

**Long Term Care  
Infection Prevention and Control Manual**

**For Non-affiliated Long Term Care Facilities**

Provincial Infection Control Network September 2011

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## **About This Manual**

This document was compiled by the Provincial Infection Control Network of British Columbia (PICNet BC). It is a collection of evidence based practices from recognized expert groups in Canada (e.g. Public Health Agency of Canada, Provincial Infectious Disease Advisory of Ontario) and reflects the current best practices for preventing and control infections in long term care settings. This manual has been written for non-affiliated Long Term Care facilities in British Columbia who do not have access to Health Authority Infection Control Programs and Services.

Depending upon the size and services provided at individual care facilities some of these policies and procedures will require some modification. It is important to protect the underlying infection control principles when doing so. PICNet recommends that when large modifications are required to elements in this manual that an infection control expert is consulted.

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## **1.0 Infection Prevention and Control Manual for Long Term Care Facilities**

### **Purpose**

The purpose of this manual is to describe the policies and procedures relating to infection prevention and control (IPAC) for Long Term Care facilities. Infection prevention and control requires a “team approach” and we encourage all staff members to read and familiarize themselves with the practices relating to their job.

### **Scope**

This manual was created to provide a written resource for long term care facilities that do not have access to Health Authority Infection Prevention and Control oversight, advice or resources.

## **2.0 Infection Prevention and Control Program**

Each facility or group of facilities under the same administration should create an infection prevention and control program that is coordinated by a designated IPAC resource person. The goal of an IPAC Program is to reduce the incidence of infection among residents and staff, while maintaining an atmosphere of a home like setting as much as possible.

Depending upon the size and complexity of the facility the IPAC resource person may also have other assigned duties. It is preferable that these other duties be complimentary to infection control, such as occupational health. The IPAC resource person should have formal education from a recognized program. Please refer to the Community and Hospital Infection Control Association of Canada website for a list of course offerings in Canada. ([www.chica.org](http://www.chica.org)) Infection Prevention and Control practices are a fundamental component of resident safety and quality of care.

### **Principles**

An IPAC Program is based on certain principles:

- Hand hygiene is the most important measure for the prevention of infections in residents.
- Routine practices should be used for all residents at all times regardless of diagnosis.
- Appropriate interventions can reduce the transmission of infection.
- Local epidemiology must be considered in the design and application of IPAC measures.
- The resident population is increasingly immunocompromised, and at greater risk for health care associated infection.
- Pathogens may be transmitted from both symptomatic and asymptomatic individuals.
- Maintaining awareness that blood and body fluids from all residents are potentially infective.
- Residents known or suspected of having infections or colonization with certain microorganisms may require additional precautions based on the mode of transmission of those microorganisms and the setting in which they are cared for.
- Education of staff, residents and visitors is the basis of good IPAC practice.

## **2.1 Terms of Reference: Infection Prevention and Control Committee**

### **Purpose**

The Infection Prevention and Control Committee (IPCC) is a standing facility committee. It guides the facility's IPAC activities. The IPCC provides leadership and advice to the Administrative Team regarding the prevention and control of infections for the benefit of residents and staff. The IPCC does not have day-to-day responsibility for managing the IPAC program; this is the responsibility of the Director of Care, or designate. In sites that are not large enough to sustain an IPCC, establishing one in conjunction with another site may be an option.

### **Functions**

- Reviews evidence based guidelines written by provincial and federal expert bodies
- Recommends to the Administrative Team:
  - Infection prevention and control goals and objectives
  - Infection control policy and procedures
- Reviews findings of surveillance programs and recommends necessary action
- Provides leadership and assistance in the prevention and control of outbreaks
- Acts as the reporting mechanism for all infection prevention and control issues

The IPCC reports to the facility Administrative Team and Medical Director.

### **Membership**

Depending upon the size and complexity of services provided by the facility, membership of a long term care facility IPCC may include:

- Facility Director of Care and/or person having primary responsibility for managing the infection control program;
- Representatives from clinical services with IPAC responsibility;
- A senior administrator and/or Medical Director
- A representative from housekeeping, maintenance, and/or food services
- An expert advisor from an external body such as the Provincial Infection Control Network or Public Health (may be as consultant rather than a regular member)

### **Meetings**

Regular meeting are held quarterly, and at the call of the Chair.

### **Minutes of Meetings**

Minutes of all meetings should be taken and approved by the committee. Minutes and any recommendations should be disseminated to the Administrative Team and Medical Director. Appropriate information should be shared with staff.

## 3.0 Admission of a New Resident

All new admissions to a long term care facility pose a potential risk for the introduction or transmission of infections within the facility; from resident to health care provider, from health care provider to resident or from resident to resident. Early identification, in conjunction with education for the resident and family, is an essential component of infection prevention and control in long term care.

### 3.1 Pre-Admission

Completed in the community and reviewed by the accepting facility to assess risk factors.

Health History, to include questions regarding:

- Tuberculosis: previous or present evidence of infection
- Antibiotic-resistant microorganisms (e.g. Methicillin Resistant *Staphylococcus Aureus* (MRSA), Vancomycin Resistant *Enterococci* (VRE), Extended Spectrum Betalactamase (ESBL) and Penicillin Resistant *Streptococcus pneumoniae*);
- Immunization Status
- Acute respiratory infection (fever, cough)
- Gastrointestinal illness (nausea, vomiting, diarrhea).
- Skin and soft-tissue infections or infestations (e.g. cellulitis, infected insect bites, scabies, head or body lice, bed bug bites)
- Presence of any chronic infections
- Residents' ability to comply and cooperate
- Continence issues

Routine pre-admission swabs for laboratory culture for antibiotic resistant organisms are generally not indicated.

### 3.2 On Admission

Admission assessment of the resident should include:

- skin and soft-tissue infections (boils, cellulitis), determine if secretions are contained
- infestations, if not previously identified (eg. scabies, head or body lice, bed bugs)
- gastrointestinal illness (nausea, vomiting, diarrhea)
- any acute infection (fever, cough)
- the resident's ability to comply and cooperate
- continence issues

Factors demonstrated to increase one's risk of developing infections include:

- extremes of age
- recent or extended stay in an acute care facility, or recurrent hospitalizations
- invasive procedures and presence of invasive devices (i.e. IV, urinary catheter, tracheostomy, gastrostomy feeding tube)
- recurrent antibiotic use
- presence of a surgical wound, decubitus ulcer, or other chronic wound

- exposure to a person who is infected with an organism and had draining skin lesions or wounds or copious respiratory secretions
- age or medication-related malnutrition and/or immunosuppression
- chronic illness and/or underlying medical conditions (e.g. HIV/AIDS)
- conditions requiring extensive hands-on care
- poor personal and/or household hygiene
- cognitive challenges (i.e. brain injury, dementia, mental health conditions)

### 3.3 Immunizations

A record of immunizations should be kept on all residents. Please refer to the Public Health Agency of Canada’s Immunization Guide at: <http://www.phac-aspc.gc.ca/publicat/cig-gci/p03-02-eng.php>  
 In addition to the regular baseline adult immunizations, the following are recommended:

- combined tetanus-diphtheria (Td) vaccine: should be updated if a booster has not been given in the previous 10 years. During the adult years one of the Td boosters should also contain acellular pertussis (Tdap).
- annual influenza vaccine
- pneumococcal vaccine: to eligible individuals who have not received one previous dose in their lifetime (depending upon age and underlying medical conditions a booster in 5 years may be advisable)

While these vaccines are publically funded and can be obtained from Public Health long term care sites have a responsibility to immunize the resident rather than send them to the Public Health unit.

#### Adult Routine Immunization Table

Vaccine	Dosing schedule (no record or unclear history of immunization)	Booster schedule (primary series completed)
Tetanus and diphtheria given as Td; and pertussis given as Tdap	Doses 1 and 2, 4-8 weeks apart and dose 3 at 6-12 months later; one of the doses should be given as Tdap for pertussis protection	Td every 10 years; 1 dose should be given as Tdap if not previously given in adulthood
Measles, mumps and rubella given as MMR	2 dose for adults born in or after 1970 without a history of measles or those individuals without evidence of immunity to rubella or mumps	Not routinely required
Varicella	Doses 1 and 2, at least 4 weeks apart for susceptible adults (no history of natural disease or seronegativity)	Not currently recommended

### 3.4 Tuberculosis (TB) Screening

Prior to admission and employment all residents and employees of these facilities are to be assessed for their risk of tuberculosis. This is to ensure early identification of an active case of tuberculosis because individuals in care facilities tend to remain for long periods of time, which could pose a risk to both the staff and the other residents. Further, because of generally reduced levels of medical surveillance compared with acute care hospitals and because many residents have reduced mental alertness, it is important to screen individuals prior to admission. Preventing a case of tuberculosis from entering the facility also prevents the need for extensive contact follow-up, which is difficult, labour intensive and expensive to undertake.

Pre-admission screening for TB includes:

- Under 60 years, do a tuberculin skin test. Chest x-ray for those with a positive tuberculin reaction.
- Age 60 years and over, a chest x-ray only. Where there is difficulty obtaining a chest x-ray prior to or at the time of admission a normal chest x-ray completed within one year preceding admission for asymptomatic residents is acceptable.

The following individuals or groups should be considered high risk for active tuberculosis. Request a chest x-ray with interpretation **prior** to admission from the following::

- Foreign born from high prevalence countries (including China, Vietnam, Philippines, Hong Kong, Indian Subcontinent, Eastern Europe, Africa, Mexico, Korea)
- Aboriginal individuals
- Any individual who is symptomatic, especially with a chronic cough and weight loss
- A previous history of tuberculosis
- An individual with immunosuppressive disease (e.g. HIV; chronic steroid use)
- Those with history of non-resolving pneumonia
- Any individual with a history of substance abuse
- Urban homelessness

Any resident with a chest x-ray abnormality compatible with tuberculosis must be reported to the local Medical Health Officer (MHO).

## 4.0 Routine Practices

Routine practices is the term used by Public Health Agency of Canada to describe the system of IPAC practices used to prevent the transmission of infections in health care settings. Routine practices should be used with all residents at all times. Specific elements of routine practice are determined by the circumstances of the resident, the environment and the care or task to be done. The following are specific practices that pertain to long term care. For a complete detailed description of Routine Practices and Additional Precautions go to [www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php](http://www.phac-aspc.gc.ca/nois-sinp/guide/pubs-eng.php)

### 4.1 Routine Practices as they Pertain to Long Term Care

Routine Practices include:

- Hand hygiene [including point of care Alcohol based hand rub (ABHR)].
- Point of Care Risk Assessment (PCRA).
- Source control (triage, early diagnosis and treatment, respiratory hygiene, spatial separation).
- Resident accommodation, placement and flow.
- Aseptic technique.
- Use of personal protective equipment.
- Sharps safety and prevention of blood borne pathogen (BBP) transmission.
- Management of the resident care environment
- Cleaning of the resident care environment
- Cleaning and disinfection of non-critical resident care equipment.
- Handling of waste and linen.
- Education of residents, families and visitors.
- Visitor management.

### 4.2 Hand Hygiene

Hand hygiene is everybody's responsibility: staff, residents, visitors and volunteers. Hand hygiene is the most effective way to prevent the transmission of microorganisms. Compliance with hand hygiene recommendations requires continuous reinforcement.

- ABHR with at least 60% alcohol by volume or soap and warm water are accepted methods of hand hygiene.
  - soap and water is required if hands are visibly soiled
  - ABHR is recommended at "point of care" places in resident care areas
- Residents who are able to participate in self-care should be taught, encouraged and reminded of the importance of hand hygiene before eating or preparing food, after using the toilet or other personal hygiene activities, before leaving their homes for common/public areas and when returning home from public places.
- Residents who are unable to assume responsibility for self-care should be assisted in performing hand hygiene whenever their hands are soiled or may be contaminated, and as recommended above.
- Health care workers (HCW) should use single-use disposable paper hand towels to dry hands, not multi-use hand towels.
- Use a plain soap for handwashing. Antibacterial soap is not required.

- Remove jewellery prior to handwashing or application of ABHR.
- The wearing of hand jewellery should be limited, as it has been associated with increased bacterial levels.
- Artificial nails and/or nail art are not acceptable for those who provide resident care, including support services such as reprocessing or housekeeping.

***Hand Hygiene is mandatory before and after all resident care***

Examples when hand hygiene must be performed:

- Before any sterile procedure
- Before preparing medications
- Before starting work and before leaving the work area
- Before direct resident care
- Before handling food, feeding or assisting in the feeding of residents
- When necessary during resident care to prevent spread of organisms to other body sites.
- When hands are visibly soiled.
- Before and after eating, drinking, smoking, handling personal care products.
- Before and after contact with open areas, urinary catheters, respiratory suctioning equipment, or any invasive procedure, even though gloves have been worn.
- After providing care to any resident regardless of whether gloves are worn;
- After contact with the resident's personal environment area regardless of whether gloves are worn.
- Immediately following removal of gloves.
- After using the toilet.

Use a hand lotion frequently to maintain skin integrity. Cover any open lesion on hands with an occlusive (air and water tight) bandage before starting work. If the lesions are extensive, the care giver should consult with his or her physician or occupational health service about appropriate coverage of the affected area, or exclusion from the work setting.

### 4.3 Point of Care Risk Assessment (PCRA)

Prior to every resident interaction, all Health Care Providers (HCP) have a responsibility to assess the infectious risk posed to themselves and others by a resident, situation or procedure. The PCRA is an evaluation of the variables (risk factors) related to the interaction between the HCP, the resident and the resident's environment to assess and analyze the potential for exposure to infectious agents and identify risks for transmission. Control measures such as the use of personal protective equipment are based on the evaluation of the variables (risk factors) identified.

In reality HCPs conduct general point of care assessments many times a day (often subconsciously). For example, when they approach a resident they automatically note their mental status, ease of breathing, skin colour etc. An infection control PCRA is simply an extension of this assessment. Questions a HCP should ask themselves during a PCRA include:

- What contact am I going to have with the resident? (direct hands on care vs. no hands on care) (contact with mucus membranes or non-intact skin)
- What task(s) or procedures(s) am I going to perform? Is there a risk of splashes/sprays? Likely to stimulate a cough? Or gagging?
- If the resident has diarrhea, is she/he continent? If incontinent, can stool be contained in an adult incontinence product?
- Is the resident able and willing to perform hand hygiene? Respiratory hygiene?
- Is the resident able to comply with instructions?
- Is the resident in a shared room? Is there a better room/space that I should use to provide this care?
- Is there personal protective equipment that I should put on prior to this task?

### 4.4 Source Control Measures

Examples of measures that help contain infectious agents at their source are:

- Early recognition of a potential source (e.g. individual with symptoms or inanimate source)
  - Timely assessment of symptomatic residents for possibility of communicable infection (e.g. norovirus, influenza)
- Segregation of those with infectious symptoms (e.g. fever, vomiting, cough, diarrhea) in a room away from other residents until they are well
- Use of spatial separation between the source and residents
- Generous access to hand hygiene products and designated hand washing sinks
- Use of respiratory hygiene by residents (whenever they are able) and HCPs. Respiratory hygiene includes:
  - Using tissues to contain respiratory secretions to cover the mouth and nose during coughing or sneezing with prompt disposal into a hands-free waste receptacle
  - Covering the mouth and nose during coughing or sneezing against a sleeve/shoulder, if a tissue is not available
  - Wearing a mask when coughing due to a respiratory illness (not for cough related to chronic conditions such as COPD) if tolerated by resident.
  - Turning the head away from others when coughing or sneezing
  - Maintaining a spatial separation of two metres between residents symptomatic with an acute respiratory infection (manifested by new cough, shortness of breath and fever) and those who do not have symptoms of a respiratory infection.

## 4.5 Resident Placement and Accommodation

Where single rooms are not available for all residents considerations should be made for co-habiting. Factors to consider:

- Ability to comply with instructions, personal and hand hygiene
- Susceptibility to adverse outcomes (e.g. immunosuppression due to chronic illness, chemotherapy or steroids)

The following residents should have priority for a single room:

- Residents who visibly soil the environment or who cannot maintain appropriate hygiene including respiratory hygiene. OR
- Residents with uncontained secretions or excretions. OR
- Residents with wound drainage that cannot be contained by a dressing. OR
- Residents with fecal incontinence if stools cannot be contained in incontinent products.

## 4.6 Aseptic Technique

Use aseptic technique when performing invasive procedures (e.g. initiating IVs) and handling injectable medications. Elements of aseptic technique include:

- Performing hand hygiene, preferably with ABHR prior to opening supplies.
- Open tray and supplies only when ready to use to ensure a sterile field.
- Performing hand hygiene prior to putting on single-use clean gloves, sterile gloves, sterile gown or mask, as indicated by the specific procedure.
- Preparing the resident's skin with an appropriate antiseptic before performing an invasive procedure.
- **DO NOT** administer medications or solutions from single-dose vials, ampoules or syringes to multiple residents or combine leftover contents for later use.
- Use a sterile, single-use disposable needle and syringe for each medication/fluid withdrawal from vials or ampoules.
- 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 ampoules in clinical settings. When a product is only available for purchase in multi-dose vials:

- Restrict the multi-dose vial to single resident use whenever possible
- Prepare syringes from multi-dose vials from a centralized medication preparation area (e.g., do not take multi-dose vials to the resident bedside)
- 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
- Store the multi-dose vial in accordance with manufacturer's recommendations
- Label the multi-dose vial with date of first opening
- Discard the multi-dose vial according to manufacturer's expiry date or organizational policy, whichever is the shorter time
- Inspect the multi-dose vial for clouding or particulate contamination prior to each use and discard if clouding or particulate contamination present
- Discard the multi-dose vial if sterility or product integrity is compromised

- Dedicate multi-use devices (e.g., glucose sampling devices, finger stick capillary blood sampling devices) for only one resident. If not feasible to assign glucometers to individual residents, clean and disinfect before use with another resident
- For storage, assembly or handling components of intravenous delivery system:
  - Use intravenous bags, tubing and connectors for one resident 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 resident's intravenous infusion bag or administration set and do not reuse
  - Store sterile intravenous equipment components in a clean, dry and secure environment
  - When inserting peripheral intravenous catheters, as a minimum, perform hand hygiene, prepare the skin with an antiseptic and wear clean disposable gloves
  - Use skin antisepsis and single-use disposable needles for acupuncture and for the use of items such as lancets and blood sampling devices.

## 4.7 Use of Personal Protective Equipment

### 4.7.1 Gloves

Touch is a fundamental part of human interaction and can be an important aspect of quality care. Gloves are not needed for routine resident care when the contact is limited to a resident's intact skin (i.e. assisting in bathing). ***Gloves are not to be substituted for other elements of hand hygiene.***

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 health care provider has an open cut or abrasions on the hands.

Three types of gloves are available: sterile, clean non-sterile disposable and non-disposable rubber gloves:

**Sterile (Surgical) Gloves** are worn to protect residents from contamination during an aseptic procedure. They also provide protection for the wearer. Use when performing an aseptic procedure (e.g. inserting or changing a urinary catheter)

**Clean (Non-Sterile) Disposable Gloves** (single use medical examination gloves – vinyl, latex or copolymer nitril or nitrile) are worn to protect the wearer from sources of contamination. Use when:

- Touching blood or other body secretions and excretions
- Touching mucous membrane
- Touching non-intact skin
- Performing a heel- or finger-prick blood collection
- Contacting an undiagnosed rash
- Initiating an IV or working with an IV site, that may result in body fluid contamination

- Protecting a staff member who is at risk of increased infection due to non-intact skin on the hands (e.g. hand dermatitis with skin cracking).

**Non-Disposable Rubber Gloves** (e.g. Rubber Household Gloves) are for protecting hands from chemicals and detergent solutions during housekeeping and maintenance work. **They are not to be used for providing resident care:**

- Issue gloves on an individual basis and do not share between employees
- Clean gloves promptly with soap and water if visibly soiled
- Wash and dry at the end of each shift
- Discard and replace rubber gloves that are cracked, chafed or visibly deteriorated.

Staff members are responsible for:

- Proper identification of gloves
- Wearing gloves for appropriate tasks
- Requesting gloves replacement when necessary
- Ensuring personal hygiene of interior of gloves.

Appropriate Glove Use:

- Gloves must be readily available in each resident care area
- Perform hand hygiene prior to putting on gloves, for tasks requiring clean, aseptic or sterile technique
- Put gloves on directly before contact with the resident or just before the task or procedure requiring gloves
- Wear gloves with fit and durability appropriate to the task. Use of powder-free gloves is preferred
- Wear disposable medical examination gloves or reusable utility gloves for cleaning the environment or medical equipment
- Remove gloves and perform hand hygiene immediately after care activities that involve contact with materials that may contain microorganisms (e.g., after contact with mucous membranes, after handling an indwelling urinary catheter, after open suctioning of an endotracheal tube or changing a dressing) before continuing care of that individual. If gloves are still indicated, replace with a clean pair
- Remove gloves in a manner that prevents contaminating hands
- Remove gloves and dispose into a waste receptacle immediately following their use
- Do not reuse single-use gloves, clean them with alcohol-based hand rub, or wash for reuse
- Always perform hand hygiene following the removal gloves (and as outlines in Routine Practices)
- Do not use the same pair of gloves for the care of more than one task or one resident
- Gloves are not worn while travelling between rooms or departments/public areas
- Gloves are not to be worn when performing clerical duties (i.e. phone, photocopying).

#### 4.7.2 Long Sleeved Gowns

Wear long sleeved cuffed gowns as determined by the Point of Care Risk Assessment:

- To protect uncovered skin from anticipated contact with infectious material
- To prevent soiling of clothing.
- During procedures and resident care activities likely to soil clothing and/or generate splashes or sprays of blood, body fluids, secretions or excretions
- If the resident is incontinent of feces or urine, has diarrhea, an ileostomy, colostomy, or wound drainage not contained by a dressing.

##### Appropriate Gown Use:

- Perform hand hygiene before gowning
- Ensure the gown is long enough to cover the front and back of the health care worker, from the neck to mid-thigh, with sleeves no shorter than just above the wrist
- Put the gown on with the opening at the back, with edges overlapping, thus covering as much clothing as possible
- Ensure the cuffs of the gown are covered by gloves
- Tie the gown at the waist and neck
- Remove gown by undoing the neck and waist 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 waste receptacle/laundry hamper and perform hand hygiene before leaving the resident's 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 the same resident
- Do not wear the same gown between successive residents.

### 4.7.3 Facial Protection

Facial protection refers to the use of a mask with eye protection (goggles, face shields, or masks with visor attachment). In Canada, there are no standardized requirements for face masks. Research that has studied the effectiveness of face masks has used surgical masks. For the purposes of this manual the term “face mask” refers to a fluid resistant surgical mask. Prescription eye glasses are not adequate for eye protection.

Wear facial protection as determined by the Point of Care Risk Assessment:

- To protect the mucous membranes of the eyes, nose and mouth during procedures and resident care activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions including respiratory secretions
- When caring for (within 2 meters of) a coughing/sneezing resident
- When eye protection is required, wear eye protection over prescription glasses as prescription glasses are not adequate for this purpose
- Remove eye protection or face shields immediately after use and place promptly into a hands-free waste receptacle and perform hand hygiene.

Appropriate use of face protection:

- Perform hand hygiene prior to putting facial protection on
- Wear facial protection as instructed by manufacturer
- Ensure nose, mouth and chin are covered when wearing a mask
- Avoid self-contamination by not touching ones face or facial protection on its external surface while providing care or during removal and disposal of mask
- Remove facial protection carefully by the straps or ties
- Discard facial protection immediately after the intended use into a waste receptacle (i.e., disposed of as soon as removed from the face) and perform hand hygiene
- Do not dangle a mask around the neck when not in use; do not reuse mask
- Change the mask if it becomes wet or soiled (from the wearer's breathing or due to an external splash).

### 4.8 Sharps Safety and Prevention of Exposure to Blood Borne Pathogens

The individual using a sharp item (e.g. needles, scalpel blades, etc.) is responsible for its safe disposal in an appropriate container. Follow provincial/territorial regulations regarding the use of safety engineered sharp devices:

- Provide “point of use” sharps containers in all resident care areas ( may need to bring to bedside)
- **DO NOT RECAP SYRINGE NEEDLES.** Discard used sharps in a clearly labelled sharps container with a secure lid. at “point-of-use”
- If it is necessary to disassemble sharps, use forceps or other tools e.g. scalpel blades must be removed using forceps

- Most containers indicate a “full” mark. **Do Not** fill beyond this. Securely close the container and treat as Biomedical Waste
- Dispose of broken glass in sharps containers
- Cover open skin areas/lesions on hands or forearms with a dry dressing at all times and consult Occupational Health or alternative designate if adherence to hand hygiene recommendations or glove use is impeded by the dressing
- Protect eyes, nose and mouth (using facial protection) when splashes with blood and/or body fluids are anticipated.

See page 85 for exposure protocols.

#### **4.9 Non-Critical Resident Care Equipment**

Clean, then disinfect, using a low level disinfectant (see definitions), reusable non-critical equipment that has been in direct contact with a resident before use in the care of another resident:

- Clean non-critical resident care equipment dedicated to an individual according to a regular schedule
- Dedicate bedpans and commodes for single resident use and label appropriately. Clean and disinfect before use by another resident. The use of a washer/disinfector machine is preferred
- Empty urine catheters into individual designated clean containers that are not carried from resident to resident
- Follow manufacturer’s written instruction for use of products for cleaning and disinfecting
- Store clean supplies in a place that is distinctly separate from dirty supplies (preferably in a separate room). Do not store under sinks and/or near plumbing as leaks may occur.

#### **4.10 Routine Environmental Cleaning**

Clean and disinfect high touch surfaces on a more frequent schedule compared to other surfaces (such as floors). This includes surfaces that are in close proximity to the resident (e.g., bedrails, over-bed tables, call bells) and frequently-touched surfaces in the resident care environment such as door knobs, surfaces in the resident’s bathroom and shared common areas for dining, bathing and toileting. Only use disinfectants that have a Drug Identification Number (DIN) from Health Canada.

#### **4.11 Routine Handling of Linen, Waste, Dishes and Cutlery**

##### **4.11.1 Linen**

- Change resident bed linen at least weekly and when soiled, upon discontinuation of precautions and following resident discharge
- Handle soiled linen from health care settings in the same way for all residents regardless of their infection status. Place soiled linen in an appropriate receptacle at the point-of-use
- Handle linen with a minimum of agitation to avoid contamination of air, surfaces and persons

- Sort, and rinse linen outside of resident care areas, except specialized items and personal clothing
- 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 then place into a bedpan or toilet for flushing.
- Perform hand hygiene after handling soiled linen
- Transport and store clean linen in a manner that prevents its contamination and ensures its cleanliness. Keep separate from soiled linen at all times
- Wash reusable linen bags after each use; they may be washed in the same cycle as the linen contained in them.

#### **4.11.2 Waste**

Contain biomedical waste, (e.g., sponges, dressings, or surgical drapes **soaked** with blood or secretions) in impervious waste-holding bags or double bags according to municipal/regional regulations:

- Dispose of blood, suctioned fluids, excretions and secretions in a sanitary sewer or septic system according to municipal/regional regulations
- Handle used needles and other sharp instruments with care to avoid injuries during disposal. Dispose of used medical sharps immediately in designated puncture-resistant containers located at the point-of-use. When full, seal and dispose these containers according to municipal/regional regulations.

#### **4.11.3 Dishes**

There are no indications for the use of disposable dishes except in the circumstance of non-functioning dishwashing equipment. Use a mechanical dishwasher for cleaning dishes or if hand washing use a process approved by Public Health Protection (consult with an Environmental Health Officer).

### **4.12 Education of Residents, Families and Visitors**

Provide instructions to residents, families and visitors regarding hand hygiene and respiratory hygiene.

### **4.13 Visitor Management**

Visitors with symptoms of acute infection (e.g., cough, fever, vomiting, diarrhea, coryza, rash, conjunctivitis) should not visit unless the visit is essential (e.g. family member in an end of life situation), in which case they should be instructed and supervised in precautions to take to minimize the risk of transmitting infection.

### **4.14 Catheter Associated Urinary Tract Infections**

Urinary tract infection (UTI) is the most common health care associated infection in long term care and contributes to increased mortality and costs (diagnostic tests, antibiotics, and increased length of stay). UTIs are usually related to instrumentation of the urinary tract, the most frequently implicated being bladder catheterization. The chance of infection increases 5-7% for every day a catheter is left in. The increased risk of UTIs with a catheter are related to:

- Microorganisms pushed directly into the bladder during catheterization or operative instrumentation (cystoscopies)
- Microorganisms migrating up from the perineum on the outside of a catheter lumen once it is inserted into the bladder
- Microorganisms migrating from a contaminated urinary drainage bag into the bladder
- Colonies of bacteria (biofilms) formation on the catheter material and in the bladder (biofilms are very resistant to antibiotic penetration).

Catheterize only for specific medical reasons and not for health care provider convenience. Consider alternatives to an indwelling catheter such as intermittent catheterization, condom drainage or incontinent products.

- Remove catheter as soon as possible – assess daily.
- Review and chart the indication for a catheter regularly.

## 5.0 Additional Precautions

Although using Routine Practices with all residents all the time will satisfy the majority of infection control issues certain conditions will require Additional Precautions. These precautions interrupt the mode of spread of infections to other individuals, and are used in **Addition** to Routine Practices, when providing care to residents known or suspected to be infected or colonized with highly transmissible or important pathogens.

The types of Additional Precautions used are determined by the mode of transmission in which the infective organism is spread (if known) and the clinical symptoms of the resident (PCRA).

**Contact Precautions** – used for residents known or suspected to have microorganisms that can be spread by direct contact with the resident or by indirect contact with environmental surfaces or resident care equipment (e.g. organisms that cause infectious diarrhea).

**Droplet Precautions** – used for residents known or suspected to have microorganisms transmitted by large particle droplets. These droplets may be produced during coughing, sneezing or certain procedures such as oral suctioning. These particles are propelled a short distance, less than two meters, and do not remain suspended in the air (e.g. organisms that cause respiratory illness).

**Airborne Precautions** – used for residents known or suspected to have microorganisms spread by the airborne route. These may consist of small particle residue (5 microns or smaller) that result from the evaporation of large droplets or dust particles containing skin squames and other debris. These can remain suspended in the air for long periods of time and are spread by air currents within a room or over a long distance (e.g. TB, measles).

**Extraordinary Precautions** – Some diseases require special isolation practices over and above Routine Precautions and the Transmission-based Precautions of Contact, Droplet and Airborne (e.g. a new emerging pathogen whose mode of transmission is unclear such as SARS).

**Note:** In long term care facilities, the most commonly used Additional Precautions are Contact and Droplet. These may be used together for diseases that have multiple routes of transmission (e.g. influenza). Explain the rationale and necessary precautions to the resident and their family/visitors and document in the resident’s chart.

Additional Precautions followed in acute care hospitals are often not appropriate for the home-like setting of long term care facilities. Where medically appropriate, and when an infected resident does not pose undue danger to other resident, an infected individual need not be transferred to an acute care hospital. The decision to retain or transfer an infected resident to an acute care facility for infection control reasons will depend on the need for special requirements (e.g. a resident with active pulmonary TB). Placement in another long term care facility capable of handling this medical condition is also a possible alternative.

### **Signage**

In the long term care setting, where the facility is essentially a resident’s home, signage requires careful consideration. Residents may experience psychological or emotional distress as a result of being identified as infectious or posing a risk to others who enter their room. Other residents may socially isolate or ostracize those who are openly identified as an infectious risk, and may exhibit unreasonable fear, even after additional precautions are discontinued.

It is important that necessary IPAC precautions be communicated to care staff, support service staff and others in a manner that effectively informs those with a need to know (e.g. HCPs who provide services to both long term and acute care during the same shift), while respecting an infected resident’s privacy, dignity and right to confidentiality.

If specific IPAC measures are required for an individual resident a sign for staff or visitors may be placed inside the room in a location where it will be readily apparent to care staff or a visitor (e.g. adjacent to the staff handwashing sink). The sign should only indicate the recommended IPAC measures, respect a resident’s right to privacy, and should not indicate the resident’s diagnosis.

In Outbreak situations signs are required at all entry points to the facility to advise all visitors of the outbreak and emphasize hand hygiene upon entering and exiting site.

## 5.1 Contact Precautions

### Purpose

- To reduce direct transmission from contact with infectious organisms, that may be found on the skin, mucous membranes, wounds, or in bodily fluids of an infected person.
- To reduce indirect transmission from contact with infectious organisms, that may be on an environmental object that an infected person has previously contacted.

In addition to Routine Practices, use Contact Precautions for residents known or suspected to be infected with microorganisms that can be transmitted by direct contact with the resident (hand or skin-to-skin contact e.g. scabies) or indirect contact (touching) with environmental surfaces in the residents environment (e.g. *C. difficile* diarrhea).

## 5.2 Contact Precautions as They Pertain to Long Term Care

Since the facility is the resident's home, IPAC precautions must be balanced with promoting an optimal, healthy lifestyle for the resident. Imposing precautions such as those required in acute care may unnecessarily interfere with social interaction and rehabilitative care and may result in isolation, depression, anger and other adverse outcomes.

### 5.2.1 Resident Placement

A private room is preferred, ideally a room with its own bathroom and handwashing sinks. Alternatively, place a resident requiring Contact Precautions in a room with another who has the same organism (cohorting).

Relocation of residents already residing in a facility and who have become colonized or infected with microorganisms requiring Contact Precautions should be assessed on a case-by-case basis.

### 5.2.2 Meals, Recreation, Socializing

In general, residents infected or colonized by microorganisms requiring Contact Precautions can engage in ALL long term daily activities along with other residents and staff, without restriction, provided they are otherwise healthy and fit to participate (and assuming their behaviour does not put others at risk).

- Risk of cross-contamination should be evaluated when considering any restrictions.
- Skin lesions should be covered with appropriate dressings.
- Residents with covered skin lesions need NOT be restricted.
- Residents should perform hand hygiene prior to each meal and prior to participating in any activity or outing so that they may:
  - eat at the same table and same time as other residents, and may share the same condiments, such as salt, pepper, dressings, or garnishes, with other residents.
  - Use the same dishes and cutlery (disposable eating utensils or dishes not needed.)
  - participate in any social function within the facility
  - travel together in the same vehicle with other residents to-and-from activities. (No special vehicle preparation or cleaning is required.)
- Residents incapable of performing hand hygiene independently should be assisted with hand hygiene prior to each meal and prior to participating in any activity or outing.

### 5.2.3 Gloves and Hand Hygiene

In addition to wearing gloves as outlined under Routine Precautions, clean non-sterile gloves should also be worn if anticipating direct contact with the infected resident (e.g. assisting in personal care), contaminated environmental surfaces or, items in the residents room.

While providing resident's care, change gloves after having contact with contaminated/infectious material that may contain high concentrations of microorganisms (feces or wound drainage) before moving to other elements of their care.

Remove gloves before leaving the resident's environment and perform hand hygiene immediately. After hand hygiene, avoid touching potentially contaminated environmental surfaces or items in the resident's room.

To the extent that infected or colonized residents are able to participate in self-care, they should also be taught, encouraged and reminded of the importance of Hand and Respiratory Hygiene.

### 5.2.4 Gowns and Aprons

In addition to wearing a gown or apron as outlined under Routine Practices, wear a clean, non-sterile gown when:

- Entering the infected resident's room
- The caregiver anticipates that their clothing will have contact with the resident, environmental surfaces, or items in the residents' room.
- Remove the gown when leaving the resident's environment.

After gown removal, avoid clothing contact with potentially contaminated environmental surfaces in the resident's room.

### 5.2.5 Resident Care Equipment

Evaluate on a case-by-case basis whether the use of dedicated equipment is indicated. Assign individual use equipment to residents who:

- Require a commode and who cannot be relied upon to prevent contamination
- Have a highly infectious situation such as *C. difficile* diarrhea

If equipment such as blood pressure cuffs, stethoscopes, thermometers, portable lifts, etc. must be shared with other residents, it should be cleaned and disinfected before use by another resident.

### 5.2.6 Bathrooms

Separate toilet, washing or bathing facilities are preferable but NOT essential.

- Use disposable single-use hand towels - not multi-use terrycloth hand towels.
- **Never** share personal hygiene items with other residents (e.g. razors, bar soap, deodorant)
- Clean bathroom surfaces that are visibly contaminated with blood, body fluid, secretions or excretions then disinfect, using a low level disinfectant, prior to use by another resident.

### **5.2.7 Bathing**

- Bathe all residents at least weekly to provide good personal hygiene.
- Bathe residents, using soap, as necessary for healthy skin care.
- Clean and disinfect the tub between each resident
- Bath residents that require contact precautions last in the day to provide adequate time to clean and disinfect the tub and bathing area, using a low level disinfectant.

## **5.3 Droplet Precautions**

### **Purpose**

To reduce transmission of infectious organisms that can be contained in larger respiratory droplets. These droplets are expelled into the air by an infected person's coughing, sneezing or talking. Droplets do not spread more than two meters (six feet) from an infected person, and do not stay suspended in the air for more than a few minutes.

In addition to Routine Precautions, use Droplet Precautions for residents known or suspected to be infected with microorganisms transmitted by droplets (e.g. influenza, streptococcal throat or lung infections). Droplet Precautions are only necessary during the period of communicability of the recognized infection.

## **5.4 Droplet Precautions as they Pertain to Long Term Care**

### **5.4.1 Resident Placement**

Temporary segregation of residents requiring Droplet Precautions from others may be required. A private room with its own bathroom is ideal. Alternatively, maintain spatial separation of at least two meters (six feet) between the infected resident and other residents and visitors.

Special ventilation is NOT required and the door to the resident's room may remain open.

If the resident's room has no toilet, exposure of others can be minimized by designating a commode to the room during the period of communicability.

Common bathing facilities may be used. Exposure to others can be minimized by having resident wear a surgical face mask (if tolerated) during transit to the bathing area, bathing them at end of day and not bathing or showering others at the same time.

### **5.4.2 Masks**

In addition to the indications outlined in Routine Practices, staff, volunteers and visitors are to wear a surgical mask with eye protection whenever they will be within two meters of resident requiring Droplet Precautions.

### **5.4.3 Meals, Recreation, Socializing**

During the period of communicability of a confirmed respiratory infection, the resident should generally be restricted to their room and not attend facility recreation or social events until past period of communicability – consult with their physician first.

Provide for increased interaction between staff and resident to mitigate the negative consequences of segregation:

- Deliver meals to residents' room
- Provide one-to-one supervision of meals for those who have difficulty swallowing
- Monitor and document oral intake of resident to ensure adequate nutrition and hydration
- Increase frequency of rounds to provide oral fluids for resident
- Plan one-to-one (or room-to-room) interactions with priority given to those who have cognitive issues
- Continue physiotherapy or other rehabilitative therapy if individual well enough. Ask them to wear a face mask that covers the nose and mouth during therapy if tolerated.

If residents who are symptomatic must leave their rooms they must wear a face mask that covers their nose and mouth.

#### **5.4.4 Resident Care Equipment**

There is NO requirement to dedicate specific care equipment for individuals requiring Droplet Precautions, however keep in mind that many droplet borne illnesses are also contact borne. Clean and disinfect equipment prior to use by another resident.

### **5.5 Combination Contact and Droplet Precautions**

Many organisms that cause respiratory infections as well as some viral agents responsible for gastrointestinal infections require a combination of Contact and Droplet precautions.

## **6.0 Antibiotic Resistant Organisms (AROs)**

### **6.1 MRSA (Methicillin-Resistant *Staphylococcus Aureus*)**

*Staphylococcus aureus* (*S. aureus*) are bacteria normally found in the nose and/or on the skin in up to 30% of healthy people. *S. aureus* can also cause a variety of infections ranging from localization skin lesions, such as impetigo, boils or wound infections, to invasive disease.

Methicillin-Resistant *Staphylococcus aureus* (MRSA) are strains of *S. aureus* resistant to oxacillin and cloxacillin. They may also be resistant to other antibiotics. This multi-drug resistance may limit treatment of infections caused by MRSA to vancomycin only, regardless of whether other antibiotics are reported in the laboratory sensitivity panel. Infections caused by MRSA are not more serious than infections caused by methicillin-sensitive *S. aureus*, nor are there significant differences in the types of infection or death rates when compared to methicillin-sensitive *staphylococcus*. Most people with MRSA are carriers without infections, as is the case with other strains of *S. aureus*. Most MRSA infections can be effectively treated with vancomycin.

#### **6.1.1 Mode of Transmission**

The primary mechanism for transmission of MRSA from one resident to another is via health care workers whose hands have become transiently colonized. Hands may become contaminated after direct contact with colonized or infected residents while performing resident care, when removing gloves, or touching contaminated surfaces.

Droplet transmission is not considered a significant mode of transmission, however when a resident is colonised with MRSA in their sputum and they are coughing, this is possible.

Colonized or infected residents with large, open, poorly healing wounds, profuse colonized tracheostomy secretions, urinary incontinence, with infected urine, or extensive desquamating skin conditions are more likely to disperse large numbers of organisms into the environment.

The efficiency of transmission of MRSA is greater by virtue of the number of organisms present from individuals who are infected or who have large colonized wounds versus those individuals with simple nasal colonization.

## **6.2 Vancomycin Resistant *Enterococcus***

*Enterococci* are bacteria that are commonly found in the gastrointestinal tract of 95% of healthy individuals. As well they are non-pathogenic colonizing flora in the vagina, oral cavity, perineal area, hepatobiliary tract and upper respiratory tract. Human feces contain the greatest quantity of *Enterococci* and therefore the fecal/oral route is the most efficient route of transmission. Occasionally, *Enterococci* are capable of causing invasive disease, particularly in severely immune-suppressed residents. *Enterococci* may also contaminate open wounds and decubitus ulcers thereby creating a reservoir for the organism. Vancomycin-Resistant *Enterococci* (VRE) VRE are *Enterococci* that have acquired resistance to vancomycin. The development of resistance to vancomycin is especially problematic in that there are few effective treatments of serious infections caused by VRE. In addition, there is the possibility that the vancomycin-resistant gene (Van A gene or Van B gene) present in VRE may be transmitted to other gram positive organisms, such as *S aureus*. Like MRSA, VRE is neither more pathogenic nor more virulent than susceptible *Enterococci*, i.e. it is not more likely to cause infection, nor does it cause more serious infection than other *Enterococci*.

### **6.2.1 Mode of Transmission**

VRE can be transmitted directly from resident to resident or by carriage on the hands of health care personnel, and indirectly by contaminated medical devices (such as electronic thermometers) or contaminated environmental surfaces. There is sufficient evidence reported in the literature to suggest that environmental contamination likely plays a role in the transmission of VRE. Environmental cultures have demonstrated widespread surface contamination in the rooms of residents colonized or infected with VRE and VRE is capable of prolonged survival on inanimate surfaces.

## **6.3 Extended Spectrum Beta-Lactamase (ESBL)**

ESBL is a bacterial enzyme with the ability to break down a wide variety of antibiotics, especially penicillins, ampicillin and all (including extended spectrum) cephalosporins. When present, this enzyme results in the bacteria being resistant to many types of antibiotic therapy. ESBL enzymes are most commonly produced by two bacteria- *Escherichia coli* (otherwise known as *E. coli*) and *Klebsiella pneumoniae*, however ESBL enzymes can also be found in bacteria such as *Salmonella*, *Proteus*, *Morganella*, *Enterobacter*, *Citrobacter*, *Serratia*, and *Pseudomonas*. In most cases, the body successfully fights off ESBL—producing bacteria. However, because of the enzymes' ability to neutralise antibiotics, people with weak immune systems are at a greater risk. This includes the frail elderly and people with chronic illnesses.

### 6.3.1 Mode of Transmission

ESBL-producing bacteria are spread either by self inoculation or direct contact with feces or urine of an infected person. These bacteria can also live in moist wounds. They can be spread from resident to resident on the hands of health care providers or the residents themselves. This is why hospitals and Long Term Care facilities are particularly prone to outbreaks. ESBL enzymes can also spread by passing from one bacterium to another through the sharing of genetic material.

## 6.4 Admission of ARO Positive Residents

Do not deny admission to a Long Term Care facility (RCF) on the basis of colonization or infection with an ARO. Experience to date and results of epidemiological studies indicate that RCF residents who are colonized or infected with these organisms do not endanger the health of staff or other residents when facility staff consistently follows routine practices, especially diligent hand hygiene.

### 6.4.1 Admission Assessment

An assessment of factors related to risk of colonization or infection with an ARO is considered part of the long term care resident's general admission assessment. Each facility should base decisions regarding ARO surveillance cultures, room placement and use of additional precautions on the results of this risk assessment. Factors that increase the risk that a long term care resident may be colonized or infected with an ARO on admission to the long term care facility include:

- Recent transfer from a tertiary care institution
- Known to be colonized or infected with a resistant pathogen
- Contact with or proximity to a resident colonized or infected with MRSA
- The presence of a surgical wound, decubitus ulcer, or other chronic wound
- Diagnoses of conjunctivitis or bacteruria
- The presence of invasive indwelling devices (e.g. intravascular lines, urinary catheter, endotracheal or tracheostomy tube, gastrostomy feeding tube)
- Recent antimicrobial therapy
- Malnutrition, immunosuppression (age- and/or medication-related).

### 6.4.2 Screening Cultures

Screening cultures for MRSA, VRE, or ESBL are only recommended on a case-by-case basis for residents likely to have ARO **and** increased risk for transmission to others such as poorly contained excretions (e.g. sputum, wound drainage), inability to comply with hand and personal hygiene etc. Residents likely to harbour resistant organisms include those who have:

- A history of having resistant organisms
- Had exposure to individuals or wards with resistant organisms
- Undergone chronic hemodialysis and with no screening cultures done
- Had chemotherapy in a tertiary facility
- Have used or shared drugs or street drug equipment in the last year
- Direct transfers from tertiary hospitals (hospital stay of > 48 hours).

Screening cultures for MRSA consist of swabs from nares, axilla, groin, and any draining wounds. VRE swabs require visible fecal material (rectum, stool). ESBL screening usually is done with a urine sample if resident is catheterized or a rectal swab.

If screening cultures are done, details of the screening (date swabbed, sites, culture results) should be recorded on the resident's medical record so that the results are readily available to be communicated to another facility should the resident be transferred.

### **6.4.3 Room Placement**

Roommates of RCF residents who are colonized with an ARO have not been shown to be at higher risk of ARO infection than residents in that facility. Either a private or multi-bed room is acceptable for residents who are colonized or infected with ARO, for whom Routine Practices are considered adequate. If admitted to a multi-bed room, it is preferable that the roommate does not have open wounds, or indwelling devices, or is not severely immunosuppressed.

Because of a higher risk of cross contamination to other persons or the environment, consider private room placement in the following circumstances:

- A resident with VRE or ESBL with uncontrolled diarrhea and fecal incontinence, an ileostomy, colostomy or open wounds. If this is not possible, place resident in a room with a resident who has the same microorganism.
- A resident with an ARO who is unable to be compliant with hand or personal hygiene because of cognitive impairment and has open wounds.

Bed location within the room may reduce the risk of transmission. Locate the bed where there is easy access to the bed from all directions, without having to touch a neighbouring bed.

## **6.5 Assessing Appropriate Level of Precautions**

Use Routine Practices for residents with:

- Nasal or superficial skin colonization with MRSA; colonization of the gastrointestinal tract with VRE and ESBL, and continent of stool, and capable of practicing good personal hygiene and hand hygiene.

Additional Precautions are recommended if the risk of transmission to other residents, either directly, or via contamination of the environment, is assessed to be higher. Factors to consider in determining whether additional precautions are necessary include:

- The residents' mental status, reliability, and level of self-care and personal hygiene
- Effectiveness of containing excrement, secretions or discharge to prevent contamination of the environment
- Any clinical condition that increases risk of: cross contamination (e.g. a VRE or ESBL colonized or infected resident is continent and has diarrhea)
- If staff provide service for both Long Term Care and Acute Care (eg. physio, lab) in the same shift (precautions may be used only by these staff).

Additional infection control precautions may include some or all of the elements of "Contact Precautions". However, utilizing all of the strict measures of Contact Precautions that may be appropriate in acute hospitals are generally neither required nor recommended in Long Term Care facilities.

***Remember that Routine Practices are the minimum practice for ALL residents at ALL times.***

### **6.5.1 Gloves**

In addition to wearing gloves where recommended for Routine Practices, staff should wear clean non-sterile gloves:

- If anticipating substantial direct contact with the infected resident, environmental surfaces and items in the resident's room that are likely to be heavily contaminated
  - e.g. assisting in personal care, such as giving a bed bath, lifting the resident from bed to chair, making a resident's bed or tidying up room.

Change gloves after having contact with infective material and remove gloves before leaving the resident's environment, performing hand hygiene hands immediately.

### **6.5.2 Gowns**

A gown is recommended:

- If staff or a visitor is involved in the resident's direct personal care and additional infection control precautions are being used, such as:
  - a resident who is colonized or infected with VRE or ESBL and who is either incontinent of stool or urine, or has diarrhea,
  - a resident with ARO-colonized skin, who has a severe desquamating condition (e.g. widespread dermatitis, psoriasis)
- In situations where there is a higher risk of soiling clothing (e.g. cleaning a toilet).

Remove the gown when leaving the resident's environment and if disposable, place in a regular plastic lined waste container or, a regular laundry hamper if not disposable.

### **6.5.3 Medical records/Kardexes/Care plans**

ARO status/culture results will be recorded in the medical record. Information regarding ARO status and/or culture results may be included in the Kardex and care plans so that health care workers will be aware of any special precautions or notes regarding room placement or use of dedicated equipment for the particular resident.

### **6.5.4 Signage**

Signs need not be placed on the door or at the entrance to the bedroom of a resident who is colonized or infected with an ARO for whom Routine Practices are considered adequate.

If additional infection control precautions are in place, a sign for staff or visitors may be placed inside the room in a location where it will be readily apparent to care staff or a visitor (e.g. adjacent to the staff handwashing sink).

The sign should only indicate the recommended additional infection control precautions and, to respect a resident's right to privacy, should not indicate the resident's diagnosis.

### **6.5.5 Resident Activities**

A RCF is considered to be a resident's home and the need for infection control must be balanced with promoting an optimal, healthy lifestyle for the residents, particularly in view of the fact that colonization with ARO may persist indefinitely.

In general, residents colonized with an ARO may use common living areas, recreational and socializing areas, and dining facilities. They should not be confined to their room or restricted in their activities or interaction with other residents. In circumstances where an ARO colonized or infected resident poses a short term (days or a few weeks) higher risk of transmission because of a temporary change in clinical status, a resident's activities may be modified or curtailed during this time (e.g. VRE colonized or infected residents who have diarrhea or residents with acute, symptomatic MRSA respiratory tract infection).

Covering open wounds or lesions with clean, dry dressings along with clean clothes or a clean cover gown will minimize the risk of spread and enable the resident to participate in activities.

## **6.6 Resident Care Equipment**

- Extra equipment should not be brought into the room unless necessary.
- If care equipment cannot be dedicated to a single resident, it should be cleaned and disinfected before use by another.

## **6.7 Bathing**

Most RCF residents are bathed weekly. Recent experience suggests that increased frequency of bathing with a plain soap is effective in reducing the microbial burden of AROs on a resident's skin. Residents infected or colonized with AROs who have diarrhea or fecal incontinence, with resulting extensive fecal contamination of skin, should be bathed as necessary for healthy skin care:

- Provide residents with their own bath towel
- Bathe at the end of the day
- After use, thoroughly clean and disinfect the bathtub.

## **6.8 Dishes and Utensils**

An automated washing process effectively removes all pathogens. Therefore, these items are not considered sources of infection and no special precautions are needed.

- Gloves are not required for delivery or pick up of food trays, dishes or eating utensils.
- Complete hand hygiene following handling of food trays or eating utensils.
- Disposable cutlery and dishware are NOT required.

## **6.9 Laundry**

Although soiled linen may carry large numbers of infectious organisms, the risk of actual disease transmission is very low, provided hygienic handling, storage and processing of clean and soiled linen are carried out. Provide impermeable containers for soiled linen close to point of care to prevent staff from walking distances carrying dirty linen. Double bagging is not necessary.

- Handle soiled linen as little as possible, to prevent microbial contamination of air and persons handling linens.
- Wear gloves when contamination of hands with blood or body fluids likely, and perform hand hygiene after completing task.
- Mattresses and pillows should have an impermeable cover and be cleaned as required.

## **6.10 Garbage and Waste**

Place garbage in a leak-proof bag and close securely before removal from resident's room. Double bagging is not necessary.

- Carefully pour body fluids, such as urine or aspirates into a hopper or toilet.
  - If the container is disposable, place in a leak-proof bag and discard with regular waste.

## **6.11 Cleaning Requirements**

AROs can survive for variable periods on environmental surfaces. Consistent, regular cleaning assists in reducing the potential for environmental transmission of microorganisms. A terminal clean should be done upon discharge of an ARO colonized or infected resident:

- Wash walls and change curtains
- Give special attention to frequently touched surfaces
- Clean and disinfect any equipment that has been kept in the room before being returned to service. Use disposable wipes or do not double dip reusable wipes into disinfectant
- Change mop head and cleaning solution after cleaning the room.

## **6.12 Surveillance**

All Long Term facilities should develop a method to keep track of known ARO infections/colonization in residents. Once a surveillance system is established each facility will obtain baseline rates. The facility will then be able to quickly identify a cluster or outbreak of infections above baseline, implement control interventions, and then be able to assess the success or failure of the interventions by comparing specific ARO incidence rates before and after the intervention.

## **6.13 ARO Outbreak Management**

If an outbreak is suspected notify the person in the facility responsible for infection prevention and control, the facility Medical Director, and the Unit/Site Manager. Outbreaks of ARO infections are reportable to the local Medical Health Officer.

## **6.14 Education**

Staff education regarding the epidemiology and specific precautions pertaining to ARO prevention and control should be undertaken to ensure that personnel are educated appropriately and understand their responsibilities.

Resident education should cover routine practices for preventing the transmission of infections, such as hand hygiene, not sharing personal items and covering their mouths when coughing. As well, education should include an explanation of any precautions being used, and the rationale behind their use. Explanations will need to be tailored to the cognitive ability of the residents.

Instruct visitors regarding specific precautions and hand hygiene.

## **6.15 Decolonization or Treatment of an ARO**

Although antibiotic treatment is clearly indicated for serious and invasive MRSA infections, it is not necessarily indicated for people who have less serious presentations of infection (such as a skin boil) or who may be colonized with these microorganisms.

Antibiotic decolonization of persons in whom MRSA is found, is not recommended because of:

- Frequent failure of decolonization
- Concern that repeated treatment of chronic carriers will actually contribute to emergence of mupirocin (antibiotic in ointment used to decolonize) resistance
- Lack of evidence that decolonization therapy has any benefit in reducing risk of transmission of the microorganisms in RCFs.

Currently, there is no effective decolonization therapy for VRE and ESBL.

## **6.16 Transfer of Infected or Colonized Residents**

ARO infected or colonized residents are a potential reservoir for re-introduction of these organisms into acute care hospitals, should they require acute care admission. Should a resident who is colonized or infected be transferred to an acute care facility, verbal communication prior to transfer and written communication on the transfer documentation is essential.

Screening for risk of ARO is the responsibility of the receiving facility. Admission to the receiving facility should not be delayed while awaiting the results of screening culture swabs.

A receiving facility that finds that a resident admitted from another facility is infected or colonized with a multiple drug resistant micro-organism, should inform the sending facility. Similarly, the transferring facility should immediately advise the receiving facility of any change from what was communicated to the receiving facility prior to transfer.

## 7.0 Nutrition Services

Appropriate IPAC procedures will be consistently practiced by all staff in handling, storing, preparing, and serving food and beverages, and in the proper maintenance, cleaning and disinfection of food service premises, equipment, dishes and utensils, to prevent occurrence of food-borne illness among residents and staff.

Operation of food establishments shall be in accordance with applicable provisions of the British Columbia Public Health Act and related regulations (Communicable Disease Regulation and Food Premises Regulation). Compliance with regulations is monitored on an ongoing basis through periodic inspections of food establishments by Public Health Inspectors.

### Dietary Staff Exclusion

Exclude dietary staff suffering symptomatic communicable disease from contact with food products or utensils. Examples of employee infections that can result in food-borne illness are:

- skin - boils, abscesses, cuts, open sores (food-handler may safely continue working if cuts, sores or lesions are effectively covered, e.g. waterproof bandage covered with a finger cot or suitable glove)
- respiratory - coughing, fever
- gastrointestinal - diarrhea, vomiting

In addition, the British Columbia Public Health Act, Communicable Disease Regulation and the BCCDC Guideline 'Exclusion of Enteric Cases and their Contacts from High Risk Settings' specifies control measures for food-handlers who are cases of hepatitis A, salmonellosis and shigellosis, and those who have or are carriers and contacts of typhoid fever and paratyphoid fever.

Consult with your local Environmental Health Officer for appropriate work restrictions in the event an employee in nutrition services is diagnosed with the above diseases.

### HAND HYGIENE SPECIFIC TO NUTRITION SERVICES

ALWAYS Clean Hands

before:

- starting work each day
- handling any food.

after:

- using the toilet
- touching the mouth, nose, ears, eyes, hair
- handling raw food (especially meat)
- contact with unclean equipment and work surfaces, soiled clothing, wash rags.

### **Food Handling**

- Avoid touching food directly. Use implements and food handling plastic gloves to minimize touch contamination.
- Employees must not eat, drink or smoke in the food preparation area.

### **Food Safety Training and Practice**

- Ministry of Health-sponsored “FOODSAFE” level 1 training is available and recommended for personnel employed in food services
- “Hazard Analysis Critical Control Point” HACCP is an internationally recognized food safety management program that is recommended as the best means to minimize risk of food borne illness in facilities. Properly applied, HACCP is a valuable tool, which both focuses staff attention on critical food-handling practices and helps identify and remedy potential food-handling safety problems. The local Environmental Health Department can assist in implementing the HACCP program within the facility. Foodsafe level 2 also provides training in HACCP and is recommended for food services supervisors.

### **Drinking Water for Residents with Impaired Immunity**

Residents who are medically diagnosed as immunosuppressed may be at increased risk of illness if they are exposed to pathogens which may be present in the water. Residents that may be at risk are those who:

- Have HIV with CD4+ count of  $< 100$  cells/mm<sup>3</sup>, hematological malignancies such as lymphoma or leukemia, hematopoietic stem cell transplant recipients or people born with diseases that severely affect their immune systems.

Personal physicians of immune impaired residents will be required to assess the need for an alternative source of water for the resident to be used for drinking, tooth brushing, denture rinsing, mouth washing and ice.

## 8.0 Laundry

Appropriate IPAC procedures will be consistently practiced by all staff when handling laundry.

Although soiled linen may carry large numbers of microorganisms, the risk of actual disease transmission is negligible, provided hygienic handling, and storage and processing of clean and soiled linen are carried out.

### 8.1 General Principles of Laundry Management

Resident linens must be clean and dry, and changed regularly.

- Wear gloves if handling soiled linen or if there is broken skin on the hands (e.g. cuts, severe hand eczema).
- Remove linen from the bed by rolling the soiled sheets; keeping contaminated surfaces inside the roll.
- Handle linen as little as possible, with minimum agitation. Do not shake linen (whether clean or soiled) as this releases dust, or lint that may potentially contain or transmit infectious microorganisms.
- Mattresses should have an impervious covering. Clean soiled mattresses with disinfectant before applying clean sheets.
- Arrange the “flow” (i.e. handling and storage) of the laundering process so that clean articles are not contaminated by soiled ones.
- Collect and transport soiled linen at regular intervals.
- Linen soiled with blood or body fluid should be placed and transported in plastic or leak-proof bags.
- Contain and transport soiled linen in covered bags or closed hampers to minimize accessibility to confused, elderly residents.
- For either personal resident or facility laundry that is soiled with feces, remove gross fecal soiling with a gloved hand and toilet tissue then place into a bedpan or toilet for flushing prior to transport to laundry room. **DO NOT** use spray mechanisms to remove gross fecal material.
- Residents requiring Additional Precautions should have the linen hamper brought into the room (when linens are to be changed.)
- Linens from residents on Additional Precautions do not need to be segregated or treated separately from other facility linen.
- A disinfectant may be used to aid cleaning and bactericidal action in hot or low temperature water washing of soiled linen. Hot water (71°C/160°F) provides the most effective means of destroying microorganisms. If hot water is used, linen should be washed with detergent for 25 minutes. If low temperature (<70°C) laundry cycles are used, chemicals at appropriate concentration for low temperature washing should be used. In addition to the wash cycle, disinfection of laundry is enhanced with the heat of dryers.

- For residents' personal laundry, use of non-institutional washing machines may necessitate some deviation from wash water temperature and wash cycles normally recommended for facility laundry. To the extent possible, the same standards as recommended for facility laundry should be followed.
- Separate the clean storage area from the soiled storage area.
- Use separate labelled carts for clean and soiled linen.
- Clean soiled linen hampers and carts at regular intervals.
- Staff must perform hand hygiene after handling soiled linen and before handling clean linen.
- Clean linen on carts should be kept covered for transport to units.

## **9.0 Cleaning and Disinfection**

### **9.1 Single Use Items**

Disposable items shall not be reprocessed unless specific written instructions from the manufacturer describe the appropriate reprocessing method. Critical and semi-critical medical equipment/devices labeled as single-use must not be reprocessed and reused unless the reprocessing is done by a licensed reprocessor. Currently there are no licensed reproducers in Canada.

### **9.2 Cleaning**

Cleaning is the removal of all foreign material (i.e., dirt, body fluid, and lubricants) from objects by using water and detergents or soap and washing or scrubbing the object.

Effective cleaning can physically remove large numbers of organisms. Soiled or foreign material can shield microorganisms and protect them from the action of disinfections or sterilants or interact with the disinfectant or sterilant to neutralize the activity of the process. Cleaning is always essential prior to disinfection or sterilization.

#### **9.2.1 Cleaning Process**

##### **Sorting and Soaking**

- If unable to clean immediately, sort and soak instruments and small items in water and/or detergent to prevent organic material from drying on them.
- Disassemble each item to allow for effective cleaning
- Heavy or non-immersible items should be covered or wrapped with a wet towel.

##### **Removal of Organic Material**

- Removal is done with the use of detergents, enzymatic cleaners, or with the use of mechanical washers.
- Detergents are used to reduce surface tension and suspend the soil in water
- Detergents selected are required to be compatible with the subsequent disinfection process because some products can interfere with chemical disinfection or sterilization.
- Enzymatic solutions may be required to remove proteinaceous material when plain water and/or detergents are considered inadequate.
- Low level disinfectant-detergent combination products (germicidal detergents) are used to clean items that do not require further disinfection or sterilization (e.g. intravenous poles, commodes, wheelchairs).

##### **Rinsing**

- Items require a thorough rinsing to remove all the soil and the cleaning agent, to avoid spotting and to ensure thorough cleanliness.
- When cleaning is followed by disinfection, all residuals of the cleaning agent (i.e. detergent) must be removed to prevent neutralization of the disinfectant.

## **Drying**

- Drying prevents microbial growth.
- Dry all items that require no further treatment prior to storage.
- Immediate drying prevents corrosion of stainless steel equipment.
- Inspect items to ensure that they are free of all organic soil and other matter.

Dry items that require further disinfection or sterilization as water may dilute the action of the chemical.

## **9.3 Disinfection**

Denotes the killing of microorganisms responsible for infection to reduce the number of microorganisms present (not to be confused with sterilization).

### **9.3.1 Methods**

#### **Heat**

Hot water disinfection (pasteurization) is a high-level, non-toxic disinfection process, generally used for rubber and/or plastic equipment, e.g. respiratory therapy equipment. A temperature of 65°C for 30 minutes is effective. Items must be thoroughly cleaned and washed prior to heat disinfection.

#### **Chemical Disinfection**

There is no single chemical disinfectant that will kill all microbial forms and is safe to use for all disinfecting procedures in a facility. The Infection Control Committee should approve all chemical disinfectants used within the facility. This includes substitutions or changes within the same generic group.

Chemical disinfectants are categorized as high, intermediate or low level depending on their ability to kill different microbial forms, in an “in-use” situation. Medical devices, equipment and surgical materials are divided into three general categories (critical items, semi-critical items and non-critical items) based on the potential risk of infection involved in their use.

#### **Guidelines for Chemical Disinfection**

- All disinfectants must have a DIN number assigned by Health Canada
- Items must be thoroughly cleaned before disinfection process
- Dilute the disinfectant according to the manufacturers instructions.
- Store and discard the “in-use” solution as per manufacturers’ instructions.
- Staff must be made aware of any change in product that may require a different concentration of chemical or a longer/shorter contact time.

## 10.0 Disinfectant Uses, Advantages and Disadvantages

Disinfectant/Use	Advantages	Disadvantages
<p><b>Alcohols</b> Intermediate level disinfectant Disinfect external surfaces of some equipment</p>	<p>Fast acting No residue Non-staining</p>	<p>Volatile Evaporation may diminish concentration May harden rubber or cause deterioration of glues Intoxicating Inactivated by organic material (need to clean with neutral soap first)</p>
<p><b>Chlorine</b> 1:500 solution added to laundry (250 ml bleach in an average size washing machine) 1:100 solutions are used for disinfecting general household surfaces. (10 ml bleach to 990 ml water). 1:50 bleach solutions are used for disinfecting surfaces contaminated with bodily fluids and waste like vomit, diarrhea, mucus, or feces. (20 ml bleach to 980 ml water) 1:10 Solutions are used for disinfecting surfaces contaminated by blood. ( 100 ml bleach to 900 ml water)</p>	<p>Low cost Fast acting Readily available in non-hospital settings</p>	<p>Surfaces must always been cleaned first Corrosive to metals Inactivated by organic material (need to clean with neutral soap first) Irritant to skin and mucous membranes Must be used in well-ventilated areas Shelf life shortened when dilution: 1/100 make fresh every 24 hours 1/50 make fresh every 30 days</p>
<p><b>Glutaraldehydes</b> High level disinfection for heat sensitive equipment (2%)</p>	<p>Non-corrosive to metal Active in presence of organic material Compatible with lensed instruments Sterilization may be accomplished in 6-10 hours</p>	<p>Extremely irritating and toxic to skin and mucous membranes Shelf life shortened when diluted (effective for 14-30 days depending on formulation) High cost Concentration must be monitored in reusable solutions</p>

<b>Disinfectant/Use</b>	<b>Advantages</b>	<b>Disadvantages</b>
<b>Hydrogen peroxide</b> Low level disinfectant (3%) High level disinfectant (6%)	Strong oxidant Fast acting Breaks down into water and oxygen	Can be corrosive to aluminium, copper, brass or zinc Surface active with limited ability to penetrate
<b>Phenolics</b> Low/intermediate level disinfectants Clean floors, walls and furnishings	Commercially available with added detergents to provide one-step cleaning and disinfecting	Leaves residual film on environmental surfaces Cannot be used in nurseries Not recommended for use on food contact surfaces May be absorbed through skin or by rubber Some synthetic flooring may become sticky with repetitive use
<b>Quaternary ammonium compounds</b> Low level disinfectant Clean floors, walls and furnishings	Generally non irritating to hands Usually have detergent properties Non-corrosive	Cannot be used to disinfect instruments Limited microbicidal spectrum

## 10.1 Specific Equipment

### Fans

Fans used in resident care areas must be cleaned prior to use on another resident.

### Ice Machines

Must contain an automatic dispenser and be emptied and cleaned at least every six months.

### Water Coolers

Regular cleaning of Water Coolers is recommended every six (6) months to decrease microbial contamination and organic material. Follow manufacturers instructions where provided.

- Disassemble unit and clean all parts with vinegar and water (1 part vinegar to 10 parts of water) followed by a rinse with clean tap water. Note: Bleach is not recommended as it destroys plastic surfaces.
- Prevent contamination by not allowing personal water bottles, etc. to come into direct contact with the lowest point of the water tap.

### Commodes

Commodes must be cleaned each after resident's use and should be **cleaned and disinfected** weekly.

- Assign this to an individual and have them sign a check sheet each week.

### Games and Activity Aides

Clean items such as puzzles, cards and board games on a monthly basis or more often if they become soiled.

### **Procedure for Cleaning Agitator Tubs**

#### **PROCEDURE FOR CLEANING BETWEEN BATHS (Nursing Staff)**

- manufacturer's instructions take precedence
- drain dirty water
- close drain and start filling tub
- when water level, on refilling, covers half of whirlpool intake, turn on whirlpool pump motor
- turn water off when water starts to surge out the whirlpool outlet
- add 1 oz. of FULL STRENGTH QUAT\* to the water in the bottom of tub and let the whirlpool run for one minute
- wash/scrub the interior of tub with brush/mop and the QUAT\* in the tub
- swing chair over tub and clean with QUAT\*
- drain the system
- shower down interior of tub and chair with clean water and back flush the pump
- wipe down chair with clean cloth

#### **END OF THE DAY CLEANING (Housekeeping Staff)**

- fill tub with water to point midway between chair and overflow
- add ½ oz. of FULL STRENGTH QUAT\* to the water
- lower chair into water
- activate whirlpool for 3 – 5 minutes
- scrub and clean all surfaces of chair(s)
- rinse the chair thoroughly and drain the tub
- complete the between bath cleaning procedure (as per procedure outlined above)

\* Use the disinfectant approved by the Manufacturer

Hydrotherapy tubs require special cleaning and should not be used in general resident care areas.

## **10.2 Purchasing Equipment / Furniture**

Resident care equipment that may require special cleaning procedures must be reviewed by the Infection Control Committee prior to purchase. Furniture to be used in resident rooms should have surfaces that can be readily cleaned and disinfected and should not be made from absorbent fabric. If items are cloth covered, unit managers must assign a delegate responsible for laundering the item and specify the frequency of cleaning.

## 11.0 Construction and Renovation

### Policy

The purpose of this policy is:

- To determine the infection risks to residents, visitors, staff, physicians, volunteers, and contractors throughout the pre-construction, construction and post-construction phases
- To prevent the transmission of infections to residents, staff and visitors during renovations and/or construction
- Adhere to the Infection Prevention and Control Procedures which include the CSA Z317.13.03 standard “Infection Control During Construction or Renovation of Health Care Facilities”

Contractors will be responsible for all liabilities associated with CSA 317.13.03.

### 11.1 Procedure

#### 11.1.1 Pre-Construction

The Construction Manager must discuss construction/renovation plans with the Health Service Administrator or Plant and Property Manager/ designate and person responsible for Infection Prevention and Control prior to developing a specification for projects. Costs associated with mitigation of Infection Control risks belong to the construction company and must be included in the proposal.

A formal assessment of the risk level and preventative measures required to be implemented must be completed by the construction manager in collaboration with the person responsible for Infection Control. This will become part of the construction documentation.

- Use the risk table and preventive measures tables in the following pages.

***Long term care facility occupants are considered to be at medium to high risk for acquiring construction related infections*** (risk group 3 on the Construction Activity and Risk Group Matrix)

Just prior to commencement of a construction/renovation project that falls into Type C or D category the person responsible for Infection Control will complete an Infection Prevention and Control Construction Analysis Form (see page 53)

**Use the charts below to assess the risk of each specific construction/renovation project.**

Part A: Types of Construction Activity	
Type A	Inspection and non-invasive activities: These include, but are not limited to, activities that require removal of ceiling tiles for visual inspection (limited to 1 tile per 50 square feet), painting (not sanding), wall covering, electrical trim work, minor plumbing (disrupts water supply to a localized resident care area (e.g. 1 room) for less than 15 minutes), and other maintenance activities that do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.
Type B	Small scale, short duration activities that create minimal dust. These include, but are not limited to, activities that require access to chase spaces, cutting of walls or ceilings where dust can be controlled for the installation/repairs of minor electrical work, where ventilation components, telephone wires or computer cables, and sanding of walls for painting or wall covering to only repair small patches. It also includes plumbing that requires disruption to the water supply of more than one resident care area (e.g. > 2 rooms) for less than 30 minutes.
Type C	Any work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies (e.g. counter tops, cupboards, sinks). These include, but are not limited to, activities that require sanding of walls for painting or wall covering, removal of floor-coverings, ceiling tiles and casework, new wall construction, minor duct work or electrical work above ceilings, major cabling activities, and any activity that cannot be completed within a single work shift. It also includes plumbing that requires disruption to the water supply of more than one resident care area (e.g. > 2 rooms) for more than 30 minutes but less than 1 hour.
Type D	Major demolition, construction and renovation projects. These include, but are not limited to, activities that involve heavy demolition or removal of a complete cabling system and new construction that requires consecutive work shifts to complete. It also includes plumbing that results in disruption to the water supply for more than one resident care area (e.g. > 2 rooms) for more than 1 hour.

NB – All corridors/hallways adjacent to these areas without a physical barrier should be considered part of the construction site

### Construction Activity and Risk Group Matrix

Construction Activity				
Risk Group	Type A	Type B	Type C	Type D
Group 1	I	II	II	III
Group 2	I	I	III	IV
Group 3	I	III	III/IV	IV
Group 4	III	III/IV	III/IV	IV

### ***All occupants of long term care facilities are in Risk Group 3***

Matrix identifies which Class the construction/renovation falls into (e.g. Class III) which identifies what activities are to be implemented.

## 11.1.2 Recommendations for Infection Prevention & Control Measures

### Class I Construction Activity

#### **Plant and Property Staff & Contractors:**

- a) Construction / Renovation Activities Dust Control \*
  - Immediately replace displaced tiles.
- b) Plumbing Activities
  - Schedule water interruption during low activity (e.g. evenings if possible).
  - Flush water lines prior to use.
  - Observe for discoloured water.
  - Ensure water temperature meets the standards set by facility.
  - Ensure gaskets and items made of materials that support the growth of Legionella, are not used.
  - Ensure faucet aerators are not installed or used.
  - Maintain as dry an environment as possible and report any water leaks that occur to walls and substructures.

#### **All site staff :**

- a) Plumbing Activities
  - Report discoloured water and water leaks to Plant Services, and Infection Prevention & Control.

#### **Medical / Nursing Staff:**

- a) Construction / Renovation Activities
  - Minimize resident's exposure to construction / renovation area.
- b) Plumbing Activities
  - Report discoloured water and water leaks to Plant Services, and Infection Prevention & Control

\* Note: Class II recommendations must be followed if dust is created during Type A construction activity.

## Class II Construction Activity

### **Plant and Property Staff & Contractors:**

#### a) Construction / Renovation Activities

##### 1) Dust Control

- Immediately replace displaced tiles.
- Execute work by methods to minimize dust generation.
- Provide active means to minimize dust generation and migration into atmosphere.
- Use drop sheets to control dust. “Kontrol Kube” may also be utilized.
- Seal windows and unused doors with duct tape.
- Seal air vents in construction / renovation area.
- Place dust mat at entrance to and exit from work areas.
- Control dust by water misting work surfaces while cutting.
- Construction workers to wear the appropriate personal protective equipment.

##### 2) Ventilation

- Disable the ventilation system in the construction / renovation area until project is completed.
- Monitor the need to change and / or clean filters in construction / renovation area.

##### 3) Debris Removal & Cleanup

- Appropriate containers supplied by contractor.
- Contain debris in covered container or cover with moistened sheet before transporting for disposal.
- Transport debris via designated route.

#### b) Plumbing Activities

- Schedule water interruption during low activity (e.g. evenings if possible).
- Flush water lines prior to use.
- Observe for discoloured water.
- Ensure water temperature meets the standards set by facility.
- Ensure gaskets and items made of materials that support the growth of Legionella, are not used.
- Ensure faucet aerators are not installed or used.
- Maintain as dry an environment as possible and report any water leaks that occur to walls and substructures.
- Collection tanks and long pipes that allow water to stagnate should be avoided.
- Consider hyperchlorinating or superheating stagnant potable water.

**Housekeeping Services:**

## a) Construction / Renovation Activities

- Wet mop and vacuum area with HEPA filtered vacuum when all work is completed.
- Wipe horizontal work surfaces with a hospital approved disinfectant.
- Workers to wear the appropriate personal protective equipment if applicable.

## b) Plumbing Activities

- Report discoloured water and water leaks to Plant Services, and Infection Prevention & Control.

**Medical / Nursing Staff:**

## a) Construction / Renovation Activities

- Minimize resident's exposure to construction / renovation area.
- Identify high-risk residents who may need to be temporarily moved away from the construction zone.

## b) Plumbing Activities

- Report discoloured water and water leaks to Plant Services, and Infection Prevention & Control.

### Class III Construction Activity

#### **Plant and Property Staff & Contractors:**

##### a) Construction / Renovation Activities

1) Ensure Infection Prevention & Control consultation has been completed and permit approved.

##### 2) Dust Control

- Erect an impermeable barrier from true ceiling (includes area above false ceilings) to the floor consisting of 2 layers of 6 ml polyethylene or sheetrock.
- Erect windows, doors, plumbing penetrations, electrical outlets and intake and exhaust vents are properly sealed with plastic and duct taped within the construction / renovation area.
- Air ducts and spaces above ceilings should be vacuumed if necessary.
- Control dust by water misting work surfaces while cutting.
- Construction workers to wear the appropriate personal equipment.
- Construction workers should be vacuumed with a HEPA filtered vacuum cleaner before leaving the work site: or they should wear cloth paper coveralls that are removed each time they leave the work site.
- Do not remove dust barrier until the projects is complete and the area has been cleaned thoroughly and inspected.
- Remove dust barrier carefully to minimize spreading dust and other debris particles.

##### 3) Ventilation

- Disable the ventilation system in the construction / renovation area until project is completed.
- Monitor the need to change and / or clean filters in construction / renovation area.
- Maintain negative pressure within construction zone by using portable HEPA equipped air filtration units.
- Ensure air is exhausted directly outside and away from intake vents or filtered through a HEPA filter before being re-circulated.
- Ensure ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction project is complete.

##### 4) Debris Removal & Cleanup

- Appropriate containers supplied by contractor
- Remove debris at the end of the workday.
- An external chute may need to be erected if the construction is not taking place on ground level.
- Vacuum work area with HEPA filtered vacuums daily or as needed.
- Contain debris in covered container or cover with moistened sheet before transporting for disposal.
- Transport debris via designated route.

**Housekeeping Services:**

## a) Construction / Renovation Activities

- Wet mop and vacuum area with HEPA filtered vacuum when all work is completed.
- Wipe horizontal work surfaces with a hospital approved disinfectant.
- Workers to wear the appropriate personal protective equipment, if applicable.
- Increase frequency of cleaning in areas adjacent to the construction zone.
- In cooperation with Infection Prevention & Control and Occupational Health & Safety ensure that construction zone is thoroughly cleaned when work is completed.

## b) Plumbing Activities

- Report discoloured water and water leaks to Plant Services, and Infection Prevention & Control.

**Infection Prevention & Control and Occupational Health & Safety Personnel:**

## a) Construction / Renovation Activities

- Move high-risk residents who are in or adjacent to the construction area.

## b) Traffic Control

- In collaboration with the facility project manager designate a traffic pattern for construction workers that avoids resident care areas, and a traffic pattern for clean or sterile supplies that avoids the construction area.

## c) Plumbing Activities

- Consider hyperchlorinating or superheating stagnant potable water.

**Medical / Nursing Staff:**

## a) Construction / Renovation Activities

- Move high-risk residents who are in or adjacent to the construction area.
- Ensure that residents do not go near the construction area.

## Class IV Construction Activity

### **Plant and Properties Staff & Contractors:**

#### a) Construction / Renovation Activities

1) Ensure Infection Prevention & Control consultation has been completed and permit approved.

#### 2) Dust Control

- Before starting the construction project, erect an impermeable dust barrier, which includes an anteroom to the construction zone.
- Ensure windows, doors, plumbing penetrations, electrical outlets and intake and exhaust vents are properly sealed with plastic and duct taped within the construction / renovation area.
- Air ducts and spaces above ceilings should be vacuumed if necessary.
- Place dust by water misting work surfaces while cutting.
- Construction workers to wear the appropriate personal protective equipment.
- Construction workers should be vacuumed with a HEPA filtered vacuum cleaner before leaving the work site: or they wear cloth paper coveralls that are removed each time they leave the work site.
- Holes in walls should be repaired within 8 hours or be temporarily sealed.
- Do not remove barrier until the project is complete and the area has been cleaned thoroughly and inspected.
- Remove barrier carefully to minimize spreading dust and other debris particles.

#### 3) Ventilation

- Disable the ventilation system in the construction / renovation area until project is completed.
- Monitor the need the change and / or clean filters in construction / renovation area.
- Maintain negative pressure within construction zone by using portable HEPA equipped air filtration units.
- Ensure negative pressure is maintained within the anteroom and construction zone.
- Ensure ventilation systems are working properly in adjacent areas.
- Ensure air is exhausted directly outside and away from intake vents or filtered through a HEPA filter before being re-circulated.
- Ensure ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction project is complete.
- Review ventilation system requirements in the construction area with Infection Prevention & Control to ensure system is appropriate and functioning properly.

#### 4) Debris Removal & Cleanup

- Appropriate containers to be supplied by contractor.
- Remove debris at the end of the workday.
- An external chute will need to be erected if the construction is not taking place on ground level.
- Vacuum work area with HEPA filtered vacuum daily or as needed.
- Contain debris in covered container or cover with moistened sheet before transporting for disposal.
- Transport debris via designated route.

#### 5) Evaluation

- Evaluate Infection Prevention & Control measures with other members of the planning team or delegate, to evaluate the effectiveness and identify problems at the end of the construction project.

#### b) Plumbing Activities

- If there are concerns about Legionella, consider hyperchlorinating stagnant potable water or superheating and flushing all stagnant lines before restoring or repressurizing the water system.

### **Housekeeping Services:**

#### a) Construction / Renovation Activities

##### 1) Dust Control

- Wet mop and vacuum area with HEPA filtered vacuum when all work is completed.
- Wipe horizontal work surfaces with a hospital approved disinfectant.
- Workers to wear the appropriate personal protective equipment, if applicable.
- Increase frequency of cleaning in areas adjacent to the construction zone.
- In cooperation with Infection Prevention & Control and Occupational Health & Safety ensure that construction zone is thoroughly cleaned when work is completed.

##### 2) Evaluation

- Provide feedback on Infection Prevention & Control measures with other members of the planning team, to evaluate the effectiveness and identify problems at the end of the construction project.

#### b) Plumbing Activities

- Report discoloured water and water leaks to Plant Services and Infection Prevention & Control.

**Infection Prevention & Control and Occupational Health & Safety Personnel:**

a) Construction / Renovation Activities

1) Risk Reduction

- Move high-risk residents who are in or adjacent to the construction area.
- Ensure that workers wear the appropriate personal protective equipment, if applicable.

2) Traffic Control

- In collaboration with the facility project manager designate a traffic pattern to construction workers that avoids resident care areas, and a traffic pattern for clean or sterile supplies that avoids the construction area.

3) Evaluation

- Regularly visit the construction site to ensure preventive measures are being followed.
- Evaluate Infection Prevention & Control measures with other members of the planning team or delegate, to evaluate the effectiveness and identify problems at the end of the construction project.

b) Plumbing Activities

- If there are concerns about Legionella, consider hyperchlorinating stagnant potable water or superheating and flushing all stagnant lines before restoring or repressurizing the water system.

**Medical / Nursing Staff:**

a) Construction / Renovation Activities

1) Risk Reduction

- Move high-risk residents who are in or adjacent to the construction area.
- Ensure that residents do not go near the construction area.

2) Evaluation

- Provide feedback on Infection Prevention & Control measures with other members of the planning team or delegate to evaluate their effectiveness and identify problems at the end of the construction project.

b) Plumbing Activities

- Consider using another source of potable water for residents who are at greatest risk until hospital potable water has been cleared for signs of Legionella after major plumbing installation / repairs.

## Infection Prevention and Control Construction Analysis Form

An Infection Control analysis of the construction or renovation project described below has been undertaken in accordance with CSA Z317.13-03. The results of the analysis are provided below.

Description of project:

Construction Activity (By Class)				
	Type A	Type B	Type C	Type D
Group 3 (risk to residents)	I	III	III/IV	IV
Construction Activity	Population risk group group 3	Construction Activity A, B, C, D	Preventive measures I, II, III, III/IV	

Site/Unit: \_\_\_\_\_

Proposed start date: \_\_\_\_\_

Proposed finish date: \_\_\_\_\_

Activity	Yes	No	Comments
Hoarding			
Negative pressure			
Plan for dust/dirt control			
Access/Egress routes defined			
Disposal method and route defined			
Clean up of site daily/end defined			
Adequate number of Sinks			
Adequate number of Toilets			
AHBR / Soap/ hand towels			
Site inspections schedule			
	Name		Title
Resident Administration contacts			
Contractor Contacts			

### **11.1.3 Construction Phase:**

Activities included in the CSA guidelines include (but are not limited to):

- Residents will not be transported through project zones. If resident transport through the zone is unavoidable, it must be done as quickly as possible with the resident and transport personnel wearing a high efficiency mask.
- Transportation of clean / sterile supplies will occur via routes separate from the project activities.
- Construction personnel will observe the appropriate precautions as outlined in Appendix A when leaving the project zone.
- Cleaning of the project zone will occur as specified by the CSA 317. 13-03 standard (see Appendix A) and is the responsibility of the construction company. Adjacent areas to the zone will also be maintained. This includes cleaning prior to the removal of barriers, and minor work performed after the removal of barriers.
- Construction debris will be transported as specified in Appendix A along pre-designated routes.
- Construction/ renovation site will be monitored for compliance by the person responsible for infection control. Serious infractions warrant a “shut down” of the construction until they have been corrected.

### **11.1.4 Post-Construction Phase:**

Activities included in the CSA guidelines include (but are not limited to):

- The air system serving the project zone will be assessed at the end of the project to determine cleaning requirements prior to use.
- All water systems associated with the project will be thoroughly flushed prior to use. disinfection will occur, as needed.
- Terminal cleaning of the project zone will occur prior to occupancy, as specified in Appendix A.

The Construction Manager and Plant and Property Services Manager/designate and person responsible for Infection Control will do a final site inspection of project zone prior to occupancy.

## 12.0 Reprocessing

Rigorous compliance to best practices is critical for effective reprocessing. Fundamental elements of reprocessing include Routine Practices and Hand Hygiene.

The goals of safe reprocessing of medical equipment/devices include:

- Preventing transmission of microorganisms to personnel and residents
- Minimizing damage to medical equipment/devices from foreign material (e.g. blood, body fluids, saline and medications) or inappropriate handling.

Best practices in reprocessing medical equipment/devices must include the following:

- A corporate strategy for dealing with single-use medical equipment/devices
- Adequate review by all parties whenever new equipment/devices are being considered for purchase (e.g. reprocessing committee)
- A centralized area for reprocessing or an area that complies with the requirements for reprocessing;
- Training of all staff who do reprocessing
- Written policies and procedures for each type of medical equipment/device that is reprocessed
- Validation of cleanliness, sterility and function of the reprocessed equipment/device
- Continual monitoring of reprocessing procedures to ensure their quality.

***All resident care equipment must be reprocessed according to Spaulding's' Classification***

Spaulding's Classification of Medical Equipment/Devices and Required Level of Processing/Reprocessing

Classification	Definition	Level of Processing/Reprocessing
Critical Equipment/device	Equipment/device that enters sterile tissues, including the vascular system.	Cleaning followed by Sterilization
Semicritical Equipment/device	Equipment/device that comes in contact with non-intact skin or mucous membranes but does not penetrate them.	Cleaning followed by High Level Disinfection (as a minimum). Sterilization is preferred.
Noncritical Equipment/device	Equipment/device that touches only intact skin and not mucous membranes, or does not directly touch the resident.	Cleaning followed by Low Level Disinfection (in some cases, cleaning alone is acceptable)

Please consult the facility reprocessing policy and procedure manual for instructions on specific instruments/equipment ([put your site's name of document here](#))

## 12.1 Reprocessing Decision Chart

<b>Manufacturers' Recommendations for Product Concentration and Exposure Time Must be Followed</b>			
<b>Level of Reprocessing</b>	<b>Classification of Equipment</b>	<b>Examples of Equipment/Devices</b>	<b>Products</b>
<p><b><u>Cleaning</u></b></p> <p>Physical removal of soil, dust or foreign material. Chemical, thermal or mechanical aids may be used. Cleaning usually involves soap and water, detergents or enzymatic cleaners. Thorough cleaning is required before disinfection or sterilization may take place.</p>	<p><b>All reusable equipment/devices</b></p>	<p>All reusable equipment/devices</p> <ul style="list-style-type: none"> <li>• Oxygen tanks and cylinders</li> </ul>	<p><b>** concentration and contact time are dependant on manufacturer's instructions</b></p> <ul style="list-style-type: none"> <li>• Quaternary ammonium compounds (QUAT)</li> <li>• Enzymatic cleaners</li> <li>• Soap and water</li> <li>• Detergents</li> <li>• 0.5% Accelerated hydrogen peroxide</li> </ul>
<p><b><u>Low level disinfection</u></b></p> <p>Level of disinfection required when processing noncritical equipment/devices or some environmental surfaces. Low level disinfectants kill most vegetative bacteria and some fungi as well as enveloped (lipid) viruses. Low level disinfectants do not kill mycobacteria or bacterial spores</p>	<p>Noncritical equipment/devices</p>	<ul style="list-style-type: none"> <li>• Environmental surfaces touched by staff during procedures involving parenteral or mucous membrane contact (e.g. dental lamps, dialysis machines)</li> <li>• Bedpans, urinals, commodes</li> <li>• Stethoscopes</li> <li>• Blood pressure cuffs</li> <li>• Oximeters</li> <li>• Glucose meters</li> <li>• Electronic thermometers</li> <li>• Hydrotherapy tanks</li> <li>• Resident lift slings</li> <li>• Ultrasound probes and equipment that come into contact with intact skin only</li> <li>• Bladder scanners</li> <li>• Environmental</li> </ul>	<p><b>** concentration and contact time are dependant on manufacturer's instructions</b></p> <ul style="list-style-type: none"> <li>• 3% Hydrogen peroxide (10 minutes)</li> <li>• 60-95% Alcohol (10 minutes)</li> <li>• Hypochlorite (1000 ppm)</li> <li>• 0.5% Accelerated hydrogen peroxide (5 minutes)</li> <li>• Quaternary ammonium compounds (QUAT)</li> <li>• Iodophors</li> <li>• Phenolics ** (should not be used in nurseries)</li> </ul>

		surfaces (e.g. IV poles, wheelchairs, beds, call bells) • Fingernail care equipment that is Single resident use	
<p><b><u>High level disinfection</u></b></p> <p>The level of disinfection required when processing semicritical equipment/devices. High level disinfection processes destroy vegetative bacteria, mycobacteria, fungi and enveloped (lipid) and non-enveloped (non-lipid) viruses, but not necessarily bacterial spores.</p>	Semicritical equipment/devices	<ul style="list-style-type: none"> <li>• Flexible endoscopes that do not enter sterile cavities or tissues</li> <li>• Laryngoscopes</li> <li>• Bronchoscopes (sterilization preferred)</li> <li>• Respiratory therapy equipment</li> <li>• Nebulizer cups</li> <li>• Anesthesia equipment</li> <li>• Endotracheal tubes</li> <li>• Specula (nasal, anal, vaginal – disposable equipment is strongly recommended)</li> <li>• Tonometer foot plate</li> <li>• Ear syringe nozzles</li> <li>• Sonography probes and equipment that come into contact with mucous membranes or non-intact skin (e.g. transrectal probes)</li> <li>• Pessary and diaphragm fitting rings</li> <li>• Cervical caps</li> <li>• Breast pump accessories</li> <li>• Glass thermometers</li> <li>• CPR face masks</li> <li>• Alligator forceps</li> <li>• Cryosurgery tips</li> <li>• Ear cleaning equipment, ear curettes, otoscope tips</li> <li>• Fingernail care equipment used on multiple residents</li> </ul>	<p><b>** concentration and contact time are dependant on manufacturer's instructions</b></p> <ul style="list-style-type: none"> <li>• 2% Glutaraldehyde (20 minutes at 20°C)</li> <li>• 6% Hydrogen peroxide (30 minutes)</li> <li>• 0.55% Orthophthalaldehyde (OPA) (10 minutes at 20°C)</li> <li>• Pasteurization (30 minutes at 75°C)</li> <li>• 7% Accelerated hydrogen peroxide (20 minutes)</li> <li>• 0.2% Peracetic acid (30-45 minutes)</li> </ul>

<p><b><u>Sterilization</u></b></p> <p>The level of reprocessing required when processing critical equipment/devices. Sterilization results in the destruction of all forms of microbial life including bacteria, viruses, spores and fungi.</p>	<p>Critical equipment/devices</p>	<ul style="list-style-type: none"> <li>• Surgical instruments</li> <li>• Foot care equipment</li> <li>• Implantable devices</li> <li>• Endoscopes that enter sterile cavities and spaces (e.g. arthroscopes, laparoscopes, cystoscopes)</li> <li>• Bronchoscopes</li> <li>• Colposcopy equipment</li> <li>• Electrocautery tips</li> <li>• Endocervical curettes</li> <li>• Fish hook cutters</li> <li>• Biopsy forceps, brushes and biopsy equipment associated with endoscopy (disposable equipment is strongly recommended)</li> <li>• Eye equipment including soft contact lenses</li> <li>• Transfer forceps</li> <li>• Kimura spatula</li> <li>• Dental equipment including high speed dental hand pieces</li> </ul>	<p><b>** concentration and contact time are dependant on manufacturer's instructions</b></p> <ul style="list-style-type: none"> <li>• Dry heat</li> <li>• 100% Ethylene oxide</li> <li>• Formaldehyde</li> <li>• 2.5-3.5% Glutaraldehyde (10 hours at 20°C)</li> <li>• Hydrogen peroxide gas plasma (75 minutes at 50°C)</li> <li>• 6-25% Hydrogen peroxide liquid (6 hours)</li> <li>• 7% Accelerated hydrogen peroxide (6 hours at 20°C)</li> <li>• 0.2% Peracetic acid (30-45 minutes)</li> <li>• Steam</li> </ul>
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## 13.0 Outbreak Management

### 13.1 General Information

*The goal of an outbreak control strategy is to promptly detect and eliminate any common sources of exposure and contain the spread of the illness.*

All suspected outbreaks of infection require rapid investigation to control and prevent further spread of disease. In addition, factors contributing to the outbreak can be identified to develop control measures to prevent similar outbreaks from recurring.

Organizational leadership is critical in all health care settings to ensure effective outbreak prevention and control. Ideally, all facilities should have a designated Outbreak Prevention and Management Team (OPMT). This group is responsible for ensuring that measures for preventing outbreaks are in place and for directing and overseeing the management of all aspects of any outbreak. OPMT members should have decision making authority for their discipline within the facility or unit. A lead person from this group should be appointed to coordinate the meeting(s) during an outbreak. The membership of an OPMT will depend upon the facilities location, size and contractual status.

Membership may include:

- A medical advisor (if available)
- Infection control physician (if available)
- Medical Health Officer or delegate
- An administrator
- A Director of Care
- An ICP or person responsible for infection control of that site
- An Occupational Health Nurse or person responsible for occupational health
- An Environmental Health Officer or alternate (e.g. Community Care Facility Licensing Officer)
- A laboratory manager or representative
- A person responsible for support services such as housekeeping and laundry
- A foods services supervisor
- Communications coordinator
- Front line HCP representative (e.g. charge nurse).

The purpose of the OPMT is to establish a plan that will:

- Include measures to prevent outbreaks such as education of staff and residents regarding hand hygiene, symptoms to be alert for etc.
- Facilitate clear communication pre, during and post outbreak
- Include implementation of control measures
- Identify who to contact in Public Health (e.g. Communicable Disease Team, Environmental Health Officer)
- Ensure resource people provide consistent information to staff and the public
- Delegate roles appropriately
- Establish a media spokesperson
- Obtain or plan for obtaining anticipated resources
- Anticipate agency demands.

A written process for Outbreak Management which includes current membership of the OPMT with contact information should be available to all HCPs. This should be reviewed yearly and updates made.

Most frequently, potential outbreaks are recognized by personnel providing resident's care. Surveillance data may also provide clues to potential outbreaks when an increase in the number of a certain type of infection or microorganism exceeds the expected (usual) level. As well, outbreaks occurring in the community may be introduced into the facility via staff or visitors. Therefore, awareness of community outbreaks should alert personnel to look for potential spread to the facility and to take preventative measures. Finally, the occurrence of even one case of an unusual or particularly serious disease or infection such as tuberculosis warrants investigation.

Continuous surveillance will focus on:

- Unusual types of infection
- An increase in/clustering of the number of cases
- Situations with the potential to increase anxiety among facility staff or in the community.

Should any of the above occur, a planning meeting will be held to create a plan of action should an outbreak be validated.

## **14.0 Management of an Outbreak of Gastrointestinal Illness Outbreak**

### **14.1 Quick Reference**

#### **Case Definition**

A case of GI infection is defined as any one of the following conditions that cannot be attributed to another cause (e.g.: laxative use, medication side effect, diet, prior medical condition):

- Two or more episodes of diarrhea in a 24 hour period – above what is considered normal for that individual  
OR
- Two or more episodes of vomiting in a 24 hours period  
OR
- One episode each of vomiting and diarrhea in a 24 hours period  
OR
- Positive culture for a known enteric pathogen with a symptom of GI infection (e.g. vomiting, abdominal pain, diarrhea)  
OR
- One episode of bloody diarrhea.

#### **Outbreak Definition**

Three or more cases of GI infection that are potentially related occur within a four day period, in a specific geographic area (i.e. unit, ward).

#### **Report**

- Report outbreak to the MHO or delegate
- Notify appropriate Managers and Resident Care Leaders
- Outbreak Prevention and Management Team should meet as soon as possible.
- Notify service providers such as HandyDART, oxygen services, laboratory services, BC Ambulance, etc. of outbreak and control measures required
- Notify any facility that admitted resident from the outbreak area within the past 72 hours
- Complete line listing of ill residents
- Complete line listing of ill HCPs (discuss with person responsible for occupational health) , where this information is available

#### **Discuss with MHO or delegate the need to:**

- Postpone transfers to other units or facilities, admissions or re-admissions unless medically warranted. Depending upon the physical layout of the building and the extent of the outbreak, restrictions may apply to one wing or one unit, one floor or the entire facility
- Decrease or discontinue group activities and outings until the outbreak is resolved

- Restrictions on visitors.

### **Collect**

Collect and send specimens as explained on page 65.

### **Establish Outbreak Control Measures**

- Wherever possible, confine ill residents to rooms until 48 hours post symptoms
- As much as possible, assign the same HCPs to take care of ill residents over the duration of the outbreak.
- Post outbreak signage and ABHR at each entrance to unit/facility
- Reinforce hand hygiene practices with all HCPs
- Ensure everyone has easy access to hand hygiene stations (e.g. soap and water, ABHR)
- HCPs to use Contact Precautions when caring for ill individuals.
- When caring for individuals who are actively vomiting or when cleaning up areas grossly contaminated by vomitus or feces use facial protection in addition to Contact Precautions.
- Advise all visitors of outbreak, emphasize hand hygiene upon entering and exiting site
- Remind visitors not to enter the facility if they have vomiting and/or diarrhea
- Ensure all visitors wear personal protective equipment as recommended by the HCPs
- Visitors should only visit one resident and not travel from room to room during visit
- Increase cleaning and disinfection procedures for washrooms, common areas and all frequently touched surfaces.
- Ensure soiled laundry is handled as little as possible, with minimum agitation and transported in closed bags
- Whenever possible dedicate equipment to be used only on that resident. In the event that equipment must be shared it requires thorough cleaning and disinfection in between residents.

### **Ongoing surveillance**

- Management and HCPs should maintain a watch for GI symptoms in residents and report any new onset to resident/resident/resident care leaders
- HCPs should self monitor for GI symptoms and report illness to supervisor. HCPs who are ill must remain away from work until symptom free for 48 hours, regardless of whether they feel well enough to work.
- HCPs returning after illness must be meticulous and consistent with hand hygiene

Communicate status of outbreak daily to Outbreak Prevention and Management Team.

## 14.2 GI Outbreak Management General Information

Long Term Care facilities are among the most frequently reported settings for both large-scale outbreaks and sporadic cases of gastrointestinal infections. Outbreaks may occur explosively, involving a large proportion of the facilities residents and staff within a few days and/or gradually via person-to-person spread over a course of weeks. The majority of cases are mild and self-limiting, but in debilitated individuals serious dehydration may result.

### Agents and Illness

A number of organisms can cause outbreaks of gastroenteritis. Viruses are often the source of the problem. However, bacteria and protozoa can also cause outbreaks of illness. Incubation periods (time interval from exposure to onset of illness) and periods of communicability (time interval over which an infected individual can spread the illness) can vary from hours to weeks depending on the causative organism and persons affected, their location, their symptoms and their duration of illness.

High Risk Activities (that increase an individual's likelihood of becoming infected or transmitting infection):

- Direct contact with ill persons/residents
- Handling soiled laundry
- Being in close proximity when an infected person vomits
- Receiving care or medication from an infected person/staff
- Sharing common washrooms during an outbreak
- Bathing in a pool or tub that has been contaminated with fecal matter and not cleaned and sanitized
- Consuming food prepared by a symptomatic food handler
- Consuming contaminated ice
- Improper hand hygiene after contact with infectious material.

***Working while symptomatic exposes residents and places them at high risk for acquiring a GI infection.***

## **Definition of a GI Outbreak**

Usually outbreaks are easy to recognize, as large numbers of residents will show symptoms such as vomiting and diarrhea. All outbreaks are reportable to the Medical health Officer. The definition of an outbreak is:

**Three or more cases of GI infection that are potentially related occur within a four day period, in a specific geographic area (i.e. unit, ward).**

Care must be taken to rule out non-infectious causes of symptoms, for example: new medications, use of laxatives, vomiting caused by gallbladder disease. As some residents may not be able to report symptoms such as nausea or abdominal pain, staff needs to use careful observation to determine if these symptoms are occurring in a resident.

When an outbreak of viral gastroenteritis is suspected it is imperative to institute control measures immediately without waiting for laboratory confirmation of the causative agent. gloves are not a replacement for hand hygiene but can provide an additional protective barrier between health care worker's hands and a resident's blood, body fluids, and other secretions.

### **14.2.1 Management of a GI Outbreak**

#### **Conduct an investigation to verify the nature and extent of the suspected outbreak**

- Confirm that each case meets the case definition
- Confirm that an outbreak is occurring

#### **Mobilize the Outbreak Management Team.**

- Form a tentative hypothesis as to the etiologic agent source and initiate an investigation to confirm the hypothesis.

#### **Resident Care Staff:**

- Enforce thorough hand hygiene of residents, visitors and staff.
- Institute Contact Precautions for all residents.
- Maintain a detailed registry of all suspected and confirmed cases (both residents and staff) using the Outbreak Surveillance Forms

#### **14.2.1.1 Specimen Collection**

To determine cause of outbreak, select 2-4 residents/staff members, who are starting to exhibit symptoms and, in conjunction with the attending physician, collect the appropriate specimens. Label specimens and requisitions with resident's name, nature of specimen, time and date collected. Ensure earliest delivery to laboratory.

**If a bacteria or virus is suspected:**

- The sterile dry fecal container with spoon is for bacteriological and viral testing, and has no liquid in it. This should be filled to the line, as a maximum (**10ml of feces is minimum amount required**).
- Larger vials with white lids are for vomitus specimens and contain no liquid.

**If a protozoan/parasite is suspected:**

- The red-capped vial contains SAF preservative and is for testing for the presence of protozoa (e.g. *Giardia*, *Cryptosporidium*). The preservative must be kept in the vial, and the ratio of specimen to liquid is 1:3 (about 2 to 3 spoonfuls of specimen using the built-in spoon). Note the expiry on the container.

**Taking the specimen**

- Label vial and requisition before collecting specimen and fill in requisition completely. Print clearly.
- If specimen is faeces - avoid contamination with urine or water from toilet.
- Replace and tighten cap. Place vials into plastic bag.

**Storage and shipping:**

- Feces and vomitus samples may be kept at room temperature if sent the same day
- BCCDC requires specimens to reach them within three days
- Feces should be kept at a temperature between 15-18<sup>0</sup> C during transport

Vomitus should be kept at 4<sup>0</sup>C during transport. A small ice pack may be added to the transport cooler as long as the specimens do not become frozen.

ii) Food Services

**Where food is implicated as a source of illness:**

- List all the food served during the previous 48 hours, meal by meal.
- Collect a sample (100 – 200 g) of each food item still available, place in dry laboratory containers. Label each container with identification of food, the meal at which it was served, and the date of serving.
- Hold all food specimens in a refrigerator not used for other food until shipping to local Laboratory or BCCDC Lab. (Infection Control Practitioner or Public Health to coordinate.)

**14.2.1.2 Prevent Resident Transmission of Disease**

- Any resident with symptoms that suggest infection should be confined to his/her room until 48 hours after cessation of symptoms. All meals should be served in the room. Bring only the tray into the room, do not bring the cart.
- The use of disposable dishes and cutlery is not necessary as regular dishwashing practices effectively clean dishes and utensils and removes any potential pathogens. Care must be taken to observe that there is not mixing of clean and soiled dishes in the food preparation area and that handwashing protocols are enforced.
- In multi-bed rooms, transfer of well residents into an ill resident's room should not occur. It should be noted that confinement of residents, even for a few days can

have adverse effects on the individual's well-being, especially those with mental illness or dementia. Staff needs to make an effort not to socially isolate these residents and to keep their time in confinement to a minimum.

- Consideration should also be given to decreasing or discontinuing group activities and outings until the outbreak is resolved.
- Keep well residents away from affected floors and/or wings.

#### **14.2.1.3 Prevent Employee Transmission of Disease**

- In gastroenteritis outbreaks, an ill food handler who contaminates food may be an initial source.
- Other care providers, because of their many contacts with residents, are at high risk of transmitting illness to residents.
- Any care provider or food handler with symptoms that suggest infection should be excluded from work until at least 48 hours after cessation of symptoms regardless of whether they feel well enough to work.
- Employees should also be instructed not to work in other facilities while they are ill or convalescing.
- Hand hygiene protocols should be reviewed and reinforced with all staff.
- Consideration should be given to cohort staff during the course of the outbreak. In cohorting, specific staff members (i.e. nurses, aides, rehab therapists and social workers) are designated to care only for cases or non-cases.
- Recently recovered staff returning to work may work with ill residents as they may have some short-term immunity to the causal agent.
- Visitors and volunteers may play an active role in the transmission of illness in outbreaks. They should be provided education on the prevention of the transmission of illness and be warned of the danger of visiting residents if they are ill or are recovering from an illness.
- Diligent use of Contact Precautions which include gown and gloves for care of all residents during an outbreak.
- Since droplet transmission of infectious material has been suggested wear a surgical mask with facial protection when cleaning areas grossly contaminated by feces or vomitus or assisting a resident who is actively vomiting.
- Gloves and gowns must be changed between contacts with different residents.

#### **14.2.1.4 Enhanced Environmental Sanitation**

- Surfaces that have been soiled, especially by feces or vomitus, should first be cleaned of visible material and then disinfected with an appropriate commercial germicidal product (*Insert the name of your disinfectant*) according to the manufacturer's directions.
- Persons performing these tasks should wear appropriate protective barriers (i.e. utility gloves; and if splashing is possible, mask or face and gown or apron).
- A program of twice daily cleaning and disinfection of common touch environmental surfaces, such as handrails, doorknobs, Sink/toilet handles, and chair arms should be undertaken.

### **Use Safeguards with Laundry**

- Soiled linen and clothes should be handled as little as possible and with minimum agitation to prevent microbial contamination of the air and of persons. Employees handling soiled laundry should wear gowns and gloves and a mask.
- Soiled laundry should be transported in an enclosed and sanitary manner and should be washed with detergent in hot water at the maximum cycle length (recommended 71°C for 25 minutes), and then machine dried.

#### **14.2.1.5 Prevent Disease Transmission to Persons Outside the Facility**

During the course of an outbreak, to prevent the transmission of illness to other care facilities, to new residents, and to the community, it is recommended that the facility:

- Postpone planned discharges or transfers to other facilities except where medically necessary. If a resident is transferred to another facility, notify the receiving facility of the outbreak
- Postpone new admissions or re-admissions
- Postpone meetings in the facility, which include outside participants
- Make all visitors aware of the presence of the outbreak and of appropriate personal precautions they can take to prevent illness. Post a notice to warn visitors of the outbreak
- Insofar as possible, limit utilization of casual or part-time staff that work at other facilities and discourage outside volunteers.

#### **14.2.1.6 Termination of Outbreak Control Measures**

Outbreak control measures can be terminated when the outbreak is declared over by the Medical Health Officer or delegate.

- Remain on alert for any new cases

**14.3 GI Outbreak Surveillance Form - Residents**

**SYMPTOMS:** V=Vomiting    D=Diarrhea    C=Cramps    N=Nausea    F=Fever    H=Headache    A=Abdominal Pain    M=Myalgia  
**ROOM TYPE:** P=Private    S=Semi-private    M=Multi-bed

Resident Information					Clinical Presentation			Specimen(s) sent	
Name	Date of birth y/m/d	Unit	Room #	Room type	Date of onset of symptoms	Symptoms	Duration of symptoms	Collection Date/ Date Submitted	Result

**14.4 GI Outbreak Surveillance Form – HCPs**

HCPs Information				Clinical Presentation				Specimen	
Name	DOB y/m/d	Occupation	Unit(s) worked	Date of symptom onset	Onset at work?	Symptoms (see below)	Date of symptom resolution	Collection Date/date submitted	Result

## 15.0 Respiratory Infection Outbreak Management

### 15.1 Quick Reference Checklist

This list is an example and meant to be modified and/or re-organized to meet individual facility needs.

Prior to laboratory confirmation of infection by a particular organism, the following case definition should be used to identify possible cases of respiratory infection (RI):

- New or worsening cough and
- Fever  $>38^{\circ}\text{C}$ , or a temperature that is abnormal for that individual
- Additional symptoms including myalgia/arthralgia, prostration nasal discharge, sore throat, headache

**Note:** There may be groups within the population that would not meet this definition, yet are infected with an organism that can cause respiratory outbreaks. For example, young children, the elderly, the immuno-compromised, or those taking medications such as steroids, NSAIDS, or ASA, **may not develop a fever** or may have a lowered temperature as a result of the infection.

- ▶ A temperature  $<35.6^{\circ}\text{C}$  or  $> 37.4^{\circ}\text{C}$  in the elderly may be an indication of infection

#### Definition of a “suspected RI outbreak”

- One laboratory confirmed case of a respiratory illness causing organism and no other cases of RI  
or
- Two cases of RI occurring within 7 days in a geographic area (i.e. unit or floor). One of the two cases may be in a staff member epidemiologically linked to the resident.  
or
- More than one unit having a case of RI within 7 days.

#### Definition of a Respiratory Illness Outbreak

- When there are additional cases identified beyond those recognized within the “suspect outbreak” definition

#### Report

- Report outbreak to the MHO or public health delegate
- Notify appropriate Managers and Resident Care Leaders
- Outbreak Prevention and Management Team should meet as soon as possible.
- Notify service providers such as HandyDART, oxygen services, laboratory services, BC Ambulance, etc. of outbreak and control measures required

- Notify any facility that admitted a resident/resident/resident from the outbreak area within the past 48 hours
- Complete line listing of ill residents (see page 75)
- Complete line listing of ill HCPs (discuss with person responsible for occupational health) , where this information is available (see page 76)

**Discuss with MHO or delegate the need to:**

- Postpone transfers to other units or facilities, admissions or re-admissions unless medically warranted. Depending upon the physical layout of the building and the extent of the outbreak, restrictions may apply to one wing or one unit, one floor or the entire facility.
- Decrease or discontinue group activities and outings until the outbreak is resolved
- Restrictions on visitors

**Collect**

- Collect and send specimens as requested by Public Health

**Establish Outbreak Control Measures**

- Review spread of common viral illnesses and disease prevention recommendations with staff and volunteers.
  - Reinforce need for diligent hand hygiene and respiratory hygiene practices and use of personal protective equipment (gloves, mask with eye protection, gowns in some cases) when providing care or within 2 meters of a resident/resident/resident with respiratory illness.
- Educate and reinforce the use of diligent hand hygiene and respiratory hygiene to resident and visitors
- Wherever possible, confine ill residents to rooms until the acute symptoms have resolved
- As much as possible, assign the same HCPs to take care of ill residents over the duration of the outbreak.
- Post outbreak signage and ABHR at each entrance to unit/facility
- Ensure everyone has easy access to hand hygiene stations (e.g. soap and water, ABHR)
- HCPs to use contact precautions when caring for ill individuals.
- Advise all visitors of outbreak, emphasize hand hygiene upon entering and exiting site
- Remind visitors not to enter the facility if they are ill (e.g. fever, cough, nausea, vomiting)
- Ensure all visitors wear personal protective equipment as recommended by the HCPs. Non-immunized visitors, including family, should be advised to consider if visits are necessary especially in the event of a vaccine preventable disease.
- Visitors should only visit one resident and not travel from room to room during visit
- Increase cleaning and disinfection procedures for common areas and all frequently touched surfaces.

- Whenever possible dedicate equipment to be used only on that resident. In the event that equipment must be shared it requires thorough cleaning and disinfection in between residents.
- **If it is confirmed that Influenza is the causative organism by the laboratory.**
  - Exclude (or reassign) health care workers not protected by vaccination unless taking antiviral prophylaxis. Those who need prophylaxis can obtain a prescription from the physician.
  - Start antiviral prophylaxis administration to residents as advised by the Medical Health Officer and in consultation with your Medical Director, if applicable.
  - Exclude ill health care providers from the workplace until at least five days from onset of symptoms or until acute symptoms have resolved, whichever is longer.

#### **Ongoing surveillance**

- Maintain a watch for RI symptoms in residents and report any new onset to care leaders
- HCPs should self monitor for RI symptoms and report illness to supervisor. HCPs who are ill must remain away from work until acute symptoms have resolved
- Communicate status of outbreak daily to Outbreak Prevention and Management Team.

## **15.2 General Respiratory Outbreak Management Information**

Early detection of respiratory outbreaks and implementation of control measures will reduce the impact on the health of both staff members and residents. Use a definition for a 'suspected outbreak' to investigate cases for the presence of a causative RI organism and to facilitate the efficient implementation of control measures should this be considered likely.

According to the British Columbia Public Health Act all RI outbreaks in health care facilities must be reported to the Medical Health Officer (MHO) and/or designated Public Health contact (i.e. PHN, Communicable Disease team). The local Medical Health Officer or delegate determines whether illness in a health care setting constitutes an outbreak of RI and assists with recommendations to contain and minimize the health consequences. At the discretion of the local Medical Health Officer and/or delegates, some control measures may be implemented at the "suspected outbreak" stage while other more invasive measures await confirmation.

### **15.2.1 Identifying the Source**

A variety of respiratory pathogens are capable of causing outbreaks in health care facilities. Very specific control measures are applied when an outbreak is caused by Influenza A or B, but facilities may be unclear about control measures needed to control outbreaks that are known or suspected to be due to other pathogens. For instance, there may be a laboratory diagnosis of other viral pathogens [e.g. Respiratory Syncytial Virus (RSV), Parainfluenza], or when a laboratory is unable to identify an organism, there may be a general consensus that the outbreak is likely caused by undefined organisms capable of causing 'common cold-like' illness.

Respiratory viral infections are transmitted among the general population either as sporadic episodes or as institutional and community outbreaks. Since many respiratory virus infections present with relatively common symptoms, a definitive laboratory diagnosis is important for the appropriate management of the residents, implementation of infection prevention and control measures and in the case of influenza, the therapeutic and prophylactic use of antiviral drugs for both the residents and staff. In general, influenza infections are known to spread rapidly through institutions and in older adults are associated with more complications than other respiratory viruses. Accordingly, in institutional outbreaks, it is particularly desirable to rule in or rule out influenza when testing for the etiological agent of the respiratory infection.

Public Health will direct the collection of respiratory specimens. Specimens should be collected only from symptomatic individuals within 48 to 72 hours of onset of symptoms, including HCP if available.

### 15.2.2 Admissions and Transfers

Restricting admissions to a facility experiencing an outbreak unnecessarily has the potential of creating a backlog in acute care, emergency departments or other community settings; on the other hand, admitting persons who are susceptible into an outbreak situation poses a risk to their health and has the potential to prolong the outbreak. Depending upon the infecting organism, the severity of illness, the extent of the outbreak and the physical layout of the building, the admission restriction might not be applied or may be applied to one floor, one wing or the entire facility. This decision needs to be made by the OPMT in consultation with the Medical Health Officer or delegate.

Factors to consider include:

- Whether the outbreak is under control
- Whether the resident's attending physician is aware of the outbreak and has agreed to the admission based on a review of the resident's current health status
- Whether adequate staff are available in the facility as not only may staff also become ill but outbreaks often require an increase of human resources
- Whether the outbreak is due to influenza, and if so, whether the person has been immunized or is on antiviral prophylaxis
- Whether the resident or their substitute decision-maker has given informed consent for the admission.

Admissions of **new residents either from the community or as a transfer from an acute care facility** to the affected unit during the outbreak are generally not advisable.

The **re-admission** of residents/residents who **met the case definition** prior to discharge/transfer is reasonable provided appropriate accommodations and care can be provided (i.e. it is assumed that the person is now immune to the organism causing the outbreak).

The **re-admission** of residents/residents who **did not meet the case definition** for RI prior to discharge/transfer is generally not advisable during an outbreak (i.e. it is assumed that the person may not be immune to the organism causing the outbreak).

**Transfers for non-urgent medical appointments** made before the outbreak should be rescheduled.

When **transfers to acute care** are necessary during an outbreak, the sending facility should provide the transferring agency (BC Ambulance Service), the hospital Infection Control Practitioner (ICP) and admitting unit or ward with the details of the outbreak to ensure control measures are in place when the resident arrives.

### **15.2.3 Problem Solving When Control Measures Appear to be Failing**

The incubation period for respiratory viral illness varies, for example the incubation period for influenza is one to four days. Therefore, in an influenza outbreak, it is expected that after a few days of outbreak control measures, the number of new cases should diminish. If new cases continue to appear four to five days after outbreak control measures were implemented the following factors should be explored and reviewed with the MHO and Outbreak Management Team:

- Has anyone with a cough been moving around the facility without a mask, and/or without performing appropriate hand hygiene?
- Is any equipment being used for sick and well residents/residents without being cleaned and disinfected between uses?
- Is personal protective equipment being changed between providing care to sick residents/residents and those that are well?
- Are there any lapses in hand-washing/hand sanitizing?
- Are all hand hygiene stations well stocked with soap or alcohol-based hand sanitizer, and are new refills of products easily to locate by all staff, volunteers and visitors?
- Is the appropriate personal protective equipment available and being appropriately worn by staff members
- If influenza is involved in the outbreak and the above do not explain ongoing illness:
  - are all residents immunized against influenza and taking antiviral medication, if appropriate?
  - are all staff members, including physicians and volunteers, either immunized against influenza or have they taken an antiviral medication?
  - have residents/staff taking antiviral medication been appropriately screened for symptoms to ensure the proper treatment versus prophylactic dose of antiviral is being used; under-dosing may lead to the emergence of antiviral resistant strains
  - have more recent outbreak specimens been screened for the possible emergence of antiviral resistance mutations in the virus





## **16.0 Occupational Health**

Occupational Health policies apply to all health care providers (defined as volunteers, students, employees and physicians). The IPAC components of Occupational Health services are:

- Follow-up with staff for who have experienced an occupational exposure to:
  - Blood and body fluids
  - Infectious diseases
- Provision and promotion of staff immunization, especially influenza
- Identification of workplace infection risks and implementation of appropriate preventive measures, including protection against vaccine-preventable diseases, and a blood and body fluid post-exposure management policy
- Provision of support and guidance for staff dealing with illnesses and work related exposures
- Education of staff on the use of Routine Practices and personal protective equipment.

All requirements of Worksafe BC are to be followed as outlined in their regulations.

***Keeping staff healthy also enhances protection of residents from infectious disease.***

Keep up-to-date staff health records as they pertain to immunization status or follow-up post exposure to blood and body fluids (BBFs) or disease.

### Staff Immunizations

Disease	Immunization Required
Measles	Given as MMR in childhood in BC 2 doses of vaccine at least 1 month apart
Mumps	
Rubella	
Diphtheria	Given as a primary series (3 doses) in childhood in BC All should have primary series plus booster of Td every 10 years. One booster may be dTap
Pertussis	
Tetanus	
Polio	Given as a primary series of 3 doses in childhood in BC Where HHP has not had primary series give series using only <u>inactivated polio vaccine</u>
Varicella	*Susceptible HCPs to receive 2 doses of vaccine at least 1 month apart  Contraindicated during pregnancy – do not become pregnant for 1 month following  (* history of varicella or shingles, lab confirmed VZV IgG, or previous immunization)
Hepatitis B	All HCPs who may be exposed to blood and/or body fluids or risk of sharps injury or bites  3 doses given at 0, 1, and 6 months
Influenza	Yearly immunization

## **16.1 Employee Illness and Exclusion from Work Due to Illness**

### **General**

Staff should not report for work when they are ill (e.g. cough, fever, vomiting, and diarrhea)

- Excuse any staff member from work who exhibits fever and cough, vomiting, diarrhea or other symptoms that could be consistent with an infectious process
- Notify the person responsible for Infection Prevention and Control if two employees in one area have the same symptoms.

### **Skin and Tissue Infection**

Minor infections, where occlusive dressings can be maintained, pose little infection control hazard in the general care area.

- When exudate cannot be contained, the employee should not be working.
- Employees with infected lesions on their hands or arms should not be preparing or handling food, or feeding residents, and must wear gloves when giving care to residents. If the nature of the lesion prevents proper hand hygiene then the employee is remain off work until healed.

### **Febrile Respiratory Illness**

Excuse from work any employee with influenza-like symptoms (fever ( $\geq 38^{\circ}\text{C}$ ), cough, sore throat, muscle aches, prostration).

If 10% or more of staff is absent from work with influenza-like symptoms contact the person responsible for Infection Prevention and Control should notify the Medical Health Officer.

## 16.2 Exclusion from Work/Re-assignment Criteria

Health Care Worker's Disease	Relieve from direct resident contact	Precautions	Duration
Acquired Immunodeficiency Syndrome	No	Counsel to work in areas where tuberculosis exposure is minimized	
Adenovirus – epidemic keratoconjunctivitis	Yes		until 14 days after the onset of clinical infection in the second eye (if second eye infected), as this represents the period of greatest communicability
Antibiotic Resistant Organisms (MRSA, VRE, ESBL)	No	Review hand hygiene	
Cytomegalovirus Infections	No		
Diarrhea Acute Stage	Yes	Personnel should be excluded from direct resident care and food handling.	Until symptoms resolve
<i>Salmonella typhi</i>	Yes	Same as acute stage Diarrhea.	Until stool is free of the infecting organism. Consult Medical Health Officer
Other enteric pathogens	No	Good hygiene should be stressed.	
Hepatitis A or E	Yes	Consult Medical Health Officer	Until seven days after the onset of jaundice.
Hepatitis B and HBsAg carrier	No		
Hepatitis C	No		Period of infectivity has not been determined.
Herpes simplex Genital	No	Good hygiene should be stressed.	
Herpes simplex Hands (herpetic whitlow)	Yes	Note – It is not known whether gloves prevent transmission	Until lesions heal
Herpes simplex Orofacial	No		
Influenza	Yes		At least 5 days after onset

Health Care Worker's Disease	Relieve from direct resident contact	Precautions	Duration
Measles (Rubeola)  Active  Post Exposure (susceptible HCP)	Yes		Until 5 days after the rash appears.  From the 5th through the 21st day after exposure and/or 7 days after the rash appears.
Meningococcal Disease  <ul style="list-style-type: none"> <li>Unprotected Exposure</li> </ul>	No	No action for non-epidemic situation  Prophylaxis for unprotected exposure to resp. droplets	
Mononucleosis	Yes		Clinical Improvement
Mumps  Active  <ul style="list-style-type: none"> <li>Post exposure (susceptible personnel)</li> </ul>	Yes		Until 9 days after onset of parotitis.  From the 12th through the 26th day after exposure or until 9 days after onset of parotitis.
Pertussis  Active  <ul style="list-style-type: none"> <li>Post exposure (susceptible personnel)</li> </ul>	Yes  No if asymptomatic	No work restriction Erythromycin "prophylaxis" may be indicated.	From the beginning of catarrhal stage through the third week after onset of paroxysms or until 5 days after start of effective therapy. <sup>1</sup>
Ringworm (Tinea)	Yes  Until treatment complete	Can remain in environment so good cleaning is important. Check for other staff or residents with lesions and have pets inspected	Infectious as long as lesions are present lesions must be covered.

Health Care Worker's Disease	Relieve from direct resident contact	Precautions	Duration
Rubella Active	Yes		Until five days after the rash appears.
Post-exposure (susceptible HCP)			From the 7th through the 21st day after exposure and/or five days after rash appears.
Scabies/ Other mites	Yes		12 – 24 hours following initial treatments.
Streptococcal disease, group A	Yes		Until 24 hours after appropriate antibiotic is started.
Tuberculosis Active pulmonary or laryngeal	Yes		Adequate treatment and until 3 negative smears of cultures.
Varicella (Chickenpox) Active	Yes		Until all lesions dry and crust.
Post exposure (susceptible HCP)			From the 10th through the 21st day after exposure or if varicella occurs until all lesions dry and crust.
Viral respiratory infections	Yes		Until acute symptoms resolve.
Zoster (Shingles) active	No (if lesions localized)	Cover lesions – if unable to cover re-assign HCP to non-direct care	Until lesions dry and are crusted.
• Post exposure (susceptible personnel)	Yes		From the 10th through the 21st day after exposure or if varicella occurs until all lesions dry and are crusted.

### **16.3 Diseases to be Avoided by Pregnant or Immunosuppressed Staff**

It is not always possible to identify communicable diseases. Staff considering pregnancy should update and validate immunity to communicable diseases prior to conception

Take extra caution for pregnant or immunosuppressed employees whose duties involve contact with residents known to have:

- Varicella zoster infection (shingles or chickenpox),
- Rubella (if immunity status unknown),
- Cytomegalovirus (CMV),
- Toxoplasmosis,
- Herpes Simplex Virus,
- Fifth's Disease Virus

Consult with the person responsible for Occupational Health regarding additional infection control precautions, or re-assignment to other residents.

## **16.4 Blood and Body Fluid Exposure**

### **Facility Administrator's Responsibility**

To ensure all staff are aware of procedures to follow in event of blood or body fluid exposure.

#### **16.4.1 Policy**

All persons exposed to blood or body fluids should be assessed for potential risk of infection from HIV, HBV, and HCV, and be provided with appropriate counseling and treatment.

Post-exposure management is required when **all** of the following indications are present:

- Percutaneous, permucosal, or non-intact skin exposure
- The exposure is to blood, potentially infectious body fluid or tissue
- The source is considered potentially infectious (positive test, or in a higher risk group, or exposure occurred in a higher risk setting).

The level of risk posed by accidental exposure may vary from the health care occupational setting to the community setting.

## 16.4.2 In the Event of an Exposure

### Cleanse

- Mucous membrane or eye: Rinse well with water and/or normal saline.
- Skin: Wash well with soap and water.

Do **not** promote bleeding of percutaneous injuries by cutting, scratching, squeezing, or puncturing the skin. This may damage the tissues and increase uptake of any pathogen(s). Allow injury/wound site to bleed freely, and then cover lightly. Do not apply bleach to the injury/wound or soak it in bleach.

### **Assess the risk of transmission from the exposure**

The following body substances have **not** been implicated in the transmission of HIV, HBV, or HCV **unless they contain visible blood:**

- faeces
- nasal secretions
- sputum
- sweat
- tears
- urine
- vomitus.

Determine if there was a percutaneous, permucosal, or non-intact skin exposure to a potentially infectious body fluid posing a risk for HIV, HBV, or HCV transmission.

Determine if the source of the blood or body fluid is known. If the source person is known to be HIV+, contact the BC Centre for Excellence in HIV/AIDS to obtain advice regarding appropriate anti-retroviral therapy for the exposed person.

**Report to nearest hospital emergency room, for assessment of risk and treatment, if necessary, for exposure to HIV, hepatitis B or hepatitis C (as soon as possible and within 2 hours)**

The emergency room physician may request blood for serologic testing from the resident who is the source of an exposure. Informed consent of the resident is required before blood can be drawn, and the resident's medical record must be documented with the orders for blood work, and the written consent.

Complete all appropriate Worksafe BC forms on every blood and body fluid exposure

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