

ROUTINE PRACTICES PROTOCOL

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 of cross-transmission of microorganisms (germs) must be balanced against the consequences (adverse effects and cost) of precautions taken.

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, community or long term care)**. Routine Practices aim to minimize or prevent healthcare-associated infections in everyone in the healthcare setting including the person receiving care, all staff, visitors, contractors, and so on. Following Routine Practices can reduce the transmission of microorganisms in all healthcare settings.

All staff (physicians, nurses, allied HCWs, support staff, students, volunteers and others) is responsible for complying with Routine Practices and for tactfully calling infractions to the attention of offenders. **No one is exempt from following Routine Practices.**

Consistent use of Routine Practices is expected for the care of all persons at all times no matter where they are receiving care – in hospital, community or long term care. Germs can be transmitted from symptomatic and asymptomatic people. This is why it is so important to follow Routine Practices at **all times** for **all persons receiving care** in **all healthcare settings**.

Deciding what Routine Practices to use in any situation is done by doing a Point of Care Risk Assessment (PCRA). A Point of Care Risk Assessment is done by staff to decide on what control measures are needed to provide safe care (i.e., protect the person receiving care from being exposed to potentially harmful germs) and to protect staff from exposure to germs (e.g., from sprays of blood, body fluids, respiratory tract or other secretions or excretions and contaminated needles and/or other sharps). A Point of Care Risk Assessment includes an assessment of the task/care to be performed, the clinical presentation of the person receiving care, physical state of the environment and the healthcare setting.

Persons receiving care 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.

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1. POINT OF CARE RISK ASSESSMENT (PCRA)

Prior to every interaction with the person receiving care (the patient, resident or client – patient/resident/client); all Healthcare staff are responsible to assess the infectious risk to themselves, those receiving care, visitors, and staff made by the patient/resident/client, the situation or task. A Point of Care Risk Assessment (PCRA) is a tool to use before each interaction with the person to ensure appropriate measures are used for providing safe care (i.e. Routine Practices and if necessary, Additional Precautions).

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

To perform a Point of Care Risk Assessment, consider infection transmission risk for the specific:

1. Interaction/task
2. Environment
3. Person receiving care
4. Health Care Worker

A Point of Care Risk Assessment should be used throughout the day to determine the appropriate actions/personal protective equipment to minimize the risk to staff, the person receiving care and others in the healthcare environment. When a member of staff evaluates the person receiving care, the situation and task, the following should be reviewed:

- The possibility of exposure to blood, body fluids, secretions and excretions, non-intact skin, and mucous membranes and select appropriate control measures. (e.g., personal protective equipment [PPE]) to prevent exposure.
- The need for Additional Precautions when Routine Practices are not sufficient to prevent exposure.
- The priority for single rooms or for roommate selection if rooms/spaces are to be shared by those receiving care (e.g., shared treatment space).
- Other high risks situations that may cause the spread of germs.

1.1. How to Perform a Point of Care Risk Assessment

- When performing a Point of Care Risk Assessment, every member of staff must ask themselves certain questions to determine risk of exposure and potential for the spread of germs during interactions with those receiving care. Examples of the questions staff must ask themselves are:
 - What kind of contact will I be having with the person receiving care?
 - What is the status of the person receiving care? Are they showing signs and symptoms of infection?
 - Will there be a risk of splashes or sprays of blood or body fluids during the task(s) or procedure(s)?
 - If the person receiving care has diarrhea, is he/she continent? If incontinent, can stool be contained in a diaper or incontinent product?
 - Is the person receiving care able and willing to perform hand hygiene?
 - Is the person receiving care in a shared room/treatment space?

1.2. Using Control Measures after doing the Point of Care Risk Assessment

After assessing the status of the person receiving care; determine what the task/procedure will be. Use Control Measures to lower the chance of spreading potentially harmful germs. Control measures may include:

- Hand hygiene (using alcohol-based hand rub at point of care)
- Placement and accommodation of the person receiving care:
 - Give priority to those with uncontained wound drainage or uncontained diarrhea into a single room
 - Place those with suspected or confirmed airborne infection (e.g.: measles or TB) into an Airborne Infection Isolation Room (AIIR) with the door closed
- 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 immune status of persons who may potentially be exposed to certain infections (e.g., measles, mumps, rubella, varicella)
- Flow (movement) of the person receiving care
 - Restrict movement of symptomatic persons receiving care within the specific care area/facility or outside the facility as appropriate for the suspected or confirmed infection/colonization
- Work assignment: Considering the immune status of staff who will potentially be exposed to certain infections (e.g., measles, mumps, rubella, varicella)
- Personal protective equipment selection:
 - Use personal protective equipment appropriate to the suspected or confirmed infection/colonization
- Cleaning of non-critical care equipment and the environment
- Handling of linen and waste
- Restricting visitor access where appropriate
- Reassessment of need for continuing or discontinuing Additional Precautions.

2. HAND HYGIENE

Hand hygiene (HH) is a general term used to refer to any action of hand cleaning, including actions taken to keep hands and fingernails healthy. Hand hygiene includes cleaning hands with soap and water or alcohol-based hand rub in order to remove germs (microorganisms). *HH includes surgical hand antisepsis.*

The most common way germs are spread in any healthcare setting is from the hands of health care staff to persons receiving care:

- those receiving care to equipment and the environment
- equipment and the environment to the person receiving care.

The spread of germs can happen when any member of staff touches a person they are caring for and then they go on to touch another person without performing HH in between. This can result in healthcare-associated infections (HAIs).

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

During the delivery of health care, staff constantly touches surfaces and substances including inanimate objects, a person's intact or non-intact skin, mucous membranes, food, waste, body fluids and the member of staff's own body (e.g. hair), all of these can carry potential harmful germs that can be passed on to someone else if proper HH is not performed.

Healthcare should be supportive of those receiving care and visitors doing hand hygiene. The benefits of the general public participating in hand hygiene should not be underestimated. Providing hand hygiene facilities for the general public should be encouraged. ^[13.5] An environmental risk assessment should be performed to determine the most appropriate placement of ABHR dispensers. ^[13.6]

Hand hygiene is a core element of safe care for the prevention of infections and the spread of antimicrobial resistant organisms (AROs). There are two methods of performing hand hygiene:

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 method for decontaminating hands and should be used at point-of-care unless exceptions apply (i.e., when hands are visibly soiled with organic material, if exposure to norovirus and potential spore-forming pathogens such as *Clostridioides difficile* (C. diff) is strongly suspected or proven, including outbreaks involving these organisms. ABHR is faster and more effective than washing hands (even with an antibacterial soap) when hands are not visibly soiled.
- ABHRs:
 - Provide for a rapid kill of most transient microorganisms
 - Are not to be used with water
 - Contain emollients to reduce hand irritation
 - Take less time than washing with soap and water
- Allow hands to dry completely before touching the patient or their environment/equipment. This ensures hand hygiene with ABHR will be effective and to eliminate the extremely rare risk of flammability in the presence of an oxygen-enriched environment or static electricity

Efficacy of ABHRs

- The efficacy of the ABHR depends on the quality of the product, the amount of product used, the time spent rubbing the product on the surfaces of the hands, and making sure all hand surface are rubbed during application
- ABHR should not be used with water, as water will dilute the alcohol and reduce its effectiveness
- ABHR should not be used after hand washing with soap and water as it will result in more irritation of the hands

ABHRs available for healthcare settings range in concentration from 60 to 90% alcohol. Concentrations higher than 90% are less effective because proteins are not denatured easily in the absence of water.

Hand wipes with antimicrobials or soap may be used to remove visible soil and/or organic material, but are not a substitute for alcohol-based hand rub or antimicrobial soap. This is because they are not as effective at reducing bacterial counts on HCWs hands.

Hand wipes may ONLY be considered as an alternative to washing hands with plain soap and water (when hands are visibly soiled) in settings where a designated hand washing sink is not available or when the hand washing sink is not satisfactory (e.g., contaminated sink, sink used for other purposes, no running water, no soap). When hands are visibly soiled use the wipe to remove the soiling and then follow with ABHR to do hand hygiene. Hands should be washed once a suitable sink is available.

At the present time, there is no evidence for the effectiveness of non-alcoholic, waterless antiseptic agents in the healthcare environment. Non-alcoholic products have a quaternary ammonium compound (QAC) as the active ingredient, which has not been shown to be as effective against most microorganisms as ABHR or soap and water. QACs are prone to contamination by Gram-negative organisms. QACs are also associated with an increase in skin irritancy.

Non-alcohol based waterless antiseptic agents are not recommended for hand hygiene in healthcare settings and should not be used

2.2. Hand Washing:

Hand washing with soap and running water must be performed when hands are visibly soiled. Antimicrobial soap may be considered for use in critical care settings such as intensive care units and burn units but is not required and not recommended in other care areas. Bar soaps are not acceptable in healthcare settings or for use by HCWs in the community. Bar soap can only be used for individual personal hygiene use by/for the person receiving care. In this case, in healthcare facilities the soap should be supplied in small pieces that are single person use, and the bar must be stored in a soap rack to allow drainage and drying. It should be discarded on discharge.

Efficacy of 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 as a preservative

- Antimicrobial soaps have residual antimicrobial activity and are not affected by the presence of organic material
- Disadvantages of antimicrobial soap include:
 - 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 germs

Hand hygiene with correctly applied alcohol-based hand rub kills germs in seconds. Hand hygiene with soap and water done correctly, physically remove germs.

2.3. Care Environments

The care environment is the space around the person receiving care that may be touched by either that person or staff. Two different environments:

- Healthcare environment/zone:
 - This is the environment beyond the immediate area surrounding the person receiving care. In a single room this is outside the room. In a multi-bed room this is everything outside the bed area of the person receiving care. In home care this is equipment and transport or storage containers temporarily brought in to the home. ^[13.3] This is also the people within it; Staff, visitors, volunteers and other persons receiving care are part of the healthcare environment. In the home this would include other household members. ^[13.2]
 - For staff this means their uniform/pockets, glasses, hair, glasses etc are part of the healthcare environment.
- Patient environment/zone:
 - The term “patient zone” refers to the space that contains the person receiving care, as well as the immediate surroundings and inanimate surfaces in contact with that person (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 person receiving care (e.g., monitors, buttons and knobs, and other frequently touched - “high touch” surfaces within the patient zone).
 - In a single room this is everything in the room of the person receiving care
 - In a multi-bed room this is the area inside the privacy curtain/divider space of the person receiving care
 - In an Emergency department cubicle it is the stretcher of the person receiving care and the equipment in close proximity used in the care of the person
 - 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 person receiving care themselves, their belongings and any equipment/furniture being used during care/treatment
 - In home care this is the entire residence of the person receiving care ^[13.3]
 - If the patient bathroom must be used for hand hygiene (no other option available), avoid contamination of hands with potentially contaminated surfaces and objects.

2.4. Indications and Moments for Hand Hygiene during Health Care Activities

When should hand hygiene be performed? A hand hygiene indication points to the reason hand hygiene is necessary at a given moment. There may be several indications to do hand hygiene in a single care sequence or activity. Hand hygiene shall be performed before and after any direct contact with a person receiving care or their equipment, between procedures on the same person and before contact with another person. 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. THE 4 MOMENTS FOR HAND HYGIENE:

3.1. MOMENT 1: BEFORE INITIAL PATIENT/RESIDENT/CLIENT ENVIRONMENT CONTACT

When? Clean your hands when entering a care environment

Examples are but not limited to:

- Before entering the patient/treatment/exam room/bed space/home
- Before touching patient/resident/client (e.g., shaking their hand, helping the patient move around)
- Before touching any object or furniture in the patient/resident/client's environment (e.g., stretchers, wheelchairs, adjusting an IV, silencing a pump)

Why? *To protect the patient/resident/client and their environment from harmful microorganisms carried on your hands.*

3.2. MOMENT 2: BEFORE ASEPTIC/CLEAN PROCEDURES

When? Clean your hands immediately before any aseptic procedure

Examples are but not limited to:

- Performing invasive procedures
- Handling dressings or touching open wounds
- Preparing and administering medications
- Preparing, handling, serving or eating food
- Feeding A patient/resident/client
- Shifts and breaks

Why? *To protect the patient/resident/client from harmful microorganisms, including his/her 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 are but not limited to:

- Contact with blood and body fluids
- Contact with items known or considered to be contaminated
- Procedures on the same patient where soiling of hands is likely, to avoid cross-contamination of body sites
- Oral care, wound care, patient toileting
- Removal of gloves
- Personal use of toilet or wiping nose/face
- Feeding a patient/resident/client
- Before and after shifts and breaks

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

3.4. MOMENT 4: AFTER PATIENT/RESIDENT/CLIENT ENVIRONMENT CONTACT

When? Clean your hands when leaving the patient/patient environment.

Examples are but not limited to:

- After touching patient/resident/client to assist with any tasks (e.g., helping a patient mobilize; giving a massage; taking pulse, blood pressure, chest auscultation, abdominal palpation)

- After touching any object or furniture in the patient's environment (e.g., changing bed linen, perfusion speed adjustment, alarm monitoring, clearing the bedside or overbed table)
- When leaving a patient/resident/client's home

Why? *To protect yourself and the healthcare environment from harmful microorganisms.*

Knowing the risk of hand contamination (picking up germs on hands) in any situation is important in making decisions of when to clean hands. Immediately after (and immediately before) requires hand hygiene at point of care.

Hand hygiene with point of care alcohol-based hand rub (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 being provided to a person 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. Point of care refers to the place where three elements occur together:

- The person receiving care
- The member of staff
- Care potentially involving contact is taking place

The point of care (POC) concept refers to a hand hygiene product (e.g., alcohol-based hand rub) which is easily accessible to staff by being as close as possible, e.g., within arm's reach (as resources permit) to where contact with the person receiving care is taking place. Point of care products should be available at the required moment, without leaving the care environment. This enables staff to quickly and easily follow the 4 Moments for Hand Hygiene. Point of care can be achieved in a variety of methods. (e.g., ABHR attached to the bed, wall, containers carried by the HCW).

Focusing on a single person receiving care, the healthcare setting is divided into two virtual geographical areas: the patient environment/zone and the healthcare environment/zone.

The patient zone refers to the space that contains the person receiving care, as well as the immediate surroundings and inanimate surfaces in contact with that person (e.g., bed rails, chair, bedside tables, work surfaces, bed linens, infusion tubing, the privacy curtain/divider and other medical equipment). It further contains surfaces frequently touched by staff within the vicinity of the person receiving care (e.g., monitors, buttons and knobs, and other 'high frequency' touch surfaces within the patient zone). The patient zone and thus the POC extend beyond the bedside in a hospital/LTC room or the exam table, chair or mobility device in the ambulatory care/community. The model assumes that the flora of the person receiving care rapidly contaminates the entire patient zone, but that it is being cleaned between admissions/visits. The POC occurs within the patient zone.

The healthcare zone contains all surfaces outside the patient zone of the person receiving care, i.e., all other persons receiving care and their patient zones, the staff and the healthcare facility environment. Conceptually, the healthcare zone is contaminated with microorganisms that might be foreign and potentially harmful to individual persons receiving

care, either because they are multi-resistant or because their transmission might result in exogenous infection.

Two moments for hand hygiene may sometimes fall together. Typically this occurs when going from one person receiving care to another without touching any surface outside the corresponding patient zones. Naturally, a single hand hygiene action will cover the two moments for hand hygiene. For example: Doing HH after removing an old dressing (Moment 3) would also cover doing HH before putting on a clean dressing (Moment 2). Two moments are covered by doing HH once.

3.5. Hand Hygiene Techniques

3.5.1. Using an Alcohol-Based Hand Rub (ABHR)

- Ensure hands are visibly clean (if soiled, follow hand washing steps)
- Remove hand and arm jewellery as these items are hard to clean and prevent the removal of germs from surfaces of the hands and wrists that they cover;^[13.5] a simple and practical solution allowing effective hand hygiene is for staff to wear their rings around their neck on a chain as a pendant
- If a watch is worn, it must be worn above the wrist and fit snugly
- Clothing or other items that impede frequent and effective hand hygiene should be removed
- Apply one to two full pumps of product (dime sized amount 2-3 ml) onto one palm; the volume should be enough so that 15 seconds of rubbing is required for drying
- 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 person receiving care 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**

3.5.2. Using Soap and Water

- Remove hand and arm jewellery as these items are hard to clean and prevent the removal of germs from surfaces of the hands and wrists that they cover;^[13.5] a simple and practical solution allowing effective hand hygiene is for staff to wear their rings around their neck on a chain as a pendant
- 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;
- Wet hands with warm (not hot or cold) water; hot or cold water is hard on the hands, and will lead to dryness
- Apply liquid 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 bacteria requires 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 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.

If performing hand hygiene with soap and water:

- The sink and the area surrounding the sink must be visibly clean and running water must be available
- Use only liquid soap to wash and paper towels to dry to your hands. The sink should be at point of care.
- If any of these things are not available ABHR must be used.

3.5.3. When hands are visibly soiled and liquid soap and running water is not available, see [Hand Hygiene Practices in Healthcare Settings](#) . PHAC. (2012)

- Use a moist pre-packaged wipe to remove the soiling and then follow with ABHR to do hand hygiene.
- Hands should be washed once a suitable sink and hand hygiene supplies are available.

3.6. Factors that Reduce Effectiveness of Hand Hygiene

3.6.1. 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 defence against germs; therefore careful attention to hand care is an essential part of the hand hygiene program. The presence of dermatitis, cracks, cuts or abrasions can trap germs and compromise hand hygiene. Dermatitis also increases shedding of skin squames (cells) and, therefore, shedding of germs. If there is any concerns regarding skin integrity Occupation and Environmental Safety and Health should be consulted^[13.7]

3.6.2. 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 one quarter inch) are required by direct care staff that comes into contact with:

- Food
- Sterile linens/supplies
- Persons receiving care
- The care environment
- Equipment used for care
- Blood or body fluid.

3.6.3. Nail Polish

Nail polish if worn must be fresh and in good condition (i.e.: not chipped) 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 harbour microorganisms that are not removed by hand washing, even with surgical hand scrubs. ^[13.6]

Freshly applied nail polish does not result in increased numbers of bacteria around the nails. Fingernail polish, if worn, must be fresh and in good condition. ^[13.2]

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. ^[13.2]

3.6.4. 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 what is listed in [3.6.2](#)) refer to [WRHA Policy 20.70.020, Dress Code](#), and WRHA Policy 90.00.060, [Routine Practices for Reducing the Risk of Infection Transmission](#)).

Acrylic nails harbour more microorganisms and are more difficult to clean than natural nails. Artificial nails and nail enhancements have been implicated in the spread of germs and in outbreaks, particularly in neonatal nurseries and other critical care areas. Surgical site infections and hemodialysis-related bacteremias have 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. ^[13.2]

3.6.5. Jewellery

Hand and arm jewellery 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 jewellery prior to work. These items are hard to clean and prevent the removal of germs from surfaces of the hands and wrists that they cover. ^[13.5] 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. ^[13.5]

If watches and other wrist jewellery 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 jewellery shall be treated the same way as pierced earrings, i.e., staff must remove or confine all facial jewellery when in areas where pierced earrings must be removed or covered with PPE. Note: Staff shall not cover earrings or facial jewellery with tape.

3.6.6. Upper Extremity Support Devices

Direct care staff (those that come into contact with what is listed in [3.6.2](#)) who wear an upper extremity support device (UESD) must be able to clean the device and perform hand hygiene as per the direction in the [Upper Extremity Supportive Devices Infection Prevention and Control Communication Form](#). See [OESH Upper Extremity Support Devices Operational Directives](#) if more information is needed.

3.6.7. 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 the action of inadvertently touching hair following a hand hygiene moment.

Missed opportunities (seen in hand hygiene audits) are also observed when staff touches their own clothing, personal items, or equipment (e.g. stethoscope, coffee cup, chart etc).

3.6.8. 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.
- Cloth drying towels must not be used unless a new towel is used for each hand hygiene episode.
- Towel dispensers must be mounted such that access to them is unobstructed and splashing or dripping onto adjacent wall and floor surfaces is minimized.
- Towel dispenser design should be designed so that only the towel is touched during removal of towel 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.
 - Where hot-air dryers are used in non-clinical areas, hands-free taps are required.
 - If hot-air dryers are used in non-clinical areas, there must be a contingency for power interruptions.

3.6.9. Lotions and Creams

- HCWs must use facility approved lotions compatible with products and gloves in use.
- 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. Furthermore, inappropriate barrier cream application on HCW hands may exacerbate irritation rather than provide benefit.

3.6.10 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 they must be emptied, washed and air-dried prior to refilling.

4. SOURCE CONTROL

These measures are used to minimize the spread of germs from an infectious source. Persons presenting with symptoms require direction at the point of initial encounter in any healthcare setting (e.g., triage in emergency departments; acute assessment settings; and reception and waiting areas in emergency departments, clinics) and in strategic places (e.g., elevators, cafeterias) within ambulatory and inpatient settings. Source control measures may include but are not limited to:

- Signage at healthcare setting entrances for early identification of symptoms
- Separate entrances/waiting areas for persons with a potential infection
- Spatial separations; Hand hygiene
- Physical barriers for acute assessment
- Early identification, diagnosis and treatment of infection
- Respiratory etiquette/hygiene
- Placement of the person requiring Additional Precautions (e.g.: single rooms/Airborne Infection Isolation Rooms [AIIRs]).

4.1. Respiratory Etiquette/Respiratory Hygiene

Respiratory hygiene refers to a combination of measures designed to decrease the spread of respiratory germs. These ‘source control’ measures are targeted to all persons with symptoms of respiratory infection starting at the initial encounter in any healthcare setting and maintained throughout every encounter in the setting (e.g., pre-hospital triage, triage in emergency departments, reception and waiting areas in emergency departments ambulatory care, clinics, and in strategic places such as elevators and cafeterias).

Respiratory hygiene involves educating and encouraging everyone (persons receiving care, HCWs 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], procedure or surgical masks). Encourage respiratory hygiene for persons receiving care and accompanying persons who have signs and symptoms of an acute respiratory infection (shown with a new or worsening cough, shortness of breath and fever), beginning at the point of initial encounter in any healthcare setting.

Respiratory hygiene includes:

- Covering your mouth & nose against your sleeve/shoulder during coughing or sneezing.
- Using tissues to contain respiratory secretions to cover your mouth and nose during coughing or sneezing, with prompt disposal of the tissue into a hands-free garbage.
- Wearing a 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 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.

Family with signs/symptoms of respiratory illness should not come to visit at the hospital. Staff with sign/symptoms of an illness should stay home.

4.2. Triage

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 divider) is located between infectious sources (e.g., those with symptoms of a respiratory infection) and others.
- Place persons who are likely to contaminate the environment directly into a single examination room whenever possible. For example, persons with:
 - Gastrointestinal (acute diarrhea/vomiting) illness.
 - Respiratory infections. These persons should be placed either directly into an examination room or an airborne infection isolation room, as indicated by the respiratory infection suspected. *Place a 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 they 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 and/or 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 persons receiving care are assessed in a timely manner and that any potential communicable infection is considered (e.g., tuberculosis, norovirus, RSV, pertussis).

4.4. Spatial Separation

Appropriate spatial separation and spacing requirements are necessary to decrease exposure to microorganisms for everyone in clinical and waiting areas. There should be a two metre/six feet spatial distance between a coughing/sneezing infected source (e.g., symptomatic persons with acute respiratory infection that is symptomatic with a cough, fever or shortness of breath) and an unprotected susceptible host (e.g., person receiving care, HCWs, visitors, contractors). This is recommended to prevent the transmission of droplet borne infectious particles. In inpatient 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 persons receiving care.

If two metres/six feet cannot be achieved, those receiving care must be at least one metre/three feet apart and the symptomatic person must wear a 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.

4.5. Aerosol-Generating Medical Procedures (AGMPS) ^[13.9]

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), 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:

- Intubation and related procedures (e.g. manual ventilation, open endotracheal suctioning)
- Cardiopulmonary resuscitation
- Bronchoscopy
- Sputum induction
- Nebulized therapy
- Autopsy
- Non-invasive positive pressure ventilation (CPAP, BiPAP).

Other medical procedures may result in the generation of aerosols but there is no evidence that documents transmission of respiratory infections, including TB, SARS or influenza. Examples of these procedures include:

- High-frequency oscillatory ventilation
- Tracheostomy care
- Chest physiotherapy
- Obtaining nasopharyngeal swabs or aspirates.

Routine Practices are sufficient for AGMPs performed on patients with no signs or symptoms of suspected or confirmed TB, SARS or other emerging respiratory infections

Person receiving care should be carefully assessed for signs or symptoms of suspected or confirmed TB, SARS or other emerging respiratory infections prior to performing AGMPs. Strategies to reduce aerosol generation are required when performing AGMPs on persons with signs and symptoms of suspected or confirmed infectious tuberculosis, SARS, MERS CoV, SARI or other emerging pathogens for which transmission characteristics are not yet known

Strategies to reduce aerosol generation should also be implemented when aerosol-generating medical procedures are necessary on persons with viral haemorrhagic fevers.

Strategies to reduce Aerosol Generating Medical Procedures AGMPs ^[13.9]

1. *Anticipate and plan for AGMPs*
2. *Use appropriate sedation for the person requiring the AGMP*
3. *Limit the number of staff in the room when performing an AGMP*
4. *Perform AGMPs in an airborne infection isolation room (AIIR) whenever possible*
5. *Maintain appropriate ventilation (e.g.: level of air filtration and direction of air flow)*
6. *When an AIIR is **not available**: Use a single room away from high risk persons and keep the door closed*
7. *Ensure respirators (N95 or higher) are worn by all staff present in the room during the procedure*
8. *Use closed endotracheal suction systems whenever possible*

Note: *When responding to a code (e.g.: cardiac arrest) for a person requiring airborne isolation for a confirmed or suspected infection who is not in an AIIR and transfer to a single room/AIIR is not possible, pull the privacy curtain/divider and ensure all staff are wearing appropriate personal protective equipment. Remove everyone else in the room if possible.*

5. ACCOMMODATION AND PLACEMENT

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

5.1. Determine options for patient placement and room sharing

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

- Presence or absence of known or suspected infection (i.e. need for Additional Precautions).
- Route(s) of transmission of the known or suspected infectious agents (e.g. airborne infections require an airborne infection isolation room).
- Contact Precautions (single room is preferred).
- Droplet Precautions (single room is preferred).
- Airborne Precautions (airborne infection isolation room required). **OR**
- The person receiving care visibly soils the environment or they cannot maintain appropriate hygiene including respiratory hygiene. **OR**
- The person receiving care has uncontained secretions or excretions. **OR**
- The person receiving care has wound drainage that cannot be contained by a dressing. **OR**
- The person receiving care that has fecal incontinence if stools cannot be contained in incontinent products or infant diapers.

5.2. Are there risk factors for transmission from the infected person receiving care?

- Are roommates susceptible to adverse outcome from a health care associated infection (HAI)?
- Are there options for room sharing (e.g. cohorting patients infected with the same organism)? **IF SO**
- Can the person's roommate(s) and visitors to 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 AIIRs are in limited supply/high demand, refer to [Priority of AIIRs](#).

5.3. Once the Point of Care Risk Assessment is complete, 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. When single rooms are not available and rooms must be shared, factors to be considered with shared rooms include:

- The selection of appropriate roommates.
- Avoid placing persons at high risk of complications, if they should become infected, in rooms with persons with transmissible infections, diarrhea or open wounds.
- Clearly define the boundary of the potentially contaminated patient area within the shared room (e.g., draw privacy curtain/place portable divider around patient).
- Prevent transmission risks through sharing of sinks and toilets.
- Assessing activities of the roommates and their visitors.

5.5. Cohorting

Assignment of patients known to be infected with the same microorganisms to the same room (cohorting) or separate wards or areas has been successful in controlling transmission of some microorganisms. *The specific benefit of using cohorting for managing ARO outbreaks, including MRSA, gram negative resistant organisms and outbreaks due to other infectious agents is difficult to determine as multiple other control measures were implemented during published outbreaks.*

5.6. The Use of Airborne Isolation Rooms (AIIRs)

AIIRs 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 persons receiving care that are suspected or confirmed to have an infection spread by the *airborne* route.

An AIIR is also required for persons receiving care with an airborne infection as well as when performing AGMPs on those with SARS, MERS CoV, viral hemorrhagic fever and other emerging pathogens for which transmission characteristics are not yet known.

In settings where AIIRs are limited, 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, Public Health/delegate and other key staff involved with the care.

Factors to be included in the risk assessment for an AIIR (done with the Infection Control Professional), but not limited to, are:

- Degree of transmissibility of the infectious disease.
- Presence of communicable symptoms (e.g.: coughing)
- Potential and level of the patient's infectivity.
- Stage of recovery of the person receiving care.
- Immune status of others.

Priority for AIIRS includes, but is not limited to: (listed in priority) ^[13.9]

1. Novel pathogens i.e.: Severe Respiratory Illness (SARI)
2. Viral hemorrhagic fever
3. Smallpox or monkeypox
4. Proven or suspected infectious respiratory (including pleural or laryngeal) tuberculosis, including MDR and XDR
5. Measles
6. Laboratory confirmed active respiratory TB (sputum smear positive for AFB or culture positive MTB) or clinically confirmed (committed to TB treatment) with priority or most infectious
7. TB under investigation
8. Varicella
9. When an Aerosol Generating Medical Procedure (AGMP) is anticipated and respiratory TB or other pathogens spread by the airborne route are suspected or confirmed.

In situations when AIIRs are not available, do a risk assessment looking at the factors identified above. The person receiving care can be temporarily housed in a single room with the door closed, away from high risk persons. Persons requiring an AIIR should be transferred as soon as medically feasible to a facility/unit with AIIRs. If AIIRs 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 person in the facility as well if that person should continue to be masked while in the room.

6. FLOW

Flow refers to the both the transfer and transport of the person receiving care ***within and outside*** of the facility, and that person's activity. There is a potential for exposure to and spread of germs as a result of the activity or transport of the person receiving care due to unintended contact with others, items used for care and environmental surfaces.

Persons receiving care 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. This provides opportunities for transmission to occur. Staff, including bed/accommodation co-ordinators, are responsible for selecting the most appropriate accommodation based on the Point of Care Risk Assessment and for prioritizing use of single rooms and AIIRs if they are limited. Using the Point of Care Risk Assessment can minimize unnecessary transfers. When in doubt regarding accommodation, consult IP&C.

6.1. Flow and Additional Precautions:

- When Additional Precautions are necessary, persons receiving care should leave their rooms for *medically necessary purposes only*.
- 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 person being transported/transferred do hand hygiene before leaving their room, cover skin lesions, wear a mask etc).

6.2. Ambulatory Care/Clinic Setting

Those scheduled for an appointment should defer it if possible (e.g.: routine foot care) or enter through a separate entrance. Upon arrival, persons requiring additional precautions should be asked to wear a mask, perform hand hygiene and be placed in an examination room with the door closed as soon as possible.

6.3. Home Care Settings

Family members who have not been exposed or are not immune should be advised to avoid sharing airspace with the person requiring precautions. Natural ventilation (e.g. open windows) will help disperse the microorganisms from the room. Advise the person to exclude themselves from group programs when experiencing acute symptoms of an illness [\[13.9\]](#)

7. ASEPTIC TECHNIQUE

Aseptic technique, sometimes referred to as sterile technique, refers to practices designed to render the skin of the person receiving care, medical supplies and surfaces as maximally free from germs. 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). Aseptic technique is used to minimize contamination of those sites with microorganisms. For example:

- Prevent the transfer of germs from the surface of the person's body to a normally sterile body site.
- OR prevent the spread of germs from one person to another.

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

- Preparing the person's skin with an antiseptic.
- Hand hygiene, preferably with alcohol-based handrub (ABHR), or if not accessible, an antimicrobial soap.
- Sterile gloves.
- Gowns.
- 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 patient 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 germs 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. ^[13.5]
- 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 person, even if the needle is changed.
- Consider a syringe or needle contaminated after it has been used to enter or connect to a person'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 assured. ^[13.5]
- Assign medications packaged as multi-use vials to a single person whenever possible.
- Do not use bags or bottles of intravenous solution as a common source of supply for more than one patient.
- Provide a puncture resistant sharps container that is available at point of use. ^[13.5]
- Store and prepare medications and supplies in a clean area on a clean surface. ^[13.5]
- Date opened container of sterile solutions and discard every 24 hours and/or according to manufacturer's instructions. ^[13.5]
- Discard out-dated medications. There should be a process in place to check expiry dates before use. ^[13.5]

7.2. Aseptic Technique for Invasive Procedures and Handling Injectable Products:

- Perform hand hygiene, preferably with alcohol-based hand rub (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 person receiving care 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 persons 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 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 patient use, typically lack preservatives. The use of these vials for multiple patients 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 patient.
- 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 patient.

7.4. Multi-Dose Vials

Use multi-dose vials only when a product is only available for purchase in multi-dose vials. Transmission of hepatitis B and hepatitis C has followed the reuse of needles and/or syringes for withdrawing from multi-use vials.

- Restrict the multi-dose vial to single patient use whenever possible.
- Prepare syringes from multi-dose vials from a centralized medication preparation area (i.e., do not take multi-dose vials to the patient).
- Store the multi-dose vial to restrict access (e.g., in a secure location away from patient 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. [13.5]
- 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. [13.5]
- Discard opened multi-dose medication vials according to the manufacturer's instructions or 28 days after opening, whichever is shorter [13.5]
- 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. [13.5]

7.5. Single Patient Multi-Use Devices:

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

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

- Use aseptic technique including a mask and sterile gloves (e.g., during lumbar puncture, myelogram, and spinal or epidural anesthesia).

7.7. Insertion of Central Venous Catheters:

- Use maximal aseptic barriers as outlined in Aseptic Technique for Invasive Procedures and Handling Injectable Products (above), in addition to a cap, 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.

7.8. Insertion of Peripheral Venous Catheters or Peripheral Arterial Lines:

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

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

- Perform hand hygiene prior to accessing IV supplies and solutions. ^[13.5]
- Use intravenous bags, tubing and connectors for one person only and dispose appropriately after use.
- Consider a syringe, needle or cannula as contaminated once it has been used to enter or connect to one person's intravenous infusion bag or administration set and do not reuse.
- Hang and prime IV bags as close to time of use as possible with the exception of the emergency department, operating room, or intensive care unit where it may be essential to maintain one system primed and ready for emergency use. In these cases store the primed system in a clean and dry area secure from tampering and label with the date of priming. Replace if not used within 2 hours.
- Store sterile intravenous equipment components in a clean, dry and secure environment.

8. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Personal protective equipment should not be the first/only strategy used to prevent the transmission of microorganisms. Focusing only on availability and use of various personal protective equipment will result in less than ideal protection of all persons, including those receiving care, and staff.

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

Appropriate personal protective equipment (PPE) must be available for use by persons receiving care, staff, visitors, contractors, and others, to prevent exposure to an infectious agent/infected source. Effective and appropriate use of PPE is reliant on the user's adherence and competence. HCWs should determine what PPE is needed by assessing the risk of exposure to blood, body fluids, secretions and excretions, mucous membranes, or non-intact skin during patient care interactions. The Point of Care Risk Assessment identifies hazards and enables staff to select PPE compatible with the hazard likely to be encountered during the patient care interaction. The selected PPE should maximize protection, dexterity and comfort.

Appropriate and proper use of personal protective equipment (PPE) includes:

- Point of care risk assessment (PCRA) to determine need for PPE.
- Correct technique for putting on and taking off PPE.
- Correct technique when wearing PPE (e.g., not contaminating self).
- Discard into designated receptacles immediately after use, followed by hand hygiene, preferably with alcohol-based hand rub (ABHR).

Following the Point of Care Risk Assessment, personal protective equipment for the appropriate application of Routine Practices may include:

- Gloves.
- Gowns.
- Facial protection:
 - Masks (procedure or surgical)
 - Eye protection (safety glasses or face shields)
prescription or fashion glasses are NOT considered eye protection
 - Masks with visor attachment.

Performing a Point of Care Risk Assessment to determine whether PPE is necessary is also important to avoid overreliance on PPE, misuse or waste. Over-reliance on PPE may result in a false sense of security. Similarly, staff should be aware of the unnecessary use of surgical caps and bouffants when caring for persons with lice. Putting or removing PPE incorrectly can result in inadvertent exposure of the user or the person receiving care to infectious agents or contamination of the healthcare environment. Faith or cultural head coverings shall be covered in areas where hair must be covered 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 Point of Care Risk Assessment (PCRA) of the patient, the environment and the interaction. Gloves are not required for routine care activities when contact is limited to the intact skin of the person receiving care. Available gloves for patient care include procedure and surgical (i.e., sterile) gloves.

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.** Gloves may have microscopic holes, or hands may become contaminated during glove removal.

Wear gloves as determined by the Point of Care Risk Assessment:

- 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.

8.1.1. Appropriate Glove Use:

- Perform hand hygiene prior to putting on gloves for tasks requiring clean, aseptic or sterile technique.
- Put gloves on directly before contact with the patient or just before the tasks or procedure requiring gloves.
- Gloves should be the correct size to maximize protection, dexterity and comfort. [13.5]
- Select type of glove appropriate to the task. [13.9]
- Wear disposable procedure or surgical gloves or reusable utility gloves for cleaning the environment or medical equipment. [13.9] 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 inoculated 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.
- Change gloves between the care of each patient.

To reduce hand irritation related to gloves: [13.7]

- Wear gloves for as short a time as possible.
- Ensure hands are clean and dry before putting on gloves.
- Ensure gloves are intact and 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 Point of Care Risk Assessment:

- During procedures and patient 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.

Gowns include:

- Isolation gowns.
- Reusable/disposable.
- Fluid repellent.
- Sterile.

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 when heavy liquid contamination is anticipated (e.g., operating theatre, dialysis).
- Requirement for sterility (e.g., operating theatre, central line insertion).

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 patient.
- Do not wear the same gown between successive patients.
- Perform hand hygiene after removing the gown due to possible contamination of hands during removal of the gown. ^[13.5]

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

There is no evidence that the routine use of gowns for all patient care is beneficial in the prevention of healthcare-associated infections (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 paediatric ICUs or on rates of neonatal colonization on post-partum wards.

In the laboratory setting, wearing of laboratory coats is considered PPE. PPE worn inside the laboratory setting should not be worn outside the laboratory containment area (e.g. should not be worn cafeteria, lunch room, patient areas). ^[13.8]

Several gown sizes should be available in a health care setting to ensure appropriate coverage of staff ^[13.7]

For aesthetic purposes and professional etiquette, staff apparel and uniforms should be clean. It is safe to launder staff uniforms at home. The safety of home laundering staff uniforms has been investigated and no increase in infection rates has been detected. Sleeves shall not interfere with or become wet when performing hand hygiene. Personal clothing that cannot be completely covered by surgical attire shall not be worn by staff required to perform a surgical scrub. Adhere to organizational policy regarding the laundering of scrub suits and uniforms supplied by the organization.

8.3. Facial Protection

Facial protection includes masks (procedure or surgical), eye protection (safety glasses, masks with built-in eye protection or face shields)

8.3.1. Masks

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

- To protect from sprays or splashes.
- As a barrier for infectious sources.
- As a barrier when performing aseptic/sterile procedures.
- To protect susceptible hosts when within two metres/six feet of patients 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:

- Masks with visor attachment.
- Safety glasses, or
- Face shields.

Users should avoid touching their faces with their hands during patient care. ^[13.5]

- The need for facial protection during routine care is determined by the Point of Care Risk Assessment: 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.
- When caring for a coughing and sneezing patient.

Transmission of hepatitis C and HIV has been reported by splashes of blood to the mucous membranes of the face.

Appropriate Use of Facial Protection:

- Wear facial protection immediately before the activity that requires you to wear a mask.
- Remove mask 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 patient care. ^[13.5]
- Wear and discard facial protection appropriately to prevent self-contamination.
- Ensure nose, mouth and chin are covered when wearing a 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.***
- Bend forward to allow the mask to fall away from the face (PHAC RPAP 2016)
- Remove facial protection carefully by the straps or ties.
- 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 mask around the neck when not in use.***
- ***Do not reuse mask.***
- ***Do not position on head or around the neck for later use.***
- Change the mask if it becomes wet or soiled (from the wearer's breathing or due to an external splash).
- Change the mask if breathing becomes difficult.
- Do not fold or store mask in a pocket. ^[13.5]

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 persons receiving care. The need for respiratory protection is determined by a Point of Care Risk Assessment. Factors to be considered are the specific infectious agent, known or suspected, infection status of the person receiving care, the care activity to be performed, the immune status of staff involved in care and the ability of the person receiving care to perform respiratory hygiene. ^[13.9]

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:

1. Assemble all supplies. When tourniquets are used, they must be single use, or safely left at the bedside and used for the duration of hospitalization, unless visibly soiled (in which case they shall be disposed).
2. Perform hand hygiene.
3. Put on appropriate personal protective equipment if required, or if splashing is anticipated.
4. Collect specimen per laboratory sample collection manuals.
5. Remove personal protective equipment. Perform HH.

Specimens will be rejected for analysis for the following reasons:

- Specimens that cannot be safely processed, i.e., specimens with needle attached.
- 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

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 persons receiving care. Therefore careful consideration to both the person receiving care and staff should be taken when selecting safety engineered sharps devices. Refer to [WRHA policy 20.20.020, Sharps, Safe Handling, Use and Disposal \(including Safety-Engineered Needle \(SEN\) Exemption\)](#).

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.

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.

Refer to [WRHA Occupational and Environmental Safety and Health Operational Procedure, Blood and Body Fluid – Post Exposure Management](#)

In home care settings:

- Teach persons receiving care and household members how to dispose of medical sharps (e.g. hypodermic needles used by patients) according to municipal or regional regulations.
- Let persons receiving care and other household members know they can place sharps into an impervious container (e.g. coffee can) if they cannot get a sharps container. Some local pharmacies provide sharps containers.

11. MANAGEMENT OF THE PATIENT CARE ENVIRONMENT

Maintaining a safe, clean and hygienic environment and minimizing microbial contamination of surfaces, items and equipment within the health care environment is increasingly recognized as an essential approach to reducing the risk of health care-associated infections for everyone within any health care setting.^[13.1]

11.1. Cleaning of Environment

Minimize Environmental Contamination:

- Do not bring the care record/chart into the patient room, cubicle or designated bed space in a shared room and perform hand hygiene after handling the record/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 person receiving care.
- Assign responsibility and accountability for routine cleaning of care equipment.
- Ensure environmental cleaning follows a set procedure and frequency, and is documented and supervised by adequately trained dedicated personnel.
- Ensure adequate human resources. ^[13.7]
- Areas/programs should have:
 - Written policies and procedures for cleaning and disinfection of client/patient/resident rooms and equipment that includes cleaning standards and frequencies. ^[13.7]
 - Procedures and increased capacity for outbreak management. ^[13.7]
- Ensure surfaces are constructed of materials that can be easily cleaned at the point of use.
- Increase the frequency of cleaning and disinfecting frequently touched 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 person receiving care (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 person's bathroom and shared common areas for dining, bathing, toileting.
- Monitor for adherence to recommended environmental cleaning practices.
 - Ensure rooms/spaces are terminally cleaned following patient discharge and after discontinuing precautions.
 - Use facility approved cleaners and disinfectants.
 - Ensure the availability of healthcare approved cleaners and disinfectants for housekeeping *and* front line staff. [13.5]
 - 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. [13.7]

When continued transmission of certain microorganisms (e.g., norovirus, rotavirus, *C. difficile*) occurs, specific disinfectant products may need to be used. In outbreak situations or when there is continued transmission, rooms of *C. difficile* infected persons should be decontaminated and cleaned with chlorine containing cleaning agents (at least 1,000 ppm) or other sporicidal agents.

11.2. Cleaning & Disinfection of Non-Critical Patient Care Equipment

Contamination of care equipment and items in the care environment, as well as the care environment itself has been implicated in transmission of infection.

Clean and disinfect used or potentially contaminated items that have been in direct contact with a person receiving care or in their environment before use in the care of another person receiving care including transport equipment. [13.7]

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

Clean and disinfect non-critical care equipment dedicated to an individual person receiving care according to a regular schedule.

Dedicate bedpans and commodes to each person receiving care and label appropriately. Clean and disinfect before use by another person. 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.

Assign responsibility for regular cleaning of computer keyboards and horizontal computer cart surfaces utilized in the healthcare environment.

Ensure computer keyboards in patient rooms are cleaned during discharge or terminal cleaning, as well as after each use.

Consider computer keyboards and computer device technology used in the healthcare environment as contaminated. Clean hands after using keyboards and computer devices, especially before touching a person receiving care, their environment or supplies.

11.2.1. In Home Care Settings ^[13.9]

- Persons receiving care should be educated about the importance of environmental cleaning.
 - The amount of disposable and non-disposable care equipment and supplies brought into the home should be limited.
 - Persons receiving care should be advised to purchase items such as thermometers and scissors for personal use.
 - Whenever possible, reusable care equipment should be left in the home until the person is discharged from home care services.
 - Non-critical care equipment (e.g., stethoscope) that cannot remain in the home should be cleaned and low-level disinfected before taking them from the home.
 - Alternatively, contaminated reusable items should be in a plastic bag for transport then cleaned and disinfected in a designated area at the home care office.
 - Unused disposable equipment or supplies in the home should be discarded following discharge from home care services if the home/environment of the person receiving care:
 - Has suspected or known bed bugs.
 - Has known or suspected rodent activity.
 - Has pets, if any pet dander or excrement is present on packaging
- And**
- If the person receiving care has a communicable disease such as VRE, MRSA, etc.
 - If the expiry date on product has been reached.
 - If Packaging is soiled or moisture is present on it.

11.3. Handling of Linen

Linen in healthcare facilities may become contaminated with pathogens but risk of disease is negligible.

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 and persons.

Handle soiled linen in the same way for everyone without regard to their infection status. Place soiled linen in a no-touch receptacle at the point of use.

Use leak-proof containers for laundry contaminated with blood or body substances (water soluble bags and 'double-bagging' are not recommended) ^[13.7]

Linen bags should be tied securely and not over-filled ^[13.7]

Clean linen should be transported and stored in a manner to prevent inadvertent handling or contamination by dust, which may contain fungal spores harmful to immunocompromised persons.

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 bed linen regularly and when soiled, upon discontinuation of contact precautions and following discharge of the person receiving care.

Roll or fold heavily soiled linen to contain the heaviest soil in the centre of the bundle. Do not remove large amounts of solid soil, feces or blood clots from linen by spraying with water; use a gloved hand and toilet tissue to remove any solid waste then 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.

In ambulatory care/clinic areas change linen following every treatment/procedure.

11.4. 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. [\[13.5\]](#)

Close waste bags when three-quarters full and tie in a manner that prevents contents from escaping. [\[13.5\]](#)

Remove waste to central holding areas at frequent intervals. [\[13.5\]](#)

Dispose of blood, suctioned fluids, excretions and secretions in a sanitary sewer or septic system according to municipal/regional regulations. [\[13.9\]](#)

Contain and dispose of biomedical waste according to site policies.

Wear personal protective equipment according to Point of Care Risk assessment

Perform Hand Hygiene after handling waste and waste containers.

11.5. Handling of Dishes

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

11.6. Handling of Deceased Bodies

Use Routine Practices properly and consistently applied 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 MANAGEMENT AND EDUCATION

Visitors have been documented to transmit infections including tuberculosis, pertussis, and respiratory viruses in healthcare settings.

Visitors 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 patient 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 primary caretaker), the visitor with an infection/signs and symptoms of an acute infection (e.g., cough, fever, vomiting, diarrhea, coryza, rash, conjunctivitis) should be instructed on measures to take to reduce the risk of transmission (e.g., wear a mask for a respiratory tract infection, perform appropriate hand hygiene, remain in the patient's room, avoid public areas, avoid contact with other persons receiving care or with care equipment).

Visitors could be at risk for serious diseases should they acquire the infection of the person receiving care (e.g., acquisition of a respiratory virus by a visitor with chronic lung disease, or exposure of a non-immune visitor to varicella), and 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 persons receiving care their families and visitors regarding respiratory hygiene and hand hygiene.

13. REFERENCES

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