accessible HH product for the general public is encouraged.

In healthcare settings, hand hygiene is the single most important way to prevent infections

2.1. Alcohol-Based Hand Rub (ABHR)

- Use of alcohol-based hand rub (ABHR) has been shown to reduce healthcare- associated infection rates
- ABHR is the preferred hand hygiene method and should be used at point-of-care unless hands are visibly soiled
- ABHR is appropriate to use when caring for PRC with Clostridioides difficile, except in outbreak or hyperendemic (sustained high rate) settings, then handwashing with soap and water is recommended[13.11].
- ABHR is faster, more convenient and effective than washing hands (even with an antibacterial soap) when hands are not visibly soiled (i.e., no sink to locate, no time needed to wet hands prior or rinse hands after soap is applied, no drying with paper towel required).
- ABHRs:
    - Provide for a rapid kill of most transient microorganisms
    - Are not to be used with water
    - Contain emollients to reduce hand irritation
    - Can be used when walking to your next location/task
- DO NOT use ABHR with water as it will reduce its effectiveness
- DO NOT use ABHR immediately after hand washing with soap and water as it will result in more hand irritation
- ABHR concentrations approved for use in healthcare settings ranges from 60 to 90% alcohol. The concentration available for most healthcare settings in this province is 70%.
- Hand hygiene with point of care ABHR is the standard of care expected of all staff, in all healthcare settings.

- Busy staff need access to hand hygiene products anywhere care is provided to a PRC or contact with their environment is taking place (from the ICU to the community outreach clinic).
- Making ABHR available at the point of care (e.g., within arm's reach) is an important system support to improve hand hygiene. This enables staff to quickly and easily follow the 4 Moments for Hand Hygiene

- Point of care ABHR can be achieved with a variety of methods (e.g., ABHR attached to the bed, wall, containers carried by the healthcare worker [HCW]).
  - Sites/programs shall complete a risk assessment to determine the most appropriate placement of ABHR in every facility and provide ABHR at point-of-care so it is easily accessible for appropriate use.

Hand hygiene with correctly applied ABHR ***kills microorganisms*** in seconds; Hand hygiene with soap and water done correctly, ***physically removes microorganisms***

2.2. Hand Washing

- Hand washing with soap and running water must be performed when hands are visibly soiled.
- Use only liquid/gel or foam soap to wash and paper towels to dry your hands.
- The sink should be at point of care
- If the PRC bathroom must be used for hand hygiene (no other option available), avoid contamination of hands with potentially contaminated surfaces and objects
- If any of these resources are not available, ABHR must be used, unless hands are visibly soiled
  - If hands are visibly soiled use the technique outlined in 2.3.3

2.2.1 Plain Soaps

- Plain soaps act on hands by emulsifying dirt and organic substances (e.g., blood, mucous), which are then rinsed away with running water.
- Antimicrobial agents in plain soaps are only present in low concentrations and are used as a preservative, they aren't as effective as an antimicrobial agent.[13.6]

2.2.2 Antimicrobial Soap

- Antimicrobial soap may be considered for use in critical care settings such as intensive care units and burn units, but is not recommended in other care areas.
- Antimicrobial soaps have residual antimicrobial activity and are not affected by the presence of organic material.

2.2.2.1 Disadvantages

- Antimicrobial soaps are harsher on hands than plain soaps and frequent use may result in skin breakdown; and
- Frequent use of antimicrobial soap may lead to antibiotic resistance in microorganisms

2.2.3 Bar Soaps

- Bar soaps are not acceptable in healthcare facilities or community settings for use by HCWs.
- Bars soaps are only for individual PRC use for showering and bathing. In healthcare facilities, if bar soap is provided for PRC s, it shall be supplied in small pieces for individual PRC's use. These bars soaps must be stored in a soap rack to allow drainage and drying.
- Discard bar soap on discharge.

2.3. HAND HYGIENE TECHNIQUES

- Remove hand and arm jewelry as these items are hard to clean and prevent the removal of microorganisms from surfaces of the hands and wrists they cover[13.3]
- If a watch is worn, it must be worn above the wrist and fit snugly
- Avoid long sleeves. Clothing or other items that impede frequent and effective hand hygiene should be removed.

2.3.1 Using an Alcohol-Based Hand Rub (ABHR)

- Ensure hands are visibly clean (if soiled, follow hand washing steps outlined in 2.3.2)
- Apply one to two full pumps of product (about 1.1 - 2.0 ml) onto one palm; the volume should be enough so that 15 seconds of rubbing is required for drying[13.12]

- Rub product over all surfaces of hands, concentrating on finger tips, between fingers, back of hands, wrists and base of thumbs; these are the most commonly missed areas; and continue rubbing hands until product is dry; this will take a minimum of 15 seconds if sufficient product is used. Hands must be fully dry before touching the PRC or the care environment/equipment for the ABHR to be effective. This also eliminates the extremely rare risk of flammability in the presence of an oxygen-enriched environment. DO NOT WIPE OFF.
- There is insufficient evidence for the efficacy of non-alcoholic, waterless antiseptic agents in the health care environment. Therefore, they shall not be used in health care settings.

2.3.1.1. In the community/providing care in non-healthcare settings

- Carry a personal size bottle of ABHR approved and provided by your organization.
- Keep the ABHR easily accessible in an outside pocket or on an ABHR hanger
- Open the bottle, dispense about a nickel sized amount (1.1-2.0 ml) into one palm. Cap the bottle and return it to your pocket or let it hang on the ABHR hanger.
- If carrying equipment and/or supplies in a bag:[13.16]

  1. Open the bag
  2. Perform hand hygiene
  3. Take out the equipment/supplies from your bag

2.3.2 Using Soap and Water

- Wet hands with warm (not hot or cold) water; hot or cold water does not significantly impact microbe removal but it is hard on the hands, and will lead to dryness
- Apply liquid/gel or foam soap
- Vigorously lather all surfaces of hands for a minimum of 15 seconds to create a good lather; removal of transient or acquired microorganisms
- Microorganisms require a minimum of 15 seconds of mechanical action; Pay particular attention to finger tips, between fingers, backs of hands, wrists and base of the thumbs; these are the most commonly missed areas
- Using a rubbing motion, thoroughly rinse soap from hands with warm running water; residual soap can lead to dryness and cracking of skin

- Dry hands thoroughly by blotting hands gently with a paper towel; rubbing vigorously with paper towels can damage the skin
- Turn off taps with paper towel to avoid recontamination of the hands. If hand air dryers are used in non-clinical areas, hands-free taps are required
- DO NOT use ABHR immediately after washing hands, as skin irritation will be increased
- HH should not be performed at a PRC's sink as this may re-contaminate hands. HH should be done as soon as a dedicated HH sink is available
- If the PRC bathroom must be used for hand hygiene (no other option available), avoid contamination of hands with potentially contaminated surfaces and objects.

2.3.2.1 In the community/providing care in non-healthcare settings

- If hand washing with soap and water is necessary (e.g., hands are visibly soiled) never use bar soap. Use liquid soap if available or carry a liquid soap approved and provided by your organization[13.15]
- The sink and the area surrounding the sink must be visibly clean and running water must be available
- Never use the PRC's towel. Always use paper towels.[13.15]
- Never use hot air dryers to dry hands
- If any of these are not available use technique outlined in 2.3.3

2.3.3 When Hands are Visibly Soiled and Liquid/Gel Soap and Running Water is Not Available

- Use a moist pre-packaged hand hygiene wipe to remove the soiling and then follow with ABHR to perform hand hygiene
- Wash hands once a suitable sink and hand hygiene supplies are available.

2.4. Factors that Reduce Effectiveness of Hand Hygiene

2.4.1 Condition of the Hands

The condition of the hands can influence the effectiveness of hand hygiene. Intact skin is the body's first line of defense against microorganisms; therefore, hand care is an essential part of the hand hygiene program. See section 2.4.9 – Lotions and Creams for more information. The presence of dermatitis, cracks, cuts or abrasions can trap microorganisms and compromise hand hygiene. Dermatitis also increases shedding of skin squamous (cells) and, therefore,

shedding of microorganisms. If there are any concerns regarding skin integrity, consult Occupation and Environmental Safety and Health (OESH).

2.4.2 Nails

Long nails are difficult to clean, can pierce gloves and harbour more microorganisms than short nails. Keep natural nails clean and short. The nail should not show past the end of the finger. Clean, short fingernails (no more than 0.64 cm or ¼ inch) are required by direct care staff that comes into contact with:

- Food
- Sterile linens/supplies
- Equipment used for care
- Patients/Residents/Clients
- Blood or body fluids
- The care environment

2.4.3 Nail Polish

- Nail polish, if worn, must be fresh and in good condition (i.e., not chipped)[13.4]
- Nail polish cannot be worn for more than 4 days and must be removed when it becomes chipped
- Nail polish that is chipped or worn longer than four days can harbor microorganisms that are not removed by hand washing, even with surgical hand scrubs[13.5]
- Freshly applied nail polish does not result in increased numbers of bacteria around the nails
- Gel polish has been shown to damage nails, resulting in nail weakness, brittleness and thinning, putting nails at increased risk for breaking. Nail art (adding decorative paint effects to nails) has been shown to be associated with outbreaks of infection.[13.4]

2.4.4 Artificial Nails or Nail Enhancements

Artificial nails and nail enhancements (gel nails, wraps or extenders - adhesive decorative plastic or vinyl attached to nails) are not to be worn by direct care staff (those who come into contact with food, equipment used for care, blood or body fluids, sterile linens/supplies, PRC s and the care environment. Adhere to organizational Dress Code policies.

Artificial nails harbor more microorganisms and are more difficult to clean than natural nails. Artificial nails and nail enhancements have been implicated in the spread of microorganisms

and in outbreaks, particularly in neonatal nurseries and other critical care areas. Surgical site infections and hemodialysis-related bacteremias have also been linked to artificial nails. Artificial nails and nail enhancements are also associated with poor hand hygiene practices and result in more tears to gloves.[13.4]

2.4.5 Jewelry

Hand and arm jewelry hinder hand hygiene. Rings increase the number of microorganisms present on hands and increase the risk of tears in gloves. Direct care staff are encouraged to remove hand and arm jewelry prior to work. These items are hard to clean and prevent the removal of microorganisms from surfaces of the hands and wrists that they cover[13.6]. A simple and practical solution allowing effective hand hygiene is for HCWs to wear their rings around their neck on a chain as a pendant.[13.6]

If watches and other wrist jewelry are present, remove or push up above the wrist before performing hand hygiene. They should not interfere with or become wet during hand hygiene. In areas where earrings must be removed or covered with PPE, facial jewelry shall be treated the same way as pierced earrings, i.e., staff must remove or confine all facial jewelry when in areas where pierced earrings must be removed or covered with PPE.

2.4.6 Upper Extremity Support Devices

Direct care staff (those that come into contact with what is listed in 2.4.2 Nails) who wear an upper extremity support device (UESD) must be able to clean the device and perform hand hygiene. Device must be removed and cleaned with a facility approved disinfectant each time hand hygiene is performed.

2.4.7 Other Obstacles to Effective Hand Hygiene

- Long sleeves should not interfere with, or become wet, when performing hand hygiene
- Ensure long hair is tied up and off the collar to avoid inadvertently touching hair following a hand hygiene moment.

Missed opportunities (seen in hand hygiene audits) are also observed when staff touch their own clothing, personal items, face or equipment

2.4.8 Hand Drying (paper towel, air dryers)

Effective hand drying is important for maintaining hand health. Considerations include:

- Disposable paper hand towels provide the lowest risk of cross-contamination and should be used for drying hands in clinical practice areas (e.g.: PRC rooms, clinic rooms etc.)

- If cloth drying towels are used, a new towel must be used for each hand hygiene episode
- Towel dispensers must be mounted so access to them is unobstructed and splashing or dripping onto adjacent wall and floor surfaces is minimized
- Towel dispenser design should be designed so only the towel is touched during its removal for use
    - Towels hanging from the dispenser should not hang directly into a garbage can
- Hot-air dryers, including jet air dryers, must not be used in clinical areas as warm air currents dry hands slowly and can be used by only one person at a time. This results in lines and the temptation to dry hands on clothing. Germs are drawn into the hot-air dryers and redeposited onto freshly washed hands. These germs are also recirculated into the air.

2.4.9 Lotions and Creams

- To be effective, skin care products should be used regularly. Health care facilities/programs should develop a proactive program to keep hands healthy so hand hygiene can be optimal
- HCWs must use facility approved lotions compatible with products and gloves in use
- Position skin care products as close as possible to areas where hand hygiene is performed
- Use dispensers of sufficient quality that they will not clog or leak
- Hand lotion bottles shall not be reused
- Barrier Creams: unlike hand lotions, which penetrate the skin via pores, barrier creams are adsorbed to the skin and are designed to form a protective layer that is not removed by standard hand washing. Barrier creams may actually be harmful as they trap agents beneath them, ultimately increasing risk for either irritant or allergic contact dermatitis
- Inappropriate barrier cream application on HCW hands may exacerbate irritation rather than provide benefit.

Careful selection of products used for hand hygiene practice (e.g., ABHR, soaps, lotions, paper towels) has a significant impact on hand hygiene compliance

2.4.10 Dispensers

- Products must be dispensed in a disposable pump/squirt container that is not topped-up, to prevent contamination
- DO NOT add soap or hand rub to a partially empty dispenser
- If reusable dispensers/containers are utilized the container as well as the pump system must be emptied, washed and air-dried completely prior to refilling
- Locked, tamper-proof containers should be used to secure the product in place
- National Fire Code, and local fire regulations, for ABHR placement and storage shall be adhered to. Consideration of alternate ABHR options may be required to support necessary point-of-care use, as well as adhere to fire regulations
- An environmental risk assessment should be performed to determine the most appropriate placement of ABHR dispensers.[13.1]
    - To avoid confusion, ABHR dispensers should not be placed near hand washing sinks.

3. THE 4 MOMENTS OF HYGIENE

Indications and Moments for Hand Hygiene During Healthcare Activities

When shall hand hygiene be performed? A hand hygiene indication identifies why hand hygiene is necessary at a given moment. There may be several indications to perform hand hygiene in a single care sequence or activity. Hand hygiene shall be performed before and after any direct contact with a PRC or their environment, between procedures on the same PRC, and before contact with another PRC. While all indications for hand hygiene are important, there are some essential moments in healthcare settings where the risk of transmission is greatest and hand hygiene must be performed.

Essential HH indications can be simplified into 4 moments for training

3.1. MOMENT 1: BEFORE INITIAL PATIENT/RESIDENT/CLIENT (PRC) CONTACT OR PRC ENVIRONMENT CONTACT

WHEN? *Clean your hands when entering a PRC environment*

Examples include, but are not limited to:

- Before entering the PRC room/bed-space/home, treatment/exam room
- Before touching PRC (e.g., shaking their hand, helping them move around)
- Before touching any object or furniture in the PRC's environment (e.g., stretchers, wheelchairs, infusion rate adjustment, silencing a pump).

WHY? *To protect the PRC and their environment from harmful microorganisms (germs) carried on your hands*

3.2. MOMENT 2: BEFORE ASEPTIC/CLEAN PROCEDURES

WHEN? *Clean your hands immediately before any aseptic/clean procedure*

Examples include, but are not limited to:

- Performing invasive procedures
- Handling dressings or touching open wounds
- Preparing and administering medications
- Preparing, handling, serving or eating food
- Feeding a PRC
- Accessing items in a Clean Supply Room.

WHY? *To protect the patient/resident/client from harmful microorganisms, including a PRC's own microorganisms, entering his or her body*

3.3. MOMENT 3: AFTER BODY FLUID EXPOSURE RISK

WHEN? *Clean your hands immediately after an exposure risk to blood and body fluids, non-intact skin, and/or mucous membranes (and after glove removal)*

Examples include, but are not limited to:

- Contact with blood and body fluids

- Contact with items known or considered to be contaminated
- Procedures on the same PRC where soiling of hands is likely, to avoid cross-contamination of body sites
- Oral care, wound care, PRC toileting
- Removal of gloves
- Feeding a PRC.

WHY? *To protect yourself and the healthcare external environment from harmful patient/resident/client microorganisms*

3.4. MOMENT 4: AFTER PATIENT/RESIDENT/CLIENT (PRC) CONTACT OR PRC ENVIRONMENT CONTACT

When? *Clean your hands when leaving the PRC, and/or PRC environment*

Examples include, but are not limited to:

- After touching PRC to assist with any tasks (e.g., helping a patient/resident/client mobilize; giving a massage; taking a pulse, blood pressure, chest auscultation, abdominal palpation)
- After touching any object or furniture in the PRC's environment (e.g., changing bed linen, infusion rate adjustment, alarm monitoring, clearing the bedside or overbed table)
- When leaving a PRC's home.

Why? *To protect yourself and the healthcare external environment from harmful patient/resident/client microorganisms*

Two moments for hand hygiene may sometimes fall together

Typically, this occurs when going from one PRC to another without touching any surfaces when moving from one PRC zone to another. Naturally, a single hand hygiene action will cover the two moments for hand hygiene.

For example: Performing HH after touching a PRC (Moment 4) would also cover doing HH before touching another PRC (Moment 1). Two Moments are covered by performing HH once

3.5. Care Environments

The care environment is the space around the PRC that may be touched by either the PRC or staff.

Two different environments:

1. Healthcare External Environment:

- This is the environment beyond the immediate area surrounding the PRC
- In a single bed room this is outside the room
- In a multi-bed room this is everything outside the bed area of the PRC, including the curtains
- In the community setting, outside a healthcare facility, (e.g., the home, outreach vehicle, mobile clinic, and all other environments where care is provided – store, roadside, community centre, etc):
    - This is equipment, supplies, supply/visit bags, and storage containers temporarily brought in to the home[13.2] (includes: pens, scales, sharps containers, HCW and personal mobile phones etc). The HCW takes these items with them at the end of the interaction/visit
    - In an outreach, or any other PRC transport vehicle (e.g., stretcher service, etc) the healthcare/external environment is the front cab of the vehicle (including door handles inside)[13.3]
    - If items have to be brought into PRC environment, the HCW must clean/disinfect as soon as possible after use, before it is used on other persons requiring care.
- This includes the people within it; staff, visitors, volunteers and other PRC are part of the healthcare external environment. In the home this would include other household members [13.2]

NOTE: For staff this means their uniform/pockets, glasses, hair, ID tags, Mobile phones, etc. are part of the healthcare external environment.

2. Patient/Resident/Client (PRC) Environment:

The term 'PRC environment' refers to the space that contains the PRC, as well as the immediate surroundings and inanimate surfaces in contact with that PRC (e.g., bed rails, chair, bedside tables, work surfaces, bed linens, infusion tubing, and other medical equipment). It also contains surfaces frequently touched by staff within the vicinity of the PRC (e.g., monitors, buttons and knobs, and other frequently touched - "high touch" surfaces within the PRC environment). The PRC environment can accompany the PRC in the external health care environment (e.g., wheelchair, walker, IV pole).

- In a single room this is everything in the room of the PRC
- In a multi-bed room this is the area inside the privacy curtain/divider space of the PRC
- In an Emergency department cubicle, it is the stretcher of the patient and the equipment in close proximity used in the care of the patient
- In a nursery/neonatal and intermediate care setting, the patient environment includes the inside of the bassinette or isolette, the equipment outside the bassinette or isolette used for that infant (e.g., ventilator, monitor), as well as an area around the infant (i.e., within approximately 1 metre/ 3 feet)
- In an ambulatory care/clinic setting this is the PRC themselves, their belongings and any equipment/furniture being used during care/treatment
- In the home this is the entire residence of the PRC[13.2]
- In the community setting, outside a healthcare facility, (e.g., the home, outreach vehicle, mobile clinic, and all other environments where care is provided – store, roadside, community centre, etc) it is the PRC, their belongings, computer and any equipment/furniture being used in the care of the PRC
- After PRC has been transferred, discharged or the interaction is complete, all equipment and furniture used, computers, surfaces touched (e.g., in an ambulance) shall be cleaned and disinfected. [13.4]

Careful selection of products used for hand hygiene practice (e.g., ABHR, soaps, lotions, paper towels) has a significant impact on hand hygiene compliance

4. SOURCE CONTROL

These measures are used to minimize the spread of microorganisms (germs) from an infectious source. Symptomatic persons require direction at the point of initial encounter and in strategic places in any healthcare setting to minimize potential infectious spread (e.g., triage, reception and waiting areas, elevators, cafeterias).

Source control measures may include but are not limited to:

- Signage at healthcare setting entrances for early identification of symptoms

- Hand hygiene
- Separate entrances/waiting areas for persons with a potential infection
- Spatial separation
- Physical barriers for acute assessment
- Early identification, diagnosis and treatment of infection
- Respiratory etiquette/hygiene
- Placement of the PRC requiring Additional Precautions (e.g.: single rooms/airborne isolation rooms [AIRs]).

4.1. Respiratory Etiquette/Respiratory Hygiene

Respiratory hygiene refers to a combination of measures designed to decrease the spread of respiratory microorganisms. These 'source control' measures are targeted to all persons with symptoms of respiratory infection throughout every encounter in the healthcare setting.

Respiratory hygiene involves educating and encouraging everyone (PRCs, HCWs designated caregivers and visitors) who have the physical and cognitive abilities to do so, to practice respiratory hygiene. Specific measures may include instructional signs, education programs and provision of materials for respiratory hygiene (e.g., tissues, plastic lined waste receptacles, alcohol-based hand rub [ABHR], medical masks).

4.1.1 Respiratory Hygiene includes:

- Covering your mouth and nose against your sleeve/shoulder during coughing or sneezing
- Using tissues to contain respiratory secretions by covering your mouth and nose during coughing or sneezing, with prompt disposal of the tissue into a hands-free garbage followed by hand hygiene
- Wearing a medical mask when coughing or sneezing
- Turning your head away from others when coughing or sneezing
- Maintaining a spatial separation of two metres/six feet between persons that are symptomatic with an acute respiratory infection and those who do not have symptoms of a respiratory infection. If this cannot be achieved, the person with respiratory symptoms must be at least one metre/three feet apart and the symptomatic person must wear a medical mask. One metre/three feet may be sufficient for young children

and others whose cough is not forceful enough to propel the droplets as far as two metres/six feet.

4.2. Triage

Family/Visitors/Designated Caregivers with signs/symptoms of respiratory illness SHOULD NOT visit. Anyone (staff and members of the General Public) with sign/symptoms of an illness should stay home

4.2.1 Emergency Rooms and Acute Assessment Settings

- Post signs to direct persons with symptoms of acute infection (e.g., cough, fever, vomiting, diarrhea, coryza (nasal congestion), rash, and conjunctivitis) to specific waiting areas
- Ensure a physical barrier (e.g., plastic partition at triage desk, wall, portable wipeable divider) is located between infectious sources (e.g., those with symptoms of a respiratory infection) and others whenever possible
- Place PRCs who are likely to contaminate the environment directly into a single examination room whenever possible. For example, PRCs with:
    - Gastrointestinal (acute diarrhea/vomiting) illness
    - Respiratory infections. These persons should be placed either directly into an examination room or an airborne isolation room, as indicated by the respiratory infection suspected. Place a medical mask on these persons until isolated or spatial separation is achieved
    - Excessive bleeding or body fluid drainage into a single examination room whenever possible.

4.2.2 Ambulatory Care/Clinic Settings

- If possible, identify persons with symptoms of an acute infection when scheduling appointments for routine clinic visits and request, if possible, then defer routine clinic visits until symptoms of the acute infection have subsided
- Inform those who cannot defer their routine clinic visit (i.e., those that require assessment of symptoms/condition) to follow hand hygiene and/or respiratory hygiene recommendations appropriate for their symptoms. Direct these persons into an examination room as soon as they arrive. If possible, schedule their appointment for a time when other persons seeking care are not present

- Post signs at clinic entrances reminding symptomatic persons to perform hand hygiene and/or respiratory hygiene if they have symptoms.

4.3. Early Diagnosis and Treatment

Ensure symptomatic PRCs receiving care are assessed in a timely manner and that potential communicable infection(s) are considered (e.g., tuberculosis, norovirus, respiratory syncytial virus [RSV], pertussis).

4.4. Spatial Separation

Appropriate spatial separation and spacing requirements are necessary to decrease exposure to microorganisms (germs) for everyone in clinical and waiting areas. There should be a two metres/six feet spatial distance between a coughing/sneezing infected source (e.g., symptomatic PRCs with acute respiratory infection with a cough, fever or shortness of breath) and an unprotected susceptible host (e.g., PRC, HCWs, visitors, contractors). This is recommended to prevent the transmission of droplet borne infectious particles. In inpatient/resident facilities, a single room with in-room designated toilet and sink is preferable, as it may be difficult to maintain the recommended spatial separation of two metres/six feet between PRCs.

If two metres/six feet cannot be achieved, those receiving care must be at least one metre/three feet apart and the symptomatic PRC must wear a medical mask. Always ensure the medical mask covers the mouth and nose. One metre/three feet may be sufficient for young children and others whose cough is not forceful enough to propel the droplets as far as two metres/six feet.

4.5. Aerosol-Generating Medical Procedures (AGMPs)

Aerosol-generating medical procedures can generate aerosols as a result of artificial manipulation of a person's airway. Several types of AGMPs have been associated with an increased risk of tuberculosis (TB), Severe Acute Respiratory Syndrome (SARS), and Middle Eastern Respiratory Syndrome (MERS CoV) transmission. While there is some evidence for the spread of infections via droplets and aerosols by these procedures, further research is needed to quantify the risk. Infection transmission may increase during AGMPs because of the potential to generate a high volume of respiratory aerosols that may be propelled over a longer distance than with natural dispersion. These procedures include:

- Endotracheal intubation and extubation, manual bag mask ventilation, insertion of laryngeal mask airway (LMA)[13.7]
- Bronchoscopy and bronchoalveolar lavage

- Tracheostomy procedure (open or percutaneous) Laryngoscopy (with instrumentation below the vocal cords)
- Non-invasive positive pressure ventilation (BiPAP and CPAP)
- High flow nasal cannula oxygenation (e.g. Optiflow) - should only be used in patients with COVID-19 following consultation with an Attending Intensivist
- Open deep suctioning via endotracheal tube/tracheostomy
- Cardiopulmonary resuscitation (with manipulation of the airway)
- Sputum induction using hypertonic saline
- Some dental procedures (e.g., high speed drilling, ultrasonic scalers etc.)
- Autopsy of lung tissue
- Administration of nebulizing medications, does not include administration of a metered dose inhaler (MDI).

4.5.1 The following are NOT considered AGMPs:

- Oxygen delivered via nasal prongs and/or non-rebreathe masks are not considered AGMPs, regardless of flow rate.
- Chest compressions are not considered an AGMP
- Collection of nasopharyngeal swabs and/or nasopharyngeal aspirates are not considered AGMPs, there is no published literature documenting transmission of respiratory infections, including TB, SARS, influenza, and COVID-19 by collection of these specimens.

** Specific COVID-19 AGMP guidance can be found at: aerosol-generating-medical-procedures-AGMPs.pdf (sharedhealthmb.ca) **

Prior to performing any AGMP, PRC should be carefully assessed and strategies to reduce risk from AGMPs should be followed when the PRC is suspected or confirmed as having any of the following:

- Airborne Pathogens (i.e.: tuberculosis)
- SARS
- MERS CoV
- SARI
- COVID-19

- Viral Hemorrhagic Fever (VHF)
- Or other emerging respiratory infections

Routine Practices are sufficient for AGMPs performed on PRC with no signs or symptoms of suspected or confirmed respiratory infections as identified above[13.10].

STRATEGIES TO REDUCE RISK OF AGMPs

1. Carefully analyze risks and benefits to AGMPs; avoid performing unnecessary AGMPs
2. Consider alternative to AGMPs
3. Anticipate and plan for AGMPs, including using appropriate engineering controls (airborne isolation rooms or private rooms, evaluating air exchange rates, personal protective equipment, etc.)
4. Depending on the procedure, sedation may be appropriate for the PRC requiring the AGMP, to minimize excessive and/or prolonged and/or forceful coughing etc.
5. Paralytics to minimize the risk of aerosolization (for intubation or if the PRC's breathing is already supported by mechanical ventilation) can be used when appropriate
6. Use closed endotracheal suction systems whenever possible
7. Use the minimum required number of staff in the room when performing an AGMP
8. Ensure appropriate PPE is worn by all staff present in the room during the procedure. PPE guidance can be found in the Provincial Guidance for Aerosol Generating Medical Procedures (AGMPs)
9. Choose an appropriate space for an AGMP. The appropriate space for an AGMP will vary depending on the PRC and the circumstances in which the AGMP is taking place
10. Once an AGMP is complete make sure the door to the room remains closed and staff continue to wear N95s until appropriate air exchanges (at 99% minimally, and ideally at 99.9%) have occurred.

NOTE: When responding to a code (e.g., cardiac arrest) for a PRC requiring airborne isolation, when neither an AIR or single room with door closed are available for an AGMP, draw the privacy curtains and remove any shared equipment, supplies or linens from the immediate vicinity prior to performing an AGMP. Ensure all staff are wearing appropriate personal protective equipment and remove everyone else in the room where possible.

5. ACCOMMODATION AND PLACEMENT

Accommodation of patients/residents/clients (PRC) in single rooms improves infection prevention and control. Single rooms with a private toilet, designated hand washing sink for PRCs, and designated staff hand washing sink may reduce opportunities for cross transmission particularly when the PRC has poor hygiene, contaminates the environment or cannot follow IP&C measures because of age or decreased cognitive abilities.

5.1. Options for PRC Placement and Room Sharing

If the availability of single rooms is limited, use the Point of Care Risk Assessment.

Consider if the PRC:

- Has presence or absence of known or suspected infection and its route(s) of transmission (i.e., need for Additional Precautions).
    - Contact Precautions (single room is preferred)
    - Droplet Precautions (single room is preferred)
    - Airborne Precautions (airborne isolation room [AIR] required). See 5.6
- Visibly soils the environment or they cannot maintain appropriate toileting and respiratory hygiene
- Has uncontained secretions or excretions
- Has wound drainage that cannot be contained by a dressing
- Has fecal incontinence where stools cannot be contained in incontinent products or infant diapers.

5.2. Risk Factors for Transmission from the Infected PRC?

- Are roommates susceptible to adverse outcome from a healthcare associated infection (HAI)?
- Are there options for room sharing (e.g., cohorting PRCs infected with the same organism)?

IF SO…

- Can the PRC's roommate(s) and visitors follow infection prevention and control measures?

- Give priority for placement in single rooms to those who pose an increased risk for transmission of a microorganism to others
- If AIRs are in limited supply/high demand, refer to Priority of AIRs.

5.3. Priority for Single Rooms Goes to Those:

- Needing Additional Precautions
- Identified as high risk for transmission of microorganisms (e.g., stool incontinence, uncontained secretions)
- Identified as being at higher risk of acquisition and adverse outcomes resulting from transmission of microorganisms (e.g., immunosuppression, open wounds, indwelling catheters, and anticipated long length of stay)
- Requiring dependence on staff for activities of daily living.

5.4. Factors to be considered with shared rooms include:

- The selection of appropriate roommates
- Avoid placing PRCC at high risk of complications, if they should become infected, in rooms with PRC with transmissible infections, diarrhea or open wounds
- Clearly define the boundary of the potentially contaminated PRC area within the shared room (e.g., draw privacy curtain/place portable divider around PRC)
- Prevent transmission risks through avoiding the sharing of sinks and toilets
- Assessing activities of the roommates and their visitors (e.g. is the PRC a wanderer, will visitors follow the correct precautions if interacting with the person on contact precautions, etc.).

5.5. Cohorting

Assignment of PRCs known to be infected with the same microorganisms/strain to the same room (cohorting) or separate units or areas has been successful in controlling transmission of some microorganisms. Contact IP&C/designate to determine appropriate cohorting.

5.6. The Use of Airborne Isolation Rooms (AIRs)

AIRs are designed with negative pressure ventilation (i.e. with air flow from the outside corridor into a room through the doorway and exiting directly to the outside of the building or filtered

before recirculation). They are used for accommodation of PRC suspected or confirmed to have an infection spread by the airborne transmission route.

An AIR is also required when performing AGMPs on those with SARS, MERS CoV, COVID-19, viral hemorrhagic fever and other emerging pathogens for which transmission characteristics are not yet known.

In settings where AIRs are limited, the priority shall be given to those with suspected or confirmed airborne infection (e.g., measles or tuberculosis). Bed moves (shuffles) may be required. When there are more PRCs requiring airborne isolation, than available AIRs, the following process should be used to assess the accommodation and/or continued accommodation along with clinical judgement and risk/benefit analysis. This will be used to determine the risk of infectivity and risk of transmission and/or disease and exposure to others. This risk assessment should be done in collaboration with IP&C/designate, Public Health/delegate and other key staff involved with the care. Factors to be included in the risk assessment for an AIR (done with the Infection Control Professional/designate), but not limited to, are:

- Degree of transmissibility of the infectious disease
- Presence of communicable symptoms (e.g., coughing)
- Potential and level of the PRCs infectivity
- Stage of recovery of the PRC
- Immune status of others.

In situations when AIRs are not available, conduct a risk assessment looking at the factors identified above. The PRC can be temporarily housed in a single room with the door closed, away from high risk persons. PRC requiring an AIR should be transferred as soon as medically feasible to a facility/unit with AIRs. If AIRs in other facilities are not available, a decision should be made following the risk assessment above to determine if it will be safe to accommodate and/or treat the PRC in the facility and whether or not that PRC should continue to be masked while in the room.

5.7. Home Settings

Individuals who have not been exposed or are not immune should be advised to avoid sharing airspace with the client requiring Droplet or Airborne precautions. Natural ventilation (e.g., open windows) will help disperse the microorganisms (germs) from the room.

Advise the client to exclude themselves from group programs, routine services that are not medically necessary (e.g. interactions with volunteers) when experiencing acute symptoms of an infection.

6. FLOW

Flow refers the transfer and transport of the patient/resident/client (PRC) within and outside of the facility. There is a potential for exposure to, and spread of microorganisms (germs), as a result of the activity or transport of the PRC due to unintended contact with others, items used for care, and environmental surfaces.

> Patients/Residents/Clients should not be transported between units, departments or facilities unless medically necessary

Frequent transfers should be avoided as this increases the number of interactions with staff and others, and provides opportunities for transmission to occur. Staff, including bed/accommodation coordinators, are responsible for selecting the most appropriate accommodation based on the PCRA and for prioritizing use of single rooms and AIRs if they are limited. Using the PCRA can minimize unnecessary transfers. When in doubt regarding transfers and accommodation, consult IP&C/designate.

6.1. Flow and Additional Precautions

- Advance communication between the transporting area and the receiving area is important to ensure precautions are used correctly and to decrease unnecessary waiting time in public areas
- Use source control measures (e.g. request that the PRC being transported/ transferred perform hand hygiene before leaving their room, cover skin lesions, wear clean clothes, wear a mask, etc.).

6.2. Ambulatory Care/Clinic Setting

When Additional Precautions are necessary, those scheduled for an appointment should defer (e.g., routine foot care) or enter through a separate entrance when possible. Upon arrival, PRCs requiring Additional Precautions should be asked to perform hand hygiene, apply PPE if appropriate (e.g., medical mask), and be placed in an examination room. The door of the exam room should be closed if an airborne spread microorganism is suspected (e.g., measles, tuberculosis).

7. ASEPTIC TECHNIQUE

Aseptic technique, sometimes referred to as sterile technique, means using practices and procedures to prevent contamination from microorganisms (germs) on the patient/resident/client (PRC) skin or another person's flora to a sterile body site. These practices are required when performing procedures that expose the person's normally sterile body sites (e.g., intravascular system, spinal canal, subdural space, urinary tract). Practices such as creating a sterile field or preparing skin with an antiseptic significantly reduces the risk of introducing microorganisms that can lead to infections.

Components of aseptic technique prior to a procedure may involve the following:

- Preparing the PRC's skin with an antiseptic
- Hand hygiene, preferably with ABHR, or if not accessible, an antimicrobial soap if it is an invasive procedure (e.g. placing central intravascular catheters or catheters for injecting into the spinal canal or subdural spaces)[13.1]
- Sterile gloves
- Gowns
- Medical masks (procedure or surgical masks), where required, to prevent microorganisms carried in the HCW's nose and mouth from contaminating the sterile field
- Sterile drapes, used to prevent transferring microorganisms from the environment to the PRC while the procedure is being performed
- Maintaining a sterile field.

Infections may result from failure to use proper skin antisepsis prior to injection of medications, vaccines or venipuncture

Chlorhexidine in alcohol inactivates microorganisms on the skin more effectively than most other antiseptics and is the preferred antiseptic for skin preparation prior to insertion of central venous catheters and pulmonary artery catheters

7.1. Recommendations for Injection Safety Include

- Perform hand hygiene prior to accessing supplies, handling vials and IV solutions, and preparing or administering medications[13.4]

- Use aseptic technique in all aspects of parenteral medication administration, medication vial use, injections and glucose monitoring procedures. Limit access to select trained persons, if possible
- NEVER administer medications from the same syringe to more than one PRC, even if the needle is changed
- Consider a syringe or needle contaminated after it has been used to enter or connect to a PRC's intravenous infusion bag or administration set
- DO NOT enter a vial, bag or bottle with a syringe or needle that has been previously used
- NEVER store needles and syringes unwrapped as sterility cannot be assured13.3
- Assign medications packaged as multi-use vials to a single PRC whenever possible
- DO NOT use bags or bottles of intravenous solution as a common source of supply for more than one PRC
- Provide a puncture resistant sharps container that is available at point of use[13.4]
- Store and prepare medications and supplies in a clean area on a clean surface[13.4]
- Label sterile solutions containers with the date opened and discard every 24 hours and/or according to manufacturer's instructions[13.4]
- Discard outdated medications. There should be a process in place to check expiry dates before use.[13.4]

7.2. Aseptic Technique for Invasive Procedures and Handling Injectable Products

- Perform hand hygiene, with ABHR prior to opening supplies:
    - When ABHR is not accessible, perform hand hygiene with antimicrobial soap and water.
- Open tray and supplies only when ready to use to ensure a sterile field
- Perform hand hygiene prior to applying personal protective equipment, as indicated by the specific procedure
- Prepare the skin of the PRC with an appropriate antiseptic before performing an invasive procedure
- Use the appropriate size drape when a drape is required, to maintain a sterile field

- DO NOT administer medications or solutions from single dose vials, ampules or syringes to multiple PRC s or combine leftover contents for later use
- Use a sterile, single use disposable needle and syringe for each medication/fluid withdrawal from vials or ampules
- Clean and disinfect the stoppers or injection ports of medication vials, infusion bags, etc., with alcohol before entering the port, vial or bag
- Use single dose medication vials, prefilled syringes, and ampules in clinical settings. If the product is only available as multi-dose vials, see multi-dose vials below.

7.3. Single Dose Vials

Single Dose vials, intended for single PRC use, typically lack preservatives. The use of these vials for multiple PRCs carries a substantial risk for bacterial contamination

- Use single dose medication vials, prefilled syringes, and ampules in clinical settings. If the product is only available as multi-dose vials, see multi-dose vials below
- NEVER use medications packaged as single use vials for more than one PRC
- ALWAYS use a sterile syringe and needle/ cannula when entering a vial.
- NEVER enter a vial with a syringe or needle/cannula that has been used on a PRC.

7.4. Multi-Dose Vials

Transmission of hepatitis B and hepatitis C has followed the reuse of needles and/or syringes when withdrawing from multi-use vials

- Restrict the multi-dose vial to single PRC use whenever possible
- A multi-dose vials should only be used when a product is only available for purchase in multi-dose vials
- Prepare syringes from multi-dose vials from a centralized medication preparation area (i.e., do not take multi-dose vials to the PRC environment)
- Store the multi-dose vial in a restricted access location (e.g., in a secure location away from PRC bedside and where access is restricted, such as a medication room or locked cart)

- Cleanse the access diaphragm of vials using friction and 70% alcohol. Allow to dry before inserting a needle into the vial[13.3]
- Use a sterile, single use needle and syringe each time the multi-dose vial is entered
    - DO NOT re-enter the multi-dose vial with a previously used needle or syringe
- Label the multi-dose vial with date of first opening. See the product manufacturer's instructions for use for recommended durations of use after entry of a multi-dose vial[13.3]
- Discard opened multi-dose medication vials according to the manufacturer's instructions or 28 days after opening, whichever is shorter[13.3]
- Inspect the multi-dose vial for clouding or particulate contamination prior to each use and discard multi-dose vial if clouding or particulate contamination present
- Discard the multi-dose vial if sterility or product integrity is compromised
- NEVER leave a needle in a multi-dose vial.[13.3]

7.5. Single PRC Multi-Use Devices

Assign single PRC multi-use devices (e.g., glucose sampling devices, finger stick capillary blood sampling devices) to only one PRC. If it is not feasible to assign glucose meters to one, PRC clean and disinfect before use on others.

Injecting Material and Placing a Catheter into the Spinal Canal or Subdural Space

Use aseptic technique including creating a sterile field, aseptic skin preparation and use of a medical mask and sterile gloves (e.g., during lumbar puncture, myelogram, and spinal or epidural anesthesia).

7.6. Insertion of Central Venous Catheters

- Use maximal aseptic barriers as outlined in 7.2 Aseptic Technique for Invasive Procedures and Handling Injectable Products (above), in addition to a cap, medical mask, long sleeved sterile surgical gown, sterile gloves, and a large full body sterile drape
- Prepare the skin with chlorhexidine in alcohol or an equal alternative for inserting any central venous catheter or pulmonary catheter.

7.7. Insertion of Peripheral Venous Catheters or Peripheral Arterial Lines

- Perform hand hygiene, prepare the skin with an antiseptic and wear clean disposable gloves.

7.8. Storage, Assembly or Handling Components of Intravenous (IV) Delivery Systems

- Perform hand hygiene prior to accessing IV supplies and solutions.[13.3]

8. PERSONAL PROTECTIVE EQUIPMENT

> Personal protective equipment IS NOT the first/only strategy used to prevent the transmission of microorganisms
>
> Focusing only on availability and use of various protective equipment will result in less than ideal protection of all persons, including those receiving

Personal protective equipment (PPE) provides a physical barrier between the uninfected and an infectious agent/infected source. It protects the user from exposure to bloodborne and other microorganisms (germs) (e.g., sprays of blood, body fluids, respiratory tract or other secretions or excretions).

Appropriate PPE must be available for use to prevent exposure to an infectious agent/infected source. Effective and appropriate use of PPE is reliant on the user's adherence and competence. Health care workers HCWs should determine what PPE is needed by performing a Point of Care Risk Assessment (PCRA).

Appropriate and proper use of PPE includes:

- PCRA to determine need for PPE
- Correct technique for donning and doffing PPE
    - Donning PPE English | French
    - Doffing PPE English | French
- Correct technique when wearing PPE (e.g., not contaminating self)

- Discard into designated receptacles immediately after use, followed by hand hygiene, preferably with ABHR

Following the PCRA, required PPE may include:

- Gloves
- Gowns
- Facial protection
    - Masks (medical)
    - Eye protection (safety glasses, goggles or face shields) **NOTE:** prescription or fashion glasses are NOT considered eye protection
    - Masks with visor attachment.

Over-reliance on PPE may result in a false sense of security; misuse (e.g., surgical caps and bouffants when caring for a patient/resident/ client [PRC] with lice); or increased waste.

Putting on or removing PPE incorrectly can result in inadvertent exposure of the user or the PRC to infectious agents or contamination of the healthcare external environment. Faith or cultural head coverings shall be covered in areas where hair must be covered (e.g., Operating Room bouffant cap) but do not require covering or removing in isolation rooms.

8.1. Gloves

> The use of gloves is NOT a substitute for hand hygiene, but an additional measure of protection

For Routine Practices, glove use is dependent on a PCRA of the PRC, the environment and the interaction. Gloves are not required for routine care activities when contact is limited to the intact skin of the PRC.

8.1.1. Gloves include:

- Procedure
- Surgical (i.e., Sterile).

Gloves are used to reduce the transmission of microorganisms from one person to another or from one body site to another, and to reduce the risk of exposure of staff to blood, body fluids, secretions and excretions, mucous membranes, draining wounds or non-intact skin and for handling items or touching surfaces visibly or potentially soiled. Hand hygiene is ALWAYS necessary after the removal of gloves, as they may have microscopic holes, or hands may become contaminated during glove removal.

8.1.2 Wear gloves as determined by the PCRA:

- For anticipated contact with blood, body fluids, secretions and excretions, mucous membranes, draining wounds or non-intact skin (including skin lesions or rash)
- For handling items or touching surfaces visibly or potentially soiled with blood, body fluids, secretions or excretions
- While providing direct care if the user has an open cut or abrasions on the hands. If gloves are used for this reason they should be changed every time hand hygiene is required.

8.1.3 Appropriate Glove Use:

- Perform hand hygiene prior to putting on gloves
- Put gloves on directly before contact with the PRC or just before the tasks or procedure requiring gloves
- Ensure gloves are the correct size to maximize protection, dexterity and comfort[13.3]
- Select type of glove appropriate to the task[13.1]
- Wear disposable procedure or surgical gloves or reusable utility gloves for cleaning the environment or medical equipment.[13.1] If using reusable utility gloves for cleaning of the environment or medical equipment be sure to disinfect with a healthcare approved disinfectant after the task and allow to air dry away from sources of contamination
- DO NOT reuse single use gloves. DO NOT clean gloves with alcohol-based hand rub or wash for reuse. Washing affects integrity and has not been shown to be effective in removing microorganisms
- Remove gloves and perform hand hygiene immediately after care activities. If gloves are still indicated, replace with a clean pair
- Remove gloves and dispose into a hands-free waste receptacle immediately following their intended use. Follow immediately with hand hygiene
- Do not carry gloves/PPE in pockets
- Change gloves between the care of each PRC.

DO NOT DOUBLE GLOVE

Wearing extra PPE may affect fit and complicates the doffing process which may increase the risk of self-contamination

8.1.4 To reduce hand irritation related to gloves:

- Wear gloves for as short a time as possible
- Ensure hands are clean and dry before putting on gloves
- Ensure gloves are intact, clean, and dry inside.

8.2. Long-Sleeved Gowns and Other Apparel

Long sleeved cuffed gowns are worn for Routine Practices as indicated by the PCRA:

- During procedures and patient/resident/client care activities likely to soil clothing and/or generate splashes or sprays of blood, body fluids, secretions or excretions
- To protect uncovered skin
- To prevent soiling of clothing.

8.2.1 Gowns include:

- Isolation gown
- Reusable/disposable
- Fluid repellent/resistant
- Sterile

8.2.2 The type of gown selected is based on the:

- Anticipated degree of contact with infectious material
- Potential for blood and body fluid penetration of the gown (fluid repellence/resistance when heavy liquid contamination is anticipated (e.g., operating theatre, dialysis)
- Requirement for sterility (e.g., operating theatre, central line insertion).

8.2.3 Appropriate Gown Use

- Perform hand hygiene before putting on a gown
- Ensure gown is long enough to cover the front and back of the user, from the neck to mid-thigh and the sleeves no shorter than just above the wrist
- Put gown on with the opening at the back, with edges overlapping, thus covering as much clothing as possible
- Ensure cuffs of the gown are covered by gloves
- Tie the gown at the neck and waist
- Remove gown by undoing the neck and waist ties, starting with neck ties, and remove the gown without touching the clothing or agitating the gown unnecessarily; then turn the gown inside on itself, and roll it up
- Remove gown immediately after the indication for use and place in a hands-free waste receptacle (if disposable), or in a soiled linen bag (if reusable), and perform hand hygiene before leaving the care environment
- Remove wet gowns immediately to prevent a wicking action that facilitates the passage of microorganisms through the fabric
- DO NOT reuse gowns once removed, even for repeated contacts with same PRC
- DO NOT wear the same gown between successive PRCs
- Perform hand hygiene after removing the gown due to possible contamination of hands during removal of the gown.[13.3]

There is no evidence the routine use of gowns for all PRC care is beneficial in the prevention of HAIs, even in high risk units such as intensive care or haematopoietic stem cell transplant units.

Universal gown use has had no effect on HAI rates in neonatal or pediatric ICUs or on rates of neonatal colonization on post-partum wards.

PPE worn inside the laboratory setting should not be worn outside the laboratory containment area (e.g., should not be worn in cafeteria, lunchroom, or PRC areas).[13.10]

Several gown sizes should be available in a health care setting to ensure appropriate coverage of staff.[13.8]

8.2.4 Staff Apparel / Uniform Considerations

For aesthetic purposes and professional etiquette, staff apparel and uniforms shall be clean.

- Sleeves shall not interfere with or become wet when performing hand hygiene
- It is safe to launder staff uniforms at home
- Adhere to organizational policies regarding the laundering of scrub suits and uniforms supplied by the organization
- Personal clothing that cannot be completely covered by surgical attire shall not be worn by staff required to perform a surgical scrub.

Outside of the laboratory setting, apparel such as uniforms, laboratory coats or scrub suits may be worn by staff for purposes of comfort, convenience or identity, but DO NOT have a role in prevention of infection (i.e., they are not considered PPE)

8.3. Facial Protection

Facial protection includes medical masks (procedure or surgical mask), eye protection (safety glasses, goggles or face shields).

8.3.1 (Medical) Masks

Medical masks include procedure or surgical masks, and have several uses:

- To protect from sprays or splashes
- As a barrier for and from infectious sources
- As a barrier when performing aseptic/sterile procedure
- To protect susceptible hosts when within two metres/six feet of patient/resident/client (PRC) with respiratory signs/symptoms.

8.3.2 Eye Protection

> The eye is an important portal of entry for some pathogens.
>
> Pathogens may be introduced into the eye directly via respiratory droplets generated during coughing or suctioning, or by self-inoculation if the eyes are touched with contaminated fingers.

Eyes may be protected through use of Shared Health approved:

- Safety glasses,
- Goggles or
- Face shields.

Users should avoid touching their faces with their hands during PRC care.[13.3]

8.3.3 The need for facial protection during routine care is determined by the PCRA:

- Interactions involving activities likely to generate coughing, splashes or sprays of blood, body fluids, secretions or excretions
- Procedures that potentially expose the mucous membranes of the eyes, nose or mouth, require facial protection. Transmission of hepatitis C and HIV has been reported by splashes of blood to the mucous membranes of the face
- When caring for a coughing and sneezing PRC

8.3.4 Appropriate Use of Facial Protection

- Perform hand hygiene before putting on facial protection
- Put on facial protection immediately before the activity that requires you to wear a medical mask and eye protection
- Remove medical mask and eye protection immediately after the activity for which it is used
- Perform hand hygiene prior to putting on facial protection
- Users should avoid touching their faces with their hands during PRC care[13.3]
- Wear and discard facial protection appropriately to prevent self-contamination
- Ensure nose, mouth and chin are covered when wearing a medical mask

- Avoid self-contamination by not touching facial protection on its external surface during use and disposal
- Wear disposable eye protection or face shields only once to avoid self- contamination
- When eye protection is required, wear eye protection over prescription or fashion glasses; *prescription or fashion glasses alone are NOT adequate for eye protection*
- Remove facial protection carefully by the straps or ties. Bend forward to allow the medical mask to fall away from the face[13.1]
- Discard facial protection immediately after the intended use into a hands-free waste receptacle (i.e., dispose of as soon as removed from the face) and perform hand hygiene
- If eye protection or face shields are reusable, clean and disinfect as per organizational policy before reuse
- DO NOT dangle a medical mask around the neck or ears when not in use
- DO NOT reuse medical mask
- DO NOT place on top of head or around the neck for later *use*
- Change the medical mask if it becomes wet or soiled (from the wearer's breathing or due to an external splash)
- Change the medical mask if breathing becomes difficult
- DO NOT fold or store medical mask in a pocket.[13.3]

8.4. Respiratory Protection

Respiratory protection from airborne infection requires the use of a respirator with NIOSH-approved N95 or higher filtration to prevent inhalation of microorganisms. Respiratory protection may be necessary as a component of airborne precautions or recommendations for performing AGMPs on certain PRC. The need for respiratory protection is determined by a POINT OF CARE RISK ASSESSMENT (PCRA). Factors to be considered are the specific infectious agent, known or suspected, infection status of the PRC, the care activity to be performed, the immune status of staff involved in care and the ability of the PRC to perform respiratory hygiene.[13.1]

9. SPECIMEN COLLECTION

All clinical specimens are considered potentially infectious and shall be handled carefully to prevent contamination.

All specimens submitted to the laboratory for testing must be packaged in such a manner as to prevent spillage, breakage, or damage to the specimen itself, and/or to accompanying specimens. The safety of the environment, and the safety of all persons involved in the shipping, handling and receiving of these specimens must be ensured by preventing exposure to the contents of the shipment at any time.

Specimens and requisitions must be labelled to comply with receiving laboratory's acceptance policy.

Specimens shall be transported to the laboratory in sealable zipper storage bags (e.g., Ziploc®).

Each specimen must have its own requisition. Requisitions shall be placed in the exterior pouch of the sealable zipper storage bag (e.g., Ziploc®) for transport.

Consider Personal Protective Equipment when collecting specimens.

Perform hand hygiene immediately before and after specimen collection.

9.1. Process

Specimens will be rejected for analysis for the following reasons:

- Specimens that cannot be safely processed, i.e., specimens with needle attached, open/leaking specimens
- Improperly transported specimens
- Improperly labelled specimens
- Improper specimen collection
- Samples that are inappropriate for the test requested

Specific rejection criteria exist depending on the specimen type; Consult the laboratory for further information

10. SHARPS SAFETY & PREVENTION OF BLOODBORNE TRANSMISSION

Adherence to Routine Practices can reduce the transmission of microorganisms (germs). As such, Additional Precautions are not routinely required for the care of people with bloodborne pathogens such as HIV and hepatitis

The prevention of sharps injury and staff exposure to bloodborne pathogens is a component of Routine Practices.

Users of sharps require education and training about how to safely handle sharp devices to prevent injuries to themselves and to others who may encounter the device during or after procedures. Safety programs include a formal incident investigation for every sharp injury occurring in the work setting.

Use of safety engineered devices such as using protected needle devices, needle-free systems with self-sealing ports, and syringes with safety features, have been reported to reduce needlestick injuries. Their use has been identified as a priority in risk reduction strategies. Some models have demonstrated a risk for patient/resident/client (PRC).

Therefore, careful consideration to both the PRC and staff should be taken when selecting safety engineered sharps devices. Refer the Sharps Safety Policy for your organization.

DO NOT recap used needles. Handle used needles and other sharp instruments with care to avoid injuries during disposal. Dispose of used needles and other used single use sharp items immediately into designated puncture-resistant containers readily accessible at the point of care.

In home settings:

- Teach PRC and caregivers in the home the correct procedures for safe handling and disposal of sharps and sharp containers in according to municipal or regional regulations
- Ensure home storage of sharps is in a labelled, puncture-proof container with a tight-fitting lid that prevents leakage
- Sharps containers may be free at some pharmacies or can be for purchase from many pharmacies or medical supply stores.

Protect eyes, nose and mouth (using facial protection) when splashes with blood and/or body fluids are anticipated.

Perform first aid immediately if exposed to blood or body fluids:

- Thoroughly rinse the site of a percutaneous injury with running water and gently clean any wound with soap and water
- Flush mucous membranes of the eyes, nose, or mouth with running water if contaminated with blood, body fluids, secretions or excretions
- Thoroughly rinse non-intact skin with running water if contaminated with blood, body fluids, secretions or excretions.

Report immediately to employer after first aid and seek immediate medical attention.

11. MANAGEMENT OF THE PATIENT/RESIDENT/CLIENT CARE ENVIRONMENT

A clean environment is a safer environment for patients/residents/clients (PRC) in all health care settings. The risk of healthcare-associated infections (HAIs) can be reduced when surfaces, items, and equipment are cleaned and disinfected with the correct products and at the right times.

11.1. Cleaning of Environment

11.1.1 Minimize Environmental Contamination:

- Perform hand hygiene before and after handling the record/chart
- DO NOT bring the care record/chart into the PRC room, cubicle or designated bed space in a shared room. If there is an exceptional circumstance when the chart must enter in room (e.g., a code):
    - Perform hand hygiene before handling the chart
    - If the chart must be put down in the room, place it where contamination can be avoided
    - When exiting the room with the chart, wipe it down with an infection Prevention and control approved disinfectant
    - Perform hand hygiene after handling the chart
- DO NOT eat or drink in areas where direct care is provided, at the nursing station, in medication rooms, in clean supply rooms, and in reprocessing or laboratory areas
- Dedicate non-critical medical equipment to a single PRC
- Consideration should be given to staff rooms and communal foods. Hand hygiene facilities shall be available in all staff rooms. Communal food items should be individually packaged or distributed in a controlled manner (i.e., supervised, using tongs, appropriate hand hygiene, etc.)
- Assign responsibility and accountability for routine cleaning and disinfection of care equipment
- Ensure environmental cleaning and disinfection follows a set procedure and frequency, and is documented and supervised by adequately trained dedicated personnel
- Ensure adequate human resources[13.8]. Areas/programs should have:
    - Written policies and procedures for cleaning and disinfection of PRC rooms and equipment that includes cleaning standards and frequencies[13.8]
    - Procedures and increased capacity for outbreak management[13.8]
- Ensure surfaces are constructed of materials that can be easily cleaned at the point of use
- Increase the frequency of cleaning and disinfecting high touch surfaces. Clean and disinfect surfaces likely to be touched and/or used on a more frequent schedule compared to other surfaces (high touch surfaces).

- This includes surfaces in close proximity to the PRC (e.g., bedrails, over bed tables, call bells, exam beds, treatment chairs) and frequently touched surfaces in the care environment such as door knobs, surfaces in the PRC's bathroom and shared common areas for dining, bathing, toileting
- This also includes personal use items such as stethoscopes, wipeable lanyards and pens.

- Monitor for adherence to recommended environmental cleaning practices
- Ensure rooms/spaces are terminally cleaned following PRC appointment, discharge and after discontinuing precautions
- Use facility approved cleaners and disinfectants
- Ensure the availability of healthcare approved cleaners and disinfectants for Environmental Services Staff and frontline staff[13.4]
- Clean areas adjacent to construction activities at the end of the day or at other times as required in order to maintain cleanliness of the area.[13.8]

In outbreak situations, or when continued transmission of certain microorganisms (e.g., norovirus, rotavirus, C. difficile) occurs, specific disinfectant products may need to be used as appropriate (i.e., facility/regionally approved sporicidal agents). Regional IP&C approval is required prior to use of these specialized products.

11.2. Cleaning and Disinfection of Non-Critical Patient/Resident/Client (PRC) Care Equipment

Contamination of care equipment and items in the care environment, as well as the care environment itself has been implicated in infection transmission. Follow policies and procedures for containing, transporting, and handling used patient/resident/client (PRC) care equipment and medical instruments and devices

Clean and disinfect all non-critical re-useable equipment when soiled and between uses with different PRCs.[13.8]

Identify used non-critical care equipment and other items such as toys and electronic games, and DO NOT allow use by another PRC until these items are appropriately cleaned and disinfected.

Clean and disinfect non-critical care equipment dedicated to an individual PRC when soiled and on a regular schedule.

Dedicate bedpans and commodes to each PRC and label/identify appropriately. Clean and disinfect before use by another PRC. The use of disposable bedpans is acceptable. Bedpan holders for disposable bedpans must be reprocessed following use.

Store sterile and clean supplies in a designated and separate clean dry area protected from dust. DO NOT store under sinks and/or near plumbing as leaks may occur.

Discard personal care items (e.g., tissues, lotions, soaps, razors) and disposable equipment such as containers used for blood collection or tourniquets left in the room following transfer, terminal cleaning or discharge.

Unless a computer keyboard and computer device technology has been just cleaned/disinfected by the user, consider keyboards and devices used in the healthcare (external) environment as contaminated. Clean hands after using keyboards and computer devices. Assign responsibility for regular cleaning and disinfection of computer keyboards and horizontal computer cart surfaces utilized in the healthcare external environment.

Ensure computer keyboards in PRC rooms are cleaned and disinfected after each use, and upon discharge or during terminal cleaning/disinfection.

11.2.1 In Home Settings

Educate clients about the importance of environmental cleaning.

Limit the amount of disposable and non-disposable care equipment and supplies brought into the home.

Advise clients to purchase items such as thermometers and scissors for personal use whenever possible.

Leave reusable care equipment in the home until the person is discharged from care services whenever possible.

Clean and disinfect non-critical care equipment (e.g., stethoscope) that cannot remain in the home before removal from the home.

Alternatively, place contaminated reusable items in a plastic bag for transport then cleaned and disinfected in a designated area in the office space.

Where limiting supply entering home is not possible, prior to entry, supplies which are not in sealed impervious packaging can be bagged and sealed to prevent contamination and support retrieval and reprocessing if appropriate and needed.

Avoid opening new packaging to decant into client's home environment, only open as needed prior to use.

In Home Settings

Removal for cleaning and disinfection (reprocessing) of supplies shall not occur in the following instances:

a. Client(s) home has a known or suspected bed bugs, rodent activity
b. Client or housemate has a communicable disease
c. Client or housemate has an infectious process requiring Additional Precautions,
d. Hoarding environment present
e. Presence of gross environmental soiling with blood or body fluids
f. Supplies unable to withstand cleaning and disinfection:
    - Paper packaging
    - Opened supplies
g. Expired supplies.

Handling of Linen

Care should be taken in the handling of soiled linen to prevent dispersal of microorganisms. Handle soiled linen with a minimum of agitation to avoid contamination of air, surfaces, self and other persons.

Linen in healthcare facilities may become contaminated with pathogens; risk of disease is usually negligible

Place soiled linen in a no-touch receptacle at the point of use.

Use leak-proof containers for laundry contaminated with blood or bodily secretions (urine, feces, etc.). Water soluble bags and 'double-bagging' are not recommended.[13.8]

Tie linen bags securely and DO NOT over-fill.[13.8]

Transport and store clean linen in a manner to prevent inadvertent handling or contamination by dust, which may contain fungal spores harmful to immunocompromised PRCs.

Maintain separation of clean and soiled linen during transport and storage.

If laundry chutes are used, they should be properly designed, maintained, and used in a manner to minimize dispersion of aerosols from contaminated laundry.

Change linen regularly and when soiled, upon discontinuation of Additional Precautions and following discharge/transfer of the PRC. In ambulatory care/clinic areas change linen following every treatment/procedure.

Roll or fold heavily soiled linen to contain the heaviest soil in the centre of the bundle. DO NOT spray soiled linens with water; use a gloved hand and toilet tissue to remove any solid waste. To avoid splashing carefully place into a bedpan or toilet for flushing.

Perform hand hygiene after handling soiled linen.

Wash reusable linen bags after each use; they may be washed in the same cycle as the linen contained in them.

11.3. Handling of Waste

Most waste generated in healthcare settings is no more hazardous than household waste

Waste receptacles should be conveniently located and, preferably, hands-free.

DO NOT double-bag waste unless the first bag becomes stretched or damaged, or when waste has spilled on the exterior.[13.3]

Close waste bags when three-quarters full and tie in a manner that prevents contents from escaping.[13.3]

Remove waste to central holding areas at frequent intervals.[13.3]

Dispose of blood, suctioned fluids, excretions and secretions in a sanitary sewer or septic system according to municipal/regional regulations.[13.1]

Contain and dispose of biomedical, pharmaceutical and sharps waste according to site policies.

Wear personal protective equipment according to PCRA.

Perform hand hygiene after handling waste and waste containers.

11.4. Handling of Dishes

There are no indications for the use of disposable dishes other than when dishwashing equipment is non-functioning.

Perform hand hygiene after handling dirty dishes.

11.5. Handling of Deceased Bodies

Use Routine Practices properly and consistently for the routine handling of deceased bodies. There are no special requirements when handling deceased bodies. Adhere to provincial specified communicable disease regulations, available at Province of Manitoba, Public Health Act, Dead Bodies Regulation.

12. VISITOR, DESIGNATED CAREGIVER, FAMILY MANAGEMENT AND EDUCATION

Visitors - Family and friends who visit for social reasons. Their time with the patient/resident/client (PRC) is discretionary and short term. They are not involved in the care of the PRC.

Designated Caregivers (DC) - provide physical, psychological and emotional support, as deemed important by the PRC. This care can include support in decision making, care coordination and continuity of care. Designated Caregiver can include family members, close friends or other caregivers and are identified by the PRC or substitute decision maker.

NOTE: Designated Caregiver language replaces essential care partner and designated family caregiver.

Visitors, Designated Caregivers and Accompanying Individuals have a responsibility to comply with Routine Practices. All staff involved in care is responsible to teach those receiving care and visitors basic principles, such as hand hygiene, respiratory hygiene, and use of personal protective equipment.

Visiting policies must balance the risk of transmission of infectious diseases and the promotion of PRC and family centered care. Exclusion of those with signs and symptoms of transmissible infections should reduce this risk. For essential visits (e.g., parent, guardian or designated caregiver), instruct the visitor with an infection/signs and symptoms of an acute infection (e.g., cough, fever, vomiting, diarrhea, coryza, rash, conjunctivitis) on measures to take to reduce the risk of transmission (e.g., wear a medical mask for a respiratory tract infection, perform

appropriate hand hygiene, remain in the PRC's room, avoid public areas, avoid contact with other PRCs or with care equipment).

Visitors, Designated Caregivers and Accompanying Individuals could be at risk for serious diseases should they acquire the infection of the PRC (e.g., acquisition of a respiratory virus by a visitor with chronic lung disease, or exposure of a non-immune visitor to varicella). They should be capable of complying with the necessary precautions to prevent indirect transmission to others receiving care (e.g., hand hygiene, not sharing personal items).

Provide education to PRCs, their families, visitors, Designated Caregivers and Accompanying Individuals regarding such as hand hygiene, respiratory hygiene, and use of personal protective equipment.

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14. Appendix A - Surgical Hand Asepsis

The goal of surgical hand asepsis is to remove the number of transient flora and reduce resident flora. It shall be done prior to participating in a surgical procedure. (1) Even after skin asepsis skin in not considered sterile, rather it is deemed surgically clean.

Surgical hand asepsis is the process of removing microorganisms from the hands and forearms using either mechanical washing with a surgical scrub agent (surgical hand scrub) or chemical antisepsis with an alcohol bases hand rub (surgical hand rub). (1) Due to the superior antimicrobial activity ABHR (surgical hand rub) is the preferred method of preoperative surgical hand preparation. (2) Many formulations also contain long acting compounds such as chlorhexidine gluconate. (2)

Surgical hand asepsis is only effective if the hands are free from hand and arm jewelry as well as watches so the product can reach all surfaces of the hands and forearms.

Surgical hand asepsis procedure (using either a scrub or rub) should follow a standardized protocol established and approved by the healthcare organization and follow the manufacturer's instructions for use. (3)

Any product used for surgical hand asepsis should: (2)

- Inhibit the growth of microorganisms under gloved hands
- Have as wide a spectrum for antimicrobial activity as possible
- Have a prolonged antiseptic effect
- Have a persistent antimicrobial activity due to rapid multiplication of bacteria under surgical gloves and the chance of glove punctures during surgery.

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