Respiratory Infection (RI) Outbreak Guidelines for Residential Care Settings
October 2016

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Introduction

Respiratory infections (RI) are often spread when people cough or sneeze and droplets of their respiratory secretions come into direct contact with the mucous membranes of the eyes, mouth, nose, or airway of another person. Because micro-organisms in droplets can survive on other surfaces, droplet-spread infections can also be spread indirectly when people touch contaminated hands, surfaces and objects.

Outbreaks of RI can occur at any time during the year. A number of viruses and several bacteria can cause institutional RI outbreaks, such as Parainfluenza, Respiratory Syncytial virus (RSV), Coronavirus, Rhinovirus, Human metapneumovirus, Adenovirus, Streptococcus pneumoniae or Bordetella Pertussis. Influenza is a major cause of respiratory outbreaks and can occur at any time, but is largely limited to the period from November 1 – March 30. While no single protocol can cover all of the more detailed aspects that might be necessary for some specific organism outbreaks, all respiratory outbreaks, can initially be managed in a similar fashion with basic measures to prevent further respiratory transmission, at least until the organism is identified and more specific measures can be put into place (e.g. antiviral prophylaxis for influenza).

The goal of this document is to provide facilities with the information and tools required to prevent, identify and control outbreaks of RI in a way that balances resident and staff protection with the least possible interference on facility function and resident well-being. The document is organized into sections:

1. Outbreak Detection and Consultation
2. Pre-Outbreak Preparation
3. Outbreak Management
4. References
5. Tools, Forms and Resources

The guidelines apply to Interior Health (IH) Adult Residential Care Facilities and Privately Operated Adult Residential Care Facilities that are licensed through the Hospital Act or Community Care and Assisted Living Act. The principles in these guidelines may also be useful in acute care or assisted living settings.

NOTE: For management of staff in IH facilities during an RI outbreak please refer to AV1300 Staff Influenza Immunization and Exclusion Policy.

For non-IH facilities, follow your facility’s Influenza Immunization Policy or, for licensed facilities, the Residential Care Regulation.
1. Outbreak Detection and Consultation

This section contains information to assist facilities when they suspect an outbreak is caused by a Respiratory Infection (RI). Facilities need to be aware of staff and residents who meet the case definition for a respiratory infection.

If you suspect an RI Outbreak:

- Consult the IH Communicable Disease Unit (CD Unit) 1-866-778-7736 during business hours (Monday to Friday 8:30am to 4:30pm). On weekends and holidays, notify the MHO on-call (1-866-457-5648).
- Notify your Infection Control Practitioner (ICP), if facility has an assigned ICP.
- Take specimens, one nasal swab per person (up to six individuals, residents or staff) for lab testing to confirm causative organism. Send only when the outbreak has been declared.
- Send specimens to BCCDC along with the appropriate requisitions and forms.
- Initiate staff and resident surveillance tools.
- Designate an individual to be responsible for daily outbreak tracking and updates.

Surveillance for Illness

RI Outbreaks may occur at any time, but are much more frequent during the winter season due to common circulating viruses, including influenza. RI may have different presentations but a common symptom to watch for is a new or worsening cough.

Facility managers should make every attempt to ensure that both Health Care Workers (HCWs) and residents are monitored for the presence of new or worsening cough and other signs of respiratory illness. As part of outbreak readiness, designate one staff member to be responsible for maintaining records for an RI outbreak.

Case Definitions for Respiratory Infection (RI)

Respiratory Infection (RI) Case Definition:

*New or worsening cough and a fever greater than 38°C or a temperature that is abnormal for that person.*

Additional symptoms may include myalgia/arthritis, extreme fatigue, runny nose, sore throat, headache.

There may be groups within the populations that would not meet this definition, yet are infected with an organism that can cause RI outbreaks. For example, young children, the elderly, the immune-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 of less than 35.6°C, or greater than 37.4°C in the elderly may be an indication of infection. The CD Unit/MHO may be consulted if you have an unusual cluster of illness in your facility that does not meet the case definition.
**Definition of an RI Outbreak**

Two or more cases of RI occurring in a unit/facility area within a 7-day period amongst staff and/or residents.

**Identifying Causative Organism**

When an outbreak is identified:

- Collect on nasal swab from each ill person, to a maximum of 6 different individuals (can be residents or staff) who meet the case definition for RI as per instructions in the swab kits.
  - Collect swabs within 48-72 hours of symptom onset.
  - Send swabs as soon as possible by courier (or by other local lab arrangements) to the Provincial Laboratory at the BC Centre for Disease Control.
  - Include the PHSA Laboratories Virology Requisition for each sample and one copy of the PHSA Laboratories Influenza-Like Illness (ILI) Outbreak Laboratory Form.
  - Include the IH CD Unity (C09768) in the “Copy To” field on the requisition.

Information on collecting and sending specimens is included under Tools for Outbreak Detection and Consultation.

**Reporting an Outbreak**

A suspected respiratory outbreak needs to be reported as soon as possible to the Director of Care or the facility designated most responsible person and the ICP, if applicable, who will ensure outbreak measures are put in place.

The facility must notify the CD Unit at 1-866-778-7736. The CD Unit is open Monday to Friday from 8:30am to 4:30pm. Information required by the CD Unit includes:

- total number of residents ill and the date of symptom onset;
- total number of staff ill;
- location of outbreak in facility;
- number of swabs sent;
- general outbreak measures initiated;
- staff immunization rates;
- resident immunization rates.

If an outbreak is identified after business hours Monday through Thursday, report the outbreak to the CD Unit first thing on the next business day. On weekends and holidays notify the MHO on call (1-866-457-5648).

Facilities licensed under the Community Care and Assisted Living Act are reminded that disease outbreaks are a reportable incident under the Residential Care Regulations. Operators should also notify the Licensing Program when any outbreak occurs.
Declaring an Outbreak

The MHO will declare the RI outbreak and will be guided by the type of illness presentation and by lab results to determine the type of management scenario.

When first declaring the outbreak, consideration should be given to whether the outbreak can be contained within one unit of the facility.

- If staff can be cohorted to work only in the affected unit where cases exist for the duration of the outbreak and residents can be contained within that unit, then it is preferable to declare the outbreak in that unit alone as opposed to declaring an outbreak for the entire facility.
- If staff (including RN’s and LPN’s) and residents cannot be cohorted, then the outbreak will be declared for the entire facility.

Scenario A
More severe respiratory illness known or suspected to be due to influenza.
(Equivalent to Scenario A, p 123, PICNetBC 2007 – Respiratory Outbreak Guidelines)

Scenario B
More severe respiratory illness known or suspected to be due to a non-influenza viral or bacterial infectious cause.
(Equivalent to Scenario B, p 124, PICNetBC 2007 – Respiratory Outbreak Guidelines)

Scenario C
Milder respiratory illness, known or suspected to be due to other non-influenza viral pathogens, most commonly rhinovirus and coronavirus.
(Equivalent to Scenario C, p 125, PICNetBC 2007 – Respiratory Outbreak Guidelines)

Notification of Partners

Once an outbreak has been declared, fill out the top section and Section A of the RI and GI Outbreak Report Form and email to cdunit@interiorhealth.ca or fax to 250-549-6310.

Ensure that partners have been notified such as:

- ICP (if your facility is assigned one);
- Director of Care or Most Responsible Person for your facility;
- Community Care Licensing Officer;
- Hospital/Facilities to which residents have been recently transferred;
- Medical Director;
- Other service providers as appropriate:
  - HandyDART, oxygen services, laboratory services, BC Ambulance, hemodialysis units, pastoral care, staffing, resident’s physicians etc.
2. Pre Outbreak Preparation

This section contains information to help prepare facilities to detect and manage outbreaks. The following is a quick checklist of activities for pre-season planning.

- Familiarize staff with the current IH Respiratory Infection Outbreak guideline.
- Pick up influenza vaccine and vaccinate Health Care Workers (HCW).
- Provide influenza vaccine and pneumococcal (as required) vaccine to residents.
- Maintain staff and resident influenza immunization records.
- Order and maintain a supply of infection control supplies required for outbreak management.
- Provide education to staff and residents.
- Ensure there is an adequate number of staff available to work during the outbreak season. If possible, additional staff to be assigned.

Preparation for an Outbreak

Once an RI outbreak has been detected, the key to successful management is implementing all of the appropriate measures as soon as possible. All staff should be aware of how to put the measures into place. To be prepared:

- Know who to contact.
- Order swabs from PHSA by September 15. **Swabs maybe ordered and replaced as needed.**
  
  Fax [Sample Container Order Form](#) to PHSA BCCDC at 604-707-2606 or email to kitorders@hsssbca.ca.
- When the supply of swabs is received, discard any remaining stock which may have expired.
- Know who is immunized. Ensure new residents are vaccinated and pre-printed orders for oseltamivir are prepared.

*Note:* Routine annual serum creatinine is no longer required, as part of fall influenza preparedness activities. Please see the section on oseltamivir for further information.

- Ensure adequate infection control and cleaning supplies are available, such as hand soap/sanitizer, masks, goggles, gowns, linens, surface disinfectants, waste-bins with step-on lids and signage.
- The most responsible person in each residential care facility should conduct a review annually and clarify the details of how to report a suspected respiratory infection outbreak for their geographic health service area with their facility staff. This annual review is best done in early October of each year.
- Develop a facility protocol that outlines your staff’s responsibilities for implementing an outbreak response and for notification to PH on weekends and after hours.

Templates for these activities are included under **Tools for Pre-Outbreak Preparation.**
**Influenza Vaccine Delivery**

**Immunization of Health Care Workers (HCWs)**

Influenza remains a significant cause of illness and death amongst the elderly and frail residents of care facilities. *Influenza vaccination of both residents and health care workers is the most effective measure for reducing the impact of influenza in residential facilities.* It reduces the risk of severe illness or death from influenza infection in individuals and it reduces the risk of influenza outbreaks.

Immunization of HCWs is critical to the care of vulnerable clients in order to achieve the best protection for them.

A HCW is any person carrying out paid or unpaid work in a healthcare facility. Persons who volunteer or undergo training in a health care facility for any period of time between October to April and all HCWs are **eligible for free vaccine.**

Vaccinations of HCWs should commence each year as soon as the vaccine becomes available. Instructions for ordering vaccine are sent to each facility by the local public health (PH) office prior to the influenza season. The vaccine will be available throughout the season and managers should ensure that staff is vaccinated whenever they commence working in a facility during the months October through April.

Staff may be vaccinated at their place of employment, through PH clinics, or by their family physician or pharmacist. All persons receiving the vaccine should be screened for contraindications. Influenza vaccine should not be given to people who have had an anaphylactic reaction to a previous dose of influenza vaccine.

Staff that decline immunization for a medical reason need to provide appropriate documentation from their physician to their supervisor (or designated Occupational Health Nurse in IH facilities). A sample form for staff with contraindications to is included through a link on pg. 28.

It is important for each facility to keep an up-to-date record of who has received influenza vaccine. All staff is encouraged to keep their own record of immunization to show their employer especially when employed at multiple sites, when vaccination is obtained from the PH centre or physician’s office, or when received at an outbreak setting.

The most responsible person in the facility should review the immunization rates by the end of December. If staff rates are less than 60% and resident rates are less than 90%, the facility should develop a plan to increase immunization rates or mitigate the effect should an influenza outbreak be declared.

- [BC Ministry of Health Policy Communiqué Health Care Worker Influenza Control Policy 2013](#)
- [BC Influenza Prevention Policy: a discussion of the evidence 2013](#)
- [IH Administrative Policy Manual AV1350 Influenza Prevention Policy](#)
- [IH Administrative Policy Manual AV1300 Staff Influenza Immunization and Exclusion Policy](#)
**Immunization of Residents of Adult Residential Care Facilities**

Residents of any age are eligible for free influenza vaccine and require vaccination annually. Unvaccinated residents who catch influenza can become very ill and can spread the virus to other residents and staff in the facility. Immunization helps prevent illness and reduces shedding of the virus.

In addition residents are eligible for pneumococcal vaccine if in a risk group or over age 65. Facilities are encouraged to screen for vaccine eligibility on admission.

**Records and Reporting**

Facilities need to maintain annual records of HCW influenza vaccination status and have these records available in the event of an influenza outbreak.

Private and contracted facilities will need to send reports on vaccine coverage to the local PH center using the form at the end of these Guidelines. Workplace Health and Safety provides PH centers with staff vaccination coverage data for all IH Facilities.

IH Staff should refer to the [IH Influenza Protection Program](#) webpage for more information.

**Antivirals**

When the RI outbreak has been identified as an influenza outbreak (by lab confirmation, or based on the assessment of the Medical Health Officer (MHO)), antivirals are initiated, both for treatment and for prevention. It is important to work with the facility pharmacist and the Medical Director to ensure facilities are ready to provide antiviral medication as soon as possible after the influenza outbreak has been declared. The current recommendation is to use oseltamivir as it is effective against both Influenza A and B. Prior to the end of October each year the facility should:

- Identify individuals with a contraindication to oseltamivir. **Note:** A recent (in the last 12 months) serum creatinine or creatinine clearance is not required before starting oseltamivir, unless there is reason to suspect renal impairment. If renal impairment is not suspected, it can be assumed to be greater than 60 mL/min. If renal impairment is present (CrCl is 60 mL/min or less), oseltamivir dosage and regimen will need to be adjusted. (Refer to Association of Medical Microbiology and Infectious Disease Canada Guidelines: The Use of Antiviral Drugs for Influenza: Guidance for Practitioners 2012/2013). For residents who are on dialysis, consult the resident’s nephrologist or Interior Health Communicable Disease Unit for dosing regimen.

- Obtain Oseltamivir pre-printed orders:
  - Oseltamivir Prophylaxis Influenza A and B (# 829559)
  - Oseltamivir Treatment Influenza A and B Infection (# 829561)

  Both PPOs should be signed by the residents’ physicians and placed on the residents’ charts prior to the start of outbreak season.

- Ensure facilities’ pharmacies can supply the volume of oseltamivir required for prophylaxis all facility residents.

  A suggested protocol for oseltamivir is included under [Tools for Outbreak Management and Reporting](#).
### 3. Outbreak Management

This section contains information to assist facilities in managing an outbreak caused by a Respiratory Infection. The specific outbreak management strategies are applied based on the management scenario (A, B, or C) designated by the MHO.

Please see next pages for specific measures for Scenarios A, B and C.

**Tracking an Outbreak**

Once an outbreak has been identified, a running record of new cases, their symptoms and other information is required to determine if outbreak measures are effective. Sample forms can be found at the end of this section.

Summary information is to be reported daily to the CD Unit using the [RI and GI Outbreak Report Form](https://www.interiorhealth.ca/CD) and if applicable to the ICP. This form should be completed and either faxed to the CD Unit at 250-549-6310 or by email to cdunit@interiorhealth.ca at the start of the outbreak, at the start of each day (including weekends) and when the outbreak is declared over.

**Declaring the Outbreak Over**

The CD Specialist (CD Unit) will declare RI outbreaks over, following the guidance provided for Scenarios A and B in these guidelines. Facilities can self-declare Scenario C outbreaks over after 4 days without a new case. MHO consultation will still be required for outbreaks involving severe illness, unusual organisms, emerging pathogens or any unusual circumstances (e.g. a request to declare an outbreak over before the usual time period described in the guidelines).

If the possibility exists that an outbreak might be able to be declared over during a weekend/holiday, then the facility can consult with the MHO/CDU prior to the weekend and make arrangements to self-declare the outbreak over on the weekend/ holiday, should no new cases arise.

Outbreaks can be declared over at the end of business hours (5 pm) on the designated day.

Refer to [PICNET Appendix 4: Common Viral and Bacterial Pathogens that Cause RI Outbreaks](https://www.interiorhealth.ca/CD).
Scenario A – Specific Measures for Managing an Outbreak

More severe respiratory illness known or suspected to be due to influenza.

1. **INITIATE ANTIVIRALS:**
   - Initiate the recommended anti-viral treatment and prophylaxis (see When to use Antiviral Medication).

2. **ILL RESIDENTS:**
   - Isolate ill residents in their room as much as possible while potentially infectious.
   - Provide meal tray service in room.
   - Ensure staff and visitors use appropriate Routine Practices and Additional Precautions
     - Use Droplet/Contact Precautions
     - Information on Droplet/Contact precautions can be found under Tools for Outbreak Management and Reporting.

3. **ILL STAFF:**
   - Recommend ill staff stay away from work for the duration of their acute symptoms or 5 days, whichever is longer.

4. **EDUCATION:**
   - Teach staff early signs of RI, how to prevent its spread and how to educate residents and their visitors.

5. **IMMUNIZATION:**
   - Offer vaccine to unimmunized residents and staff who do not have contraindications to influenza immunization.

6. **EXCLUSIONS OF WELL HCWs:**
   - Initiate exclusion of unimmunized well HCWs.
     - In IH facilities, follow the exclusion criteria outlined in AV1300 Staff Influenza Immunization and Exclusion Policy for unimmunized staff.
     - For non-IH facilities, follow your facility’s Influenza Immunization Policy or, for licensed facilities, the Residential Care Regulation.
     - HCWs that are unimmunized are at risk of contracting influenza and should be excluded for the duration of the outbreak, unless taking antiviral medication.

7. **RESTRICT ADMISSIONS AND TRANSFERS:**
   - Restriction of admissions/discharges of residents to and from the facility will be implemented for the duration of the outbreak.
     - If wings/units can be separated/closed from each other by doors and staffing is separate, then wings/units with ill patients should be closed to transfers, and wings with no illness can remain open.
- Should transfer to acute care be medically required, notify the receiving facility of the outbreak and the need to isolate for an incubation period.

- Re-admission/Repatriation: **Consult the CD Unit/MHO for all re-admission issues.** In general, re-admission of residents who **met the case definition** for RI prior to discharge/transfer is reasonable provided appropriate accommodations and care can be provided.

- The re-admission of residents who **did not meet the case definition** for RI prior to discharge/transfer is not advisable during an outbreak and requires consultation with the CD Unit/MHO. However, if a resident who is not a case leaves the facility for a short period of time during an outbreak (e.g. medical appointment, ER visit or a family visit), they can return to the facility without MHO/CDU consultation. A host period of time is defined as a few hours, not more than one day, and less than one incubation period if the causative organism is known.

8. **RESTRICTION OF ACTIVITIES:**
- Social activities for residents should be suspended within the affected area.
- Restriction of residents’ movements within the facility will be implemented (to wing or floor depending on layout of facility).
- Consider cancelling non-critical volunteer services (e.g. hair dressing, animal visits, candy-stripers).

9. **VISITOR RESTRICTIONS**
- In general, a complete closure of the facility to all visitors/volunteers is not recommended and should only be done in consultation with the MHO and with careful consideration of the risks/benefits to all residents.
  - If possible, notify family members of ill residents.
  - Advise visitors of the potential risk of acquiring infections within the facility and of re-introducing infections into the facility.
  - Advise visitors to reschedule visits if they are sick with respiratory symptoms.
  - Visitors, including family members, should be counselled about their ability to spread the virus.
  - As per IH policy, during flu season it is recommended that all visitors who are not vaccinated against influenza be offered a mask if they enter patient care areas.
  - All visitors are required to perform hand hygiene on arrival and immediately prior to leaving the resident’s room, follow respiratory hygiene processes, and are not to visit other residents in the facility.

10. **POST OUTBREAK SIGNAGE:**
- Use signage to alert visitors of the outbreak and required precautions. Sample posters are included through a link on pg. 28.
11. COHORT STAFF

If the outbreak has been declared in one section of the facility:

- Only immunized staff or staff taking antivirals may work in the area of the facility under outbreak. These staff may also work in the non-outbreak area of the facility.
- Working staff members should be cohorted to work with either ill residents or well residents for the duration of their shift.
- Working staff members should work with well residents first, then with ill residents, and strict hand hygiene and infection control practices must be used between residents.
- Healthcare providers entering the facility during an outbreak (e.g. laboratory staff or physicians) must:
  - be immunized;
  - provide care or services in the non-affected areas of the facility or with well residents first;
  - use strict hand hygiene measures; and
  - follow Droplet Contact precautions.

12. IMPLEMENT INFECTION PREVENTION AND CONTROL PRACTICES

- Hand Hygiene
  - Provide hand sanitizer at all entrances and exits with signage on how to use.
  - Practice hand hygiene before and after contact with each resident.

- Respiratory Hygiene
  - Remind residents, visitors and staff to cover the nose and mouth when sneezing and coughing and to perform hand hygiene after coughing, sneezing or using tissues.

- Routine Practices and Additional Precautions
  - Use Routine Practices for interaction with all residents.
  - Use Droplet/Contact Precautions for interaction with residents showing symptoms of RI.

- Point of Care Risk Assessment
  - Must be done for any interaction with the resident: assess resident’s symptoms and cognitive ability, type of interaction that will occur, necessary Personal Protective Equipment (PPE) and potential for contamination of equipment or environment.

13. ENHANCED HOUSEKEEPING:

- Frequent disinfection of commonly touched surfaces or items such as handrails, elevator buttons and door handles. Use a product approved for use on viruses.
- Provide sufficient receptacles for safe disposal of contaminated items such as tissues.
- Clean and disinfect all equipment between use for different residents or areas.

14. DAILY OUBREAK TRACKING

- Fax or email the RI and GI Outbreak Report Form to the IH CD Unit by the end of the business day. Fax to 250-549-6310 or email cdunit@interiorhealth.ca
- For in-facility use only, update the resident and staff illness surveillance forms
- Reporting sheets are provided under Tools for Outbreak Management and Reporting.

15. DECLARING THE OUTBREAK OVER:

- The MHO/CD Unit will declare the outbreak over at the end of business hours (5 pm) on the 8th day after the onset of illness in the most recent case and 4 days after the last symptomatic staff member worked in the facility.

When to use Anti-Viral Medication

Antivirals are not effective against respiratory infections other than influenza. Therefore, it is important to base decisions about their use on appropriate epidemiologic, clinical and laboratory data about the etiology of prevalent infection(s).

When the causative agent has been lab-identified as influenza or when a Scenario A outbreak has been declared by the MHO, the appropriate use of antiviral medication for the prophylaxis (prevention) and treatment of infections has been shown to be effective in controlling outbreaks due to influenza in residential care facilities. Antiviral prophylaxis should not replace annual influenza vaccination. Vaccination remains the primary tool for the prevention of influenza infection and illness.

Oseltamivir should be used as follows:

Residents

For prophylaxis of influenza:

- All symptom-free residents should receive prophylaxis once a Scenario A outbreak has been declared and it should continue until the outbreak is declared over. This date may be defined as a minimum of 8 days after the onset of illness in the last case.

For treatment of Influenza:

- All residents with influenza symptoms should receive treatment provided the medication can be started within 48 hours of onset of symptoms. Treatment should continue for 5 days.
**Health Care Workers (HCWs)**

- All symptom-free, unimmunized HCWs should receive influenza antiviral medication and/or vaccine as soon as possible.
- Antiviral prophylaxis should continue until the outbreak has been declared over (usually 8 days after the onset of illness in the last case) or until 14 days after immunization if the outbreak has not been declared over.
- HCWs may return to work as soon as they have received their first dose of antiviral medication.
- Staff need to obtain a prescription for the antiviral medication from their family physician.
- A sample letter for staff to take to their physician is attached as a link on pg.28.

**Oseltamivir**

The recommended oral dose of oseltamivir for prophylaxis of influenza in persons greater than 13 years of age is 75 mg once daily. No dose adjustment is necessary if the eGFR is greater than 60 ml/minute. A dose adjustment for an eGFR less than 60 ml/minute is recommended as follows:

- eGFR 31 – 60 mL/min, give Oseltamivir 30 mg PO daily
- eGFR 10 – 30 mL/min, give Oseltamivir 30 mg PO every 48 hours
- Peritoneal dialysis: give Oseltamivir 30 mg PO before dialysis, then 30 mg every 7 days
- Hemodialysis: give Oseltamivir 30 mg PO before dialysis, then 30 mg after every alternate dialysis session.

If the patient is receiving peritoneal dialysis or hemodialysis, Oseltamivir pre-printed orders should be faxed to the renal program and/or dialysis unit for their records.

The recommended oral dose of Oseltamivir for the treatment of influenza in persons more than 13 years of age is 75 mg twice daily for 5 days. No dosage adjustment is necessary if the eGFR is greater than 60 mL/minute. A dose adjustment for an eGFR less than 60 mL/minute is recommended as follows:

- eGFR 31 – 60 mL/min, give Oseltamivir 30 mg twice a day for 5 days.
- eGFR 10 – 30 mL/min, give Oseltamivir 30 mg daily for 5 days.
- Peritoneal dialysis: give Oseltamivir 30 mg x 1 dose before dialysis.
- Hemodialysis: give Oseltamivir 30 mg PO before dialysis, then 30 mg after each dialysis session x 5 consecutive days.

If the patient is receiving peritoneal dialysis or hemodialysis, the signed Oseltamivir pre-printed orders should be faxed to the renal program and/or dialysis unit for their records.
To estimate renal function, creatinine retesting is not required if the estimated GFR (eGFR) was 60 mL/minute in the last 12 months and no renal dysfunction is suspected by the physician, if a recent creatinine is available (in the previous 4 weeks), or if the patient receives chronic hemodialysis or peritoneal dialysis. A creatinine is recommended if there has been no creatinine tested in the last 12 months or if the eGFR is less than 60 ml/minute or renal dysfunction is suspected by the physician. Note that the eGFR is automatically reported for each creatinine.

Oseltamivir should not be administered to patients with an Oseltamivir allergy or intolerance, or who refuse treatment.

In general, Oseltamivir is well tolerated, with the most common adverse effects being nausea, vomiting and diarrhea.

It is recommended that the two pre-printed orders be completed annually for each resident in advance of the Influenza outbreak season:

- Oseltamivir Prophylaxis – Influenza A and B – Residential Care # 829559
- Oseltamivir Treatment – Influenza A and B – Residential # 829561

**Surveillance of Side Effects from Antivirals**

As with any medication, surveillance of adverse side effects should be documented in the resident’s chart. Particular or unusual concerns that arise should be reported to the Director of Care, Medical Director, or ICP as applicable.

**More detailed information** on the use of antivirals including indications for use, dosage, potential side effects can be found in the most current Compendium of Pharmaceuticals and Specialties (e-CPS).

**Scenario B – Specific Measures for Managing an Outbreak**

More severe respiratory illness known or suspected to be due to a non-influenza or bacterial infectious cause

1. **NO ANTIVIRAL MEDICATION IS NECESSARY**

2. **ILL RESIDENTS:**

   - Isolate ill residents in their room as much as possible while potentially infectious.
   - Provide meal tray service in room.
   - Ensure staff and visitors use appropriate Routine Practices and Additional Precautions
   - Use **Droplet/Contact Precautions**
     - Information on Droplet/Contact Precautions can be found under Tools for Outbreak Management and Reporting
3. **ILL STAFF**
   - Recommend ill staff stay away from work for the duration of their acute symptoms or 5 days, whichever is longer.

4. **EDUCATION:**
   - Teach staff early signs of RI, how to prevent its spread and how to educate residents and their visitors.

5. **IMMUNIZATION:**
   - If an influenza outbreak is suspected, offer vaccine to unimmunized residents and staff who do not have contraindications to influenza immunization.

6. **EXCLUSION OF WELL-HCWs:**
   - There is no policy to exclude well HCWs under Scenario B or C RI outbreaks.

7. **RESTRICT ADMISSIONS AND TRANSFERS:**
   - **Consult CD Unit/MHO regarding any potential admissions.**
     - In general, admissions should be limited to those deemed to be essential and consider the receiving facility’s ability to provide suitable accommodation during the outbreak to prevent exposure (e.g. room in separate wing not affected by outbreak; private room).
     - Include resident/decision maker and attending physician in the decision to admit during an outbreak. They must be able to provide informed consent.
   - If wings/units can be separated / closed from each other by doors and staffing is separate, then wings/units with ill patients should be closed to transfers, and wings with no illness can remain open.
   - If resident is transferred to acute care, notify the receiving facility of the outbreak so they can initiate appropriate precautions (including suitable accommodation and isolating the resident through an incubation period if necessary).
   - **Consult CD Unit/MHO regarding any potential discharges/transfers to facilities other than acute care.** Discharge to a residential facility may be considered if the receiving facility is made aware and are able to isolate the resident through an incubation period.
   - **Re-admission/Repatriation:** Consult CD Unit/MHO for all issues around re-admission of a resident.

8. **RESTRICTION OF ACTIVITIES:**
   - Review group activities and consider cancelling or modifying to prevent spread. (i.e., cohabiting ill-residents with ill-residents, and well-residents with well-residents).
   - Weigh the importance of group activities for resident well-being against the needed infection control measures.
   - Consider cancelling non-critical volunteer services (e.g. hair dressing, animal visits, candy- stripers).
9. VISITOR RESTRICTIONS:
   - In general, a complete closure of the facility to all visitors/volunteers is not recommended and should only be done in consultation with the MHO and with careful consideration of the risks/benefits to all residents.
     - If possible, notify family members of ill residents.
     - Advise visitors of the potential risk of acquiring infections within the facility and of re-introducing infections into the facility.
     - Advise visitors to reschedule visits if they are sick with respiratory symptoms.
     - Visitors, including family members, should be counselled about their ability to spread the virus.
     - As per IH policy, during flu season it is recommended that all visitors who are not vaccinated against influenza be offered a mask if they enter patient care areas.
     - All visitors are required to perform hand hygiene on arrival and immediately prior to leaving the resident's room, follow respiratory hygiene processes, and are not to visit other residents in the facility.

10. POST OUTBREAK SIGNAGE:
    - Use signage to alert visitors of the outbreak and precautions to use. Sample posters are included through a link on pg. 28.

11. COHORT STAFF
    If the outbreak has been declared in one section of the facility:
    - Correct cohorting of staff requires that staff are assigned to work in either the outbreak area or the non-outbreak area of the facility, but not both, for the duration of the outbreak or until the causative organism has been identified. Once the causative organism has been identified, consultation with the MHO is required to determine when staff can work in the non-outbreak area after having worked in the outbreak area.

    If the outbreak has been declared for the entire facility:
    - Working staff members should be cohorted to work with either ill residents or well residents for the duration of their shift.
    - Working staff members should work with well residents first, then with ill residents, and strict hand hygiene and infection control practices must be used between residents.
    - Healthcare persons entering the facility during an outbreak such as lab staff or physicians must work in the non-affected areas of the facility or with well residents first, use strict hand hygiene measures and follow Droplet Contact precautions.
12. IMPLEMENT INFECTION PREVENTION AND CONTROL PRACTICES:

- Hand Hygiene
  - Provide hand sanitizer at all entrances and exits with signage on how to use.
  - Practice hand hygiene before and after contact with each resident.
- Respiratory Hygiene
  - Remind residents, visitors and staff to cover the nose and mouth when sneezing and coughing and to perform hand hygiene after coughing, sneezing or using tissues.
- Routine Practices and Additional Precautions
  - Use Routine Practices for interaction with all residents.
  - Use Droplet/Contact Precautions for interaction with residents showing symptoms of RI.
- Point of Care Risk Assessment
  - Must be done for any interaction with the resident: assess resident’s symptoms and cognitive ability, type of interaction that will occur, necessary Personal Protective Equipment (PPE) and potential for contamination of equipment or environment.

13. ENHANCED HOUSEKEEPING:

- Frequent disinfection of commonly touched surfaces or items such as handrails, elevator buttons and door handles. Use a product approved for use on viruses.
- Provide sufficient receptacles for safe disposal of contaminated items such as tissues.
- Clean and disinfect all equipment between use for different residents or areas.

14. DAILY OUTBREAK TRACKING:

- Fax or email the [RI and GI Outbreak Report Form](#) to the IH CD Unit by the end of the business day. Fax to 250-549-6310 or email cdunit@interiorhealth.ca
- For in-facility use only, update the [resident and staff illness surveillance tool](#)
- Reporting sheets are provided under [Tools for Outbreak Management and Reporting](#)

15. DECLARING THE OUTBREAK OVER:

- The MHO/CD Unit will declare the outbreak over when greater than two incubation periods have passed since the onset of illness in the last case (anywhere from 4-14 days since the last case, based on the pattern of illness and the known or suspect causative organisms).
Results from all tests routinely done on samples collected during an RI outbreak must be available prior to considering downgrading an outbreak from Scenario B to C (Influenza A, B, RSV results are negative but Multiplex results must be available as well).

The outbreak can be declared over at the end of business hours (5 pm) on the last day of the incubation period.

Refer to PICNET Appendix 4: Common Viral and Bacterial Pathogens that Cause RI Outbreaks.

**Scenario C – Specific Measures for Managing an Outbreak**

Milder respiratory illness, known or suspected to be due to other non-influenza viral pathogen, most commonly rhinovirus and coronavirus

1. **NO ANTIVIRAL MEDICATION IS NECESSARY**

2. **ILL RESIDENTS:**
   - Isolate ill residents in their room as much as possible while potentially infectious.
   - Provide meal tray service in room.
   - Ensure staff and visitors use appropriate Routine Practices and Additional Precautions
   - Use Droplet/Contact Precautions
     - Information on Droplet/Contact Precautions can be found under Tools for Outbreak Management and Reporting

3. **ILL STAFF:**
   - Recommend ill staff stay away from work for the duration of their acute symptoms or 5 days, whichever is longer.

4. **EDUCATION:**
   - Teach staff early signs of RI, how to prevent its spread and how to educate residents and their visitors.

5. **IMMUNIZATION:**
   - If an influenza outbreak is suspected, offer vaccine to unimmunized residents and staff who do not have contraindications to influenza immunization.

6. **EXCLUSION OF WELL-HCWs:**
   - There is no policy to exclude well HCWs under Scenario B or C RI outbreaks.
7. **RESTRICT ADMISSIONS AND TRANSFERS:**
   - Must include resident/decision maker and physician in the discussion regarding admission during an outbreak. All parties must be able to provide informed consent.
   - Consider isolation of incoming residents with pre-existing conditions which may make them more vulnerable to viral illness.
   - If resident is transferred to acute care, notify receiving facility of the outbreak so they can initiate appropriate precautions.
   - If wings/units can be separated / closed from each other by doors and staffing is separate, then wings/units with ill patients should be closed to transfers, and wings with no illness can remain open.

8. **RESTRICTION OF ACTIVITIES:**
   - Review group activities and consider cancelling or modifying to cohort ill-residents with ill- residents and well-residents with well-residents.
   - Weigh the importance of group activities to resident well-being against the needed infection control measures.
   - Consider cancelling non-critical volunteer services (e.g. hair dressing, animal visits, candy- stripers).

9. **VISITOR RESTRICTIONS:**
   - In general, a complete closure of the facility to all visitors/volunteers is not recommended and should only be done in consultation with the MHO and with careful consideration of the risks/benefits to all residents.
     - If possible, notify family members of ill residents.
     - Advise visitors of the potential risk of acquiring infections within the facility and of re- introducing infections into the facility.
     - Advise visitors to reschedule visits if they are sick with respiratory symptoms.
     - Visitors, including family members, should be counseled about their ability to spread the virus.
   - As per IH policy, during flu season it is recommended that all visitors who are not vaccinated against influenza be offered a mask if they enter patient care areas.
   - All visitors are required to perform hand hygiene on arrival and immediately prior to leaving the resident’s room, follow respiratory hygiene processes, and are not to visit other residents in the facility.

10. **POST OUTBREAK SIGNAGE:**
    - Use signage to alert visitors of the outbreak and precautions to use. Sample posters are included through a link on pg. 28.
11. COHORT STAFF

If the outbreak has been declared in one section of the facility:

- Correct cohorting of staff requires that staff are assigned to work in either the outbreak area or the non-outbreak area of the facility, but not both, for the duration of the outbreak or until the causative organism has been identified. Once the causative organism has been identified, consultation with the MHO is required to determine when staff can work in the non-outbreak area after having worked in the outbreak area.

If the outbreak has been declared for the entire facility:

- Working staff members should be cohorted to work with either ill residents or well residents for the duration of their shift.
- Working staff members should work with well residents first, then ill residents, and strict hand hygiene and infection control practices must be used between residents.
- Healthcare persons entering the facility during an outbreak such as lab staff or physicians must work in the non-affected areas of the facility or with well residents first, use strict hand hygiene measures and follow Droplet Contact precautions.

12. IMPLEMENT INFECTION PREVENTION AND CONTROL PRACTICES:

- Hand Hygiene
  - Provide hand sanitizer at all entrances and exits with signage on how to use.
  - Practice hand hygiene before and after contact with each resident.
- Respiratory Hygiene
  - Remind residents, visitors and staff to cover the nose and mouth when sneezing and coughing and to perform hand hygiene after coughing, sneezing or using tissues.
- Routine Practices and Additional Precautions
  - Use Routine Practices for interaction with all residents.
  - Use Droplet/Contact Precautions for interaction with residents showing symptoms of RI.
- Point of Care Risk Assessment
  - Must be done for any interaction with the resident: assess resident’s symptoms and cognitive ability, type of interaction that will occur, necessary Personal Protective Equipment (PPE) and potential for contamination of equipment or environment.

13. ENHANCED HOUSEKEEPING:

- Frequent disinfection of commonly touched surfaces or items such as handrails, elevator buttons and door handles. Use a product approved for use on viruses.
- Provide sufficient receptacles for safe disposal of contaminated items such as tissues.
Clean and disinfect all equipment between use for different residents or areas.

14. DAILY OUTBREAK TRACKING:

- Fax or email the RI and GI Outbreak Report Form to the IH CD Unit by the end of the business day. Fax to 250-549-6310 or email cdunit@interiorhealth.ca
- For in-facility use only, update the resident and staff illness surveillance tool
- Reporting sheets are provided under Tools for Outbreak Management and Reporting

15. DECLARING THE OUTBREAK OVER:

- Facility (in consultation with ICP, if one is assigned) can self-declare the outbreak over when there is a period of 4 days since the onset of the last case.

The outbreak can be declared over at the end of business hours (5 pm) on the 4th day since the date of onset of the last case.

4. References

British Columbia Centre for Disease Control. (2005). Guidelines for the Control of Influenza Like Illness (ILI) Outbreaks.

British Columbia Centre for Disease Control. (2007). Communicable Disease Policy Committee (October 10, 2007)


5. **Links**

- IH Influenza Protection Program
- IH Infection Prevention and Control Webpage
- Sample Container Order Form
- Respiratory Illness Outbreak Laboratory Form
- PHSA Virus Isolation Requisition
- Provincial Infection Control Network of British Columbia (PICNet BC) Respiratory Infection
- BC Ministry of Health Policy Communiqué Health Care Worker Influenza Control Policy 2013
- BC Influenza Prevention Policy: a discussion of the evidence 2013
- IH Administrative Policy Manual AV1350 Influenza Prevention Policy
- IH Administrative Policy Manual AV1300 Staff Influenza Immunization and Exclusion Policy

6. **Tools Forms and Resources**

**Tools for Outbreak Detection and Consultation**

- Interior Health Public Health Contact Information  
  *Weekdays - 0830 to 1630*  
  Interior Health Communicable Disease Unit  
  Phone: 1-866-778-7736  
  Fax: 250-549-6310  
  Email: cdunit@interiorhealth.ca

- *Weekends and Holidays*  
  IH MHO on call: 1-866-457-5648  
  Medical Health Officers  
  - Dr. Trevor Corneil  
  - Dr. Kamran Golmohammadi  
  - Dr. Sue Pollock  
  - Dr. Silvena Mema

- Infection Control Team Contact Information
- Respiratory Illness Outbreak: Nasal Swab Collection and Shipping Information
- Respiratory Illness (RI) Surveillance Tool
- Overview of Respiratory Outbreaks Process
- "Common Viral and Bacterial Pathogens That Cause RI Outbreaks" PICNET Appendix 4
- PICNET Respiratory Infection Outbreak Guidelines for Healthcare Facilities
Respiratory Illness Outbreak: Nasal Swab Collection and Shipping Information

Nasal Swab Collection Kits
Respiratory outbreak kits from BCCDC may be ordered by September 15 of each year. To order:

- Fax Sample Container Order Form to PHSA BCCDC at 604-707-2606 or email to kitorders@hssbc.ca.
- OR mail a written request as above. Address the envelope
  Attn: Shipping and Receiving, PHSA Laboratory Services
  Virus Isolation Laboratory
  655 West 12th Avenue
  Vancouver BC V5Z 4R4

Nasal Swab Specimen Collection

NOTE: For personal protection it is recommended that gloves and a mask be worn when collecting specimens.

NOTE: Collect the specimens within 48-72 hours of symptom onset.
- Assemble sterile supplies – PHSA Respiratory Outbreak swab
- Have patients with copious discharge gently clean their nose with a tissue or by washing
- Incline the patient’s head as required and insert the cotton swab provided 2-3 cm into the nostril.
- Swab around the inside of the nostril and along the nasal septum, a minimum of 6 times.
- Place the swab into the accompanying vial of transport media and tighten the lid securely.
- Label the container with the patient’s full name and date of birth.

Complete the Accompanying Documentation

- Send one PHSA Laboratories Influenza-Like Illness (ILI) Outbreak Laboratory Form for each outbreak (up to 6 residents listed on the form).
- Send one PHSA Laboratories Virology Requisition for each nasal swab taken.
  - Under Examination Requested, enter “Respiratory Outbreak”
  - under Return Address, enter the full name and billing number of facility (or physician) to whom the final report will be sent
  - under Copy Report To, enter IH CD Unit C09768
Transportation of Nasal Swabs

- Keep specimens at refrigerator temperature (2°C to 8°C). Do not freeze specimens.
- Assemble the swabs and ship them together with the Outbreak Laboratory Form and the Virus Isolation Requisition in a cooler marked Diagnostic Specimens. Include an icepack if possible.
- Fax the Outbreak laboratory form to PHSA - BCCDC at 604-707-2605 and the CD Unit at 250-549-6310.
- Specimens may be shipped directly to PHSA Laboratory Services via courier or sent via the local lab’s routine shipping process, depending on local agreements. Please contact your local lab to see if there is an agreement in place.
- If there is concern that specimens may not be sent out in a timely manner (For example, specimens that are collected just prior to a long weekend) and the results may have significant impact on patient care or operations, please contact the CD Unit. In these rare cases, specimens may be able to be shipped out via an expedited process depending on local resources. There may be additional associated costs charged to the facility.
- If sending specimens via courier, send by routine same day or overnight delivery to:
  
  PHSA Laboratory Services  
  Virus Isolation Laboratory  
  655 West 12th Ave  
  Vancouver, BC V5Z 4R4  
  Courier: DHL/Loomis Express, 1-855-256-6647; bill to Acct. M45579.
Overview of Respiratory Outbreak Process

Has RI Outbreak Definition Been Met?

Two or more people within 7 days with:

- New or Worsening Cough
- Fever >38°C or a temperature that is abnormal for that individual

*Additional symptoms may include muscle or joint aches, runny nose, sore throat and headache

Report suspect RI outbreak to:

- IH CD Unit at 1-866-778-7736 (Mon-Fri 8:30am—4:30pm)
- IH MHQ-On-Call at 1-866-457-5648 (Weekends and holidays)

Notify Partners, including:
- Director of Care or Most Responsible Person
- Infection Control Practitioner (if one is assigned)
- Licensing

Implement outbreak measure immediately
- Initiate collection of nasopharyngeal swabs
- Offer vaccine to unimmunized residents and staff (if no contraindication)

MHO declares outbreak and management scenario based on available epidemiological data and illness severity

At MHO discretion based on epidemiological data & illness severity

- Scenario A Outbreak Management
  - Outbreak Report Form Daily
  - MHO/CDU declare outbreak over 8 days from last case onset

At MHO discretion based on epidemiological data & illness severity

- Scenario B Outbreak Management
  - Re-evaluation based on epidemiological data & illness severity
  - Outbreak Report Form Daily
  - MHO/CDU declare outbreak over 4-14 days from last case onset
  - (Use 2 incubation periods)

At MHO discretion based on epidemiological data & illness severity

- Scenario C Outbreak Management
  - Re-evaluation based on epidemiological data & illness severity
  - Facility declares outbreak over 4 days from last case onset

Default Declaration

Most Intensity of Measures

Least
Tools for Outbreak Management and Reporting

- Quick Reference: RI Outbreak in Residential Care Settings
- Stop – We Are Experiencing an Outbreak Sign (807909)
- Interior Health Outbreak Information Brochure (810203)
- Droplet/Contact Precautions Sign (807904)
- Physician Letter – Oseltamivir Influenza Antiviral Prophylaxis Letter (Staff)
- Oseltamivir Prophylaxis Pre-Printed Order (829559)
- Oseltamivir Treatment Pre-Printed Order (829561)
- RI and GI Outbreak Report Form (823076)

Tools for Pre-Outbreak Preparation

- Influenza Immunization Health Care Worker Record
- Medical Exemption Letter
- Influenza Immunization Resident Record
**For Facility Use Only**

**INFLUENZA IMMUNIZATION - HEALTH CARE WORKER RECORD**

FACILITY:

UNIT/FLOOR/DEPARTMENT:

List all health care workers employed per unit/floor/department. Enter the date of influenza vaccine or indicate medical contraindications. If no date is entered, the employee is assumed to be unvaccinated. Please keep this record on file.

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<tr>
<th>Name</th>
<th>Vaccine</th>
<th>Lot #</th>
<th>Site E.G., LA/RA</th>
<th>Immunization Date</th>
<th>Provider Initials</th>
<th>Medical Contraindication</th>
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