Prince Edward Island
CANADA

Health and Wellness

Prince Edward Island Guidelines for the Control of Influenza In Long Term Care Facilities

Revised 2021/2022

Department of Health and Wellness

Chief Public Health Office

Contents

1. Introduction

Influenza is an acute viral disease of the respiratory tract characterized by fever, chills, headache, runny nose, sore throat, cough, and aching in the muscles and joints. Residents of long-term care facilities are at high risk for acquiring influenza and have an increased chance of morbidity and mortality due to their age and diminished immune status.

Influenza immunization of both residents and staff is the most effective means of preventing influenza and its complications.

Treatment with antiviral medication is recommended for influenza when it is diagnosed early in the illness (usually within 48 hours of symptom onset). The Association of Medical Microbiology and Infectious Diseases Canada (AMMI) recommends that antiviral medication should still be used even if it has been more than 48 hours since the onset of symptoms when the individual belongs to a group at high risk for complications of influenza (1).

Prescribing antiviral medication to individuals who have been exposed to influenza but who have not yet developed symptoms is known as post-exposure prophylaxis (PEP). PEP is recommended for residents in long term care facilities to reduce the risk of transmission to other residents and to minimize the impacts of an influenza outbreak in this vulnerable population. The Chief Public Health Office provides antiviral medication (oseltamivir) for post-exposure prophylaxis of residents in both public and private long-term care facilities (LTCF) in PEI.

The purpose of these guidelines is to provide information and guidance on the surveillance, management and control of influenza in long term care facilities in PEI. Prompt identification of influenza and ILI in closed facilities and reporting to public health facilitates appropriate investigation and follow-up aimed at preventing further spread of disease. Surveillance of seasonal influenza activity is important in determining the burden of influenza illness in PEI and is reported nationally to the Public Health Agency of Canada (PHAC).

2. Duty to Report

Influenza and outbreaks of influenza-like illness (ILI) in health facilities and institutions are notifiable events under the Prince Edward Island *Public Health Act* (2) and Notifiable Diseases and Conditions and Communicable Diseases Regulations (3). Lab confirmed cases of influenza are reported to the Chief Public Health Office (CPHO) by the Microbiology Laboratory. Section 33 of the *Act* outlines the responsibility of a medical practitioner or nurse practitioner to report cases of influenza to the CPHO (2).

Section 35 of the *Act* states the administrator or person in charge of a health facility (or designate) is responsible to report one or more occurrences of a communicable disease to the CPHO. (2)

3. Preparing for Influenza Season

A number of steps should be taken to prepare for influenza season including reviewing these guidelines with facility staff with responsibility for identifying, managing and reporting influenza and ILI in the facility. In addition, the following should occur:

3.1 Calculate and record the creatinine clearance on all residents yearly in the fall. (Appendix 1)

3.2 A standing physician's order (or nurse practitioner if applicable) should be obtained by early fall for the administration of antiviral treatment or prophylaxis in the event of an influenza outbreak within the facility. (Appendix 1) If a resident has a creatinine clearance of less than 10 ml/min (renal failure) or requires dialysis, a consult with the physician/renal specialist is recommended.

3.3 Ensure naso - pharyngeal (NP) swabs for influenza testing are available in the facility and are not expired. NP Swabs can be obtained from the Microbiology Lab and should be stored appropriately for maximum effectiveness.

3.4 Plan for influenza immunization of residents and staff annually. The National Advisory Committee on Immunization (NACI) recommends immunization for health care and other care providers in facilities who, through their activities, are capable of transmitting influenza to those at high risk of influenza complications. (4)

Even when elderly people are immunized, they do not mount as effective an immune response as younger persons and are therefore considered at high risk for complications related to influenza, including death. Family members of residents in LTC should be encouraged to receive the influenza vaccine from a public influenza clinic, community pharmacy or physician/nurse practitioner.

3.5 Influenza vaccine is best administered in the fall but can still be provided after the influenza season has started for those who have not received it.

4. Case Definitions

Influenza-Like Illness (ILI)

Must have cough (sudden onset or new) **and** fever as follows:

1) Single oral temp >37.8C
or
2) Repeated oral temps >37.2C or rectal temps >37.5
or
3) Single temp >1.1C over the individual's baseline (oral or rectal)

and
at least 1 of the following: headache, myalgia/arthralgia, sore throat

ILI Cluster in a LTC Facility

2 or more cases of ILI in 72 hours

5. ILI Cluster/Outbreak

5.1 If a single case of ILI is identified in the facility, the physician should assess and recommend treatment for that patient. If antiviral medication is needed for that patient only, it should be obtained via the usual process for obtaining medications for a single patient in a LTC facility.

5.2 If **two or more cases of ILI in one area of a facility in 72** hours are identified, this is considered an ILI cluster. Document what is happening on the facility using a line list. (Appendix 2)

5.3 Call the CPHO to report the cluster and to discuss the possibility of initiating antiviral PEP. The CPHO nurse can be reached at **902-368-4996** during government business hours or **1-902-213-5824** after hours.

*Please note that if the **Civil Service is closed in Charlottetown** due to inclement weather, the nurse can be reached by calling **1-902-213-5824**.

5.4 Using the line list, the following information is required to assist in making timely and accurate decisions:

- Residents - total number of residents and the number of residents ill, name(s) of each resident with ILI, onset date(s), symptoms, current condition, unit(s), immunization status, and if they have been swabbed for influenza;
- Staff- total number of staff who work in the facility and the number of staff ill, onset date(s), symptoms, current condition, unit(s) working on, last date worked, and immunization status.

5.5 The information on the line list should be faxed to the CPHO at **902-620-3354** to help in decision making at this early stage. Once the antiviral prophylaxis is started, a daily line list is no longer required by the CPHO; however, it may be useful for the facility Outbreak Management Team in managing the outbreak. Regular contact with the CPHO from an outbreak team representative is recommended in the event that the outbreak spreads to other units/areas of the facility.

5.6 If influenza is already known to be in the community, the CPHO will help to determine if testing of residents is needed and if/when prophylaxis should be started.

5.7 If no cases of influenza are known to be in the community, testing of residents is recommended. The best lab specimens to obtain are from residents with recent onset of ILI symptoms (within the past 24 hours). A naso-pharyngeal swab is recommended. (Appendix 3)

It is important when sending specimens to notify the lab that the facility may be in an outbreak situation. The lab will advise how many to send but usually three specimens are sufficient.

6. Antiviral Treatment and PEP

6.1 The decision on the use of antiviral medications to control the outbreak will be made in consultation with the CPHO after reviewing the information collected.

6.2 The CPHO may recommend antiviral medication after consultation with the attending physician.

6.3 Table 1 outlines the AMMI recommendations for antiviral treatment and prophylaxis. (1)

6.4 Antiviral medications (Oseltamivir®75mg and 30mg doses) are now pre-positioned within each facility for all residents (long term care and dual long-term care/community care facilities). Table 2 can be used to determine if additional antiviral doses are required over and above what is pre-positioned in the facility. The CPHO will arrange for further doses as required.

6.5 If a resident develops influenza-like illness while on the prophylaxis dose, the resident should be switched to the treatment dose as per Table 1 and start as if on day one.

Table 1: Influenza Treatment and Post-Exposure Prophylaxis Dosages (1)

Creatinine Clearance	Treatment for 5 days	Prophylaxis until outbreak is over
greater than 60 ml/min	75 mg capsule twice daily	75 mg capsule once daily
30 ml/min-60 ml/min	75 mg capsule once daily Or 30 mg BID	75 mg capsule on alternate days or 30 mg once daily
10 - 30 ml/min	30 mg once daily	30 mg capsule on alternate days
Less than 10 ml/min (renal failure)*	1 single 75 mg dose for the duration of illness	No data available Consult with primary physician or specialist
Residents on Dialysis*	Low-flux HD:30mg after each dialysis session	30 mg after alternate dialysis sessions
	High-flux HD: 75 mg after each dialysis session	No data available Consult with primary physician or specialist
	CAPD dialysis: 30 mg once/week	30 mg once weekly
	CRRT high-flux dialysis: 30 mg once daily or 75 mg every second day	No data available Consult with primary physician or specialist

**Experience with the use of Oseltamivir in patients with renal failure is limited. These regimens have been suggested based on the limited available data. Consultation with an infectious physician or a clinical pharmacist is recommended.*

Table 2: Number of antiviral doses required.

Number of doses pre-positioned in the facility	**75 mg:** **30 mg:**
Total # of residents at the facility:	
# of residents who are symptomatic	
• # with CC greater than 60 ml/min:	
• # with CC 30 ml/min-60 ml/min:	
• #with CC < 10ml/min	
• # with CC 10 - 30 ml/min	
• # on dialysis	
# of residents needing PEP:	
• # with CC greater than 60 ml/min:	
• # with CC 30 ml/min-60 ml/min:	
• #with CC < 10ml/min	
• # with CC 10 - 30 ml/min	
• # on dialysis	

7. Infection Prevention and Control

Routine Practices are followed with all residents at all times with particular attention to hand hygiene for staff, visitors, and residents. Additional Infection Control Practices for LTC facilities to prevent the transmission of influenza are documented in Appendix 4.

8. Admissions During an Outbreak

Restricting admissions to a facility experiencing an outbreak has the potential of creating a backlog in acute care, emergency departments, or other community settings. Alternately, admitting residents who are susceptible to influenza to a facility experiencing an outbreak poses a risk to their health and has the potential to prolong the outbreak.

8.1 **New admissions:** Admission of new residents to the unit during an outbreak is generally not advisable. Restriction of admission might be applied to one section of a facility or to the whole facility depending on the extent of the outbreak, severity of illness, or the layout of the building. The decision should be made by the facility Outbreak Management Team considering factors such as:

- Is the outbreak under control?
- Is there adequate staff available to provide care?
- Is the resident's attending physician aware of the outbreak and agreeable to the admission based on a review of the health status of the resident?

- Has the resident or their substitute decision maker given consent after being informed of the potential risk?
- Is the resident immunized or on antiviral prophylaxis?

8.2 **Readmissions:**

8.2.1 A resident may be readmitted to a facility if the resident is known to have had influenza prior to leaving that facility. The resident would be considered immune to the organism causing the outbreak.

8.2.2 If a resident is scheduled to be readmitted to a facility for any reason such as surgery, COPD, fall, etc., but the resident did not experience influenza prior to leaving the facility, it is not advisable for the resident to be readmitted.

9. Declaring an Outbreak Over and Discontinuing Precautions

The facility Outbreak Management Team should have a plan in place to discontinue additional precautions for individual residents, rooms, units, and the full facility. To declare the outbreak over there must be no new symptomatic residents for two consecutive influenza incubations periods (one incubation period is 72 hours). Factors to assess when making decisions include:

- Are the residents in the room/unit/facility still symptomatic?
- Have the precautions been effective in controlling the spread of the outbreak?
- Is the number of new symptomatic patients decreasing and for how many days?
- Is the staffing available to adequately care for the residents?

Works Cited

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3. Notifiable and Communicable Diseases and Conditions Regulations. ***Legislative Assembly of PEI.*** **[Online] [Cited: 10 19, 2015.] http://www.gov.pe.ca/law/regulations/pdf/P&30-1-05.pdf.**

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5. Guidance: Infection Prevention and Control Measures for Healthcare Workers in Acute Care and Long-term Care Settings. ***Public Health Agency of Canada.*** **[Online] 12 20, 2010. [Cited: 10 21, 2015.] http://www.phac-aspc.gc.ca/nois-sinp/guide/pdf/ac-sa-eng.pdf.**

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APPENDIX 1 Creatinine Clearance and Standing Order Template

Obtain the resident's weight (in Kg) and serum creatinine and then calculate the resident's creatinine clearance using the formula below.

NOTES:

- Creatinine level within the past 12 months is adequate.
- When a resident cannot be weighed, an estimate of the weight is adequate.

Calculating Creatinine Clearance (ml/min)

$$\text{Male} \quad \frac{(140 - \text{AGE IN YRS}) \times (\text{WEIGHT IN Kg})}{\text{SERUM CREATININE (umol/L)} \times 0.81} = \quad \text{ml/min}$$

$$\text{Female} \quad \left\{ \frac{(140 - \text{AGE IN YRS}) \times (\text{WEIGHT IN Kg})}{\text{SERUM CREATININE (umol/L)} \times 0.81} \right\} \times .85 = \quad \text{ml/min}$$

RESIDENT INFORMATION

Name:	Health Number:
Age in years:	Weight in Kg
Serum Creatinine (umol/L)	Date:
Creatinine Clearance (ml/min):	

Standing order for Tamiflu® Post- Exposure Prophylaxis during an ILI outbreak: Yes ☐ No ☐

Standing order for treatment with Tamiflu® during an ILI outbreak: Yes ☐ No ☐

Attending Physician Signature: _____Date:_____

APPENDIX 2 Line List Information on Residents and Staff with Influenza-like Illness (ILI)

Facility : ______________________ **Date:** ______________________ **Fax to Chief Public Health Office 902-620-3354**

RESIDENTS: Total Number of Residents: ______________			Number of Residents ill: ______________			
Name and MRN	**Onset Date**	**Unit**	**Symptoms**	**Influenza Vaccine**	**Swabbed If Yes, Date**	**Comments**
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	Date Y or N	
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	Date Y or N	
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	Date Y or N	
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	Date Y or N	
STAFF: Total Number of Staff: ______________			**Number of Staff ill:** ______________			
Name and MRN	**Onset Date**	**Last Date of Work**	**Symptoms**	**Immunized**	**Swabbed If yes, Date**	**Comments**
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	DateY or N	
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	Date Y or N	
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	Date Y or N	
			☐ Fever[1] ☐ Sudden onset cough ☐ Muscle/body aches ☐ Sore Throat ☐ Headache	Y or N	Date Y or N	

[1] Fever = 1) single oral temp >37.8C 2) Repeated oral temps >37.2C or rectal temps >37.5 or 3) Single >1.1C over baseline from any site.

APPENDIX 3 Procedure for Obtaining a Naso-Pharyngeal Swab

1. Use the swab supplied with the viral transport media.

2. Explain the procedure to the patient.

3. When collecting the specimens, don and doff personal protective equipment (PPE) which includes eye protection, gloves, and a mask. (Appendix 4) Change gloves and wash your hands between each patient.

4. If the patient has a lot of mucus in the nose, this can interfere with the collection of cells. Either ask the patient to use a tissue to gently clean out visible nasal mucus or clean the nostril yourself with a cotton swab (e.g. Q-Tip).

5. How to estimate the distance to the nasopharynx: prior to insertion, measure the distance from the corner of the nose to the front of the ear and insert the shaft approximately 2/3 of this length.

6. Seat the patient comfortably. Tilt the patient's head back slightly to straighten the passage from the front of the nose to the nasopharynx to make insertion of the swab easier.

7. Insert the swab along the medial part of the septum, along the floor of the nose, until it reaches the posterior nares; gentle rotation of the swab may be helpful. (If resistance is encountered, try the other nostril as the patient may have a deviated septum.)

8. Allow the swab to sit in place for 5-10 seconds.

9. Rotate the swab several times to dislodge the columnar epithelial cells. Note: Insertion of the swab usually induces a cough.

10 Withdraw the swab and place it in the collection tube.

11. Remove PPE as per doffing

12. Attach completed requisition with **two unique patient identifiers** on the swab and the requisition.

13. Refrigerate specimen until ready for transport to the laboratory.

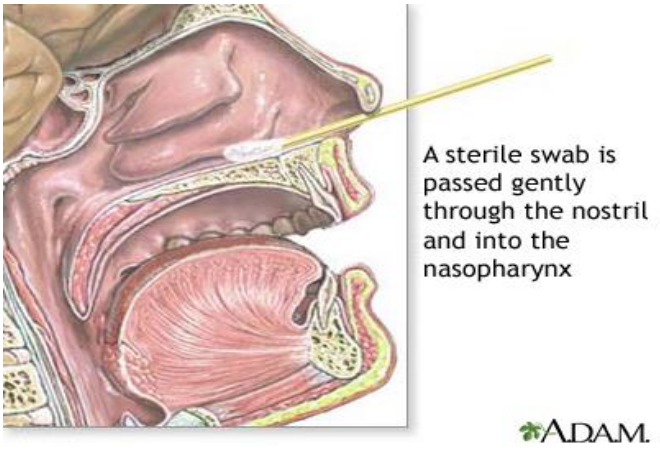

Image obtained from www.nlm.nih.gov/medlineplus/ency/imagepages/9687.htm

APPENDIX 4 Infection Prevention and Control Precautions (5)

Routine Practices are followed with all residents at all times with particular attention to hand hygiene for staff, visitors and residents.

- All persons entering and working in the facility should perform hand hygiene according to "the 4 moments of hand hygiene".
- Respiratory cough etiquette and hand hygiene should be taught to residents who are able to follow instruction and assistance given to those who are not able (eg. help with hand hygiene, proper disposal of tissue).

Additional precautions are recommended as follows when ILI is identified. A resident who shows signs of ILI should be placed on droplet and/or contact precautions right away.

1. Accommodation:
    a. If possible place the resident in a private room.
    b. If the resident is in a semi private or ward room, ensure 2 meters (6 feet) of separation between resident and roommates and draw the curtains.
    c. Residents with ILI should be restricted to their bed space.
    d. The ill person should only leave their room for essential purposes.
    e. Roommates should be considered exposed to influenza and be monitored for symptoms of ILI at least twice per day for seven days.
    f. Exposed roommates (even if asymptomatic) should not be transferred to another facility for seven days after the last exposure unless medically necessary. **If the exposed roommate is transferred, the receiving unit/facility should be given information regarding monitoring for symptoms of ILI .**
    g. There is no need to restrict asymptomatic roommates from activities within the facility.

2. Cleaning and Disinfection of Equipment:

    a. Hospital-grade cleaning and disinfecting agents are sufficient for environmental cleaning in the context of influenza.
    b. All horizontal and frequently touched surfaces should be cleaned at least twice daily and when soiled.
    c. Terminal cleaning of the patient's room should be done following discharge, transfer, or discontinuation of droplet/contact precautions.
    d. Equipment should be dedicated to residents. Equipment that is shared between residents should be cleaned and disinfected before being moved from one resident to another.

3. Hand Hygiene and PPE:

    a. Practice the 4 Moments of Hand Hygiene (hand rub containing 60-90% alcohol, or soap and running water) at all times.
    b. Use **droplet precautions** (surgical masks and eye protection) when within 2 meters of the resident with ILI.
    c. If an Aerosol Generating Medical Procedure (AGMP) is being performed use droplet precautions and limit the number of personnel in the room.
    d. Additional **contact precautions** should be used as follows:
        i. Gloves should be worn for direct personal care with the resident or if direct contact with frequently touched environmental surfaces is anticipated.
        ii. A long sleeved gown should be worn if it is anticipated that clothing or forearms will be in direct contact with the resident or with environmental surfaces or objects in the patient care environment.

4. Donning (putting on) PPE in Order:

    a. Perform hand hygiene
    b. Gown (if needed)
    c. Mask
    d. Eye or face protection
    e. Gloves (if needed)

    Doffing (taking off) PPE in) in Order:

    a. Remove gloves (if wearing)
    b. Remove gown (if wearing)
    c. Perform hand hygiene
    d. Remove eye or face protection
    e. Remove mask by the straps (do not touch the mask)
    f. Perform hand hygiene

5. Staff Exclusion

    a. Health care workers (including students and volunteers) experiencing ILI should be excluded from work in any health care setting while they are symptomatic.
    b. Staff exhibiting symptoms of ILI should not come to work (or should go home if symptoms start while at work) until they are symptom free and able to participate fully in work activities.

c. Health Care workers working at other facilities
    I. Staff and physicians who are immunized against seasonal influenza and who are not symptomatic have no restrictions on their ability to work at other facilities during an ILI outbreak, provided the individual changes their uniform between facilities.
    II. Staff and physicians who are not immunized against seasonal influenza and who are not symptomatic must wait one incubation period (3 days) from the last day that they worked at the outbreak facility/unit prior to working in a non-outbreak facility, to ensure they are not incubating influenza and at risk of transmitting it.

6. Visitors (including family members)

    a. During influenza season, passive screening of visitors should be done by posting signs at the doors of the facility asking those with symptoms of ILI not to come into the facility.
    b. Families and visitors with ILI should be asked to stay away until their symptoms resolve and they are able to get back to their regular daily activities.
    c. If ILI symptoms are noted and it is essential that the visitor(s) see the resident, the visitor(s) exhibiting symptoms should be asked to wear a mask when in the facility and perform hand hygiene frequently.

7. Social Activities

    a. All social activities in the facility should be cancelled during an ILI/influenza outbreak.

8. Appointments and Facility Transfers

    a. If a resident has **ILI symptoms** and has a medically necessary appointment, the transferring facility must notify the receiving office or facility (including those transporting the resident) of the ILI symptoms and necessary precautions.
    b. If a need for **Droplet and/or Contact Precautions** has been established, any receiving unit, diagnostic service, or transport personnel **must** be informed so they are aware of the precautions to follow.
    c. Those responsible for transporting the symptomatic resident should apply **Droplet and/or Contact Precautions** and maintain them during transport to minimize risk of transmission to others and contamination of environmental surfaces or objects.
    d. If an **asymptomatic** resident is being transferred, the receiving facility should be advised by the transferring facility to monitor for the development of symptoms of ILI for seven days after the exposure.